

Level 2 Preliminary Site Investigation Report Geotechnical Drilling Support

Earthquake Ready Burnside Bridge Project
Portland, Oregon

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Table of Contents

1.0 EXECUTIVE SUMMARY	1
2.0 INTRODUCTION	4
2.1 Purpose	4
2.2 Scope of Work	4
3.0 BACKGROUND	5
3.1 Site Location and Description	5
3.2 Site Geology and Hydrogeology	5
3.3 Conceptual Site Model	6
3.4 Data Quality Objectives	6
4.0 SITE INVESTIGATION ACTIVITIES	7
4.1 Preparatory Activities	7
4.1.1 Site Health and Safety Plan	7
4.1.2 Site Access and Underground Utility Location	7
4.2 Soil Boring Methods and Procedures	7
4.3 Analyses Performed	8
4.4 Investigation-Derived Waste	9
4.4.1 Environmental Monitoring IDW	9
4.4.2 Geotechnical Drilling IDW	9
5.0 SITE INVESTIGATION RESULTS	10
5.1 Field Observations	10
5.1.1 Upland Borings	10
5.1.2 In-Water Borings	10
5.2 Analytical Results	10
5.2.1 Soil and Fill Analytical Results	11
5.2.2 Sediment Analytical Results	12
5.2.3 Groundwater Analytical Results	12
6.0 DATA QUALITY EVALUATION	12
6.1 Soil and Groundwater (Upland Borings)	13
6.2 Sediment	13
6.3 Groundwater (In-Water Borings)	14
7.0 CONCLUSIONS AND RECOMMENDATIONS	15
7.1 Soil Recommendations	15
7.2 Groundwater Recommendations	16
7.3 Sediment Recommendations	16
7.3.1 Sediment Disposal	16
7.3.2 Portland Harbor Impact Discussion	17
7.3.3 Bridge Design Potential for Scouring	18
7.3.4 Sediment Dewatering Additional Considerations	18



Tables

- 1 Soil Analytical Results
- 2 TCLP Analytical Results
- 3 Groundwater Analytical Results
- 4 Sediment Analytical Results
- 5 Groundwater Analytical Results from In-Water Borings
- 6 IDW Soil Analytical Results
- 7 Soil Analytical Results – Exceedances of Screening Criteria
- 8 Sediment Analytical Results – Exceedances of Screening Criteria

Figures

- 1 Vicinity Map
- 2 Soil Analytical Results Above Screening Levels, West Bank
- 3 Soil Analytical Results Above Screening Levels, East Bank
- 4 Sediment Analytical Results Above Screening Levels, River Span

Appendices

- A SW Site and Exploration Plan
- B Boring Logs
- C Photo log
- D Laboratory Data Packages
- E IDW Disposal Documentation
- F SW IDW Disposal Documentation



1.0 Executive Summary

This Preliminary Site Investigation (PSI) Report (Report) summarizes the field activities and results of sub-surface sampling conducted to preliminarily characterize sediment, soil, and groundwater prior to construction activities for the Multnomah County (County) Earthquake Ready Burnside Bridge Project (the Project), County contract number DCS-SVCSGEN-857-2019-conv. Work was conducted in accordance with the *Work Plan for Geotechnical Drilling Support, Earthquake Ready Burnside Bridge Project* (Work Plan; Coles + Betts, 2021), the Oregon Department of Transportation (ODOT) *Hazmat Program Manual* (2020), and environmental procedures outlined in the *Hazardous Waste Guide for Project Development* by American Association of State Highway and Transportation Officials (AASHTO, 1990), on behalf of the County and their design consulting team, led by HDR, Inc.

A Draft Hazardous Materials Corridor Assessment (HMCA) was performed by Shannon & Wilson (SW) for the Project area (SW, 2021a). The HMCA identified sites with known and suspected contamination within and adjoining the Project corridor. The identified contamination is expected to impact the majority of soils, Willamette River sediment, and/or if encountered, fill material and groundwater within the Project area. The HMCA recommended environmental monitoring at each geotechnical boring location.

SW, the contract geotechnical engineering firm, coordinated and oversaw the geotechnical drilling both on land and in water. In accordance with SW's Work Plan (SW, 2021b), Coles + Betts Environmental Consulting, LLC (CB), Apex Companies, LLC (Apex) and Reynolds Engineering, LLC (Reynolds; collectively the CB team) completed hazardous materials monitoring at all borings between zero and 25 feet below ground surface (bgs) or until the fill/native interface was reached in upland borings, and within the upper 25 feet of sediment of the Willamette River. The CB team completed hazardous materials monitoring at 15 locations on land and 12 locations within the Willamette River (i.e., in-water) between September 8, 2021, and October 25, 2021.

Soil and fill material samples were generally collected from each Standard Penetration Test (SPT) sampler utilizing a hollow-stem auger for upland borings; though some locations were drilled using direct-push or sonic rigs due to drill rig clearance issues. Sediment samples were collected into disposable tubes utilizing a sonic drill rig. Groundwater was sampled using a peristaltic pump and disposable tubing or a disposable bailer. The CB team collected a total of 23 upland soil samples, 8 groundwater samples from upland borings, 21 sediment samples and 10 groundwater samples from in-water borings.

Upland soil and/or fill material samples and groundwater samples were submitted under Chain-of-Custody protocols to Apex Laboratories, LLC (Apex Labs) of Tigard, Oregon, for laboratory analysis. The samples were analyzed for the following compounds at a sensitivity that allows for comparison to Oregon Department of Environmental Quality (DEQ) Clean Fill Criteria and Risk-Based Criteria (RBCs) (DEQ, 2018):

- Gasoline-range petroleum hydrocarbons by Northwest Total Petroleum Hydrocarbons (NWTPH)-Gasoline (Gx) Method;
- Diesel- and residual-range petroleum hydrocarbons by NWTPH-Diesel (Dx) Method;
- Volatile Organic Compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260B;



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- Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270 SIM; and
 - Total Resource Conservation and Recovery Act (RCRA) 8 metals plus total antimony, copper, and zinc for soil, and dissolved RCRA 8 metals for groundwater. The metals will be analyzed by EPA Methods 200/6020A/7471B.

In-water sediment, fill material, and groundwater samples collected were submitted under Chain-of-Custody protocols to ALS Environmental (ALS) in Kelso, Washington, for laboratory analysis. The samples were analyzed for the following compounds at a sensitivity that allows for comparison to DEQ Clean Fill Criteria and RBCs:

- Gasoline-range hydrocarbons using Method NWTPH-Gx;
- Diesel- and residual oil-range hydrocarbons using Method NWTPH-Dx;
- VOCs using EPA Method 8260B;
- PAHs using EPA Method 8270D-SIM;
- Low-level Semi-Volatile Organic Compounds (SVOCs) using EPA Method 8270D;
- Low-level organochlorine pesticides using EPA Method 8081B;
- Polychlorinated Biphenyls (PCBs) using EPA Method 8082A;
- Chlorinated herbicides using EPA Method 8151A;
- Polychlorinated dibenzodioxins (PCDDs) and Polychlorinated dibenzofurans (PCDFs) by EPA Method 8290A;
- Butyltins; and
- RCRA 8 metals using EPA Methods 200/6020A/7471B.

Soil, sediment, and groundwater analytical results were compared to DEQ's RBCs to determine the presence or absence of contamination and identify construction and excavation worker direct contact safety concerns, and were also compared to DEQ's Clean Fill Criteria (DEQ, 2019) to inform decisions regarding how contaminated soil and/or groundwater should be handled and disposed of during construction activities. In addition, because of the Project location upstream of the Portland Harbor Superfund Site, sediment data were also compared to Portland Harbor (PH) Record of Decision (ROD) Cleanup Levels (CULs), Freshwater Benthic Toxicity Screening Levels (Sediment Evaluation Framework, 2018), and Willamette River Upstream Background Concentrations (Portland Harbor RI/FS, 2016). This additional comparison was completed to evaluate potential effects on construction within the Project area (including potential sediment scour) on the Portland Harbor Superfund Site.

No concentrations of contaminants of concern (COCs) were detected at concentrations exceeding Construction or Excavation Worker RBCs in the samples collected from the west end of the Burnside Bridge. Several of the soil samples collected from the west end of the Bridge contained metals and petroleum constituents at concentrations exceeding Clean Fill Criteria. However, the factor of exceedance in many cases was less than an order of magnitude. Samples collected from bulk spoils material at the time of construction may meet Clean Fill Criteria.



At the east end of the bridge, lead was detected at concentrations exceeding the Clean Fill Criteria in the samples collected from borings B-16, B-17, and boring B-18. No lead concentrations exceeded the direct contact RBCs for the Construction or Excavation Worker scenarios. However, because lead concentrations in 4 samples exceeded 100 milligram per kilogram (mg/kg), those samples were submitted for additional lead analysis Toxicity Characteristic Leaching Procedure (TCLP). Results of the samples submitted for TCLP analysis were all less than 5 milligram per liter (mg/L) and indicate that the material would not require disposal as hazardous waste. Soils in this area will need to be disposed of as special waste.

The only upland soil sample containing concentrations of any analyzed constituent that exceeded the direct contact RBCs was the soil sample collected from boring B-33 from 15 to 16.5 feet bgs on the east side of the bridge. This sample interval was observed to have free petroleum product during drilling, and laboratory analytical results of diesel and residual-range organics in the sample both exceed the Construction Worker direct contact RBC of 4,600 mg/kg, at 27,400 mg/kg and 26,000 mg/kg, respectively. Soils from this area will require special management, including worker safety precautions, and should be segregated and managed separately for disposal purposes. A Contaminated Media Management Plan is recommended for soils on the eastern end of the bridge.

Analytical results of sediment samples collected indicate that one or more COC was detected at a level exceeding Clean Fill Criteria in 10 of the 12 borings completed within the Willamette River. The most common analytes detected at concentrations exceeding Clean Fill Criteria were arsenic, mercury, lead, phthalates, dibenzofuran, PAHs and PCBs. No analytes were detected at concentrations exceeding DEQ RBCs for the Construction or Excavation Worker direct contact scenarios, so there is no excess risk posed to construction or excavation workers due to exposure to sediments during Project construction. Based on contaminant concentrations detected, it may be possible for bulk dewatered sediment to be used as clean fill.

Although in-water boring B-38 was not completed as planned due to site access issues, this does not appear to be a significant data gap. We compared the sediment analytical data for the samples collected from borings B-39 (directly upstream from planned boring B-38), B-37 (west of B-39) and B-36 (downstream of B-37). In general, analyte concentrations in samples collected from the three borings were very similar (Table 4). For TPH, VOCs, PAHs and SVOCs, concentrations detected in samples collected from boring B-37 were generally lower than those collected from boring B-36 from the same depth interval (i.e., comparing the 0-10 feet composite samples and the 10-plus feet below surface samples separately), and concentrations detected in the samples collected from borings B-36 and B-39 were the most similar. Conversely, concentrations of metals, dioxins/furans and PCBs were generally higher in the samples collected from boring B-37 than in those collected from borings B-36 or B-39. PCBs were only detected in the sample collected from boring B-37 from 0-10 feet below the sediment interface. The concentrations of butyltins, organochlorine pesticides and chlorinated herbicides were all similar between the sample locations

Groundwater samples were collected from 8 upland borings and 10 in-water borings. No groundwater constituents analyzed were detected at concentrations exceeding DEQ RBCs for groundwater in excavations or the daily discharge maximum local limit (City of Portland Bureau of Environmental Services Sanitary Discharge and Pretreatment Program Administrative Rules (ENB - 4.03), June 2016). The concentrations of



diesel-range organics detected in all in-water samples collected exceeded the PH ROD CUL of 2.6 microgram per liter ($\mu\text{g/L}$), ranging from 120 to 990 $\mu\text{g/L}$. There does not appear to be a discharge limit for diesel-range organics imposed by the City of Portland, nor is there an RBC established for diesel-range organics for the groundwater in an excavation exposure scenario. If dewatering is necessary in the area of boring B-33, groundwater samples from the purged water should be collected to determine appropriate disposal options.

We understand that bridge components evaluated during the design phase for the Project may result in sediment scour. The COC concentrations detected within the Project area are generally much lower than those detected within the Portland Harbor Superfund Site. Given that most of Portland Harbor will achieve CULs only after decades of natural recovery, chemical impacts from the bridge scour to downstream sediments would likely be negligible. If a specific design will result in sediment scour, we recommend environmental sampling in the expected scour zone to characterize the sediments that would get scoured.

2.0 Introduction

2.1 Purpose

The purpose of this PSI is to present the results of the sediment, soil and groundwater sampling activities conducted in September and October 2021. These activities were conducted to evaluate potential impacts to Project construction related to potential contaminant sources identified in the HMCA for the Project.

2.2 Scope of Work

The scope of work was completed in general accordance with the Work Plan, dated July 14, 2021, with the exception noted that boring B-38 was not completed by SW as planned and boring B-14 was moved upland due to site access constraints. The purpose of the sampling scope of work was to preliminarily characterize soil, sediment, and groundwater prior to Project construction activities. The analytical results of samples collected will be used to characterize subsurface materials (soil, groundwater, and sediment) for disposal in areas of planned excavation and dewatering and were used to conduct a screening-level risk assessment in accordance with DEQ guidelines.

The geotechnical drilling support included the following tasks:

- Preparation of the hazmat sampling Work Plan to provide rationale for and to guide field activities;
- Preparation of a site-specific health and safety plan (HASP) for CB personnel to identify potential job hazards and protect worker safety;
- Environmental sampling of soil, sediment, and if encountered, fill materials and groundwater from geotechnical borings sufficient to determine whether or not contaminants of concern are present;
- Manage investigation derived waste (IDW) generated from the drilling activities within the upper 25 feet bgs (or deeper as necessary) in accordance with applicable local, state, and federal regulations and permits;



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- Evaluate the potential impact of future construction within the Project Area (particularly with respect to sediment scour) as it relates to the Portland Harbor Superfund Site; and
 - Preparation of this PSI Report that summarizes investigation efforts and provides recommendations for management of soils, sediment, fill material, groundwater, and IDW.

These activities are discussed in further detail within this report.

3.0 Background

A detailed site history for the corridor, including a description of past and present land use based on available historical documentation is presented in the HMCA. A brief summary of pertinent information follows.

3.1 Site Location and Description

The Project area is in Portland, Multnomah County, Oregon, along the Burnside Bridge alignment and on both banks of the Willamette River (Appendix A and Figure 1). The Project area, from west to east, is along W Burnside Street from SW/NW 2nd Avenue to the western Willamette River bank, below the Willamette River, and along E Burnside Street from the eastern bank of the Willamette River to the City block between NE Couch Street and SE/NE Martin Luther King Jr Blvd (Appendix A).

The Project intends to seismically upgrade the Burnside Bridge so that it remains operational and accessible for vehicles and other modes of transportation immediately following a major Cascadia Subduction Zone (CSZ) earthquake, and to provide long-term, low-maintenance, multi-modal (motor vehicle, bus, streetcar, bike, and pedestrian) transportation on a daily basis.

3.2 Site Geology and Hydrogeology

According to the United States Geological Survey (USGS) 7.5-minute Portland, OR Quadrangle Map, the Project area is at an elevation of between 0 and 65 feet above mean sea level. The local topography generally slopes toward the Willamette River from the east and west. The Willamette River is the center of the Project area and is the only water body in the Project area. The Burnside Bridge spans the Willamette River at a height of approximately 66 feet above the water and is approximately 2,241 feet long and 86 feet wide.

Based on the local topography and proximity of the Willamette River, local groundwater is presumed to flow generally towards the Willamette River from the east and west in the immediate vicinity of the river. However, local subsurface geologic and manmade features can affect groundwater flow and this groundwater flow interpretation is only an estimate based on surface observations.

Water well records filed with the Oregon Water Resources Department (OWRD) were searched and revealed over 3,000 well records within a half mile of the Project; however, none appeared to be groundwater production wells currently in use. Records consisted of geotechnical borings, groundwater monitoring wells,



and water resource wells. Groundwater monitoring wells were generally drilled to depths of less than 30 feet bgs and geotechnical borings were generally drilled to depths of less than 60 feet bgs. Groundwater was generally encountered at depths of between 15 feet and 25 feet bgs.

Surficial materials within the Project area commonly consist of various fill materials to depths of 25 feet or more because of the long history of industrial, commercial, and residential use of the Project area. Underlying the fill materials are fine-grained sand, silt, and clay catastrophic flood sedimentary deposits of The Willamette Silt formation. These sediments were deposited by catastrophic floods that swept across eastern Washington, the Columbia River Gorge, and into the Willamette Valley near the end of the last ice age. Below the catastrophic flood deposits are the gravels and cobbles of the Troutdale Formation which overlie the Miocene bedrock basalt of the Columbia River Basalt Group.

3.3 Conceptual Site Model

Our baseline conceptual site model (CSM) for the Project was developed based on the findings from the HMCA. The HMCA identified sites with known and suspected contamination within and adjoining the Project area and recommended environmental monitoring at all boring locations. Worker exposure to contaminated soil, sediment and fill material, and groundwater management during Project construction activities are Project concerns. Contamination from historical and/or current operations and activities, spills, and placement of contaminated fill materials has been documented within the Project area.

Potential COCs for Project upland soils, sediment, fill materials, and groundwater include: petroleum products, VOCs, PAHs, and metals. Potential additional COCs for sediment, fill materials, and groundwater for in-water borings include: SVOCs, organochlorine pesticides, PCBs, chlorinated herbicides, PCDDs and PCDFs, butyltins, and metals. Potential exposure pathways for contaminated fill, soils, sediment, and groundwater include dermal contact, ingestion, and inhalation.

3.4 Data Quality Objectives

The following data quality objectives for the PSI intend to address uncertainties identified in the CSM:

- Characterize soils, sediment and fill material up to 25 feet bgs (or to the fill/native soil interface in upland borings if deeper) and, if encountered, groundwater, to determine the concentrations of potential COCs;
- Compare upland soil and fill material analytical results to the DEQ RBCs and Clean Fill Criteria and provide management recommendations;
- Compare sediment analytical results to Benthic Toxicity Screening Levels from Sediment Evaluation Framework (RSET, 2018), Portland Harbor ROD CULs), and Willamette River upstream background concentrations from the Portland Harbor RI/FS (EPA, 2016).
- Compare all Project area groundwater analytical results to DEQ RBCs and any municipal sewer or discharge regulations and provide management recommendations; and
- Update the CSM and evaluate the need for follow on action.



4.0 Site Investigation Activities

4.1 Preparatory Activities

The following preparatory activities were completed before conducting the site investigation activities.

4.1.1 Site Health and Safety Plan

A site-specific HASP was prepared for the site investigation activities and provided as an attachment to the Work Plan. The HASP was prepared in general accordance with the Occupational Safety and Health Administration (OSHA) and the Oregon Administrative Rules (OAR). A copy of the HASP was maintained on-site during the field activities. Prior to performing any on-site work, the CB team prepared a Job Safety Analysis (JSA) guiding task-specific activities, risks, and safety protocols for each task. All CB field staff supporting the Project were required to review and follow the HASP and JSAs. A daily meeting was conducted with the field crew and drilling subcontractor prior to initiating work.

4.1.2 Site Access and Underground Utility Location

Prior to drilling activities, SW, the geotechnical subcontractor for the Project, coordinated the site access to the sampling areas and managed utility clearance.

4.2 Soil Boring Methods and Procedures

The CB team completed hazardous materials sampling and oversight of geotechnical borings at 15 upland and 12 in-water borings between September 9, 2021, and October 25, 2021. During that time, representatives of the CB team were on-site during geotechnical explorations conducted by SW to collect soil, sediment, and groundwater samples. As a subcontractor to SW, Western States Soil Conservation (Western States) performed the geotechnical drilling services. The in-water geotechnical borings were advanced from a barge in the river using a sonic drilling rig. Western States generally used a hydraulic push or hollow-stem auger rig to advance upland borings to the depth of environmental sampling. Upland borings B-21, B-22, B-23, B-32 and B-33 were completed with a sonic drill rig due to site constraints. Attempts were made to vacuum clear the majority of upland borings to 10 feet bgs.

CB team field personnel collected samples at a minimum 5-foot interval from each boring. The approximate locations of the explorations are included on Figures 2, 3 and 4 of this report, and on the SW Explorations Plan in Appendix A. Soil boring logs are included in Appendix B, and a photo log containing photographs of drilling and sampling activities is included as Appendix C.

Sediment and soils recovered from the borings were field screened for the presence of VOCs using a handheld photoionization detector (PID) and observations were made with respect to odor, discoloration, sheen, presence of fill materials, etc., that may have indicated the presence of soil contamination. Soil cores were extracted, and soil lithology and conditions were logged in general accordance with ASTM 2487/2488.



The split spoons were decontaminated between each use by cleaning with a solution of phosphate-free soap and triple rinsed with distilled water to avoid cross-contamination.

If field screening indicating a contaminated zone of soils and/or fill material was encountered, samples were collected from “worst case” contaminated soils and/or fill material and soils and/or fill material below the contaminated zone that did not exhibit contamination.

Groundwater samples were collected with a disposable bailer or a peristaltic pump and disposable tubing. Dissolved metals groundwater samples were field filtered using a 0.45- micron filter.

Soil, fill materials, sediment and groundwater samples were placed into clean laboratory-supplied containers. Field personnel donned clean nitrile gloves prior to collecting each sample. Samples were labeled and maintained in a cooler of ice at 4 ± 2 degrees Celsius ($^{\circ}\text{C}$) and transported to the laboratory under Chain-of-Custody protocols.

All explorations were abandoned in accordance with OWRD regulations after sampling.

4.3 Analyses Performed

A total of 23 soil and/or fill, 21 sediment, and 18 groundwater samples were collected and analyzed for the Project. Included in the analyses was the soil sample collected from the zone containing free product (heavy oil) in boring B-33 (please see Section 5.1.1).

Upland soil and/or fill material samples and groundwater samples were submitted to Apex Labs of Tigard, Oregon, for laboratory analysis. The samples were analyzed for the following compounds at a sensitivity that allows for comparison to DEQ Clean Fill Criteria and RBCs:

- Gasoline-range petroleum hydrocarbons by NWTPH-Gx Method;
- Diesel- and residual-range petroleum hydrocarbons by NWTPH-Dx Method;
- VOCs by EPA Method 8260B;
- PAHs by EPA Method 8270 SIM; and
- Total RCRA 8 metals plus total antimony, copper, and zinc for soil and dissolved RCRA 8 metals for groundwater. The metals will be analyzed by EPA Methods 200/6020A/7471B.

In-water sediment, fill material, and groundwater samples collected were submitted under Chain-of-Custody protocols to ALS in Kelso, Washington, for laboratory analysis. The samples were analyzed for the following compounds at a sensitivity that allows for comparison to DEQ Clean Fill Criteria and RBCs:

- Gasoline-range hydrocarbons using Method NWTPH-Gx;
- Diesel- and residual oil-range hydrocarbons using Method NWTPH-Dx;
- VOCs using EPA Method 8260B;
- PAHs using EPA Method 8270D-SIM;
- Low-level SVOCs using EPA Method 8270D;



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- Low-level organochlorine pesticides using EPA Method 8081B;
 - PCBs using EPA Method 8082A;
 - Chlorinated herbicides using EPA Method 8151A;
 - PCDDs and PCDFs by EPA Method 8290A;
 - Butyltins; and
 - RCRA 8 metals using EPA Methods 200/6020A/7471B.

Laboratory analytical reports are included in Appendix D.

4.4 Investigation-Derived Waste

IDW consisted of decontamination/purge water and soil cuttings (including cuttings from vacuum utility clearance activities). Soil and water IDW were containerized in properly labeled ODOT-approved drums pending receipt of analytical results and waste profiling for disposal. Sampling materials and personal protective equipment (PPE) were disposed of as solid waste.

4.4.1 Environmental Monitoring IDW

A total of 26 drums were generated during hollow stem and direct-push drilling, as well as during vacuum clearance. Drum contents included drill cuttings and water used when vacuuming boring locations. Twelve of the drums containing vacuumed soil were directly characterized for disposal, while the results of field samples collected were used for characterizing the remaining drums. IDW soil analytical results are summarized in Table 6. The drums were characterized as non-hazardous waste. The Project drum IDW log is presented in Appendix E.

All drums were stored at the Multnomah County maintenance facility at 1620 SE 190th Ave pending disposal. The drums were disposed by WasteXpress on January 21, 2022. The non-hazardous waste manifests are presented in Appendix E.

4.4.2 Geotechnical Drilling IDW

A total of 114 drums were generated during geotechnical drilling of borings that did not have environmental oversight and of borings that did have environmental oversight from surface to 25 feet bgs. Drum contents included bentonite slurry, soil cuttings, and decontamination water. A drum log and supporting laboratory reports were provided by SW and are presented in Appendix F. No evidence of gross contamination was reported by SW. Environmental results from samples collected when using mud rotary drilling methods should be used with caution due to potential cross-contamination from drilling mud.

Geotechnical drilling drums were also stored at the Multnomah County maintenance facility at 1620 SE 190th Ave pending disposal. The drums were disposed by WasteXpress on October 28, 2021 (16 drums), December 8, 2021 (30 drums), and January 21, 2022 (68 drums). Non-hazardous waste manifests provided by SW are presented in Appendix F.



5.0 Site Investigation Results

5.1 Field Observations

Soil boring logs are included in Appendix B. Photographs taken during drilling activities are included in Appendix C.

5.1.1 Upland Borings

Field observations during environmental monitoring of the upper 25 feet from borings on both the east and west sides of the river indicate that fill materials are present from the surface to depths of 10 to over 25 feet bgs. At boring locations where the upper 10 to 15 feet were vacuum cleared for utilities, those soils were not field screened because they were within the vacuum truck tank and were later placed directly into drums for disposal (see *Section 4.4*). Fill materials included silts, sands and silty gravels with brick and wood pieces. Native materials encountered in upland borings consisted primarily of sand and silt, with occasional gravel. Free petroleum product was present in boring B-33 at a depth of 15 feet bgs on the east side of the river, within the area historically occupied by a lumber mill. Fill was present to a depth of 22.5 feet bgs at this location. No odor or staining were observed deeper than 25 feet. Free product was not encountered in any of the surrounding borings B-16, B-17, B-15 or B-32, or any other boring location. A slight petroleum odor was noted in boring B-18, approximately 200 feet to the east, at a depth of 12 to 16.5 feet bgs. No elevated PID readings were noted at this location. An organic sheen and odor were noted at boring B-8 near the west bank of the river; however elevated PID readings were not observed.

No other elevated PID readings or visual or olfactory evidence of contamination were noted in any of the upland borings. Groundwater was present in 8 of the upland borings, at depths ranging from 10 to over 25 feet bgs. No sheen or other evidence of contamination was noted during groundwater sample collection.

5.1.2 In-Water Borings

No suspect fill materials were encountered during barge drilling. Sediments observed included primarily fine-to-coarse sand with varying amounts of silt and gravel. No sheen or odors were noted during drilling. One slightly elevated PID reading of 7.5 ppm was noted at a depth of 2 feet below the sediment surface in boring B-39. Groundwater was encountered in each of the borings and groundwater samples were collected from 10 of the borings. No sheen or other evidence of contamination was noted during groundwater sample collection.

5.2 Analytical Results

The analytical results of samples collected during the investigation are summarized in Tables 1 through 8 and on Figures 2 through 4. Laboratory analytical reports are included in Appendix D. The soil, fill and sediment results were screened against DEQ Clean Fill Criteria for soil to evaluate the material for re-use or disposal. Soil, fill, sediment, and groundwater analytical results were also compared to DEQ's RBCs for the



Construction and Excavation Worker Direct Contact scenarios to evaluate potential future worker safety concerns. In addition, because of the Project location upstream of the Portland Harbor Superfund Site, sediment data were also compared to Portland Harbor ROD CULs, Freshwater Benthic Toxicity Screening Levels, and Willamette River Upstream Background Concentrations.

Groundwater concentrations were screened against DEQ RBCs for Groundwater in Excavations – Construction/Excavation Worker scenario and the daily discharge maximum local limit (City of Portland Bureau of Environmental Services Sanitary Discharge and Pretreatment Program Administrative Rules (ENB - 4.03), June 2016). A discussion of the soil, sediment, and groundwater results is provided below.

5.2.1 Soil and Fill Analytical Results

Analytical results of soil and fill samples collected from borings B-5, B-6, B-7, B-8, B-21, B-22, and B-23 on the west bank of the river indicate that one or more constituents was detected at a level exceeding Clean Fill Criteria in 5 of the 7 borings (Figure 2 and Tables 1, 2 and 7). Arsenic was detected at levels exceeding the Clean Fill Criteria of 8.8 mg/kg in samples collected from borings B-5, B-21, and B-22, ranging from 9.38 to 11.4 mg/kg. Lead was also detected at a level exceeding Clean Fill Criteria of 28 mg/kg at 34.9 mg/kg in the sample collected from boring B-21 from 0-10 feet bgs. The concentration of copper detected in the sample collected from 6-10 feet bgs from boring B-23 (39.6 mg/kg) exceeded the Clean Fill Criteria of 34 mg/kg.

Concentrations of petroleum constituents benzene, naphthalene, and several PAHs detected in boring B-8 from both the 8-10 foot bgs interval and the 15-21.5 foot bgs interval exceeded their respective Clean Fill Criteria. No concentrations were detected in any of the samples collected from the west bank of the river that exceeded DEQ RBCs.

Seven soil borings (B-15, B-16, B-17, B-18, B-19, B-32, and B-33) were completed on the east bank of the river (Figure 3 and Tables 1, 2 and 7). Analytical results of soil samples collected indicate that one or more constituents was detected at a level exceeding Clean Fill Criteria in 4 of the 7 borings. Lead was detected at concentrations exceeding the Clean Fill Criteria of 28 mg/kg in the samples collected from borings B-16 (340 mg/kg in the 0-10 feet bgs sample and 34.1 mg/kg in the 10-20 feet bgs sample), B-17 (32.4 mg/kg in the 0-10 feet bgs sample and 110 mg/kg in the 10-25 feet bgs sample), and boring B-18 (106 mg/kg in the 0-10 feet bgs sample and 245 mg/kg in the 10-26 feet bgs sample). No lead concentrations exceeded the direct contact RBCs for the Construction or Excavation Worker scenarios; however, because lead concentrations in 4 samples exceeded 100 mg/kg, those samples were submitted for additional lead analysis by the TCLP. This is required under 40 CFR 261.24, which states that soil lead concentrations over 100 mg/kg may be hazardous and require additional testing by the TCLP procedure to determine whether they are classified as hazardous or non-hazardous for disposal. TCLP results greater than 5 mg/L lead are designated hazardous for disposal purposes. Results of the samples submitted for TCLP analysis were all less than 5 mg/L and indicate that the material would not require disposal as hazardous waste.

Mercury was also detected at a concentration of 7.11 mg/kg in the soil sample collected from boring B-18 from the 10-26 feet bgs interval. This concentration exceeds the limit of 4 mg/kg stated in 40 CFR 261.24, over which additional testing by TCLP is required to determine whether the material must be designated



hazardous for disposal purposes. TCLP results greater than 0.2 mg/L for mercury are designated as hazardous for disposal purposes. The TCLP result for the sample collected from B-18 from the 10-26 feet bgs interval was non-detect, with a detection limit well below 0.2 mg/L at 0.007 mg/L. Therefore, the material is non-hazardous for disposal purposes.

Other metals and PAHs were also detected at levels exceeding Clean Fill Criteria in the samples collected from borings B-16, B-17 and B-18 (Figure 3). The only upland soil sample containing concentrations of any analyzed constituent that exceeded the direct contact RBCs was the soil sample collected from boring B-33 from 15 to 16.5 feet bgs. This sample interval was observed to have free petroleum product during drilling, and laboratory analytical results of diesel and residual-range organics in the sample both exceed the Construction Worker direct contact RBC of 4,600 mg/kg, at 27,400 mg/kg and 26,000 mg/kg, respectively.

5.2.2 Sediment Analytical Results

Twelve borings (B-24, B-25, B-26, B-28, B-29, B-30, B-31, B-34, B-35, B-36, B-37, and B-39) were completed within the Willamette River (Figure 4 and Tables 4 and 8). Analytical results of sediment samples collected indicate that one or more constituents was detected at a level exceeding Clean Fill Criteria in 10 of the 12 borings. The most common analytes detected at concentrations exceeding Clean Fill Criteria were arsenic, mercury, lead, phthalates, dibenzofuran, PAHs and PCBs. No analytes were detected at concentrations exceeding DEQ RBCs for the Construction or Excavation Worker direct contact scenarios.

5.2.3 Groundwater Analytical Results

Groundwater samples were collected from 8 upland borings (Table 3) and 10 in-water borings (Table 5). No groundwater constituents analyzed were detected at concentrations exceeding DEQ RBCs for groundwater in excavations or the daily discharge maximum local limit (City of Portland Bureau of Environmental Services Sanitary Discharge and Pretreatment Program Administrative Rules (ENB - 4.03), June 2016). The concentrations of diesel-range organics detected in all in-water samples collected exceeded the PH ROD CUL of 2.6 µg/L, ranging from 120 to 990 µg/L.

6.0 Data Quality Evaluation

Laboratory data quality was reviewed to determine usability for the preliminary characterization of sediment, soil, and groundwater prior to construction activities for the Project. The data quality review included evaluation of the laboratory data packages provided by Apex Labs and ALS for the following parameters.

- Chain-of-custody and sample handling procedures.
- Appropriate analytical preparation and quantitation methods to address data quality objectives.
- Holding time violations.
- Detection limit exceedances of screening criteria.
- Method blank detections.



-
- Laboratory quality assurance and quality control (QA/QC) samples including laboratory control samples and their duplicates (LCS/LCSD), matrix spike and their duplicates (MS/MSDs), and laboratory duplicates.
 - Surrogate recoveries.

Qualifiers were used to identify data that is estimated due to deficiencies in data quality. A summary of usability is provided below.

6.1 Soil and Groundwater (Upland Borings)

Data that were determined to be outside of quality control limits are discussed below. Overall data quality for soil results was acceptable for the intended use.

- Samples were generally received by the laboratory at $4\pm 2^{\circ}\text{C}$ with the exception of laboratory report A110192. Samples were received on ice and within three hours of sampling; therefore, sample data is still acceptable for use and results were not flagged.
- For VOCs, the compounds chloroethane, 1,2-dibromo-3-chloropropane, dichlorodifluoromethane, naphthalene, styrene, and 1,2,4-trichlorobenzene were recovered below the lower control limit for analytical batch LCS and/or LCSDs. These compounds were not detected in the affected soil samples and results are 'UJ' flagged as estimated non-detections at the reported method detection limit (MDL).
- The surrogate recovery for gasoline-range hydrocarbons for soil samples B-33 at 15-16.5 and 10-26.5 feet bgs was above the upper control limit. Results are 'J+' flagged as estimated values that may be biased high.
- The surrogate recoveries for residual-range hydrocarbons and PAHs for groundwater sample B-7 were below the lower control limit. Detected results are 'J-' flagged as estimated values that may be biased low and not detected results are 'UJ' flagged as estimated non-detections at the reported MDL.

6.2 Sediment

Sediment data was generally acceptable but did include numerous holding time violations, surrogate failures, method blank samples with contamination, and laboratory QA/QC samples outside of control limits. A summary of data quality issues for sediment data are provided below.

- Sediment samples for boring B-30 were received slightly above 6°C but were chilled on ice immediately after sampling. The sample receiving temperature is not suspected to significantly influence results and no data was flagged.
- Samples were extracted or analyzed out of hold for VOCs for boring B-24, chlorinated pesticides and herbicides for boring B-25, and butyltins for sediment samples B-24 at 10-20 feet bgs, B-26 at 0-10



and 10-25 feet bgs, and B-25 at 0-10 and 10-25 feet bgs. These results should be considered estimated.

- Method blank samples with target analyte detections that are more than ten times the concentration found in the associated sediment sample indicate that laboratory contamination may have significantly contributed to the concentration found in sediment. These results are 'J+' flagged as estimated values that may be biased high.
- LCS/LCSD and MS/MSD recoveries and RPDs were reviewed, and associated sediment data were flagged as appropriate.
- Surrogate recoveries were reviewed and sediment samples with exceedances of control limits were flagged as appropriate.
- Target analyte identification for some detected dioxin/furans, chlorinated pesticides, and chlorinated herbicides could not be confirmed using method criteria. These results are 'NJ' flagged as analytes that may or may not be present in the sediment sample; however, these are included as detections for the purposes of being protective of human health and the environment.

6.3 Groundwater (In-Water Borings)

Laboratory data quality for groundwater at in-water boring locations was generally acceptable but did include holding time violations, surrogate failures, method blank samples with contamination, and laboratory QA/QC samples that were outside of control limits. A summary of data quality issues is provided below.

- Groundwater sample B-30 was received slightly above 6°C but was chilled on ice immediately after sampling. The sample receiving temperature is not suspected to significantly influence results and no data was flagged.
- Samples were extracted or analyzed out of hold for PAHs for B-31, chlorinated pesticides for B-36, B-39, B-37, B-34, and B-29 are highlighted as gross exceedances since samples were extracted more than 12 weeks outside of the 7-day holding time. All results associated with out of hold extraction or analysis are not considered representative of field conditions and are 'J' flagged for detected values and 'UJ' flagged for not detected values..
- Method blank samples with target analyte detections that are more than ten times the concentration found in the associated groundwater sample indicate that laboratory contamination may have significantly contributed to the concentration found in sediment. These results are 'J+' flagged as estimated values that may be biased high.
- LCS/LCSD and MS/MSD recoveries and RPDs were reviewed, and associated groundwater data were flagged as appropriate.
- Surrogate recoveries were reviewed and groundwater samples with exceedances of control limits were flagged as appropriate.
- Target analyte identification for some detected dioxin/furans, chlorinated pesticides, and chlorinated herbicides could not be confirmed using method criteria. These results are 'NJ' flagged as analytes that may or may not be present in the groundwater sample; however, these are included as detections for the purposes of being protective of human health and the environment.



Overall data quality was acceptable for use for this Project. Data that is estimated or may be biased high or low is appropriately flagged in the tables provided in this report. However, holding time exceedances for groundwater samples from in-water borings B-36, B-39, B-37, B-34, and B-29 for chlorinated pesticides are considered gross exceedances and may not be representative of actual field conditions. Detections of chlorinated pesticides for in-water borings that were extracted and analyzed within the recommended holding time did have trace detections of chlorinated pesticides, but concentrations did not exceed the applicable RBC. Sediment from in-water borings B-36, B-39, B-37, B-34, and B-29 also did not exceed applicable RBCs, Clean Fill Criteria, Hazardous Waste Toxicity Characteristic, Freshwater Benthic Toxicity Screening Level, Portland Harbor ROD CULs, or Willamette River Upstream Background Concentrations. Based on chlorinated pesticide data from groundwater from in-water borings that was within the holding time and the associated sediment data for the affected borings, it is likely that chlorinated pesticides are not a risk to human health or the environment and the holding time exceedance is not a data gap.

7.0 Conclusions and Recommendations

7.1 Soil Recommendations

No concentrations of COCs were detected at concentrations exceeding Construction or Excavation Worker RBCs in the samples collected from the west end of the Burnside Bridge. Several of the soil samples collected from the west end of the Bridge contained metals and petroleum constituents at concentrations exceeding Clean Fill Criteria; however, the factor of exceedance in many cases was less than an order of magnitude. Samples collected from bulk spoils material at the time of construction may meet Clean Fill Criteria.

Lead was detected at concentrations exceeding the Clean Fill Criteria in the samples collected from borings B-16, B-17, and boring B-18 on the east side of the bridge. No lead concentrations exceeded the direct contact RBCs for the Construction or Excavation Worker scenarios; however, because lead concentrations in 4 samples exceeded 100 mg/kg, those samples were submitted for additional lead analysis TCLP. Results of the samples submitted for TCLP analysis were all less than 5 mg/L and indicate that the material would not require disposal as hazardous waste. Soils in this area will need to be disposed of as special waste.

The only upland soil sample containing concentrations of any analyzed constituent that exceeded the direct contact RBCs was the soil sample collected from boring B-33 from 15 to 16.5 feet bgs. This sample interval was observed to have free petroleum product during drilling, and laboratory analytical results of diesel and residual-range organics in the sample both exceed the Construction Worker direct contact RBC of 4,600 mg/kg, at 27,400 mg/kg and 26,000 mg/kg, respectively. Soils from this area will require special management, including worker safety precautions, and should be segregated and managed separately for disposal purposes. A Contaminated Media Management Plan is recommended for soils on the eastern end of the bridge.



7.2 Groundwater Recommendations

No groundwater concentrations of COCs exceeded RBCs for groundwater in excavations or daily discharge maximum local limits for the City of Portland in any of the groundwater samples collected from upland or in-water borings; however, no groundwater sample was collected from boring B-33, where free petroleum product was observed. There does not appear to be a discharge limit for diesel-range organics imposed by the City of Portland, nor is there an RBC established for diesel-range organics for the groundwater in an excavation exposure scenario. If dewatering is necessary in this area, groundwater samples from the purged water should be collected to determine appropriate disposal options.

7.3 Sediment Recommendations

Analytical results of sediment samples collected indicate that one or more COC was detected at a level exceeding Clean Fill Criteria in 10 of the 12 borings completed within the Willamette River. The most common analytes detected at concentrations exceeding Clean Fill Criteria were arsenic, mercury, lead, phthalates, dibenzofuran, PAHs and PCBs. No analytes were detected at concentrations exceeding DEQ RBCs for the Construction or Excavation Worker direct contact scenarios, so there is no excess risk posed to construction or excavation workers due to exposure to sediments during Project construction.

Although in-water boring B-38 was not completed as planned due to site access issues, this does not appear to be a significant data gap. We compared the sediment analytical data for the samples collected from borings B-39 (directly upstream from planned boring B-38), B-37 (west of B-39) and B-36 (downstream of B-37). In general, analyte concentrations in samples collected from the three borings were very similar (Table 4). For TPH, VOCs, PAHs and SVOCs, concentrations detected in samples collected from boring B-37 were generally lower than those collected from boring B-36 from the same depth interval (i.e., comparing the 0-10 feet composite samples and the 10-plus feet below surface samples separately), and concentrations detected in the samples collected from borings B-36 and B-39 were the most similar. Conversely, concentrations of metals, dioxins/furans and PCBs were generally higher in the samples collected from boring B-37 than in those collected from borings B-36 or B-39. PCBs were only detected in the sample collected from boring B-37 from 0-10 feet below the sediment interface. The concentrations of butyltins, organochlorine pesticides and chlorinated herbicides were all similar between the sample locations.

7.3.1 Sediment Disposal

There are two substantive differences between sediments and soil when it comes to evaluating disposal:

- Under the Solid Waste rules, there is an exemption for soil and soil-like materials. Soil can be used as fill and there is a presumption that it is not solid waste (this is the basis of DEQ's Clean Fill determination guidance). With dredged sediments; however, DEQ presumes that dredged sediments are solid waste until proven otherwise. There are multiple COCs exceeding Clean Fill Criteria with maximum exceedance ratios up to 30 (concentration detected/Clean Fill Criteria = exceedance ratio). Among the average concentrations for COCs with at least one exceedance, there are five COCs that the average concentration exceeds the Clean Fill Criteria. The ratio of the average of these



concentrations to the Clean Fill Criteria for each is as follows: MCPA (6), MCPP (5), dibenzofuran (3), dioxins/furans TEQ (2), and BEHP (1.4).

Based on the above calculations, it appears the material could potentially be used as Clean Fill, especially if the material will be mixed with a large quantity of deeper, less-impacted material by the time it reaches its end use. For COCs that exceed Clean Fill Criteria, the proposed use for the material and the basis for the associated Clean Fill numbers will need to be reviewed to ensure the material is not used in a manner that could result in an exposure to a critical receptor. For example, if the basis for the Clean Fill Criteria for a particular COC is residential human health, as long as the material is not used for fill in residential setting, that COC would not be a concern.

- The other substantial difference between soil and sediment disposal considerations is the need for dewatering. Prior to transport (whether to landfill or for re-use as fill), the sediments will need to be dewatered. The water would require appropriate handling, testing, and/or treatment as needed per requirements of the dredging permit.

7.3.2 Portland Harbor Impact Discussion

Based on the following, disturbance of sediment during construction at the Project Site should have no substantive impact on Portland Harbor.

- The site is not within Portland Harbor.
- There was only one Remedial Action Level (RAL)¹ exceedance (PCBs detected at a concentration of 0.079 mg/kg in the sample collected from boring B-34 from 0-10 feet bgs, which slightly exceeds the RAL of 0.075 mg/kg). The exceedance was detected in the sample collected from boring B-34 which is not located near a bridge pier. All of the COCs in samples collected from borings completed near piers are below RALs.
- The primary concern for COCs detected in sediment would be related to suspended solid migration from the construction work. Loss of sediment during construction will be controlled by permit requirements, so residuals escaping downriver will be limited. This would be best reflected by average concentrations. Only four COCs had average concentrations above the CUL, and three of those were only slightly above (arsenic; 2,3,7,8-TCDF and total PCBs all had exceedance ratios of 1.1). The fourth was dieldrin where the average exceeded the CUL by 6 times (a conservative estimate based on calculating the average using the detection limits – the exceedance factor is closer to 3 using ½ detection limit).
- The CULs won't be achieved in Portland Harbor for decades of natural recovery. Therefore, minor impacts now would have no real impact on achieving CULs eventually.
- There would be significant dispersion of the limited residuals from the construction, so impacts in Portland Harbor would be negligible.

¹ The RAL is the concentration that requires active remediation in PH. Concentrations below that value will achieve cleanup via natural recovery.



7.3.3 Bridge Design Potential for Scouring

We understand that bridge components that may be evaluated during the design phase for the Project may result in sediment scour. The COC concentrations detected within the Project area are generally much lower than those detected within the Portland Harbor Superfund Site. Given that most of Portland Harbor will achieve CULs only after decades of natural recovery, chemical impacts from the bridge scour to downstream sediments would likely be negligible. If a specific design will result in sediment scour, we recommend environmental sampling in the expected scour zone to characterize the sediments that would get scoured.

7.3.4 Sediment Dewatering Additional Considerations

There are a number of COCs that were detected in groundwater samples collected from borings in the river that exceed Portland Harbor surface water to groundwater CULs:

<u>COC</u>	<u>Exceedance Factor</u>
cPAHs	3,500
BEHP	5
Dioxin TEQ	40,000
Dissolved lead	5
Chlordanes	15
DDT	300
MCPP	2

Some of these CULs are based on long-term human cancer risk (e.g., cPAHs, dioxins, DDT) so are not directly applicable to discharge events. Additionally, these same COCs are likely associated with suspended solids so would be mostly removed by treatment of turbidity. Although it is unlikely that dewatering discharge to the river would be permitted, and it is expected the Project would be designed to discharge to the sewer, it is unlikely that an accidental discharge to the river would have any long-term impact.

8.0 References

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Tables

Table 1
Soil Analytical Results
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-17 0-10C	B-17 10-25C	B-18 0-10C	B-18 10-26C	B-16 0-10 C	B-16 10-20 C	B-08 0-10C	B-19 10-25C	B33 7.5-9	B33 15-16.5	B33 10-26.5	B-32 10-15	B-15 0-10C	B-15 10-25C	B7(10-26.5)C	B8 (15-21.5)C	B-6 10-25C	B-05 10-25 C	B-23 6-10	B-23 20-25	B21C(0-10)	B21C(10-25)	B-22C 10-25	Oregon DEQ Clean Fill Criteria	Maximum Concentration for TCLP	Oregon DEQ RBCs			
Boring ID:	B-17		B-18		B-16		B-08	B-19	B-33			B-32	B-15		B-7	B-8	B-6	B-5	B-23		B-21		B-22			Soil Ingestion, Dermal Contact, and Inhalation	Excavation		
Sample Type:	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Discrete	Discrete	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite					Soil Ingestion, Dermal Contact, and Inhalation	Excavation
Sample Depth (feet bgs):	0-10	10-26	0-10	10-26	0-10	10-20	0-10	10-25	7.5-9	15-16.5	10-26.5	10-15	0-10	10-25	10-26.5	15-21.5	10-25	10-25	6-10	20-25	0-10	10-25	10-25						
Collection Date:	8/23/2021	8/23/2021	8/23/2021	8/23/2021	8/27/2021	8/27/2021	8/30/2021	9/7/2021	9/1/2021	9/1/2021	9/1/2021	9/8/2021	9/13/2021	9/13/2021	9/16/2021	9/20/2021	9/22/2021	9/27/2021	11/4/2021	11/4/2021	11/8/2021	11/8/2021	11/8/2021						
Total Petroleum Hydrocarbons (TPH) in mg/kg																													
Gasoline Range Organics	3.49 U	4.43 U	3.95 U	5.67 J	3.71 U	3.68 U	2.80 U	2.63 U	3.57 U	353 J+	63.7 J+	4.78 U	3.21 U	2.91 U	4.02 U	3.21 U	3.98 U	4.06 U	3.57 U	4.15 U	3.86 U	4.04 U	3.99 U	31	--	--	9,700	--	
Diesel Range Organics	12.2 U	13.3 U	66.0 U	146 U	12.4 U	11.5 U	10.7 U	10.2 U	12.6 U	27,400 J	2,310 J	14.3 U	10.9 U	10.3 U	12.9 U	11.1 U	13.3 U	12.8 U	12.3 U	13.6 U	12.8 U	13.2 U	13.5 U	1,100	--	--	4,600	--	
Residual Range Organics	35.2 J	51.3 J	361	1,760	31.8 J	184	290 J+	20.4 U	282	26,000 J	3,370 J	28.5 U	21.7 U	74.7	25.8 U	67.7 J	26.6 U	25.5 U	190	27.2 U	25.7 U	26.4 U	27.0 U	1,100	--	--	4,600	--	
Volatile Organic Compounds (VOCs) in mg/kg																													
Acetone	0.699 U	0.887 U	0.790 U	0.997 U	0.743 U	0.735 U	0.560 U	0.526 U	0.713 U	0.697 U	0.764 U	0.956 U	0.641 U	0.582 U	0.803 U	0.643 U	0.796 U	0.811 U	0.714 U	0.831 U	0.772 U	0.808 U	0.799 U	1.2	--	--	--	--	
Acrylonitrile	0.0699 U	0.0887 U	0.0790 U	0.100 U	0.0743 U	0.0735 U	0.0560 U	0.0526 U	0.0713 U	0.0697 U	0.0764 U	0.0956 U	0.064 U	0.0582 U	0.0803 U	0.0643 U	0.0796 U	0.0811 U	0.0714 U	0.0831 U	0.0772 U	0.0808 U	0.0799 U	0.00036	--	--	40	1,100	
Benzene	0.00699 U	0.00887 U	0.0079 U	0.0130 J	0.00743 U	0.00735 U	0.00744	0.00526 U	0.00713 U	0.00697 U	0.00764 U	0.00956 U	0.0064 U	0.00582 U	0.00803 U	0.00502	0.00796 U	0.00811 U	0.00714 U	0.00831 U	0.00772 U	0.00808 U	0.00799 U	0.023	10	380	11,000	--	
Bromobenzene	0.0175 U	0.0222 U	0.0197 U	0.0249 U	0.0186 U	0.0184 U	0.0140 U	0.0131 U	0.0178 U	0.0174 U	0.0191 U	0.0239 U	0.0160 U	0.0146 U	0.0201 U	0.0161 U	0.0199 U	0.0203 U	0.0179 U	0.0208 U	0.0193 U	0.0202 U	0.0200 U	0.0200 U	2.5	--	--	--	--
Bromochloromethane	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0280 U	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	1.3	--	--	--	--	
Bromodichloromethane	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0280 U	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	0.002	--	230	6,300	--	
Bromoform	0.0699 U	0.0887 U	0.0790 U	0.100 U	0.0743 U	0.0735 U	0.0560 U	0.0526 U	0.0713 U	0.0697 U	0.0764 U	0.0956 U	0.064 U	0.0582 U	0.0803 U	0.0643 U	0.0796 U	0.0811 U	0.0714 U	0.0831 U	0.0772 U	0.0808 U	0.160 UJ	0.046	--	2,700	74,000	--	
Bromomethane	0.699 U	0.887 U	0.790 U	0.997 U	0.743 U	0.735 U	0.560 U	0.526 U	0.713 U	0.697 U	0.764 U	0.956 U	0.641 U	0.582 U	0.803 U	0.643 U	0.796 U	0.811 U	0.714 U	0.831 U	0.772 U	0.808 U	0.799 U	0.083	--	370	10,000	--	
2-Butanone (MEK)	0.349 U	0.443 U	0.395 U	0.499 U	0.371 U	0.368 U	0.280 U	0.263 U	0.357 U	0.348 U	0.382 U	0.478 U	0.321 U	0.291 U	0.402 U	0.321 U	0.398 U	0.406 U	0.357 U	0.415 U	0.386 U	0.404 U	0.399 U	72	4,000	--	--	--	
n-Butylbenzene	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0280 U	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	190	--	--	--	--	
sec-Butylbenzene	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0280 U	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	350	--	--	--	--	
tert-Butylbenzene	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0280 U	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	96	--	--	--	--	
Carbon disulfide	0.349 U	0.443 U	0.395 U	0.499 U	0.371 U	0.368 U	0.280 U	0.263 U	0.357 U	0.348 U	0.382 U	0.478 U	0.321 U	0.291 U	0.402 U	0.321 U	0.398 U	0.406 U	0.357 U	0.415 U	0.386 U	0.404 U	0.399 U	0.81	--	--	--	--	
Carbon Tetrachloride	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0280 U	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	0.013	10	320	8,900	--	
Chlorobenzene	0.0175 U	0.0222 U	0.0197 U	0.0249 U	0.0186 U	0.0184 U	0.0140 U	0.0131 U	0.0178 U	0.0174 U	0.0191 U	0.0239 U	0.0160 U	0.0146 U	0.0201 U	0.0161 U	0.0199 U	0.0203 U	0.0179 U	0.0208 U	0.0193 U	0.0202 U	0.0200 U	2.4	2,000	4,700	130,000	--	
Chloroethane	0.699 UJ	0.887 UJ	0.790 UJ	0.997 UJ	0.743 U	0.735 U	0.560 U	0.526 U	0.713 U	0.697 U	0.764 U	0.956 U	0.641 U	0.582 U	0.803 U	0.643 U	0.796 U	0.811 U	0.714 U	0.831 U	0.772 U	0.808 U	0.799 U	310	--	--	--	--	
Chloroform	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0280 U	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	0.0034	120	410	11,000	--	
Chloromethane	0.175 U	0.222 U	0.197 U	0.249 U	0.186 U	0.184 U	0.140 U	0.131 U	0.178 U	0.174 U	0.191 U	0.239 U	0.160 U	0.146 U	0.201 U	0.161 U	0.199 U	0.203 U	0.179 U	0.208 U	0.193 U	0.202 U	0.200 U	2.2	--	25,000	700,000	--	
2-Chlorotoluene	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0280 U	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	14	--	--	--	--	
4-Chlorotoluene	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0280 U	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	14	--	--	--	--	
Chlorodibromomethane	0.0699 U	0.0887 U	0.0790 U	0.100 U	0.0743 U	0.0735 U	0.0560 U	0.0526 U	0.0713 U	0.0697 U	0.0764 U	0.0956 U	0.064 U	0.0582 U	0.0803 U	0.0643 U	0.0796 U	0.0811 U	0.0714 U	0.0831 U	0.0772 U	0.0808 U	0.0799 U	0.0024	--	210	5,800	--	
1,2-Dibromo-3-Chloropropane	0.175 U	0.222 U	0.197 U	0.249 U	0.186 U	0.184 U	0.140 U	0.263 UJ	0.178 U	0.174 U	0.191 U	0.478 UJ	0.160 U	0.146 U	0.201 U	0.321 UJ	0.199 U	0.203 U	0.179 U	0.208 U	0.386 UJ	0.404 UJ	0.399 UJ	0.0000084	--	--	--	--	
1,2-Dibromoethane	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0280 U	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	0.00012	--	9	250	--	
Dibromomethane	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0280 U	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	0.13	--	--	--	--	
1,2-Dichlorobenzene	0.0175 U	0.0222 U	0.0197 U	0.0249 U	0.0186 U	0.0184 U	0.0140 U	0.0131 U	0.0178 U	0.0174 U	0.0191 U	0.0239 U	0.0160 U	0.0146 U	0.0201 U	0.0161 U	0.0199 U	0.0203 U	0.0179 U	0.0208 U	0.0193 U	0.0202 U	0.0200 U	0.92	--	20,000	560,000	--	
1,3-Dichlorobenzene	0.0175 U	0.0222 U	0.0197 U	0.0249 U	0.0186 U	0.0184 U	0.0140 U	0.0131 U	0.0178 U	0.0174 U	0.0191 U	0.0239 U	0.0160 U	0.0146 U	0.0201 U	0.0161 U	0.0199 U	0.0203 U	0.0179 U	0.0208 U	0.0193 U	0.0202 U	0.0200 U	0.74	--	--	--	--	
1,4-Dichlorobenzene	0.0175 U	0.0222 U	0.0197 U	0.0249 U	0.0186 U	0.0184 U	0.0140 U	0.0131 U	0.0178 U	0.0174 U	0.0191 U	0.0239 U	0.0160 U	0.0146 U	0.0201 U	0.0161 U	0.0199 U	0.0203 U	0.0179 U	0.0208 U	0.0193 U	0.0202 U	0.0200 U	0.057	150	1,300	36,000	--	
Dichlorodifluoromethane	0.0699 U	0.0887 U	0.0790 U	0.100 U	0.0743 U	0.0735 U	0.0560 U	0.0526 U																					

Table 1
Soil Analytical Results
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID: Boring ID:	B-17 0-10C	B-17 10-25C	B-18 0-10C	B-18 10-26C	B-16 0-10 C	B-16 10-20 C	B-08 0-10C	B-19 10-25C	B33 7.5-9	B33 15-16.5	B33 10-26.5	B-32 10-15	B-15 0-10C	B-15 10-25C	B7(10-26.5)C	B8 (15-21.5)C	B-6 10-25C	B-05 10-25 C	B-23 6-10	B-23 20-25	B21C(0-10)	B21C(10-25)	B-22C 10-25	Oregon DEQ Clean Fill Criteria	Maximum Concentration for TCLP	Oregon DEQ RBCs	
	Sample Type: Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Discrete	Discrete	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite			Soil Ingestion, Dermal Contact, and Inhalation	Construction Worker
Sample Depth (feet bgs):	0-10	10-26	0-10	10-26	0-10	10-20	0-10	10-25	7.5-9	15-16.5	10-26.5	10-15	0-10	10-25	10-26.5	15-21.5	10-25	10-25	6-10	20-25	0-10	10-25	10-25				
Collection Date:	8/23/2021	8/23/2021	8/23/2021	8/23/2021	8/27/2021	8/27/2021	8/30/2021	9/7/2021	9/1/2021	9/1/2021	9/1/2021	9/8/2021	9/13/2021	9/13/2021	9/16/2021	9/20/2021	9/22/2021	9/27/2021	11/4/2021	11/4/2021	11/8/2021	11/8/2021	11/8/2021				
VOCs in mg/kg, continued																											
Vinyl Chloride	0.0175 U	0.0222 U	0.0197 U	0.0249 U	0.0186 U	0.0184 U	0.0140 U	0.0131 U	0.0178 U	0.0174 U	0.0191 U	0.0239 U	0.0160 U	0.0146 U	0.0201 U	0.0161 U	0.0199 U	0.0203 U	0.0179 U	0.0208 U	0.0193 U	0.0202 U	0.0200 U	0.00057	4	34	950
m,p-Xylene	0.0349 U	0.0443 U	0.0395 U	0.0499 U	0.0371 U	0.0368 U	0.0582	0.0263 U	0.0357 U	0.0348 U	0.0382 U	0.0478 U	0.0321 U	0.0291 U	0.0402 U	0.0321 U	0.0398 U	0.0406 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	11	--	--	--
o-Xylene	0.0175 U	0.0222 U	0.0197 U	0.0249 U	0.0186 U	0.0184 U	0.0168 J	0.0131 U	0.0178 U	0.0174 U	0.0191 U	0.0239 U	0.0160 U	0.0146 U	0.0201 U	0.0161 U	0.0199 U	0.0203 U	0.0179 U	0.0208 U	0.0193 U	0.0202 U	0.0200 U	1	--	--	--
Xylenes, Total	0.0524 U	0.0665 U	0.119 U	0.1496 U	0.0557 U	0.0552 U	0.0750	0.0394 U	0.0535 U	0.0522 U	0.0573 U	0.0717 U	0.0481 U	0.0437 U	0.0603 U	0.0482 U	0.0597 U	0.0609 U	0.0357 U	0.0415 U	0.0386 U	0.0404 U	0.0399 U	1.4	--	20,000	560,000
Polycyclic Aromatic Hydrocarbons (PAHs) in mg/kg																											
Acenaphthene	0.00610 U	0.0156	0.0641 U	1.27	0.00614 U	0.0233 J	0.239	0.00531 U	0.00631 U	1.55 J	0.257 J	0.00740 U	0.00582 U	0.00526 U	0.00677 U	0.0246	0.00671 U	0.00639 U	0.00595 U	0.00657 U	0.00617 U	0.00668 U	0.00642 U	0.25	--	21,000	590,000
Acenaphthylene	0.00610 U	0.0070 U	0.0641 U	0.382	0.00614 U	0.0233 U	1.09	0.00531 U	0.00631 U	0.427 U	0.134 U	0.00740 U	0.00582 U	0.00526 U	0.00677 U	0.0131	0.00671 U	0.00639 U	0.0140	0.00657 U	0.00617 U	0.00668 U	0.00642 U	120	--	--	--
Anthracene	0.00610 U	0.0538	0.0641 U	1.08	0.00614 U	0.0627	1.51	0.00531 U	0.00631 U	0.427 U	0.134 U	0.00740 U	0.00582 U	0.00650 J	0.00677 U	0.0202	0.00671 U	0.00639 U	0.00595 U	0.00657 U	0.00617 U	0.00668 U	0.00642 U	6.8	--	110,000	--
Benzo(a)anthracene	0.0150	1.29	0.0978 J	1.65	0.0114 J	0.131	4.03	0.00531 U	0.00631 U	0.858 U	0.134 U	0.00753 J	0.00639 J	0.0214	0.00956 J	0.0348	0.00671 U	0.00639 U	0.0277	0.00657 U	0.00617 U	0.00668 U	0.00642 U	0.73	--	170	4,800
Benzo(a)pyrene	0.0163	0.210	0.0810 J	1.03	0.0108 J	0.115	3.58	0.00531 U	0.00631 U	1.28 U	0.134 U	0.00740 U	0.00582 U	0.0286	0.00792 J	0.0396	0.00671 U	0.00639 U	0.0335	0.00657 U	0.00617 U	0.00668 U	0.00642 U	0.11	--	17	490
Benzo(b)fluoranthene	0.0234 J	0.662	0.112 J	1.45	0.0158 J	0.136 J	3.77 J	0.00531 U	0.00631 U	1.28 U	0.134 U	0.00805 J	0.00747 J	0.0346 J	0.00999 J	0.0453 J	0.00671 U	0.00639 U	0.0368	0.00657 U	0.00617 U	0.00668 U	0.00642 U	1.1	--	170	4,900
Benzo(k)fluoranthene	0.0078 J	0.205 J	0.0641 U	0.519 J	0.00614 U	0.0544 J	1.50 J	0.00531 U	0.00631 U	0.642 U	0.134 U	0.00740 U	0.00582 U	0.0119 J	0.00677 U	0.0161 J	0.00671 U	0.00639 U	0.0124 J	0.00657 U	0.00617 U	0.00668 U	0.00642 U	11	--	1,700	49,000
Benzo(g,h,i)perylene	0.0123	0.0610	0.0832 J	0.690	0.0106 J	0.113	1.72	0.00531 U	0.00631 U	0.427 U	0.134 U	0.00740 U	0.00582 U	0.0342	0.00677 U	0.0317	0.00671 U	0.00639 U	0.0252	0.00657 U	0.00617 U	0.00668 U	0.00642 U	25	--	--	--
Chrysene	0.0163	1.06	0.124 J	2.20	0.0145	0.168	3.31	0.00531 U	0.00631 U	1.96 U	0.482 U	0.00740 U	0.00663 J	0.0280	0.00866 J	0.0393	0.00671 U	0.00639 U	0.0300	0.00657 U	0.00617 U	0.00668 U	0.00642 U	3.1	--	17,000	490,000
Dibenz(a,h)anthracene	0.00610 U	0.0202	0.0641 U	0.136 J	0.00614 U	0.0233 U	0.401	0.00531 U	0.00631 U	0.427 U	0.134 U	0.00740 U	0.00582 U	0.00526 U	0.00677 U	0.0057 U	0.00671 U	0.00639 U	0.00595 U	0.00657 U	0.00617 U	0.00668 U	0.00642 U	0.11	--	17	490
Fluoranthene	0.0117 J	3.61	0.197	8.12	0.0253	0.226	7.51	0.00531 U	0.00631 U	0.893 J	0.181 J	0.0123 J	0.00649 J	0.0384	0.00809 J	0.0654	0.00671 U	0.00639 U	0.0386	0.00657 U	0.00617 U	0.00668 U	0.00642 U	10	--	10,000	280,000
Fluorene	0.00610 U	0.0174	0.0641 U	1.50	0.00614 U	0.0233 U	0.853	0.00531 U	0.00721 J	0.427 U	0.134 U	0.00740 U	0.00582 U	0.00561 J	0.00677 U	0.0128	0.00671 U	0.00639 U	0.00595 U	0.00657 U	0.00617 U	0.00668 U	0.00642 U	3.7	--	14,000	390,000
Indeno(1,2,3-cd)pyrene	0.0124	0.0826	0.0703 J	0.631	0.0100 J	0.0904	1.90	0.00531 U	0.00631 U	0.427 U	0.134 U	0.00740 U	0.00582 U	0.0279	0.00705 J	0.0313	0.00671 U	0.00639 U	0.0265	0.00657 U	0.00617 U	0.00668 U	0.00642 U	1.1	--	170	4,900
Naphthalene	0.00610 U	0.0492	0.136	3.92	0.00620 J	0.0363 J	0.581	0.00531 U	0.00631 U	0.858 U	0.134 U	0.0447	0.00582 U	0.0139	0.0279	0.0890	0.00671 U	0.00639 U	0.0103 J	0.00657 U	0.00617 U	0.00668 U	0.00642 U	0.077	--	580	16,000
Phenanthrene	0.00772 J	0.132	0.205	7.68	0.0193	0.308	5.97	0.00531 U	0.0137	1.16 U	0.134 U	0.0174	0.00582 U	0.0342	0.00698 J	0.0806	0.00671 U	0.00639 U	0.0180	0.00657 U	0.00617 U	0.00668 U	0.00642 U	5.5	--	--	--
Pyrene	0.0137	2.99	0.168	6.03	0.0245	0.266	7.06	0.00531 U	0.00631 U	1.29 J	0.284	0.0125 J	0.00923 J	0.0439	0.0107 J	0.0827	0.00671 U	0.00639 U	0.0471	0.00657 U	0.00617 U	0.00668 U	0.00642 U	10	--	7,500	210,000
Metals in mg/kg																											
Antimony	0.621 U	0.711 U	1.13 J	2.92	0.634 U	0.642 U	0.546 U	0.583 U	0.664 U	0.664 U	0.709 U	0.783 U	0.618 U	0.585 U	0.693 U	0.317 U	0.699 U	0.683 U	0.680 U	0.747 U	0.676 U	0.715 U	0.712 U	0.56	--	--	--
Arsenic	7.71	6.98	7.94	5.38	9.40	5.05	1.98	2.49	7.53	3.58	4.91	3.19	6.34	4.20	7.08	3.16	7.98	9.38	7.54	7.20	11.4	8.68	10.2	8.8	100	15	420
Barium	143	231	150	151	181	140	69.9	78.4	150	97.9	345	201	130	93.2 J	138	79.7	163	194	142	157	192	150	179	790	2,000	69,000	--
Cadmium	0.140 J	0.213 J	0.188 J	0.274 J	0.189 J	0.190 J	0.109 U	0.117 U	0.163 J	0.133 U	0.177 J	0.157 U	0.140 J	0.117 U	0.140 J	0.0987 J	0.186 J	0.244 J	0.178 J	0.249 J	0.150 J	0.185 J	0.712 U	0.63	20	350	9700
Chromium	17.5	23.6	21.1	19.9	23.2	20.7	12.9	15.0	19.0	12.9	32.2	24.8	15.4	14.7 J	15.0	12.6	18.1	24.8	19.2	17.8	22.2	16.5	23.7	76	100	530,000	--
Copper	26.2	30.2	42.4	98.1	28.7	31.6	15.9	19.5	25.1	15.7	35.1	28.3	20.4	18.4	21.6	15.7	25.4	30.2	39.6	28.5	26.8	26.1	30.9	34	--	14,000	390,000
Lead	32.4	110	106	245	34.1	8.27	3.50	10.2	2.44	8.29	4.92	13.0	21.1 J	10.0	15.5	9.78	10.9	19.4	11.0	34.9	13.0	14.2	28	100	800	800	
Mercury	0.0497 U	0.215	3.88	7.11	0.0507 U	0.111	0.0437 U	0.0467 U	0.0531 U	0.0531 U	0.0567 U	0.0626 U	0.0494 U	0.0468 U	0.0555 U	0.0410 J	0.0559 U	0.0547 U	0.0926 J	0.0597 U	0.159	0.0572 U	0.0570 U	0.23	4	110	2,900
Selenium	0.912 J	1.08 J	0.793 J	0.791 J	0.634 U	0.642 U	0.546 U	0.617 J	0.664 U	0.664 U	0.709 U	0.783 U	0.618 U	0.585 U	0.693 U	0.317 U	0.699 U	0.683 U	0.680 U	0.747 U	0.676 U	0.715 U	0.712 U	0.71	20	--	--
Silver	0.124 U	0.142 U	0.156 J	0.201 J	0.127 U	0.128 U	0.109 U	0.117 U	0.133 U	0.133 U	0.142 U	0.157 U	0.124 U	0.117 U	0.												

Table 1
Soil Analytical Results
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-17 0-10C	B-17 10-25C	B-18 0-10C	B-18 10-26C	B-16 0-10 C	B-16 10-20 C	B-08 0-10C	B-19 10-25C	B33 7.5-9	B33 15-16.5	B33 10-26.5	B-32 10-15	B-15 0-10C	B-15 10-25C	B7(10-26.5)C	B8 (15-21.5)C	B-6 10-25C	B-05 10-25 C	B-23 6-10	B-23 20-25	B21C(0-10)	B21C(10-25)	B-22C 10-25	Oregon DEQ Clean Fill Criteria	Maximum Concentration for TCLP	Oregon DEQ RBCs		
Boring ID:	B-17		B-18		B-16		B-08	B-19	B-33			B-32	B-15		B-7	B-8	B-6	B-5	B-23		B-21		B-22			Soil Ingestion, Dermal Contact, and Inhalation		
Sample Type:	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Discrete	Discrete	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite			Composite	Composite	Construction
Sample Depth (feet bgs):	0-10	10-26	0-10	10-26	0-10	10-20	0-10	10-25	7.5-9	15-16.5	10-26.5	10-15	0-10	10-25	10-26.5	15-21.5	10-25	10-25	6-10	20-25	0-10	10-25	10-25					
Collection Date:	8/23/2021	8/23/2021	8/23/2021	8/23/2021	8/27/2021	8/27/2021	8/30/2021	9/7/2021	9/1/2021	9/1/2021	9/1/2021	9/8/2021	9/13/2021	9/13/2021	9/16/2021	9/20/2021	9/22/2021	9/27/2021	11/4/2021	11/4/2021	11/8/2021	11/8/2021	11/8/2021			Worker	Worker	
Semi-Volatile Organic Compounds (SVOCs) in mg/kg																												
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	0.858 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.36	--	--	--
2-Methylnaphthalene	--	--	--	--	--	--	--	--	--	0.858 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	--	--	--
Carbazole	--	--	--	--	--	--	--	--	--	0.642 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	79	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--	--	0.427 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.002	--	--	--
2-Chlorophenol	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.39	--	--	--
4-Chloro-3-methylphenol	--	--	--	--	--	--	--	--	--	4.27 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	--	--	--
2,4-Dichlorophenol	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.4	--	--	--
2,4-Dimethylphenol	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	20	--	--	--
2,4-Dinitrophenol	--	--	--	--	--	--	--	--	--	10.7 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.6	--	--	--
4,6-Dinitro-2-methylphenol	--	--	--	--	--	--	--	--	--	10.7 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.67	4000	--	--
3+4-Methylphenol(s)	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	78	4000	--	--
2-Nitrophenol	--	--	--	--	--	--	--	--	--	4.27 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	--	--	--	--	--	--	--	--	--	8.58 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	7	--	--	--
Pentachlorophenol (PCP)	--	--	--	--	--	--	--	--	--	4.27 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.066	2000	--	--
Phenol	--	--	--	--	--	--	--	--	--	0.858 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.79	--	--	--
2,3,4,6-Tetrachlorophenol	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11	--	--	--
2,3,5,6-Tetrachlorophenol	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4	8000	--	--
Nitrobenzene	--	--	--	--	--	--	--	--	--	4.27 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0055	40	--	--
2,4,6-Trichlorophenol	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.4	40	270	7,400
Bis(2-ethylhexyl)phthalate	--	--	--	--	--	--	--	--	--	6.42 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.02	--	1,300	37,000
Butyl benzyl phthalate	--	--	--	--	--	--	--	--	--	4.27 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Diethylphthalate	--	--	--	--	--	--	--	--	--	4.27 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	100	--	--	--
Dimethylphthalate	--	--	--	--	--	--	--	--	--	4.27 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	--	--	--
Di-n-butylphthalate	--	--	--	--	--	--	--	--	--	4.27 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.011	--	--	--
Di-n-octyl phthalate	--	--	--	--	--	--	--	--	--	4.27 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.91	--	--	--
N-Nitrosodimethylamine	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0000016	--	--	--
N-Nitroso-di-n-propylamine	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00094	--	3	74
N-Nitrosodiphenylamine	--	--	--	--	--	--	--	--	--	5.3 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10	--	3,800	110,000
Bis(2-Chloroethoxy) methane	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.78	--	--	--
Bis(2-Chloroethyl) ether	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00019	--	--	--
2,2'-Oxybis(1-Chloropropane)	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	--	--	--	--	--	--	--	--	--	0.427 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.018	2.6	11	320
Hexachlorobutadiene	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.016	10	--	--
Hexachlorocyclopentadiene	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.078	--	--	--
Hexachloroethane	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.022	60	180	5,100
2-Chloronaphthalene	--	--	--	--	--	--	--	--	--	0.427 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	230	--	--	--
1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.2	--	--	--
4-Bromophenyl phenyl ether	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aniline	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.28	--	--	--

Please see notes at end of table.

Table 1
Soil Analytical Results
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-17 0-10C	B-17 10-25C	B-18 0-10C	B-18 10-26C	B-16 0-10 C	B-16 10-20 C	B-08 0-10C	B-19 10-25C	B33 7.5-9	B33 15-16.5	B33 10-26.5	B-32 10-15	B-15 0-10C	B-15 10-25C	B7(10-26.5)C	B8 (15-21.5)C	B-6 10-25C	B-05 10-25 C	B-23 6-10	B-23 20-25	B21C(0-10)	B21C(10-25)	B-22C 10-25	Oregon DEQ Clean Fill Criteria	Maximum Concentration for TCLP	Oregon DEQ RBCs		
Boring ID:	B-17		B-18		B-16		B-08	B-19	B-33			B-32	B-15		B-7	B-8	B-6	B-5	B-23		B-21		B-22			Soil Ingestion, Dermal Contact, and Inhalation		
Sample Type:	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Discrete	Discrete	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite			Composite	Composite	Construction
Sample Depth (feet bgs):	0-10	10-26	0-10	10-26	0-10	10-20	0-10	10-25	7.5-9	15-16.5	10-26.5	10-15	0-10	10-25	10-26.5	15-21.5	10-25	10-25	6-10	20-25	0-10	10-25	10-25					
Collection Date:	8/23/2021	8/23/2021	8/23/2021	8/23/2021	8/27/2021	8/27/2021	8/30/2021	9/7/2021	9/1/2021	9/1/2021	9/1/2021	9/8/2021	9/13/2021	9/13/2021	9/16/2021	9/20/2021	9/22/2021	9/27/2021	11/4/2021	11/4/2021	11/8/2021	11/8/2021	11/8/2021			Worker	Worker	
SVOCs in mg/kg, continued																												
4-Chloroaniline	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0096	--	--	--
2-Nitroaniline	--	--	--	--	--	--	--	--	--	8.58 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.8	--	--	--
3-Nitroaniline	--	--	--	--	--	--	--	--	--	8.58 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	--	--	--
4-Nitroaniline	--	--	--	--	--	--	--	--	--	8.58 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.096	--	--	--
2,4-Dinitrotoluene	--	--	--	--	--	--	--	--	--	4.27 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.019	2.6	--	--
2,6-Dinitrotoluene	--	--	--	--	--	--	--	--	--	4.27 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0089	--	13	350
Benzoic acid	--	--	--	--	--	--	--	--	--	53.6 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	--	--	--
Benzyl alcohol	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	29	--	--	--
Isophorone	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Azobenzene (1,2-DPH)	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.056	--	--	--
Bis(2-Ethylhexyl) adipate	--	--	--	--	--	--	--	--	--	10.7 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	280	--	--	--
3,3'-Dichlorobenzidine	--	--	--	--	--	--	--	--	--	8.58 UJ	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.17	--	--	--
1,2-Dinitrobenzene	--	--	--	--	--	--	--	--	--	10.7 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	--	--
1,3-Dinitrobenzene	--	--	--	--	--	--	--	--	--	10.7 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.072	--	--	--
1,4-Dinitrobenzene	--	--	--	--	--	--	--	--	--	10.7 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.11	--	--	--
Pyridine	--	--	--	--	--	--	--	--	--	2.14 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.41	100	--	--
1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.92	--	20000	560,000
1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.74	--	--	--
1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--	1.07 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.057	150	1,300	36,000
Polychlorinated Biphenyls (PCBs) in mg/kg																												
Aroclor 1016	--	--	--	--	--	--	--	--	--	0.00638 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.1	--	--	--
Aroclor 1221	--	--	--	--	--	--	--	--	--	0.00638 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0048	--	--	--
Aroclor 1232	--	--	--	--	--	--	--	--	--	0.00638 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0048	--	--	--
Aroclor 1242	--	--	--	--	--	--	--	--	--	0.00638 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.041	--	--	--
Aroclor 1248	--	--	--	--	--	--	--	--	--	0.00638 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.0073	--	--	--
Aroclor 1254	--	--	--	--	--	--	--	--	--	0.00638 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.041	--	--	--
Aroclor 1260	--	--	--	--	--	--	--	--	--	0.00638 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.24	--	--	--
Total PCBs	--	--	--	--	--	--	--	--	--	0.00638 U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.23	--	5	140

- Notes:**
1. mg/kg = Milligrams per kilogram.
 2. bgs = Below ground surface.
 3. -- = Value not available.
 4. Bold values indicate the analyte was detected above method detection limits.
 5. Clean Fill Criteria from the Oregon Department of Environmental Quality (DEQ) Clean Fill Determinations (updated June 17, 2019).
 6. Soil Maximum Concentrations for TCLP from 40 CFR 261.24, multiplied by 20 to account for dilution performed during TCLP extraction.
 7. Oregon DEQ RBCs from the Oregon Department of Environmental Quality (DEQ) Risk-Based Concentrations (RBCs) for Individual Chemicals (updated May 2018).
 8. Shaded values indicate the analyte was detected above one or more applicable screening levels.
 9. U = Analyte was not detected above the reported method detection limit.
 10. J = Result is an estimated value.
 11. UJ = Analyte was not detected; however, the reported method detection limit may be inaccurate or imprecise.
 12. J+ = Result is an estimated value that may be biased high.

Table 2
 TCLP Analytical Results
 Geotechnical Drilling Support
 Earthquake Ready Burnside Bridge Project
 Portland, Oregon

Sample ID:	B-17 10-25C	B-18 0-10C	B-18 10-26C	B-16 0-10C	B-7/B-8 VAC	Regulatory Level (40 CFR 261.24)
Boring ID:	B-17	B-18		B-16	B-7/B-8	
Sample Type:	Composite	Composite	Composite	Composite	IDW	
Sample Depth (feet bgs):	10-26	0-10	10-26	0-10	--	
Collection Date:	8/23/2021	8/23/2021	8/23/2021	8/27/2021	12/1/2021	
TCLP Metals in mg/L						
Mercury	--	--	0.00700 U	--	--	0.2
Lead	0.0250 U	0.0732	0.0674	0.409	0.0250 U	5.0

Notes:

1. mg/L = Milligrams per liter.
2. bgs = Below ground surface.
3. -- = Value not available.
4. Bold values indicate the analyte was detected above method detection limits.
5. Red sample IDs indicate that the sample exceeds hazardous waste limits.
6. Shaded values indicate the analyte was detected above one or more applicable screening levels.
7. U = Analyte was not detected above the reported method detection limit.

Table 3
Groundwater Analytical Results
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-17	B-16	B-19	B-32	B-7	B-8	B-6	B-22	Daily Discharge Maximum Local	Oregon DEQ RBCs
Collection Date:	8/23/2021	8/27/2021	9/7/2021	9/8/2021	9/16/2021	9/21/2021	9/22/2021	11/8/2021	Limit	Groundwater in Excavations
Total Petroleum Hydrocarbons (TPH) in µg/L										
Gasoline Range Organics	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	50.0 U	--	14,000
Diesel Range Organics	37.7 U	157 J	47.1 U	78.4 J	38.1 U	106 J	119	43.1 J	--	--
Residual Range Organics	31.8 J	78.4 U	94.1 U	76.9 U	432 J-	81.6 U	583	86.0 U	--	--
Volatile Organic Compounds (VOCs) in µg/L										
Acetone	20.0 U	20.0 U	20.0 U	10.0 U	10.0 U	20.0 U	20.0 U	10.0 U	--	--
Acrylonitrile	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1,000	250
Benzene	0.100 U	0.200 U	0.100 U	0.100 U	0.100 U	0.281	0.100 U	0.315	--	1,800
Bromobenzene	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	--	--
Bromochloromethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
Bromodichloromethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	450
Bromoform	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	14,000
Bromomethane	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	--	1,200
2-Butanone (MEK)	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	--	--
n-Butylbenzene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
sec-Butylbenzene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
tert-Butylbenzene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
Carbon Disulfide	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	--	--
Carbon Tetrachloride	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	1,800
Chlorobenzene	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	200	10,000
Chloroethane	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	--	2,400,000
Chloroform	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	1.30	0.500 U	--	720
Chloromethane	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	--	22,000
2-Chlorotoluene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
4-Chlorotoluene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
Chlorodibromomethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	610
1,2-Dibromo-3-Chloropropane	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	--	--
1,2-Dibromoethane	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	--	27
Dibromomethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
1,2-Dichlorobenzene	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	--	37,000
1,3-Dichlorobenzene	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	--	--
1,4-Dichlorobenzene	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	--	1,500
Dichlorodifluoromethane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
1,1-Dichloroethane	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	--	10,000
1,2-Dichloroethane	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	500	630
1,1-Dichloroethene	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	--	44,000
cis-1,2-Dichloroethene	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	--	18,000
trans-1,2-Dichloroethene	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	--	180,000
1,2-Dichloropropane	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	--	--
1,3-Dichloropropane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
2,2-Dichloropropane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
1,1-Dichloropropene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
cis-1,3-Dichloropropene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
trans-1,3-Dichloropropene	0.500 U	1.00 U	1.00 U	1.00 U	0.500 U	1.00 U	1.00 U	0.500 U	--	--
Ethylbenzene	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	--	4,500
Hexachloro-1,3-Butadiene	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	2.50 U	--	--
2-Hexanone	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	--	--
Isopropylbenzene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	51,000
p-Isopropyltoluene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
Methylene Chloride	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	--	79,000
4-Methyl-2-Pentanone (MIBK)	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	5.00 U	--	--
Methyl tert-Butyl Ether	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	63,000
Naphthalene	4.00 U	1.00 U	1.00 U	1.00 U	2.00 U	2.00 U	2.00 U	2.00 U	--	500
N-Propylbenzene	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	--	--
Styrene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	170,000
1,1,1,2-Tetrachloroethane	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	--	--
1,1,2,2-Tetrachloroethane	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	--	--
Tetrachloroethene	0.200 U	0.200 U	0.224 J	0.200 U	0.450	0.200 U	0.200 U	0.200 U	--	5,600
Toluene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	220,000
1,2,3-Trichlorobenzene	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	--	--
1,2,4-Trichlorobenzene	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	--	--
1,1,1-Trichloroethane	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	--	1,100,000
1,1,2-Trichloroethane	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	--	49
Trichloroethene	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	200	430
Trichlorofluoromethane	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	--	160,000
1,2,3-Trichloropropane	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
1,2,4-Trimethylbenzene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	6,300
1,3,5-Trimethylbenzene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	7,500
Vinyl Chloride	0.200 U	0.200 U	0.200 U	0.500 U	0.200 U	0.200 U	0.200 U	0.200 U	--	960
m,p-Xylene	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	--	--
o-Xylene	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	0.250 U	--	--
Xylenes, Total	0.750 U	0.750 U	0.750 U	0.750 U	0.750 U	0.750 U	0.750 U	0.750 U	--	23,000

Please see notes at end of table.

Table 3
Groundwater Analytical Results
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-17	B-16	B-19	B-32	B-7	B-8	B-6	B-22	Daily Discharge Maximum Local Limit	Oregon DEQ RBCs Groundwater in Excavations
Collection Date:	8/23/2021	8/27/2021	9/7/2021	9/8/2021	9/16/2021	9/21/2021	9/22/2021	11/8/2021		
Polycyclic Aromatic Hydrocarbons (PAHs) in µg/L										
Acenaphthene	0.0190 U	0.0198 U	0.0190 U	0.0190 U	0.0189 UJ	0.0295 J	0.0250 UJ	0.0198 U	--	--
Acenaphthylene	0.0190 U	0.0198 U	0.0190 U	0.0190 U	0.0261 J-	0.0215 U	0.0250 UJ	0.0198 U	--	--
Anthracene	0.0190 U	0.0198 U	0.0190 U	0.0190 U	0.0243 J-	0.0215 U	0.0250 UJ	0.0198 U	--	--
Benzo(a)anthracene	0.0564	0.0198 U	0.0190 U	0.0190 U	0.151 J-	0.0248 J	0.0250 UJ	0.0198 U	--	--
Benzo(a)pyrene	0.0493	0.0198 U	0.0190 U	0.0190 U	0.150 J-	0.0215 U	0.0250 UJ	0.0198 U	--	--
Benzo(b)fluoranthene	0.0613	0.0198 U	0.0190 U	0.0190 U	0.172 J-	0.0215 U	0.0250 UJ	0.0198 U	--	--
Benzo(k)fluoranthene	0.0197 J	0.0198 U	0.0190 U	0.0190 U	0.0654 J-	0.0215 U	0.0250 UJ	0.0198 U	--	--
Benzo(g,h,i)perylene	0.0485	0.0198 U	0.0190 U	0.0190 U	0.0989 J-	0.0215 U	0.0250 UJ	0.0198 U	--	--
Chrysene	0.0542	0.0198 U	0.0190 U	0.0190 U	0.183 J-	0.0215 U	0.0250 UJ	0.0198 U	--	--
Dibenz(a,h)anthracene	0.0190 U	0.0198 U	0.0190 U	0.0190 U	0.0203 J-	0.0215 U	0.0250 UJ	0.0198 U	--	--
Fluoranthene	0.0575	0.0198 U	0.0190 U	0.0190 U	0.228 J-	0.0278 J	0.0350 J	0.0198 U	--	--
Fluorene	0.0190 U	0.0198 U	0.0190 U	0.0190 U	0.0189 UJ	0.0215 U	0.0250 UJ	0.0198 U	--	--
Indeno(1,2,3-cd)pyrene	0.0420	0.0198 U	0.0190 U	0.0190 U	0.109 J-	0.0215 U	0.0250 UJ	0.0198 U	--	--
Naphthalene	0.0381 U	0.0396 U	0.0190 U	0.0190 U	0.0377 UJ	0.0430 U	0.0500 UJ	0.0633 J	--	500
Phenanthrene	0.0356 J	0.0198 U	0.0190 U	0.0190 U	0.123 J-	0.0526	0.0250 UJ	0.0198 U	--	--
Pyrene	0.0673	0.0200 J	0.0190 U	0.0190 U	0.262 J-	0.0591	0.0250 UJ	0.0198 U	--	--
Dissolved Metals in µg/L										
Arsenic	0.632 J	0.500 U	0.680 J	0.875 J	0.657 J	1.53	0.500 U	0.969 J	200 (total)	6,300
Barium	114	30.3	12.0	117	57.8	104	24.2	49.2	--	--
Cadmium	0.100 U	0.100 U	0.100 U	0.100 U	0.108 J	0.127 J	0.101 J	0.100 U	700 (total)	130,000
Chromium	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	1.00 U	3,530 (total)	--
Lead	0.100 U	0.100 U	0.100 U	1.10	0.139 J	0.100 U	0.100 U	0.100 U	700 (total)	--
Mercury	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	0.0400 U	10 (total)	--
Selenium	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.505 J	600 (total)	--
Silver	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	400 (total)	1,100,000

Notes:

1. µg/L = Micrograms per liter.
2. -- = Value not available.
3. Bold values indicate the analyte was detected above method detection limits.
4. Oregon DEQ RBCs from the Oregon Department of Environmental Quality (DEQ) Risk-Based Concentrations (RBCs) for Individual Chemicals (updated May 2018).
5. Daily Discharge Maximum Local Limits from the City of Portland Bureau of Environmental Services, Sanitary Discharge and Pretreatment Program Administrative Rules (ENB - 4.03), June 2016.
6. Shaded values indicate the analyte was detected above the Oregon DEQ Clean Fill Criteria.
7. U = Analyte was not detected above the reported method detection limit.
8. UJ = Analyte was not detected; however, the reported method detection limit may be inaccurate or imprecise.
9. J = Result is an estimated value.
10. J- = Result is an estimated value that may be biased low.

Table 5
Groundwater Analytical Results from In-Water Borings
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-24	B-25	B-31	B-36	B-39	B-37	B-34	B-29	B-28	B-30	Daily Discharge Maximum Local Limit	Oregon DEQ RBCs Groundwater in Excavations
Collection Date:	9/8/2021	9/20/2021	10/15/2021	10/11/2021	10/11/2021	10/12/2021	10/12/2021	10/12/2021	10/19/2021	10/25/2021		
Total Petroleum Hydrocarbons (TPH) in µg/L												
Gasoline Range Organics	28.2 J	34.9 J	49.5 J	22.6 J	21.3 J	43.9 J	33.1 J	14.5 J	28.7 J	15.3 J	--	14,000
Diesel Range Organics	990 J	170 J+	250 J	380 J+	280 J+	560 J	520 J	120 J+	220 J	120 J+	--	--
Residual Range Organics	1,700 J	320 J+	260 J+	460 J+	390 J+	690 J+	700 J+	180 J+	340 J	200 J+	--	--
Volatile Organic Compounds (VOCs) in µg/L												
Acetone	11 J	3.3 U	9.0 J+	5.8 J	5.3 J	17 J	10 J	6.3 J	7.8 J	13 J+	--	--
Benzene	0.080 J	0.062 U	0.062 U	0.062 U	0.062 U	0.090 J	0.062 U	0.062 U	0.062 U	0.062 U	--	1,800
Bromobenzene	2.0 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	--	--
Bromochloromethane	0.50 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	--	--
Bromodichloromethane	0.50 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	0.091 U	--	450
Bromoform	0.50 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	--	14,000
Bromomethane	0.50 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	--	1,200
2-Butanone (MEK)	20 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	--	--
n-Butylbenzene	4.0 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	--	--
sec-Butylbenzene	2.0 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	0.062 U	--	--
tert-Butylbenzene	2.0 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	0.059 U	--	--
Carbon Disulfide	0.33 J+	0.069 U	0.069 U	0.10 J	0.069 U	0.72 J+	0.069 J+	0.25 J+	0.53	0.069 U	--	--
Carbon Tetrachloride	0.50 U	0.096 U	0.096 U	0.096 U	0.096 U	0.096 U	0.096 U	0.096 U	0.096 U	0.096 U	--	1,800
Chlorobenzene	0.50 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	200	10,000
Chloroethane	0.50 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	--	2,400,000
Chloroform	0.50 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	200	720
Chloromethane	0.35 J	0.068 U	0.068 U	0.090 J	0.080 J	0.080 J	0.070 J	0.068 U	0.11 J	0.14 J	--	22,000
2-Chlorotoluene	2.0 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--
4-Chlorotoluene	2.0 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	--
1,2-Dibromo-3-Chloropropane	0.50 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	--	--
Chlorodibromomethane	2.0 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	--	610
1,2-Dibromomethane	2.0 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	27
Dibromomethane	0.50 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	--	--
1,2-Dichlorobenzene	0.50 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	--	37,000
1,3-Dichlorobenzene	0.50 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--
1,4-Dichlorobenzene	0.50 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	--	1,500
Dichlorodifluoromethane	0.50 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	--	--
1,1-Dichloroethane	0.50 U	0.077 U	0.077 U	0.077 U	0.077 U	0.077 U	0.077 U	0.077 U	0.077 U	0.077 U	--	10,000
1,2-Dichloroethane	0.50 U	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	500	630
1,1-Dichloroethene	0.50 U	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	0.080 U	0.16 J	0.08 U	--	44,000
cis-1,2-Dichloroethene	0.50 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.067 U	0.11 J	--	18,000
trans-1,2-Dichloroethene	0.50 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U	--	180,000
1,2-Dichloropropane	0.50 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	0.095 U	--	--
1,3-Dichloropropane	0.50 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	--	--
2,2-Dichloropropane	0.50 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	0.065 U	--	--
1,1-Dichloropropene	0.50 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	--	--
cis-1,3-Dichloropropene	0.50 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	--	--
trans-1,3-Dichloropropene	0.50 U	0.068 U	0.068 U	0.068 U	0.068 U	0.068 U	0.068 U	0.068 U	0.068 U	0.068 U	--	--
Ethylbenzene	0.50 U	0.05 U	0.050 U	--	4,500							
Hexachloro-1,3-Butadiene	2.0 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	--	--
2-Hexanone	20 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	--	--
Isopropylbenzene	2.0 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	0.051 U	--	51,000
p-Isopropyltoluene	2.0 U	0.14 J	0.060 U	--	--							
Methylene Chloride	2.0 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	--	79,000
4-Methyl-2-Pentanone (MIBK)	20 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	--	--
Naphthalene	2.0 U	0.088 U	0.088 U	0.088 U	0.088 U	0.088 U	0.088 U	0.088 U	0.088 U	0.088 U	--	500
N-Propylbenzene	2.0 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	0.054 U	--	--
Styrene	0.50 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	--	170,000
1,1,1,2-Tetrachloroethane	0.50 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	--	--
1,1,2,2-Tetrachloroethane	0.50 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	--	--
Tetrachloroethane	0.50 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	0.099 U	--	5,600
Toluene	0.090 J	0.054 U	0.13 J+	0.17 J	0.10 J	1.2	0.46 J	0.13 J	0.12 J	0.21 J+	--	220,000
1,2,3-Trichlorobenzene	2.0 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	--	--
1,2,4-Trichlorobenzene	2.0 U	0.096 U	0.096 U	0.096 U	0.096 U	0.096 U	0.096 U	0.096 U	0.096 U	0.096 U	--	--
1,1,2-Trichloroethane	0.50 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	0.14 U	--	49
1,1,1-Trichloroethane	0.50 U	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	--	1,100,000
Trichloroethene	0.50 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	200	430
Trichlorofluoromethane	0.50 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	--	160,000
1,2,3-Trichloropropane	0.50 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	0.20 U	--	--
1,2,4-Trimethylbenzene	2.0 U	0.069 U	0.069 U	0.069 U	0.069 U	0.069 U	0.069 U	0.069 U	0.069 U	0.069 U	--	6,300
1,3,5-Trimethylbenzene	2.0 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	0.089 U	--	7,500
Vinyl Chloride	0.50 U	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	0.075 U	--	960
m,p-Xylene	0.50 U	0.074 U	0.074 U	0.074 U	0.074 U	0.074 U	0.074 U	0.074 U	0.074 U	0.074 U	--	--
o-Xylene	0.50 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	--	--
Xylenes, Total	1.0 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	--	23,000
Polycyclic Aromatic Hydrocarbons (PAHs) in µg/L												
2-Methylnaphthalene	0.040 J	0.0067	0.00040 UJ	0.0030 J	0.0046	0.037 J-	0.00040 U	0.0049	0.0017 J	0.00040 U	--	--
Acenaphthene	0.032 J-	0.014	0.00036 UJ	0.0056	0.0039	0.025 J-	0.0076	0.0057	0.00036 UJ	0.00036 U	--	--
Acenaphthylene	0.023 J-	0.016	0.00037 UJ	0.014	0.0093	0.095 J-	0.017	0.0054	0.0030 J	0.00037 U	--	--
Anthracene	0.019 J-	0.0025 J	0.0013 J	0.0027 J	0.0084	0.100 J-	0.0043	0.0063	0.0043 J	0.00029 U	--	--
Benzo(a)anthracene	0.030 J-	0.0022 J+	0.00074 J	0.0033	0.020	0.250 J-	0.010	0.016	0.017 J	0.00075 J+	--	--
Benzo(a)pyrene	0.033 J-	0.0039	0.00041 UJ	0.0024 J	0.022	0.290 J-	0.0073	0.025	0.020 J	0.00041 U	--	--
Benzo(b)fluoranthene	0.037 J-	0.00025 U	0.044 J+	0.0032	0.028	0.320 J-	0.017	0.023	0.030 J	0.00025 U	--	--
Benzo(g,h,i)perylene	0.021 J-	0.0034	0.0011 J	0.0036	0.027	0.210 J-	0.013	0.032	0.016 J	0.00084 J	--	--
Benzo(k)fluoranthene	0.021 J-	0.00041 U	0.088 J	0.012	0.020	0.130 J-	0.0093	0.0092	0.041 J	0.00041 U	--	--
Chrysene	0.033 J-	0.0043	0.0015 J	0.0048	0.026	0.390 J-	0.016	0.018	0.021 J	0.00098 J	--	--
Dibenz(a,h)anthracene	0.0042 J-	0.00045 U	0.00045 UJ	0.0023 J	0.0043	0.050 J-	0.0047	0.0035				

Table 5
Groundwater Analytical Results from In-Water Borings
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-24	B-25	B-31	B-36	B-39	B-37	B-34	B-29	B-28	B-30	Daily Discharge Maximum Local Limit	Oregon DEQ RBCs Groundwater in Excavations
Collection Date:	9/8/2021	9/20/2021	10/15/2021	10/11/2021	10/11/2021	10/12/2021	10/12/2021	10/12/2021	10/19/2021	10/25/2021		
Semi-Volatile Organic Compounds (SVOCs) in µg/L												
Benzoic Acid	25	2.1 J	1.5 J	1.1 U	1.1 U	3.5	1.1 U	1.1 U	1.2 U	1.1 U	--	--
Bis(2-ethylhexyl) Phthalate	0.98 J+	0.81 J+	0.56 J	0.55	0.26 J	0.25 J	0.30 J	0.27 J	0.80 J	0.55 J	--	--
Carbazole	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.020 U	0.018 U	--	--
Di-n-butyl Phthalate	0.16 J+	0.079 J+	0.023 U	0.032 J	0.15 J	0.11 J+	--	--				
Di-n-octyl Phthalate	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.13 J	0.036 U	0.033 U	--	--
Dibenzofuran	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.02 U	0.018 U	--	--
2,4-Dinitrotoluene	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.018 U	0.02 U	0.018 U	130	--
2-Methylphenol	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.12 U	0.11 U	--	--
4-Methylphenol	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.14 U	0.12 U	--	--
Nitrobenzene	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.028 U	0.031 U	0.028 U	2000	--
Pentachlorophenol (PCP)	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.34 U	0.37 U	0.34 U	40	--
Phenol	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.063 U	0.069 U	0.063 U	--	--
Pyridine	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.6 U	1.4 U	--	--
2,4,5-Trichlorophenol	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.031 U	0.034 U	0.031 U	--	--
2,4,6-Trichlorophenol	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.058 U	0.064 U	0.058 U	--	1700
Dioxins/Furan in pg/L												
2,3,7,8-TCDD	2.77 U	4.56 U	3.30 U	2.55 U	2.10 U	8.31 U	5.89 U	3.35 U	4.05 U	4.67 UJ	--	450
1,2,3,7,8-PeCDD	0.499 U	6.92 NJ	1.36 U	0.897 U	9.46 J	2.42 U	1.91 U	1.25 U	1.82 U	2.2 U	--	--
1,2,3,6,7,8-HxCDD	0.840 U	6.48 NJ	0.728 U	0.564 U	7.85 NJ	1.73 U	1.98 U	1.20 U	1.44 U	2.13 NJ	--	--
1,2,3,4,7,8-HxCDD	1.02 U	5.67 NJ	0.878 U	0.659 U	10.9 J	2.06 U	2.35 U	1.43 U	1.68 U	2.26 U	--	--
1,2,3,7,8,9-HxCDD	0.892 U	6.01 NJ	0.734 U	0.561 U	8.66 J	1.73 U	1.98 U	1.20 U	1.43 U	1.95 U	--	--
1,2,3,4,6,7,8-HpCDD	5.79 NJ+	10.0 J+	1.49 NJ+	4.50 J	13.0 J	31.0 NJ	21.5 NJ+	3.17 J+	1.80 NJ+	41.2	--	--
OCDD	40.5 J+	37.6 J+	11.8 J+	31.7 J+	50.4	435 U	360	26.6 J+	12.9 J+	320	--	--
2,3,7,8-TCDF	2.11 U	2.68 U	2.49 U	1.79 U	2.69 J	4.87 U	4.73 U	2.68 U	3.42 U	4.49 UJ	--	--
1,2,3,7,8-PeCDF	0.706 U	6.78 NJ	0.863 U	0.728 UJ	6.91 J-	1.41 U	1.79 U	0.927 U	1.17 UJ	2.21 U	--	--
2,3,4,7,8-PeCDF	0.773 U	9.02 J	1.01 U	0.829 U	9.21 J	1.66 U	2.31 U	1.13 U	1.38 U	1.99 U	--	--
1,2,3,6,7,8-HxCDF	0.397 U	8.71 J	0.863 U	0.534 U	9.13 J	1.94 U	2.57 U	1.10 U	1.54 U	1.90 U	--	--
1,2,3,7,8,9-HxCDF	0.749 NJ+	9.23 J	1.23 U	0.713 U	10.4 J	2.59 U	3.85 U	1.67 U	1.94 U	2.22 U	--	--
1,2,3,4,7,8-HxCDF	0.376 U	9.23 J	0.814 U	0.505 U	9.05 J	1.82 U	2.32 U	1.01 U	1.42 U	1.80 U	--	--
2,3,4,6,7,8-HxCDF	0.397 U	8.57 J	0.839 U	0.487 U	8.37 NJ	1.92 U	2.97 U	1.07 U	1.44 U	1.80 U	--	--
1,2,3,4,6,7,8-HpCDF	2.3 NJ+	26.3	0.761 U	1.05 NJ+	9.26 NJ	9.82 NJ	5.51 NJ	1.07 NJ	1.19 U	17.5 J	--	--
1,2,3,4,7,8,9-HpCDF	0.591 NJ+	5.87 NJ	0.603 UJ	0.364 UJ	5.63 J-	0.917 NJ	0.983 U	0.593 U	1.02 UJ	2.58 U	--	--
OCDF	14.3 NJ+	217	5.87 J+	7.31 J	29.2 J	28.2 J+	24.4 J+	3.79 NJ+	3.99 U	211	--	--
Total Tetra-Dioxins	2.77 U	4.56 U	3.30 U	2.55 U	2.10 U	8.31 U	5.89 U	3.35 U	4.05 U	4.67 U	--	--
Total Penta-Dioxins	0.499 U	1.20 U	1.36 U	0.897 U	9.46 J	2.42 U	1.91 U	1.25 U	1.82 U	2.20 U	--	--
Total Hexa-Dioxins	0.909 U	0.956 U	0.773 U	1.36 J	19.6 J	1.83 U	28.7	1.26 U	1.5 U	2.05 U	--	--
Total Hepta-Dioxins	6.69 J	10.0 J	0.825 U	4.50 J	17.7 J	30.8	1.95 U	3.17 J	1.6 U	2.09 U	--	--
Total Tetra-Furans	2.11 U	2.68 U	2.49 U	1.79 U	2.69 J	4.87 U	4.73 U	2.68 U	3.42 U	4.49 U	--	--
Total Penta-Furans	0.736 U	9.02 J	0.925 U	0.774 U	16.1 J	1.52 U	2.01 U	1.02 U	1.27 U	2.10 U	--	--
Total Hexa-Furans	0.407 U	36.5	0.918 U	0.550 U	28.5	3.24 J	4.17 J	1.18 U	1.57 U	1.92 U	--	--
Total Hepta-Furans	2.61 J	29.5	0.667 U	1.37 J	5.63 J	13.9 J	1.09 U	0.653 U	1.09 U	2.40 U	--	--
Total TEQ (ND = 1/2 MDL)	2.24 J+	18.1	2.95 J+	2.22	20.5	7.06	5.80	3.11	3.89 J+	3.22	--	450
Butyltins in µg/L												
n-Butyltin Cation	0.031 U	0.035 U	0.029 U	0.030 U	0.030 U	0.030 U	0.030 U	0.031 U	0.031 U	0.030 U	--	--
Di-n-butyltin Cation	0.014 J+	0.0086 U	0.0073 U	0.0075 U	0.0085 NJ+	0.021 J+	0.0076 U	0.0077 U	0.017 J+	0.021 J+	--	--
Tri-n-butyltin Cation	0.013 U	0.015 U	0.012 U	0.013 U	--	--						
Tetra-n-butyltin	0.040 U	0.045 U	0.038 U	0.039 U	0.039 U	0.040 U	0.040 U	0.040 U	0.040 U	0.039 U	--	--
Dissolved Metals in µg/L												
Arsenic	3.82	1.42	0.390 J	0.340 J	0.420 J	0.960	0.480 J	0.780	0.510	0.610	200 (total)	6,300
Barium	8.72	42.8	7.90	6.00	7.20	54.6	15.5	8.29	9.28	15.5	--	--
Cadmium	0.00800 U	0.0110 J	0.00800 U	0.00800 U	0.00800 U	0.0280	0.00800 J	0.00800 U	0.0160 J	0.0130 J	700 (total)	130,000
Chromium	1.80	0.300	0.170 J	0.310	0.200 J	5.19	1.55	0.140 J	0.200 J	2.72	3,530 (total)	--
Lead	0.116	0.0780	0.0300	0.0820	0.0520	2.93	0.944	0.0800	0.326	0.445	700 (total)	--
Mercury	0.0200 U	0.00800 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	0.0200 U	10 (total)	--
Selenium	0.300 J	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	0.200 U	600 (total)	--
Silver	0.00900 U	0.00900 U	0.00900 U	0.00900 U	0.00900 U	0.0240	0.00900 U	0.00900 U	0.00900 U	0.00900 U	400 (total)	1,100,000
Total Metals in µg/L												
Arsenic	28.3	3.26	6.60 J	2.38	1.60	12.0	3.50	6.48	4.49	0.770	200 (total)	6,300
Barium	1,100	172	558	93.8	64.4	922	206	619	98.0	26.6	--	--
Cadmium	1.86	0.0870	0.747	0.103	0.0650	0.563	0.208	0.695	0.111	0.00900 J	700 (total)	130,000
Chromium	182	28.1	78.7	31.7 J	13.6	116	29.1	57.6	8.10	5.77	3,530 (total)	--
Lead	65.2	8.76	20.2	7.91	6.49	62.5	20.1	12.5	49.2	0.921	700 (total)	--
Mercury	0.0400 J+	0.00900 J	0.140 J	0.0200 U	0.0700 J	0.0200 U	10 (total)	--				
Selenium	3.00 J	0.200 U	0.600 J	0.200 U	0.200 U	0.800 U	0.200 U	0.800 J	0.200 U	0.200 U	600 (total)	--
Silver	0.740	0.0350	0.229	0.0280	0.0230	0.556	0.0410	0.0800	0.0150 J	0.00900 U	400 (total)	1,100,000
Organochlorine Pesticides in µg/L												
Aldrin	0.00080 UJ	0.00077 U	0.0015 U	0.0024 UJ	0.0016 U	0.00077 U	--	3.5				
alpha-BHC	0.00072 UJ	0.00025 U	0.00035 NJ	0.00075 UJ	0.0012 NJ	0.00028 NJ	--	18				
beta-BHC	0.00017 UJ	0.00017 U	0.0012 U	0.002 UJ	0.00051 UJ	0.0026 UJ	0.00051 UJ	0.00051 UJ	0.0031 U	0.00091 U	--	--
delta-BHC	0.00027 UJ	0.00027 U	0.00027 U	0.00081 UJ	0.00054 U	0.00027 U	--	--				
gamma-BHC (Lindane)	0.00060 UJ	0.00060 U	0.0006 U	0.0018 UJ	0.0012 U	0.0006 U	--	100				
cis-Chlordane	0.00036 UJ	0.00060 J	0.00036 U	0.0011 UJ	0.00072 U	0.00036 U	--	--				
trans-Chlordane	0.00054 UJ	0.00062 J	0.00054 U	0.0017 UJ	0.0011 U	0.00054 U	--	--				
4,4'-DDD	0.00057 UJ	0.00057 U	0.00057 U	0.0018 UJ	0.0012 U	0.00057 U	--	3.2				
4,4'-DDE	0.00084 UJ	0.00053 U	0.00046 U	0.0014 UJ	0.00092 U	0.00046 U	--	--				
4,4'-DDT	0.016 UJ	0.0029 U	0.0067	0.0036 UJ	0.0029 UJ	0.0023 UJ	0.0023 UJ	0.0023 UJ	0.0053 UJ	0.0015 U	--	--
Dieldrin	0.00060 UJ	0.00044 U	0.00044 U	0.0014 UJ	0.00088 U	0.00044 U	--	2.4				
Endosulfan I	0.00036 UJ	0.00036 U	0.00036 U	0.0011 UJ	0.0011 UJ	0.0019 UJ	0.0011 UJ	0.0011 UJ	0.00072 U	0.00036 U	--	--
Endosulfan II	0.0053 NJ	0.0019 U	0.00034 U	0.0011 UJ	0.0011 UJ	0.023 UJ	0.014 UJ	0.0015 UJ	0.00068 U	0.00034 U	--	--
Endosulfan Sulfate	0.0084 UJ	0.00047 U	0.00094 U	0.0015 UJ	0.0070 U	0.00092 U	--	--				
Endrin	0.00042 UJ	0.00042 U	0.00056 U	0.0013 UJ	0.0013 UJ	0.0065 UJ	0.0036 UJ	0.0013 UJ	0.0068 U	0.00078 U	--	170
Endrin Aldehyde	0.00047 UJ	0.00047 U	0.00079 U	0.0015 UJ	0.0015 UJ							

Table 5
Groundwater Analytical Results from In-Water Borings
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-24	B-25	B-31	B-36	B-39	B-37	B-34	B-29	B-28	B-30	Daily Discharge Maximum Local Limit	Oregon DEQ RBCs Groundwater in Excavations
Collection Date:	9/8/2021	9/20/2021	10/15/2021	10/11/2021	10/11/2021	10/12/2021	10/12/2021	10/12/2021	10/19/2021	10/25/2021		
Polychlorinated Biphenyls (PCBs) in µg/L												
Aroclor 1016	0.028 U	0.028 U	0.11 U	0.028 U	0.028 U	0.044 UJ	0.028 UJ	0.028 U	0.042 U	0.028 U	--	--
Aroclor 1221	0.028 U	0.028 U	0.16 U	0.028 U	0.028 U	0.028 UJ	0.028 UJ	0.028 U	0.16 U	0.028 U	--	--
Aroclor 1232	0.028 U	0.028 U	0.13 U	0.028 U	0.028 U	0.028 UJ	0.062 UJ	0.028 U	0.11 U	0.028 U	--	--
Aroclor 1242	0.028 U	0.028 U	0.041 U	0.028 U	0.028 U	0.028 UJ	0.028 UJ	0.028 U	0.048 U	0.028 U	--	--
Aroclor 1248	0.028 U	0.028 U	0.063 U	0.028 U	0.028 U	0.028 UJ	0.030 UJ	0.028 U	0.051 U	0.028 U	--	--
Aroclor 1254	0.028 U	0.028 U	0.029 U	0.028 U	0.028 U	0.041 UJ	0.028 UJ	0.028 U	0.047 U	0.028 U	--	--
Aroclor 1260	0.028 U	0.028 U	0.029 U	0.028 U	0.028 U	0.045 UJ	0.028 UJ	0.028 U	0.028 U	0.028 U	--	--
Total PCBs	0.028 U	0.028 U	0.16 U	0.028 U	0.028 U	0.045 UJ	0.062 UJ	0.028 U	0.16 U	0.028 U	--	30
Chlorinated Herbicides in µg/L												
2,4,5-T	0.033 UJ	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.033 U	0.041 U	0.033 U	--	--
2,4,5-TP (Silvex)	0.045 UJ	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.045 U	0.055 U	0.045 U	--	--
2,4-D	0.036 UJ	0.036 U	0.14 U	0.036 U	0.046 U	0.21 U	0.056 U	0.086 U	0.044 U	0.036 U	--	77000
2,4-DB	0.22 UJ	0.10 U	0.26 U	0.10 U	0.10 U	0.18 U	0.25 U	0.10 U	0.13 U	0.10 U	--	--
Dalapon	0.28 UJ	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U	0.35 U	0.28 U	--	--
Dicamba	0.025 UJ	0.049 U	0.035 U	0.025 U	0.025 U	0.027 U	0.042 U	0.025 U	0.031 U	0.025 U	--	--
Dichlorprop	0.030 UJ	0.03 U	0.030 U	0.030 U	0.062 U	0.030 U	0.030 U	0.030 U	0.037 U	0.030 U	--	--
Dinoseb	0.043 UJ	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.015 U	0.019 U	0.015 U	--	--
MCPA	8.7 UJ	42 NJ	8.7 U	8.7 U	8.7 U	25 J	8.7 U	8.7 U	11 U	8.7 U	--	1700
MCPP	14 UJ	14 U	14 U	14 U	14 U	26 U	14 U	14 U	24 J	14 U	--	--

Notes:

- µg/L = Micrograms per liter.
- pg/L = Picograms per liter.
- = Value not available.
- Bold values indicate the analyte was detected above method detection limits.
- Oregon DEQ RBCs from the Oregon Department of Environmental Quality (DEQ) Risk-Based Concentrations (RBCs) for Individual Chemicals (updated May 2018).
- Daily Discharge Maximum Local Limits from the City of Portland Bureau of Environmental Services, Sanitary Discharge and Pretreatment Program Administrative Rules (ENB - 4.03), July 2019..
- Shaded values indicate the analyte was detected above the Oregon DEQ Clean Fill Criteria.
- U = Analyte was not detected above the reported method detection limit.
- UJ = Analyte was not detected; however, the reported method detection limit may be inaccurate or imprecise.
- J = Result is an estimated value.
- J+ = Result is an estimated value that may be biased high.
- NJ+ = The analyte was tentatively identified and did not meet method criteria for confirmation. The reported concentration is also an estimated concentration that may be biased high.
- NJ = The analyte was tentatively identified and did not meet method criteria for confirmation.
- J- = Result is an estimated value that may be biased low.

Table 6
IDW Soil Analytical Results
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-19 VAC	B-32 VAC	B-20 VAC	B-6 VAC	B-8 VAC	B-7/B-8 VAC	Oregon DEQ Clean Fill Criteria	Maximum Concentration for TCLP	Oregon DEQ RBCs		
Boring ID:	B-19	B-32	B-20	B-6	B-8	B-7/B-8			Soil Ingestion, Dermal Contact, and Inhalation	Construction	Excavation
Sample Type:	IDW	IDW	IDW	IDW	IDW	IDW					
Collection Date:	12/1/2021	12/1/2021	12/1/2021	12/1/2021	12/1/2021	12/1/2021					
Total Petroleum Hydrocarbons (TPH) in mg/kg											
Gasoline Range Organics	6.86 U	59.8	9.48 U	5.71 U	15.5 U	6.10 U	31	--	9,700	--	
Diesel Range Organics	19.1 U	641 J	59.3 J	16.4 U	34.0 U	169 U	1,100	--	4,600	--	
Residual Range Organics	38.2 U	622	45.4 U	32.8 U	68.0 U	1,100	1,100	--	4,600	--	
Volatile Organic Compounds (VOCs) in mg/kg											
Acetone	1.37 U	1.00 U	1.90 U	1.14 U	3.10 U	1.22 U	1.2	--	--	--	
Acrylonitrile	0.137 U	0.100 U	0.190 U	0.114 U	0.310 U	0.122 U	0.00036	--	40	1,100	
Benzene	0.0137 U	0.0100 U	0.0190 U	0.0114 U	0.0310 U	0.0122 U	0.023	10	380	11,000	
Bromobenzene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	2.5	--	--	--	
Bromochloromethane	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	1.3	--	--	--	
Bromodichloromethane	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	0.002	--	230	6,300	
Bromofrom	0.137 U	0.100 U	0.190 U	0.114 U	0.310 U	0.122 U	0.046	--	2,700	74,000	
Bromomethane	1.37 U	1.00 U	1.90 U	1.14 U	3.10 U	1.22 U	0.083	--	370	10,000	
2-Butanone (MEK)	0.686 U	0.502 U	0.948 U	0.571 U	1.550 U	0.610 U	72	4,000	--	--	
n-Butylbenzene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	190	--	--	--	
sec-Butylbenzene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	350	--	--	--	
tert-Butylbenzene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	96	--	--	--	
Carbon disulfide	0.686 U	0.502 U	0.948 U	0.571 U	1.550 U	0.610 U	0.81	--	--	--	
Carbon Tetrachloride	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	0.013	10	320	8,900	
Chlorobenzene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	2.4	2,000	4,700	130,000	
Chloroethane	0.686 U	0.502 U	0.948 U	0.571 U	1.55 U	0.610 U	310	--	--	--	
Chloroform	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	0.0034	120	410	11,000	
Chloromethane	0.343 U	0.251 U	0.474 U	0.285 U	0.775 U	0.305 U	2.2	--	25,000	700,000	
2-Chlorotoluene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	14	--	--	--	
4-Chlorotoluene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	14	--	--	--	
Chlorodibromomethane	0.137 U	0.100 U	0.190 U	0.114 U	0.310 U	0.122 U	0.0024	--	210	5,800	
1,2-Dibromo-3-Chloropropane	0.343 U	0.251 U	0.474 U	0.285 U	0.775 U	0.305 U	0.000084	--	--	--	
1,2-Dibromoethane	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	0.0012	--	9	250	
Dibromomethane	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	0.13	--	--	--	
1,2-Dichlorobenzene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.92	--	20,000	560,000	
1,3-Dichlorobenzene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.74	--	--	--	
1,4-Dichlorobenzene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.057	150	1,300	36,000	
Dichlorodifluoromethane	0.137 U	0.100 U	0.190 U	0.114 U	0.310 U	0.122 U	18	--	--	--	
1,1-Dichloroethane	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.044	--	3,200	89,000	
1,2-Dichloroethane	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.0028	10	200	5,600	
1,1-Dichloroethene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	6.7	14	13,000	370,000	
cis-1,2-Dichloroethene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.63	--	710	20,000	
trans-1,2-Dichloroethene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	7	--	7,100	200,000	
1,2-Dichloropropane	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.017	--	--	--	
1,3-Dichloropropane	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	7.8	--	--	--	
2,2-Dichloropropane	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	--	--	--	--	
1,1-Dichloropropene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	0.01	--	--	--	
cis-1,3-Dichloropropene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	--	--	--	--	
trans-1,3-Dichloropropene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	--	--	--	--	
Ethylbenzene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.22	--	1,700	49,000	
Hexachloro-1,3-Butadiene	0.137 U	0.100 U	0.190 U	0.114 U	0.310 U	0.122 U	0.016	10	--	--	
2-Hexanone	0.686 U	0.502 U	0.948 U	0.571 U	1.55 U	0.610 U	0.36	--	--	--	
Isopropylbenzene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	96	--	27,000	750,000	
p-Isopropyltoluene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	--	--	--	--	
Methylene Chloride	0.686 U	0.502 U	0.948 U	0.571 U	1.55 U	0.610 U	0.14	--	2,100	58,000	
4-Methyl-2-Pentanone (MIBK)	0.686 U	0.502 U	0.948 U	0.571 U	1.55 U	0.610 U	9.7	--	--	--	
Methyl tert-Butyl Ether	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	0.11	--	12,000	320,000	
Naphthalene	0.137 U	0.100 U	0.190 U	0.114 U	0.310 U	0.122 U	0.077	--	580	16,000	
n-Propylbenzene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	72	--	--	--	
Styrene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	1.2	--	56,000	--	
1,1,1,2-Tetrachloroethane	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.013	--	--	--	
1,1,2,2-Tetrachloroethane	0.0686 U	0.528 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	0.0018	--	--	--	
Tetrachloroethene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.18	14	1,800	50,000	
Toluene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	23	--	28,000	770,000	
1,2,3-Trichlorobenzene	0.343 U	0.251 U	0.474 U	0.285 U	0.775 U	0.305 U	1.3	--	--	--	
1,2,4-Trichlorobenzene	0.343 U	0.251 U	0.474 U	0.285 U	0.775 U	0.305 U	0.2	--	--	--	
1,1,1-Trichloroethane	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	190	--	470,000	--	
1,1,2-Trichloroethane	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.0063	--	54	1,500	
Trichloroethene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.013	10	130	3,700	
Trichlorofluoromethane	0.137 U	0.100 U	0.190 U	0.114 U	0.310 U	0.122 U	52	--	69,000	--	
1,2,3-Trichloropropane	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	0.000019	--	--	--	
1,2,4-Trimethylbenzene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	10	--	2,900	81,000	
1,3,5-Trimethylbenzene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	11	--	2,900	81,000	
Vinyl Chloride	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	0.00057	4	34	950	
m,p-Xylene	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	11	--	--	--	
o-Xylene	0.0343 U	0.0251 U	0.0474 U	0.0285 U	0.0775 U	0.0305 U	1	--	--	--	
Xylenes, Total	0.0686 U	0.0502 U	0.0948 U	0.0571 U	0.155 U	0.0610 U	1.4	--	20,000	560,000	

Please see notes at end of table.

Table 6
IDW Soil Analytical Results
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-19 VAC	B-32 VAC	B-20 VAC	B-6 VAC	B-8 VAC	B-7/B-8 VAC	Oregon DEQ Clean Fill Criteria	Maximum Concentration for TCLP	Oregon DEQ RBCs	
Boring ID:	B-19	B-32	B-20	B-6	B-8	B-7/B-8			Soil Ingestion, Dermal Contact, and Inhalation	
Sample Type:	IDW	IDW	IDW	IDW	IDW	IDW			Construction	Excavation
Collection Date:	12/1/2021	12/1/2021	12/1/2021	12/1/2021	12/1/2021	12/1/2021				
Polycyclic Aromatic Hydrocarbons (PAHs) in mg/kg										
Acenaphthene	0.00906 U	0.0812 U	0.0118 U	0.00841 U	0.0181 U	0.0682 J	0.25	--	21,000	590,000
Acenaphthylene	0.00906 U	0.0221 U	0.0118 U	0.00841 U	0.0181 U	0.757	120	--	--	--
Anthracene	0.00906 U	0.0148 U	0.0118 U	0.00841 U	0.0181 U	0.618	6.8	--	110,000	--
Benzo(a)anthracene	0.0144 J	0.0394 J	0.0118 U	0.0168	0.0181 U	2.40	0.73	--	170	4,800
Benzo(a)pyrene	0.0223	0.0248	0.0118 U	0.0155 J	0.0181 U	2.22	0.11	--	17	490
Benzo(b)fluoranthene	0.0271 J	0.0403	0.0118 U	0.0174 J	0.0181 U	2.49	1.1	--	170	4,900
Benzo(k)fluoranthene	0.00906 U	0.00738 U	0.0118 U	0.00841 U	0.0181 U	0.886 J	11	--	1,700	49,000
Benzo(g,h,i)perylene	0.0291	0.0154	0.0118 U	0.00912 J	0.0181 U	1.15	25	--	--	--
Chrysene	0.0211	0.137	0.0118 U	0.0155 J	0.0181 U	2.2	3.1	--	17,000	490,000
Dibenz(a,h)anthracene	0.00906 U	0.00738 U	0.0118 U	0.00841 U	0.0181 U	0.275	0.11	--	17	490
Fluoranthene	0.0419	0.0893	0.0118 U	0.0157 J	0.0181 U	4.4	10	--	10,000	280,000
Fluorene	0.00906 U	0.0177 U	0.0118 U	0.00841 U	0.0181 U	0.199	3.7	--	14,000	390,000
Indeno(1,2,3-cd)pyrene	0.0246	0.0155	0.0118 U	0.0107 J	0.0181 U	1.29	1.1	--	170	4,900
Naphthalene	0.00906 U	0.111	0.0118 U	0.00841 U	0.0181 U	0.484	0.077	--	580	16,000
Phenanthrene	0.0237	0.0473 U	0.0118 U	0.00841 U	0.0181 U	1.94	5.5	--	--	--
Pyrene	0.0557	0.132	0.0118 U	0.0215	0.0181 U	4.39	10	--	7,500	210,000
Metals in mg/kg										
Antimony	1.03 U	0.778 U	2.83	0.893 U	1.79 U	0.941 J	0.56	--	--	--
Arsenic	7.40	4.10	7.58	7.78	4.04	7.04	8.8	100	15	420
Barium	286	161	243	185	147	216	790	2,000	69,000	--
Cadmium	0.205 U	0.156 U	0.260 U	0.187 J	0.357 U	0.207 J	0.63	20	350	9700
Chromium	36.8	32.2	34.4	32.9	18.5	26.7	76	100	530,000	--
Copper	35.1	35.1	49.3	27.9	20.7	52.7	34	--	14,000	390,000
Lead	13.3	6.76	17.9	15.3	12.2	134	28	100	800	800
Mercury	0.139 J	0.0622 U	0.104 U	0.0715 U	0.143 U	0.629	0.23	4	110	2,900
Selenium	1.17 J	0.778 U	1.30 U	0.893 U	1.79 U	0.918 U	0.71	20	--	--
Silver	0.205 U	0.156 U	0.260 U	0.179 U	0.357 U	0.335 J	0.82	100	1,800	49,000
Zinc	96.1	73.8	158	88.0	68.3	124	180	--	--	--

Notes:

1. mg/kg = Milligrams per kilogram.
2. IDW = Investigation Derived Waste
3. -- = Value not available.
4. Bold values indicate the analyte was detected above method detection limits.
5. Clean Fill Criteria from the Oregon Department of Environmental Quality (DEQ) Clean Fill Determinations (updated June 17, 2019).
6. Soil Maximum Concentrations for TCLP from 40 CFR 261.24, multiplied by 20 to account for dilution performed during TCLP extraction.
7. Oregon DEQ RBCs from the Oregon Department of Environmental Quality (DEQ) Risk-Based Concentrations (RBCs) for Individual Chemicals (updated May 2018).
8. Shaded values indicate the analyte was detected above one or more applicable screening levels.
9. U = Analyte was not detected above the reported method detection limit.
10. J = Result is an estimated value.

Table 7
Soil Analytical Results - Exceedances of Screening Criteria
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-17 0-10C	B-17 10-25C	B-18 0-10C	B-18 10-26C	B-16 0-10 C	B-16 10-20 C	B-08 0-10C	B33 15-16.5	B33 10-26.5	B8 (15-21.5)C	B-05 10-25 C	B-23 6-10	B21C(0-10)	B-22C 10-25	Oregon DEQ Clean Fill Criteria	Maximum Concentration for TCLP	Oregon DEQ RBCs	
Boring ID:	B-17		B-18		B-16		B-08	B-33		B-8	B-5	B-23	B-21	B-22			Soil Ingestion, Dermal Contact, and Inhalation	
Sample Type:	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Discrete	Composite	Composite	Composite	Composite	Composite	Composite			Construction Worker	Excavation Worker
Sample Depth (feet bgs):	0-10	10-26	0-10	10-26	0-10	10-20	0-10	15-16.5	10-26.5	15-21.5	10-25	6-10	0-10	10-25				
Collection Date:	8/23/2021	8/23/2021	8/23/2021	8/23/2021	8/27/2021	8/27/2021	8/30/2021	9/1/2021	9/1/2021	9/20/2021	9/27/2021	11/4/2021	11/8/2021	11/8/2021				
Total Petroleum Hydrocarbons (TPH) in mg/kg																		
Gasoline Range Organics	3.49 U	4.43 U	3.95 U	5.67 J	3.71 U	3.68 U	2.80 U	353 J+	63.7 J+	3.21 U	4.06 U	3.57 U	3.86 U	3.99 U	31	--	9,700	--
Diesel Range Organics	12.2 U	13.3 U	66.0 U	146 U	12.4 U	11.5 U	10.7 U	27,400 J	2,310 J	11.1 U	12.8 U	12.3 U	12.8 U	13.5 U	1,100	--	4,600	--
Residual Range Organics	35.2 J	51.3 J	361	1,760	31.8 J	184	290 J+	26,000 J	3,370 J	67.7 J	25.5 U	190	25.7 U	27.0 U	1,100	--	4,600	--
Volatile Organic Compounds (VOCs) in mg/kg																		
Benzene	0.00699 U	0.00887 U	0.0079 U	0.0130 J	0.00743 U	0.00735 U	0.0744	0.00697 U	0.00764 U	0.0502	0.00811 U	0.00714 U	0.00772 U	0.00799 U	0.023	10	380	11,000
Naphthalene	0.0699 U	0.0887 U	0.0790 U	0.637	0.0743 U	0.0735 U	0.524	0.348 UJ	0.153 UJ	0.0643 U	0.0811 U	0.0714 U	0.0772 U	0.0799 U	0.077	--	580	16,000
Polycyclic Aromatic Hydrocarbons (PAHs) in mg/kg																		
Acenaphthene	0.00610 U	0.0156	0.0641 U	1.27	0.00614 U	0.0233 J	0.239	1.55 J	0.257 J	0.0246	0.00639 U	0.00595 U	0.00617 U	0.00642 U	0.25	--	21,000	590,000
Benzo(a)anthracene	0.0150	1.29	0.0978 J	1.65	0.0114 J	0.131	4.03	0.858 U	0.134 U	0.0348	0.00639 U	0.0277	0.00617 U	0.00642 U	0.73	--	170	4,800
Benzo(a)pyrene	0.0163	0.210	0.0810 J	1.03	0.0108 J	0.115	3.58	1.28 U	0.134 U	0.0396	0.00639 U	0.0335	0.00617 U	0.00642 U	0.11	--	17	490
Benzo(b)fluoranthene	0.0234 J	0.662	0.112 J	1.45	0.0158 J	0.136 J	3.77 J	1.28 U	0.134 U	0.0453 J	0.00639 U	0.0368	0.00617 U	0.00642 U	1.1	--	170	4,900
Chrysene	0.0163	1.06	0.124 J	2.20	0.0145	0.168	3.31	1.96 U	0.482 U	0.0393	0.00639 U	0.0300	0.00617 U	0.00642 U	3.1	--	17,000	490,000
Dibenz(a,h)anthracene	0.00610 U	0.0202	0.0641 U	0.136 J	0.00614 U	0.0233 U	0.401	0.427 U	0.134 U	0.0057 U	0.00639 U	0.00595 U	0.00617 U	0.00642 U	0.11	--	17	490
Indeno(1,2,3-cd)pyrene	0.0124	0.0826	0.0703 J	0.631	0.0100 J	0.0904	1.90	0.427 U	0.134 U	0.0313	0.00639 U	0.0265	0.00617 U	0.00642 U	1.1	--	170	4,900
Naphthalene	0.00610 U	0.0492	0.136	3.92	0.00620 J	0.0363 J	0.581	0.858 U	0.134 U	0.0890	0.00639 U	0.0103 J	0.00617 U	0.00642 U	0.077	--	580	16,000
Phenanthrene	0.00772 J	0.132	0.205	7.68	0.0193	0.308	5.97	1.16 U	0.134 U	0.0806	0.00639 U	0.0180	0.00617 U	0.00642 U	5.5	--	--	--
Metals in mg/kg																		
Antimony	0.621 U	0.711 U	1.13 J	2.92	0.634 U	0.642 U	0.546 U	0.664 U	0.709 U	0.317 U	0.683 U	0.680 U	0.676 U	0.712 U	0.56	--	--	--
Arsenic	7.71	6.98	7.94	5.38	9.40	5.05	1.98	3.58	4.91	3.16	9.38	7.54	11.4	10.2	8.8	100	15	420
Copper	26.2	30.2	42.4	98.1	28.7	31.6	15.9	15.7	35.1	15.7	30.2	39.6	26.8	30.9	34	--	14,000	390,000
Lead	32.4	110	106	245	340	34.1	8.27	2.44	8.29	15.5	10.9	19.4	34.9	14.2	28	100	800	800
Mercury	0.0497 U	0.215	3.88	7.11	0.0507 U	0.111	0.0437 U	0.0531 U	0.0567 U	0.0410 J	0.0547 U	0.0926 J	0.159	0.0570 U	0.23	4	110	2,900
Selenium	0.912 J	1.08 J	0.793 J	0.791 J	0.634 U	0.642 U	0.546 U	0.664 U	0.709 U	0.317 U	0.683 U	0.680 U	0.676 U	0.712 U	0.71	20	--	--

Notes:

1. mg/kg = Milligrams per kilogram.
2. bgs = Below ground surface.
3. -- = Value not available.
4. Bold values indicate the analyte was detected above method detection limits.
5. Clean Fill Criteria from the Oregon Department of Environmental Quality (DEQ) Clean Fill Determinations (updated June 17, 2019).
6. Soil Maximum Concentrations for TCLP from 40 CFR 261.24, multiplied by 20 to account for dilution performed during TCLP extraction.
7. Oregon DEQ RBCs from the Oregon Department of Environmental Quality (DEQ) Risk-Based Concentrations (RBCs) for Individual Chemicals (updated May 2018).
8. Shaded values indicate the analyte was detected above one or more applicable screening levels.
9. U = Analyte was not detected above the reported method detection limit.
10. J = Result is an estimated value.
11. UJ = Analyte was not detected; however, the reported method detection limit may be inaccurate or imprecise.
12. J+ = Result is an estimated value that may be biased high.

Table 8
Sediment Analytical Results - Exceedances of Screening Criteria
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

Sample ID:	B-24 (0-10)C	B-24 (10-20)C	B-26(0-10)C	B-26(10-25)C	B-25(0-10)C	B-35 (0-10)	B-35 (10-20)	B-36 (0-10)	B-36 (10-17.5)	B-39 (0-10)	B-37 (0-10C)	B-37 (10-23C)	B-34 (0-10C)	B-34 (10-23C)	B-29 (0-12C)	B-30 (0-10C)	Oregon DEQ Clean Fill Criteria	Maximum Concentration for TCLP	Oregon DEQ RBCs		Freshwater Benthic Toxicity Screening Levels		Portland Harbor ROD	Willamette River Upstream Background Concentrations	
Boring ID:	B-24		B-26		B-25	B-35		B-36		B-39	B-37		B-34		B-29	B-30			Soil Ingestion, Dermal Contact, and Inhalation	Construction Worker	Excavation Worker	SL1	SL2	CUL	
Sample Type:	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite									
Sample Depth (feet bgs):	0-10	10-20	0-10	10-25	0-10	0-10	10-20	0-10	10-17.5	0-10	0-10	10-23	0-10	10-23	0-12	0-10									
Collection Date:	9/8/2021	9/8/2021	9/15/2021	9/15/2021	9/20/2021	10/11/2021	10/11/2021	10/11/2021	10/11/2021	10/11/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/12/2021	10/25/2021									
Total Petroleum Hydrocarbons (TPH) in mg/kg																									
Diesel Range Organics	30 J	17 J	76 J	44 J	11 J+	2.0 U	3.6 J+	12 J+	140 J	16 J+	6.7 J+	3.2 J+	170 J	13 J+	2.3 U	4.3 J	1,100	--	4,600	--	340	510	91	--	
Polycyclic Aromatic Hydrocarbons (PAHs) in mg/kg																									
Benzo(a)pyrene	0.0023 J	0.00041 U	0.33	0.063	0.00066 J+	0.00042 U	0.00044 U	0.015	0.0065	0.0075	0.00043 U	0.0031 J	0.34	0.040	0.0055 J	0.00043 U	0.11	--	17	490	--	--	--	--	
Dibenzofuran	0.00073 U	0.00064 U	0.038	0.015	0.00068 U	0.00066 U	0.00069 U	0.0044 J	0.0022 J	0.0021 J	0.00068 U	0.00068 J	0.020	0.0056 J	0.00087 J	0.00068 U	0.002	--	--	--	--	--	--	--	
Naphthalene	0.0018 J+	0.0015 J+	0.21	0.074	0.0015 J	0.0052 J+	0.0034 J+	0.012 J+	0.0083 J+	0.018 J+	0.0027 J+	0.0029 J+	0.18	0.022	0.0035 J+	0.00091 J+	0.077	--	580	16,000	--	--	--	--	
Total HPAHs (ND = 1/2 MDL)	0.035	0.0037 J	3.0	0.67	0.0059 J	0.0054 J	0.0027 J	0.12 J	0.075 J	0.059 J	0.0024 J+	0.024 J	2.9	0.33 J	0.025 J	0.0041 J	1.1	--	--	--	--	--	--	--	
Total PAHs (ND = 1/2 MDL)	0.042	0.0068	4.6	1.2	0.012 J	0.016 J	0.016 J	0.16 J	0.11 J	0.11 J	0.0089 J+	0.039 J	4.31	0.45 J	0.039 J	0.0072 J	--	--	--	--	17	30	23	0.113	
BaP Equivalents (ND = 1/2 MDL)	0.0050	0.00077	0.43	0.084	0.0010 J	0.00075 J	0.00045 J	0.020 J	0.0085 J	0.0088 J	0.00044 J+	0.0037 J	0.456	0.051 J	0.0062 J	0.00046 J	0.11	--	--	--	--	--	1.076	0.012	
Metals in mg/kg																									
Arsenic	4.41	2.55	2.69	2.30	2.85 J	4.31	3.03	3.15	2.13	2.27	5.46	3.96	3.55	5.35	2.84	2.38	8.8	100	15	420	14	120	3	3	
Cadmium	0.0690	0.0560	0.0860	0.0660	0.0490	0.0530	0.0510	0.0820	0.0610	0.106	0.112	0.0570	0.217	0.132	0.0690	0.0510	0.63	20	350	9700	2.1	5.4	0.51	0.1	
Lead	3.54	2.27	7.96	8.78	2.95 J	3.94	3.67	10.0	3.89	8.15	5.73	3.91	61.5	22.2	4.70	3.70	28	100	800	800	360	>1,300	196	7.7	
Mercury	0.0100 J	0.0150 J	0.0410	0.0710	0.00800 J	0.0500 J+	0.00900 J+	0.0190 J+	0.0420 J+	0.0350 J+	0.0180 J	0.0270 J+	0.433 J	0.247	0.0600	0.0320	0.23	4	110	2,900	0.66	0.8	0.085	0.03	
Semi-Volatile Organic Compounds (SVOCs) in mg/kg																									
Bis(2-ethylhexyl) Phthalate	0.020 J+	0.025 J+	0.012 U	0.019 J+	0.022 J+	0.0098 UJ	0.014 J+	0.073 J+	0.026 J+	0.028 J+	0.014 J	0.010 U	0.12	0.031 J	0.012 J	0.011 U	0.02	--	1300	37000	0.5	2.2	0.135	0.062	
Di-n-butyl Phthalate	0.014 J	0.0080 J	0.0063 U	0.0060 U	0.015 J+	0.0053 UJ	0.0064 J	0.0061 U	0.0057 U	0.0063 U	0.0055 U	0.0054 U	0.006 U	0.0061 U	0.0059 U	0.0054 U	0.011	--	--	--	0.38	1	--	--	
Dibenzofuran	0.0042 U	0.0038 U	0.017	0.0098 J	0.0039 U	0.0038 UJ	0.0039 UJ	0.0043 U	0.0041 U	0.0045 U	0.0039 U	0.0039 U	0.012 J	0.0043 U	0.0042 U	0.0039 U	0.002	--	--	--	0.2	0.68	--	--	
Dioxins/Furans in ng/kg																									
1,2,3,7,8-PeCDD	0.0977 U	0.593 NJ	0.118 U	0.170 NJ	0.0949 U	0.123 U	0.188 U	0.318 U	0.192 U	0.200 U	0.198 U	0.233 U	0.205 U	0.150 U	0.165 U	0.124 U	--	--	--	--	--	--	0.2	0.2	
2,3,7,8-TCDF	0.181 U	0.596 U	0.187 U	0.635 U	0.376 U	0.204 U	0.298 U	0.634 U	0.277 U	0.222 U	0.823 U	1.07 U	0.649 NJ	0.319 U	0.258 U	0.238 U	--	--	--	--	--	--	0.40658	0.3	
2,3,4,7,8-PeCDF	0.117 U	0.567 J	0.138 U	0.206 U	0.153 U	0.109 U	0.149 U	0.204 U	0.161 U	0.126 U	0.221 U	0.251 U	0.310 NJ	0.152 U	0.196 NJ	0.0998 U	--	--	--	--	--	--	0.3	0.3	
1,2,3,4,7,8-HxCDF	0.0584 U	0.447 NJ	0.0734 NJ	0.239 NJ	0.0749 U	0.0814 U	0.132 U	0.177 U	0.121 U	0.112 U	0.218 J	0.184 U	0.384 J	0.123 U	0.391 J	0.0596 U	--	--	--	--	--	--	0.4	0.4	
Polychlorinated Biphenyls (PCBs) in mg/kg																									
Aroclor 1248	0.0031 U	0.0030 U	0.0037 U	0.0035 U	0.0029 U	0.0031 U	0.0033 U	0.0035 U	0.0033 U	0.0038 U	0.0033 U	0.0032 U	0.022	0.0037 U	0.0036 U	0.0029 U	0.0073	--	--	--	--	--	--	--	
Total PCBs	0.0031 U	0.0030 U	0.0037 U	0.0035 U	0.014 J	0.0031 U	0.0033 U	0.0035 U	0.0033 U	0.0038 U	0.0033 U	0.0032 U	0.079	0.0037 U	0.0036 U	0.0029 U	0.23	--	5	140	0.11	2.5	0.009	0.009	
Organochlorine Pesticides in mg/kg																									
Dieldrin	0.00025 U	0.00023 U	0.00028 U	0.00027 U	0.00037 NJ	0.00024 U	0.00025 U	0.00027 U	0.00025 U	0.00029 U	0.00025 U	0.00025 U	0.0018 U	0.00028 U	0.00028 U	0.0012 U	0.0045	--	1.2	33	0.0049	0.0093	0.00007	--	
Chlorinated Herbicides in mg/kg																									
MCPA	2.6 NJ	0.36 U	0.42 U	0.41 U	0.37 UJ	0.36 U	0.37 U	0.41 U	0.38 U	0.42 U	0.37 U	0.36 U	0.40 U	0.41 U	0.40 U	0.56 U	0.097	--	130	3700	--	--	--	--	
MCP	8.3 U	0.52 U	3.4 NJ	1.7 NJ	1.0 J	0.51 U	0.53 U	0.58 U	0.55 U	0.61 U	0.52 U	0.52 U	0.71 U	0.66 U	0.57 U	0.80 U	0.28	--	--	--	--	--	--	--	

Notes:

1. mg/kg = Milligrams per kilogram.
2. ng/kg = Nanograms per kilogram.
3. bgs = Below ground surface.
4. -- = Value not available.
5. Bold values indicate the analyte was detected above method detection limits.
6. Clean Fill Criteria from the Oregon Department of Environmental Quality (DEQ) Clean Fill Determinations (updated June 17, 2019).
7. Soil Maximum Concentrations for TCLP from 40 CFR 261.24, multiplied by 20 to account for dilution performed during TCLP extraction.
8. Freshwater Benthic Toxicity Screening Levels from the Sediment Evaluation Framework for the Pacific Northwest (updated May 2018).
9. CUL = Cleanup Levels from the Portland Harbor Superfund Site Record of Decision for Riverbank Soil, Table 17 January 2020 Errata #2 update, (ROD, 2017).
10. Willamette River Upstream Background Concentrations from the Portland Harbor RI/FS (2016).
11. Oregon DEQ RBCs from the Oregon Department of Environmental Quality (DEQ) Risk-Based Concentrations (RBCs) for Individual Chemicals (updated May 2018).
12. Shaded values indicate the analyte was detected above one or more applicable screening levels.
13. U = Analyte was not detected above the reported method detection limit.
14. J = Result is an estimated value.
15. UJ = Analyte was not detected; however, the reported method detection limit may be inaccurate or imprecise.
16. J+ = Result is an estimated value that may be biased high.
17. NJ = The analyte was tentatively identified and did not meet method criteria for confirmation.

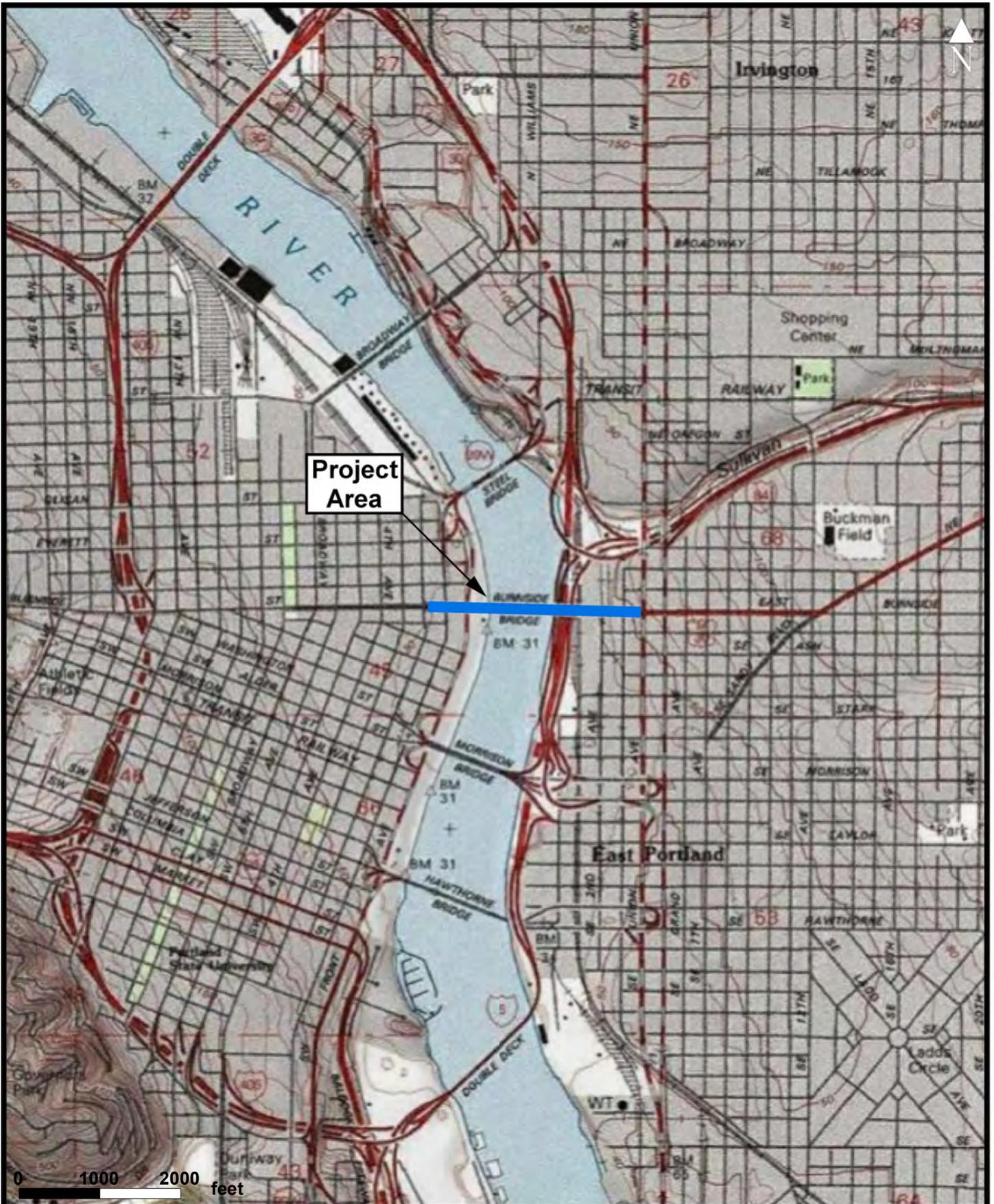
Table 9
 IDW Analytical Results - Exceedances of Screening Criteria
 Geotechnical Drilling Support
 Earthquake Ready Burnside Bridge Project
 Portland, Oregon

Sample ID:	B-19 VAC	B-32 VAC	B-20 VAC	B-7/B-8 VAC	Oregon DEQ Clean Fill Criteria	Maximum Concentration for TCLP	Oregon DEQ RBCs		
Boring ID:	B-19	B-32	B-20	B-7/B-8			Soil Ingestion, Dermal Contact, and Inhalation	Construction	Excavation
Sample Type:	IDW	IDW	IDW	IDW					
Collection Date:	12/1/2021	12/1/2021	12/1/2021	12/1/2021					
Total Petroleum Hydrocarbons (TPH) in mg/kg									
Gasoline Range Organics	6.86 U	59.8	9.48 U	6.10 U	31	--	9,700	--	
Polycyclic Aromatic Hydrocarbons (PAHs) in mg/kg									
Benzo(a)anthracene	0.0144 J	0.0394 J	0.0118 U	2.40	0.73	--	170	4,800	
Benzo(a)pyrene	0.0223	0.0248	0.0118 U	2.22	0.11	--	17	490	
Benzo(b)fluoranthene	0.0271 J	0.0403	0.0118 U	2.49	1.1	--	170	4,900	
Dibenz(a,h)anthracene	0.00906 U	0.00738 U	0.0118 U	0.275	0.11	--	17	490	
Indeno(1,2,3-cd)pyrene	0.0246	0.0155	0.0118 U	1.29	1.1	--	170	4,900	
Naphthalene	0.00906 U	0.111	0.0118 U	0.484	0.077	--	580	16,000	
Metals in mg/kg									
Antimony	1.03 U	0.778 U	2.83	0.941 J	0.56	--	--	--	
Copper	35.1	35.1	49.3	52.7	34	--	14,000	390,000	
Lead	13.3	6.76	17.9	134	28	100	800	800	
Mercury	0.139 J	0.0622 U	0.104 U	0.629	0.23	4	110	2,900	
Selenium	1.17 J	0.778 U	1.30 U	0.918 U	0.71	20	--	--	

Notes:

1. mg/kg = Milligrams per kilogram.
2. IDW = Investigation Derived Waste
3. -- = Value not available.
4. Bold values indicate the analyte was detected above method detection limits.
5. Clean Fill Criteria from the Oregon Department of Environmental Quality (DEQ) Clean Fill Determinations (updated June 17, 2019).
6. Soil Maximum Concentrations for TCLP from 40 CFR 261.24, multiplied by 20 to account for dilution performed during TCLP extraction.
7. Oregon DEQ RBCs from the Oregon Department of Environmental Quality (DEQ) Risk-Based Concentrations (RBCs) for Individual Chemicals (updated May 2019).
8. Shaded values indicate the analyte was detected above one or more applicable screening levels.
9. U = Analyte was not detected above the reported method detection limit.
10. J = Result is an estimated value.

Figures



COLES+BETTS
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APEX
INCORPORATED

REYNOLDS ENGINEERING, LLC

Preliminary Site Investigation
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

VICINITY MAP

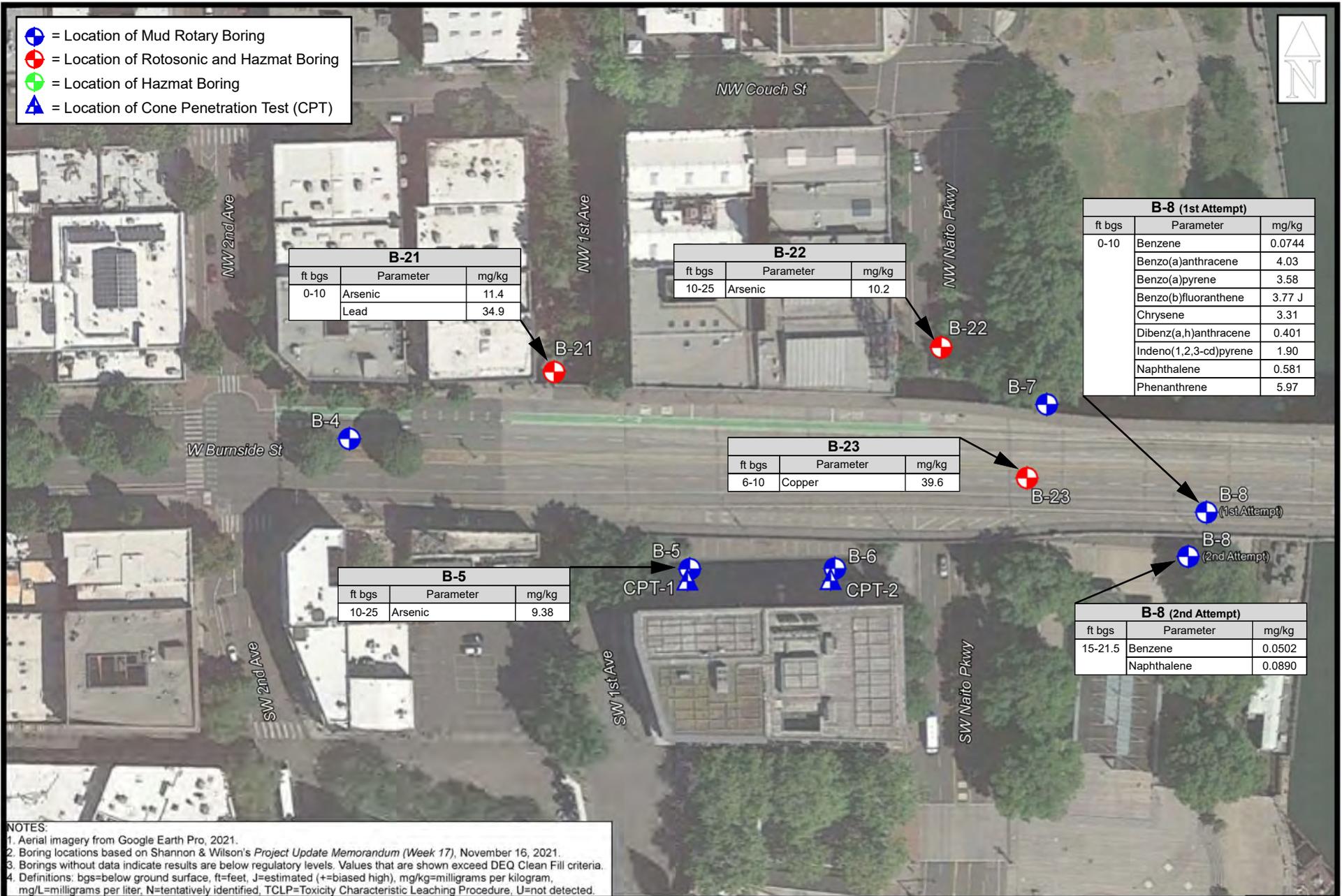
January 2022

C+BEC Job# 319

Figure No.

1

-  = Location of Mud Rotary Boring
-  = Location of Rotosonic and Hazmat Boring
-  = Location of Hazmat Boring
-  = Location of Cone Penetration Test (CPT)



B-21		
ft bgs	Parameter	mg/kg
0-10	Arsenic	11.4
	Lead	34.9

B-22		
ft bgs	Parameter	mg/kg
10-25	Arsenic	10.2

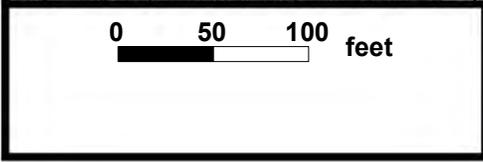
B-8 (1st Attempt)		
ft bgs	Parameter	mg/kg
0-10	Benzene	0.0744
	Benzo(a)anthracene	4.03
	Benzo(a)pyrene	3.58
	Benzo(b)fluoranthene	3.77 J
	Chrysene	3.31
	Dibenz(a,h)anthracene	0.401
	Indeno(1,2,3-cd)pyrene	1.90
	Naphthalene	0.581
	Phenanthrene	5.97

B-23		
ft bgs	Parameter	mg/kg
6-10	Copper	39.6

B-5		
ft bgs	Parameter	mg/kg
10-25	Arsenic	9.38

B-8 (2nd Attempt)		
ft bgs	Parameter	mg/kg
15-21.5	Benzene	0.0502
	Naphthalene	0.0890

NOTES:
 1. Aerial imagery from Google Earth Pro, 2021.
 2. Boring locations based on Shannon & Wilson's *Project Update Memorandum (Week 17)*, November 16, 2021.
 3. Borings without data indicate results are below regulatory levels. Values that are shown exceed DEQ Clean Fill criteria.
 4. Definitions: bgs=below ground surface, ft=feet, J=estimated (+=biased high), mg/kg=milligrams per kilogram, mg/L=milligrams per liter, N=tentatively identified, TCLP=Toxicity Characteristic Leaching Procedure, U=not detected.



Preliminary Site Investigation
 Geotechnical Drilling Support
 Earthquake Ready Burnside Bridge Project
 Portland, Oregon

SOIL ANALYTICAL RESULTS ABOVE SCREENING LEVELS, WEST BANK
 January 2022
 C+BEC Job# 319

Figure No.
2

-  = Location of Mud Rotary Boring
-  = Location of Rotosonic and Hazmat Boring
-  = Location of Hazmat Boring
-  = Location of Cone Penetration Test (CPT)

B-16		
ft bgs	Parameter	mg/kg
0-10	Arsenic	9.40
	Lead	340
	TCLP Lead (mg/L)	0.409
10-20	Benzo(a)pyrene	0.115
	Lead	34.1

B-17		
ft bgs	Parameter	mg/kg
0-10	Lead	32.4
	Selenium	0.912 J
10-25	Benzo(a)anthracene	1.29
	Benzo(a)pyrene	0.210
	Lead	110
	TCLP Lead (mg/L)	0.025 U
	Selenium	1.08 J

B-18		
ft bgs	Parameter	mg/kg
0-10	Naphthalene	0.136
	Antimony	1.13 J
	Copper	42.4
	Lead	106
	TCLP Lead (mg/L)	0.0732
	Mercury	3.88
	Selenium	0.793 J
10-26	Residual-Range Organics	1,760
	Acenaphthene	1.27
	Benzo(a)anthracene	1.65
	Benzo(a)pyrene	1.03
	Benzo(b)fluoranthene	1.45
	Dibenz(a,h)anthracene	0.136 J
	Naphthalene	3.92
	Phenanthrene	7.68
	Antimony	2.92
	Copper	98.1
	Lead	245
	TCLP Lead (mg/L)	0.0674
Mercury	7.11	
TCLP Mercury (mg/L)	0.007 U	
Selenium	0.791 J	

B-33		
ft bgs	Parameter	mg/kg
15-16.5	Gasoline-Range Organics	353 J+
	Diesel-Range Organics	27,400 J
	Residual-Range Organics	26,000 J
	Acenaphthene	1.55 J
10-26.5	Gasoline-Range Organics	63.7 J+
	Diesel-Range Organics	2,310 J
	Residual-Range Organics	3,370 J
	Acenaphthene	0.257 J
	Copper	35.1

- Notes:
- Aerial imagery from Google Earth Pro, 2021.
 - Boring locations based on Shannon & Wilson's *Project Update Memorandum (Week 17)*, November 16, 2021.
 - Borings without data indicate results are below regulatory levels. Red values indicate concentration exceeds DEQ RBC for Construction Workers; all other values exceed DEQ Clean Fill criteria.
 - Definitions: bgs=below ground surface, ft=feet, J=estimated (+=biased high), mg/kg=milligrams per kilogram, mg/L=milligrams per liter; N=tentatively identified, TCLP=Toxicity Characteristic Leaching Procedure, U=not detected.

0 50 100 feet



Preliminary Site Investigation
Geotechnical Drilling Support
Earthquake Ready Burnside Bridge Project
Portland, Oregon

**SOIL ANALYTICAL RESULTS ABOVE
SCREENING LEVELS, EAST BANK**

January 2022

C+BEC Job# 319

Figure No.

3

-  = Location of Mud Rotary Boring
-  = Location of Rotosonic and Hazmat Boring
-  = Location of Hazmat Boring
-  = Location of Cone Penetration Test (CPT)

B-24		
ft bgs	Parameter	mg/kg
0-10	Arsenic	4.41
	Bis(2-ethylhexyl) Phthalate	0.020 J+
	Di-n-butyl Phthalate	0.014 J
	MCPA	2.6 NJ
10-20	Bis(2-ethylhexyl) Phthalate	0.025 J+
	1,2,3,7,8-PeCDD	0.593 NJ
	2,3,4,7,8-PeCDF	0.567 J
	1,2,3,4,7,8-HxCDF	0.447 NJ

B-26		
ft bgs	Parameter	mg/kg
0-10	Benzo(a)pyrene	0.33
	Dibenzofuran	0.038
	Naphthalene	0.21
	Total HPAHs	3.0
	Total PAHs	4.6
	BaP Equivalents	0.43
	Lead	7.96
	Mercury	0.0410
	MCPP	3.4 NJ
10-25	Dibenzofuran	0.015
	Total PAHs	1.2
	BaP Equivalents	0.084
	Lead	8.78
	Mercury	0.0710
	MCPP	1.7 NJ

B-36		
ft bgs	Parameter	mg/kg
0-10	Dibenzofuran	0.0044 J
	Total PAHs	0.16 J
	BaP Equivalents	0.020 J
	Arsenic	3.15
	Lead	10.0
	Bis(2-ethylhexyl) Phthalate	0.073 J+
10-17.5	Diesel-Range Organics	140 J
	Dibenzofuran	0.0022 J
	Mercury	0.0420 J+

B-35		
ft bgs	Parameter	mg/kg
0-10	Arsenic	4.31
	Mercury	0.0500 J+
10-20	Arsenic	3.03

B-30		
ft bgs	Parameter	mg/kg
0-10	Mercury	0.0320

B-29		
ft bgs	Parameter	mg/kg
0-12	Mercury	0.0600

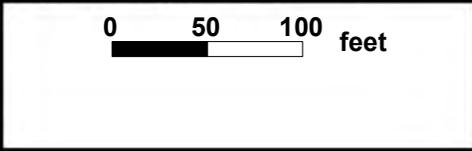
B-39		
ft bgs	Parameter	mg/kg
0-10	Dibenzofuran	0.0021 J
	Cadmium	0.106
	Lead	8.15
	Mercury	0.0350 J+
	Bis(2-ethylhexyl) Phthalate	0.028 J+

B-25		
ft bgs	Parameter	mg/kg
0-10	Bis(2-ethylhexyl) Phthalate	0.022 J+
	Di-n-butyl Phthalate	0.015 J+
	Total PCBs	0.014 J
	Dieldrin	0.00037 NJ
	MCPP	1.0 J

B-34							
ft bgs	Parameter	mg/kg	Parameter	mg/kg	ft bgs	Parameter	mg/kg
0-10	Diesel-Range Organics	170 J	Cadmium	0.217	10-23	Dibenzofuran	0.0056 J
	Benzo(a)pyrene	0.34	Lead	61.5		Total PAHs	0.45 J
	Dibenzofuran	0.020	Mercury	0.433 J		BaP Equivalents	0.051 J
	Naphthalene	0.18	Bis(2-ethylhexyl) Phthalate	0.12		Arsenic	5.35
	Total HPAH	2.9	2,3,7,8-TCDF	0.649 NJ		Total PCBs	0.132
	Total PAH	4.31	2,3,4,7,8-PeCDF	0.31 NJ		Lead	22.2
	BaP Equivalents	0.456	Aroclor 1248	0.022		Mercury	0.247
	Arsenic	3.55	Total PCBs	0.079		Bis(2-ethylhexyl) Phthalate	0.031 J

B-37		
ft bgs	Parameter	mg/kg
0-10	Arsenic	5.46
	Cadmium	0.112
	Total PCBs	0.017 J
10-17.5	Arsenic	3.96

NOTES:
 1. Aerial imagery from Google Earth Pro, 2021.
 2. Boring locations based on Shannon & Wilson's Project Update Memorandum (Week 17), November 16, 2021.
 3. Borings without data indicate results are below regulatory levels. Red values indicate concentration exceeds one or more in-water screening level(s); all other values exceed DEQ Clean Fill criteria.
 4. Definitions: bgs=below ground surface, ft=feet, J=estimated (+=biased high), mg/kg=milligrams per kilogram, mg/L=milligrams per liter, N=tentatively identified, TCLP=Toxicity Characteristic Leaching Procedure, U=not detected.



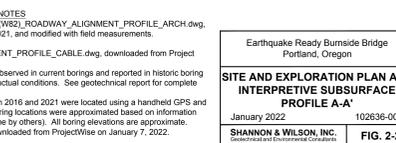
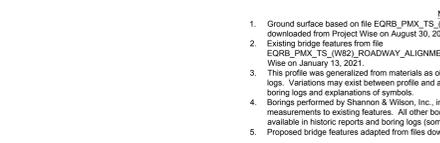
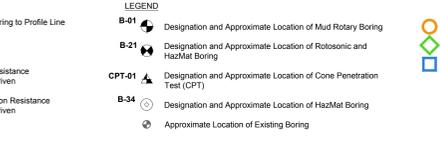
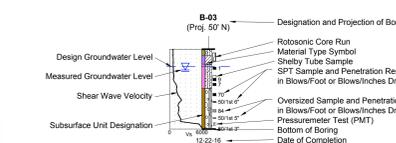
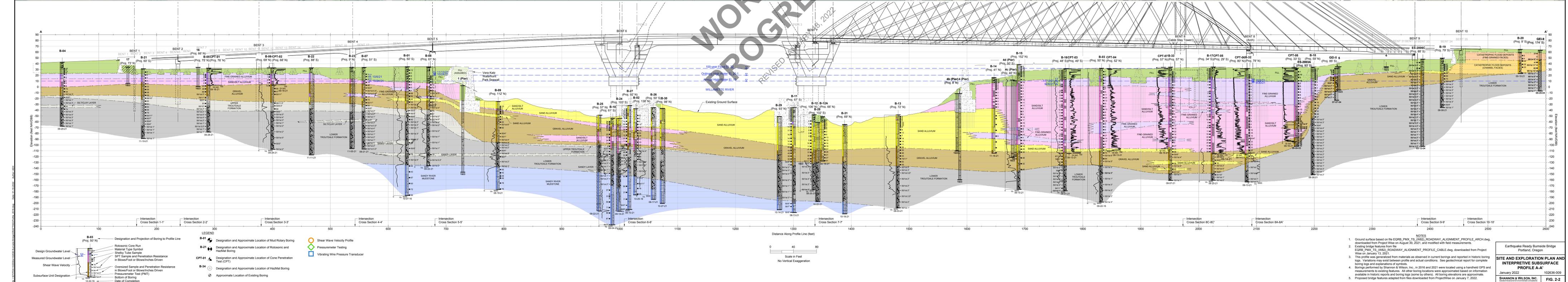
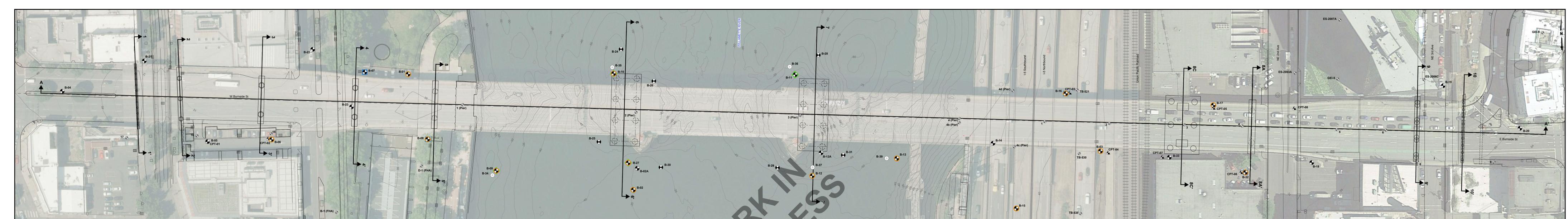
Preliminary Site Investigation
 Geotechnical Drilling Support
 Earthquake Ready Burnside Bridge Project
 Portland, Oregon

SEDIMENT ANALYTICAL RESULTS ABOVE
 SCREENING LEVELS, RIVER SPAN
 January 2022
 C+BEC Job# 319

Figure No.
4

Appendix A

SW Site and Exploration Plan

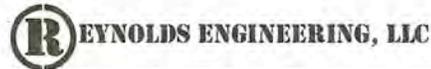


NOTES

- Ground surface based on file EQRB_PMX_TS_IWS2_ROADWAY_ALIGNMENT_PROFILE_ARCH.dwg, downloaded from Project Wise on August 30, 2021, and modified with field measurements.
- Existing bridge features from file EQRB_PMX_TS_IWS2_ROADWAY_ALIGNMENT_PROFILE_CABLE.dwg, downloaded from Project Wise on January 13, 2022.
- This profile was generalized from materials as observed in current borings and reported in historic boring logs. Variations may exist between profile and actual conditions. See geotechnical report for complete boring logs and explanations of symbols.
- Borings performed by Shannon & Wilson, Inc. in 2016 and 2021 were located using a handheld GPS and measurements to existing features. All other boring locations were approximated based on information available in historic reports and boring logs (some by others). All boring elevations are approximate.
- Proposed bridge features adapted from files downloaded from ProjectWise on January 7, 2022.

Appendix B

Boring Logs



Project Name: **EQRB**
 Project Number: **319**
 Boring Number: **B-18**

Logged By: **Jill Betts**
 Date: **8/23/21**
 Ground Conditions: **Asphalt Lot**
 Drilling Contractor: **Western States**
 Drilling Equipment/Rig#: **HSA**
 Sampler Type: **SPT**
 Groundwater Present (Y/N): **Y**
 Depth to Water (ATD): **25.42***

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0		2.5 4	2.5 4	-	N	N	N	BIB 2.5 @ 9:18	SILT - Brown, blue/gray, moist, st. plastic	(1) 4oz	Got the shoe. Not enough for PID.
5		5.5 6.5	5- 6.5	1.7	N	N	N	BIB 5-6.5 @ 9:30	SILT w/wood - Brown, moist, st. plastic	(2) 4oz	Black sand layer @ 5.5 to about 5.6' 1.5 jars filled
		7.5 9	7.5 9	1.0	N	N	N	BIB 7.5-9 @ 9:40	7.5-8 Black Sand w/silt. 8-9 SILT, Brown, moist, st. plastic, wood debris	(1) 4oz	
10		10.5 11.5	10- 11.5	0.9	N	N	N	BIB 10-11.5 @ 9:55	SILT w/ sm. black sand layers, moist. wood in shoe	(2) 4oz	1.5 jars, outer core sample, wet. Dried. 5' to 15' - waited 15 minutes, NO gw in hole.
		12- 14.5	12- 14.5	1.0	N	Y	N	BIB 12.5-14 @ 10:02	SILT w/wood	(3) 4oz	12-14.5: slight petroleum/oil/diesel odor.
15		15.5 16.5	15- 16.5	0.4	N	Y	N	BIB 15-16.5 @ 10:12	SILT w/wood	(1) 4oz	15-16.5: slight odor As above.
		17.5 19	17.5 19	0.6	N	N	N	BIB 17.5-19 @ 10:17	SILT w/ sand & wood debris Brown, moist sand size - pieces brick?	(2) 4oz	
20		20- 21.5	20- 21.5	0.6	N	N	N	BIB 20-21.5 @ 10:25	SILT w/wood gray, moist, st. plastic	(3) 4oz	Filled 2.5 jars
25		25- 26.5	25- 26.5	0.6	N	N	N	BIB 25-26.5 @ 10:35	SILT to Brown w/ black & light brown mottling. Rootlets (vertical)	(3) 4oz	Filled 2.5 jars

IDW Drum Summary: Soil Cutting Drums 1 Purge Water Drums 0

Log is for internal distribution only. Do not distribute outside HDR and Multnomah County's Owner's Representative(s).

* SWITCHED TO MUD ROTARY AFTER LEFT HOLE OPEN 25 MINUTES - BAILER WENT INTO MUD. NO GROUNDWATER RECORDED. NO GW SAMPLE.

Project Name: **EQR13**

Project Number: **CB319**

Boring Number: **B-17**

Logged By: **MSR**
Date: **8/23/21**
Ground Conditions: **Pump/Underbr**
Drilling Contractor: **Western States**

Drilling Equipment/Rig#: **HSA/Trench**
Sampler Type: **SPT**
Groundwater Present (Y/N)
Depth to Water (ATD):

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Shear (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0									Asphalt/Gravel Aggregate (coarse sand)		Hand Drilling...
	9:06	4"	2.5-4'	Ø	Y	N	N	—	6" br silty sand w/ gravel some asphalt	Ø	V. Little sample (crack) - Black asphalt pieces.
5	9:12	12"	5-6.5'	Ø	N	N	N	—	Br sandy silt btw Bricks debris on top & monom at bottom	Ø	cuttings: silty sand w/ gravel → bag
	9:16	12"	7.5-9'	Ø	N	N	N	B-17 7.5 (9:28)		140z (1/2 fill)	softer drilling...
10	9:32	6"	10-11.5'	Ø	Y	N	N	B-17 10 (9:36)	Br sandy silt Brk, gravel	140z (1/4 fill)	Black color/no odor w/ Brk. Soft Drilling...
	9:39	10"	12.5-14'	Ø	Y	N	N	B-17 12.5 (9:42)	Gr sandy clayey silt, Brk	140z (1/2 fill)	Black color/no odor w/ Brk
15	9:44	20"	15-16.5'	Ø	N	N	N	B-17 15 (9:50)	Gr clayey silt, Brk	140z (1/2 fill)	
	9:51	18"	17.5-19'	Ø	N	N	N	B-17 17.5 (9:57)	Gr clayey silt.	140z (1/2 fill)	Appears nat., moist. to wet
20	10:01	18"	20-21.5'	Ø	N	N	N	B-17 20 (10:03)	SAA	140z (fill)	
	10:07	24"	23-25'	—	—	—	—	—	—	—	Shelly Tube

IDW Drum Summary: Soil Cutting Drums 1 Purge Water Drums 2
← 2 gal



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REYNOLDS ENGINEERING, LLC

Project Name: EQ23

Project Number: 03319

Boring Number: B-17

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Logged By: MSN	Drilling Equipment/Rig#:		
								Date: 8/23/21	Sampler Type:		
Ground Conditions:								Groundwater Present (Y/N)			
Drilling Contractor:								Depth to Water (ATD): 22.1'			
		Sample ID	Sample Description	Sample Volume/Containers	Notes						
25	10:21	8" 25-26.5	9	N	N	N	N	B-17 25 (10:23)	Bry Sandy silt	1 408	Transited from gray to brown.
30					N	N	N	B-17 (10:55)	Groundwater Sample.		
35											
40											
45											
50											

IDW Drum Summary: Soil Cutting Drums _____, Purge Water Drums _____



APEX COMPANIES, LLC



Project Name: EQRB

Project Number: C3319

Boring Number: B-33

Logged By: msgr + JEB

Drilling Equipment/Rig#:

Date: 9/1/21

Sampler Type: HSA/SPT

Ground Conditions: Paved lot

Groundwater Present (Y/N) free prod & sat 15-16.5

Drilling Contractor: Warden Stokes

Depth to Water (ATD):

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0											Asphalt paving = 3" Vac 1st = 10" start = 9 AM
5								* Not enough volume for PID sample B33 75-9 @ 12:20	SILT w/ gravel brown, moist fill	(1) 4oz	Pause in vac run @ 10:10-11:05 need with run tube. start again @ 11:10 Br silty sand w/ gravel observable. no odors Rubber debris @ 1.5' bgs Wini debris @ 4.0' bgs cobbles @ 5.0' bgs
10	4"				N	N	N	B33 10-115 @ 12:27	SILT w/ gravel fill	(1) 4oz	Poor recovery. Pak. ~4"
15	~6"				Y	Y	N	B33 125-14 @ 12:35	SILT w/ gravel brown & gray black sand w/ odor (poorly sorted)	(0.25) 4oz	odor - heavy oil sheen in decant
20	~18-20"				Y	Y	Y	B33 15-165 @ 1:05	Wet Contaminated Black sand & silt w/ gravel piece wood in slur	(2) 4oz	Free product present. Heavy oil. But watered SPT (40 poured out) & outer core wet. Soils wet. Free product (brown blebs) in water.
20	25'				Y	Y	N	B33 175-19 @ 2:30	Gray silty clay. odor. Moist	(3) 4oz	NO V
20	2.5'				Y	Y	N	B33 20-215 @ 2:40	Gray moist, silty clay.	(3) 4oz	Silt increases w/ depth. Wet outer SPT w/ sheen & brown/blebs
25	2.5'				N	N	N	B33 225-24 @ 2:55	Brown moist silt/silty clay w/ gray mottling	(2) 4oz	Native perstru

Grade 1221

IDW Drum Summary: Soil Cutting Drums 1 Purge Water Drums 0

B33 25-26 (2) 4oz
@ 3:15

Brown silty clay
Moist
Gray mottling
(Native pebbles)

No discol.
sh. color.
PID = 0.4

full auger. ∇ @ 15.5' bgs.

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Logged By: Jill Betts	Drilling Equipment/Rig#: HSA	
								Sample ID	Sample Description	Sample Volume/Containers
0								Date: 9/12/21 - 9/13/21	Drilling Equipment/Rig#: HSA	
								Ground Conditions: Concrete/Roadway	Sampler Type: SPT	
								Drilling Contractor: W. States	Groundwater Present (Y/N) (N)	
									Depth to Water (ATD): 0	
0								used water to core concrete.	Top 1 ft = concrete. 2 layers: 0-4" & 4"-1'.	
2.5-4.0		0.2		N	N	N		B-15 2.5-4.0	Fill-Brown sand w/silt. moist. (1) 4oz	Not enough to get baggie for PID
5-6.5		0.1		N	N	N		B-15 5-6.5	Fill-Brown, moist silty sand, gravel (1) 4oz	Asphalt in shoe
7.5-9		0.8		N	N	N		B-15 7.5-9	Fill-Brown silt. loose fr. (1) 4oz @ 12:19	Did not feel sand. Less moisture.
10-11.5		1.2		N	N	N		B-15 10-11.5	Fill-silt as above. (1) 4oz @ 12:19	Black "streak" on side of soil core
12.5-14		1.8		N	N	N		B-15 12.5-14	Fill-silt w/brick fragment (1) 4oz @ 12:27	
15-16.5				N	N	N		B-15 15-16.5	Fill-silt, gravel (rounded), gravel 1/4" to 1.25" (1) 4oz @ 12:30	Unable to get PID sample. White "squishy" material
17.5-19		0.0		N	N	N		B-15 17.5-19	Fill-silt, moist w/gravel. (1) 4oz @	More gravel @ depth Not enough volume to get a PID sam
20-21.5		0.4		N	N	N		B-15 20-21.5	Fill-Sand, dry, loose, subangular to subrounded gravels (1) 4oz @ 12:43	Brick fragment Gravels ~ 15%
25-26.5		0.9		N	N	N		B-15 25-26.5	Fill-Same as above (1) 4oz @ 12:52	Less gravel (1 piece) than above

IDW Drum Summary: Soil Cutting Drums 1 Purge Water Drums 0



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REYNOLDS ENGINEERING, LLC

Project Name: ERRB

Project Number: 39

Boring Number: BB 2nd attempt

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Logged By: <u>Juli Betts</u>		Drilling Equipment/Rig#: <u>vac'd</u>					
								Date: <u>9/14/21</u>		Sampler Type:					
Ground Conditions:								Groundwater Present (Y/N)		Depth to Water (ATD):					
Drilling Contractor:								Sample ID		Sample Description		Sample Volume/Containers		Notes	
0								0-1' concrete							
1-3'								FILL: Gravel w/sand. 2" gravel to 0.25" gravel. Sand coarse to fine. Wire @ 2' w/ red metal. Brown, Moist							
5								TERMINATED @ 3' due to copper wire (used to locate utilities).							
10								Vac'd cuttings not drummed. Will combine w/ next hole. See 9/14/21 Field Log.							
15								BB 0-3	FILL (see above)	(2) 4oz					
20															
25															

IDW Drum Summary: Soil Cutting Drums _____, Purge Water Drums _____

Log is for internal distribution only. Do not distribute outside HDR and Multnomah County's Owner's Representative(s).



Project Name: ECRB
 Project Number: 319
 Boring Number: B-7

Logged By: Jill Betts Drilling Equipment/Rig#: HSA
 Date: 9-16-21 Sampler Type: SPT
 Ground Conditions: Asphalt Groundwater Present (Y/N) Y
 Drilling Contractor: Western States Depth to Water (ATD): 22'2.5"

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0											~1' Asphalt & conc. Vacuumed to 11' Drilled to 15' & began sampling
11-12.5		X	0.0	Y	N	N		B7 11-12.5	clay/silt, brown, moist, sl. plastic to top 4" 5% coarse sand Eray top 4"	(1) 4oz @ 1:53	Sample likely slough from vacuuming. Talk to ATP - he said <u>not</u> slough.
15-16.5			0.0	N	N	N		B7 15-16.5	clay/silt, brown, moist, sl. plastic to plastic	(2) 4oz @ 2:10	
20-21.5			0.3	Y	N	N		B7 20-21.5	Fill - clay/silt, brown w/ green gray mottling to green/grey color. Moist to wet.	(2) 4oz @ 2:15	More saturated/wet @ bottom (last 4") of SPT VOCs in ambient air spiked to 0.5 after truck usage = 0.5
25-26.5			0.7	N	N	N		B7 25-26.5	Top 1" thin 9" sand well sorted	(1) 4oz @ 2:20	Saturated Ambient air - VOC = 0.9

END @ 26.5'
 IDW Drum Summary: Soil Cutting Drums 1, Purge Water Drums 0
 No soil/larger cuttings because Purge water went into vac drum

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vac note so big it all went in note.



Project Name: **ECRFB**

Project Number: **319**

Boring Number: **B-8**

Logged By: **Jill Betts**

Drilling Equipment/Rig#: **HSA**

Date: **9/20/21**

Sampler Type: **SPT**

Ground Conditions: **Concrete**

Groundwater Present (Y/N)

Drilling Contractor: **W. States**

Depth to Water (ATD):

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0											Driers cored & vac'd out soil/fill to 13.5' 14.5'
5											~ 2 drums vac waste.
10											Sampling started @ 15'
15											Gravel fill until 7-8' bgs. Care-ins. Then soft stuff, 8-15' 14.5'. Observed cobbles @ rig rounded, 3"-5".
15			00		Y*	N	N	BB 15-16.5	Clay/silt, gray to black, Btm @ gravel & sand per gravel rounded	(2) 4oz @ 3:08	*Top 26" = gray clay/silt fill
17.5			00		N	Y*	N	BB 17.5-19	No fines	(1) 4oz @ 3:25	17.5-19 * decomposed wood, organic decomposing odor fill
20								BB 20-21.5	Sand w/ gravel w/ wood moist	(1) 4oz @ 3:30	20-21.5: Fill NOT enough to get PID/bag & sheen
25								BB 25-26.5	Silt/clay w/ gravel, wood, gray, moist	(1) 4oz @ 3:42	Wood debris. shoe very moist. Water, meter did not detect groundwater.

IDW Drum Summary: Soil Cutting Drums _____ Purge Water Drums _____

~ 2 vac (estimated); (1) auger cuttings

Log is for internal distribution only. Do not distribute outside HDR and Multnomah County's Owner's Representative(s).



Project Name: ECRB

Project Number: 39

Boring Number: B-8

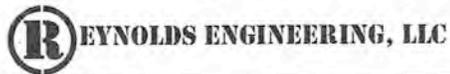
Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
25											9/21/21 Cont.
30					N	N	N		SAND w/ silt/clay Gray, wet, Gravel too Dirt Silt/clay 20%	Did not collect sample because below ∇.	SPT filled w/ water & exterior wet. ∇ = 26'8"
35											
40					N	N	N	BB	Groundwater @ 10:45 8:45	Water @ 10:45 8:45	Slow water Low water flow. Very turbid. Organic/sewer odor first few minutes then dissipated
45									Due to low flow, did not purge more than 250ml. Collected w/ peristaltic.		
50									Due to low flow, tried to collect VOA's first. Too turbid too many air bubbles. Began to fill ampers. Turbidity improved over time. @ 10:45 dark brown, by 9:20, light brown. Sewer odor when first purged / run pump 9:35 after 3L water cleared turbidity improved.		

IDW Drum Summary: Soil Cutting Drums 1, Purge Water Drums

gave label to driller

Log is for internal distribution only. Do not distribute outside HDR and Multnomah County's Owner's Representative(s).

Purge H₂O (~500ml) given to driller.



Project Name: EQNRB
 Project Number: 319
 Boring Number: B-21

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Shear (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
								Logged By: MSH			
Date: 11/8/21				Sampler Type: Push							
Ground Conditions: Comp. Sand flw				Groundwater Present (Y/N)							
Drilling Contractor: Western States				Depth to Water (ATD):							
0											
0-4.6	10:45	0.6'	0.6-4.6	Ø	Ø	Ø	Ø	B-21 0.6-4.6 (11:00)	Comp. Sand Silt, some organics 4.5-5'	4 4oz Jars	Start aug @ 10:45 Start push @ 10:55 Recovery 0.6-4.6"
5-6.5				Ø	Ø	Ø	Ø	none - Geo	SAA	-	SPT @ 5'-6.5'
6.5-10	11:05	3.5'	6.5-10	Ø	Ø	Ø	Ø	B-21 6.5-10 (11:15)	Silt, Sand Silt	4 4oz Jars	Recovery 6.5-10'
10-11.5				Ø	Ø	Ø	Ø	none - Geo	SAA	-	SPT 10-11.5'
11.5-15	11:25	3.5'	11.5-15	Ø	Ø	Ø	Ø	B-21 11.5-15 (11:25)	Br silty Sand	4 4oz Jars	Recovery 11.5-15'
15-16.5				Ø	Ø	Ø	Ø	none - Geo	SAA	-	SPT 15-16.5'
16.5-20	11:45	3.5'	16.5-20	Ø	Ø	Ø	Ø	B-21 16.5-20 (11:45)	Silt, Sand Silt	4 4oz Jars	Recovery 16.5-20'
20-21.5				Ø	Ø	Ø	Ø	none - Geo	SAA	-	SPT 20-21.5'
21.5-25	11:55	3.5'	21.5-25	Ø	Ø	Ø	Ø	B-21 21.5-25 (12:00)	Silt, Sand Silt (more to red)	4 4oz Jars	Recovery 21.5-25'
25-23.5									SAA moist to wet 22.5-23.5	4 4oz Jars	NO GW Sample

IDW Drum Summary: Soil Cutting Drums 1 - soil cuttings @ 25' Purge Water Drums



Project Name: **EORB**
 Project Number: **319**
 Boring Number: **B-22**

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Logged By: Jill Betts	Drilling Equipment/Rig#:		
								Date: 11-8-2021	Sampler Type: Sonic		
Ground Conditions: Asphalt/Naio								Groundwater Present (Y/N): Y	OST 23.45'-B'		
Drilling Contractor: W. States								Depth to Water (ATD):			
								Sample ID	Sample Description	Sample Volume/Containers	Notes
0											Vac'd to 10' Hit boulders @ 8.5'
10								B2210-11 ¹⁵	Brown, moist, silty plastic. clayey silt w/ trace-v. fine sand. No odor, sheen, discoloration	4 (4oz)	Abil to see core 10-17 in 1st box. PID = 0.0
15								15-17	Same as above		15-17 - same as above PID = 0.0
20									AA to 24'		No recovery 17-20 wet 20-25 loose soil - mostly sandy. # 20-21 wet 21.5-22 zone 23-23.5
25								25-20' PID = 0.3*	silty sandy brown to gray gravel - fill w/ some cobbles NO OST		Gravels - rounded sand - fine to coarse

IDW Drum Summary: Soil Cutting Drums , Purge Water Drums

Log is for internal distribution only. Do not distribute outside HDR and Multnomah County's Owner's Representative(s).

2 drums vac'd - gave 2 labels to driver.



Project Name:
Project Number:
Boring Number:

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Logged By:		Drilling Equipment/Rig#:	
								Sample ID	Sample Description	Sample Volume/Containers	Notes
25								Date:	Drilling Equipment/Rig#:	Sampler Type:	
								Ground Conditions:	Groundwater Present (Y/N)		
								Drilling Contractor:	Depth to Water (ATD):		
30											
35											
40											
45											
50											

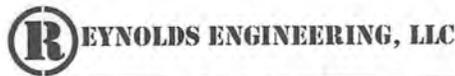
*Sampled gw @ 25'. Silt @ 1st. Felt like caved in.
END @ 30'.*

*NOTE - in post-drilling conversation driller indicated odor @ 24' likely from evo lube used in sonic equipment that heated.
No sheen in any samples.*

IDW Drum Summary: Soil Cutting Drums _____, Purge Water Drums _____



APEX COMPANIES, LLC



Project Name: EQRB

Project Number: CB319

Boring Number: B-05

Logged By: mja

Date: 9/27/21

Ground Conditions: Paved

Drilling Contractor: Western Slopes

Drilling Equipment/Rig#: CME

Sampler Type: HSA/SPT

Groundwater Present (Y/N)

Depth to Water (ATD): 23.16

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0											Vac @ 10:30 in vac mount to B-4 in container 7" in short HSA @ concrete layer in @ 10:50 => some cobbles (GAI)
10	10:55	18"	10-11.5	Ø	N	N	N	B-05 10 (11:00)	Bw sandy silt w/ some clay	14oz (2L)	Easy drilling...
	11:00	18"	11-12.5	Ø	N	N	N	B-05 12.5 (11:05)	SAA	14oz (2L)	
15	11:25	18"	15-16.5	Ø	N	N	N	B-05 15 (11:12)	SAA	14oz (2L)	
	11:30	18"	17-18.5	Ø	N	N	N	B-05 17.5	SAA	14oz (2L)	(no sample @ 17.5)
20	11:40	18"	20-21.5	Ø	N	N	N	B-05 20 (11:23)	SAA @ 20.5 Bw fine sandy silt (wet)	14oz (2L)	Bw @ 20.16' to 22' to 23' to 24' to 25' to 26' to 27' to 28' to 29' to 30'
25	11:50	18"	25-26.5	Ø	N	N	N	B-05 26 (11:35)	Bw fine sandy silt	14oz (2L)	to about = 12:15

IDW Drum Summary: Soil Cutting Drums 1 SC Purge Water Drums _____



Project Name: **EANB**
 Project Number: **319**
 Boring Number: **B-6**

Logged By: **MSH**
 Date: **9/22/21**
 Ground Conditions: **hard**
 Drilling Contractor: **Werner Sols**
 Drilling Equipment/Rig#: **CME**
 Sampler Type: **NSA/SPT**
 Groundwater Present: **(Y/N)**
 Depth to Water (ATD): **23.45'**

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0											Vac to 11' (11:30) 24" Pannet 19 4" connect in Down 19 fill, Br silty Sand, gravel & cobbles bould & tile fragments (25' logs)
	11:13	11"	11'-25"	Ø	N	N	N	B-6 11 (11:15)	Br silty/dry Sand	140z (SPL)	@ Bottom of vac hole... Switch to NSA
15	12:05	17"	15'-16.5"	Ø	N	N	N	B-6 15 (12:07)	SAA	140z (SPL)	
			19.5"					B-6 17.5	(empty 5'...)		
20	12:14	12"	20'-21.5"	Ø	N	N	N	B-6 20 (12:17)	Br Silty Sand, moist down	140z (SPL)	Sand & GW mixing to clay July Recovery slow
25	12:21	18"	25'-26.5"	Ø	N	N	N	B-6 25 (12:28)	SAA wet	140z	GW - 23.45 B-6 (1:35) 3 VACs 1 Amber not pres

IDW Drum Summary: Soil Cutting Drums VAC contents (1) SC contents (2) Purge Water Drums _____
 1 Amber not pres



APEX COMPANIES, LLC



Project Name: EQRB

Project Number: CB319

Boring Number: B-08

Logged By: MSR

Date: 8/30/21

Ground Conditions: Paved

Drilling Contractor: Western States

Drilling Equipment/Rig#:

Sampler Type: HSA/SPT

Groundwater Present (Y/N)

Depth to Water (ATD):

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0									Gravelly S.S., Sand		Paved sidewalk in stand cone 9:30. in 8" cone in stand daily 9:50.
	9:54	0	2.5	Ø	N	N	N	B-08 2.5 (9:57)	Gravelly S.S., Sand, some gravel	14oz (2/3 fill)	Brick obs. Driller = soil 4e4" Soft drilling
5	9:59	10	5-6.5	Ø	N	N	N	B-08 5 (10:03)	Gravelly sand, some silt	14oz (2/3 fill)	
	10:22	12	7.5	Ø	N	N	N	B-08 7.5 (10:28)	SAA	14oz (2/3 fill)	Pause for SW utility reconnect.
10	10:29	8	10-11.5	Ø	N	N	N	B-08 10 (10:52)	SAA, some gravel	14oz (2/3 fill)	
			12.5-14					Boring Abandoned			unmarked utility strike (PVC, no liquid) → BES abandoned at 2:30 → SW had tied to new boring isol. causing a new hole.

IDW Drum Summary: Soil Cutting Drums 1 Purge Water Drums



APEX COMPANIES, LLC



Project Name: EQRB

Project Number: CB319

Boring Number: B-19

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Logged By: <i>msk</i>	Drilling Equipment/Rig#:		
								Date: <i>9/7/21</i>	Sampler Type: <i>USA/SPT</i>		
								Ground Conditions: <i>Paired Rd</i>	Groundwater Present (Y/N) <i>Y</i>		
								Drilling Contractor: <i>Western States</i>	Depth to Water (ATD): <i>25.15'</i>		
								Sample ID	Sample Description	Sample Volume/Containers	Notes
0											<i>Vac hole start @ 8:50 ↳ asphalt = 2-3" ↳ concrete = 8-10" ↳ vac @ 9:10 brown soil w/ sand gravel & cobbles (stony 0.5-6" BFS) No odors Stop @ 8.4' cobbles ↳ 11:18 switch.</i>
10	<i>11:34</i>	<i>12"</i>	<i>10-11.5</i>	<i>Ø</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>B-19 10 (11:38)</i>	<i>Bre Sand & gravel w/ S.H.</i>	<i>14oz (Full)</i>	<i>High Blow count/S</i>
	<i>11:43</i>	<i>12"</i>	<i>12.5-14</i>	<i>Ø</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>B-19 12.5 (11:47)</i>	<i>SAA = 13' Bre. Sand</i>	<i>14oz (1/2 Full)</i>	
15	<i>11:49</i>	<i>12"</i>	<i>15-16.5</i>	<i>Ø</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>B-19 15 (11:53)</i>	<i>Bre. Fine Sand some gravel</i>	<i>14oz (Full)</i>	<i>2" gravel (1 on 2 pieces in core.)</i>
	<i>11:56</i>	<i>14"</i>	<i>17.5-19</i>	<i>Ø</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>B-19 17.5 (11:59)</i>	<i>SAA</i>	<i>14oz (Full)</i>	
20	<i>12:01</i>	<i>14"</i>	<i>20-21.5</i>	<i>Ø</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>B-19 20 (12:06)</i>	<i>SAA</i>	<i>14oz (Full)</i>	
25	<i>12:10</i>		<i>25-26.5</i>					<i>B-19 25 (12:15)</i>	<i>SAA - coarse Sand</i>	<i>14oz (Full)</i>	<i>GW @ 25.15' ↳ B-19 (12:35)</i>

IDW Drum Summary: Soil Cutting Drums _____, Purge Water Drums _____

Project Name: **EQRB**
Project Number: **CB319**
Boring Number: **B-20 (1)**

Logged By: **MRK**
Date: **9/9/21**
Ground Conditions: **Payment**
Drilling Contractor: **Wendell Steen**

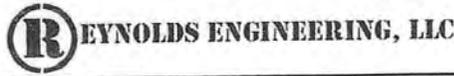
Drilling Equipment/Rig#: **CME**
Sampler Type: **HSA/SPT**
Groundwater Present (Y/N)
Depth to Water (ATD):

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0											Asphalt on abandoned concrete (-2" asphalt, 3" concrete) Corod 9/8. Drifters refuse to drill after locates near buoy w/o Val
5									Sand w/ some gravel @ 4.5' gravel @ 5' metal plate "drill rock"	* only dsV during mud Rotary. metal plate? @ 5'	Swirled to mud recovery - start 11:30 ← Buck layer
10											Decision to switch = 11:30
15											Decision to shut shortly after! waiting do see concrete cure avail today (on tomorrow). Final mud: About 4 try again tomorrow at a slightly different local @ 1:20.
20											
25											

IDW Drum Summary: Soil Cutting Drums _____, Purge Water Drums _____



APEX COMPANIES, LLC



Project Name: EORB

Project Number: CB319

Boring Number: B-70 (2)

Logged By: MSR

Drilling Equipment/Rig#: CME

Date: 9/10/21

Sampler Type: HSA/SPT

Ground Conditions: Gravelly

Groundwater Present (Y/N)

Drilling Contractor: Western States

Depth to Water (ATD):

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0									roadway fine silty sand w/ granules obs. some small cobbles		new B-20 location to west of P1 Accurate Concrete Drilling answer 9:22 concrete based slide to 9:55 to 10:34 done
5									cobble sized		depth 2-3" / 12-13" core start VAC 10:45 to Bore e.s. 3' to stop ~ 11:00 Core Bore 11:30 - core stuck 11:45 - 12:05 6-7" cobbles w/ 1/2" of gravel on bottom VAC Returns 12:20-12:22 Backfill 15 Bore hole to 12:45 Set up for mud logging start drilling 1:03 Had Drilling through cobble size.
10	1:39	10%	10-11.5	Ø	N	N	N		no sample, obsv only fine mud mud		
15	1:49	14%	12.5-15	Ø	N	N	N		fine silty/ clayey, w/ sand SAA included w/ increasing amounts of sand. Appears to be native.		

IDW Drum Summary: Soil Cutting Drums _____ Purge Water Drums _____



APEX COMPANIES, LLC



Project Name: EQMB

Project Number: 319

Boring Number: B-23

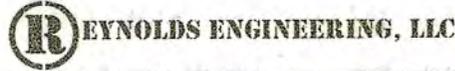
Logged By: *MSK*
 Date: *11/2/21 - 11/4/21*
 Ground Conditions: *Asphalt, Under Br.*
 Drilling Contractor: *Western States*

Drilling Equipment/Rig#: *Cropster*
 Sampler Type: *Sample*
 Groundwater Present (Y/N) *(Y)*
 Depth to Water (ATD): *23.48'*

* 2nd Attempt logged

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0	<i>11/2/21</i>		<i>0-6'</i>	-	-	<i>2</i>	-		<i>Br. sandy silty gravels + cobbles.</i>	<i>VAC</i>	<i>Start saw cut ~ 9:20 start vac ~ 9:45 to about 6 ~ 10:25 to metal pipe = 6 shaft socket - 2nd attempt start ~ 10:40 (no saw cut) to rock - saw + drill to hard more spacer to get tool (post-hole digger) = 11:05 - 11:25 to struggle w/ several cobbles to stop at large cobble @ ~ 5-6' logs About ~ 200</i>
5								<i>4' recovery</i>	<i>Recovery small to drillers think by rock was pushed down hole.</i>	<i>4 4 oz Jars</i>	
10	<i>9:00</i>		<i>6-10'</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>B-23 6-10 (9:50)</i>	<i>Br. silty sand sandy silt to some gravel Br coarse sand, gravel silt, monofam coast debris 8.5-9.5 Br sandy clay silt 9.5-10.1'</i>		<i>Day 2 (11/3/21) Centrifuge clean in AM but hydraulic failure on trailer, could not get veg off. Push to work.</i>
15											<i>Day 3 (11/4/21) Start sonic ~ 8:05</i>
20	<i>9:30</i>		<i>20-25'</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>N</i>	<i>5' recovery B-23 20-25 (9:00)</i>	<i>Br sandy clayey silt, trace gravel, moist to touch ~ 23-24'</i>	<i>4 4 oz Jars</i>	<i>Swi 24.19' - 8.5' ↓ = 23.48' no sample due to fine. no odors or obvious gas</i>
25											

IDW Drum Summary: Soil Cutting Drums *7* (VAC - 11/2/21 & 2 (6') (5-6') → one drum NO other soil cuts),
 Purge Water Drums _____



Project Name: **EQRB**
 Project Number: **CB 319**
 Boring Number: **B-30**

Logged By: **msu**
 Date: **10/25/21**
 Ground Conditions: **Base**
 Drilling Contractor: **Western Slope**
 Drilling Equipment/Rig#: **Geoprobe Rig**
 Sampler Type: **SONIC**
 Groundwater Present: **(Y/N)**
 Depth to Water (ATD): **(no water @ 310')**

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0								B-30 0-12" (12:50)	0-12" Rocky Granular sand Br 2/5ft	4 8 oz	More sample @ 1200 Start @ 1210
5	12:10		12-24" 15-0'		N	N	N	B-30 12-24" (12:55)	12-24" 24+ on silty sand, some gravel	4 8 oz	15' core 28 11' recovery Mudlines El: -40.5
10					N	N	N	B-30 24-30" (12:55)	SAA	4 8 oz	Depth 55.6 below Base level 9.3' above RW (12:15) 4' 9.3-55.6
15	1:00		15-20" 15-20'		N	N	N	B-30 15-20" (1:55)	SAA	4 8 oz	11-15" recovered in 2nd run
20	1:00		20-25" 15-25'		N	N	N	B-30 20-25" (2:15)	SAA-20.5 20.5-22' sandy silt Br	4 8 oz	Recovery 15-25' SW Sample (1:20) 24' casing (1 extra) 1L (800 ml HAW)
25											

IDW Drum Summary: Soil Cutting Drums _____ Purge Water Drums _____



Project Name: EQCB
 Project Number: C3319
 Boring Number: B-32

Logged By: MKL
 Date: 9/8/21
 Ground Conditions: sand
 Drilling Contractor: Western States

Drilling Equipment/Rig#: CME
 Sampler Type: HSA/SPT
 Groundwater Present: (N)
 Depth to Water (ATD): 10.95'

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0											Vac truck arrival ~ 10:20 ↳ start ~ 11:00 (Top Hole) ↳ Drum collapsed during vac. ↳ cobbles - switch to vac truck only ↳ complete ~ 12:15
10	12:35	70%	10'-11.5'	Ø	N	N	N	B-32 10 (12:38)	Bc sptly sand present	1 400 (1/4 fill)	
	12:47	70%	11.5'-12.5'	Ø	N	N	N	B-32 12.5 (12:49)	SAA → 11.2 11.2-11.5 Gr silty sand	1 400 (1/2 fill)	more to wet
15	12:51		15'-16.5'	Ø	N	N	N	B-32 15 (1:02)	SAA → 16.2 16.2-16.5 Gr clayey silt.	1 400 (1/2 fill)	wet
20											GW @ 10.95' Sample B-32 (1:10)

Switch to mud rotary

IDW Drum Summary: Soil Cutting Drums 2-3, Purge Water Drums Ø
 ↗ 1-2 Vac 0-10'
 1 SC 10-25'



Project Name: *Burnside Bridge*
 Project Number:
 Boring Number: *B-24*

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Logged By: <i>JM RS</i>		Drilling Equipment/Rig#: <i>GeoProbe 500iC</i>
								Date: <i>7/9/2021</i>		Sampler Type: <i>Core Barrel</i>
								Ground Conditions:		Groundwater Present (Y/N)
								Drilling Contractor:		Depth to Water (ATD):
Sample ID	Sample Description	Sample Volume/Containers	Notes							
B-24 (0-5)	<i>Silty SAND w Gravel; (GL-SM) Grey, wet, well graded, medium dense</i>	<i>4 x 8 (02)</i>	<i>70' From top of barge to mudline. Top of barge is 9' above water line at time of drilling @ 1330</i>							
B-24 5-10		<i>4 x 8 (02)</i>								
B-24 10-15	<i>@ 10' Sandy GRAVEL; (GW) grey, wet, well graded, dense, some cobbles</i>	<i>4 x 8 (02)</i>								
B-24 15-20	<i>@ 15' SAND; (SU) grey, wet, well graded medium dense.</i>	<i>4 x 8 (02)</i>								
B-24 20-25	<i>@ 19' Sandy GRAVEL (GW), grey, wet, well graded, dense</i>	<i>4 x 8 (02)</i>								

GW sample 1800/B-24

IDW Drum Summary: Soil Cutting Drums 0, Purge Water Drums 0

Logged By: *Robert Schettler*

Drilling Equipment/Rig#: *Geo Probe*

Date: *10/15/21*

Sampler Type: *Soil Drilling*

Ground Conditions: *Sunny*

Groundwater Present (Y/N) *3/15*

Drilling Contractor: *Western States*

Depth to Water (ATD): *9.3'*

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
								B 31		802	
0	<i>10:30</i>										
			0.5	N	N	N			<i>Silty sand, gray, wet, tr RS</i>		
			0.4	N	N	N			<i>Tr f-c gravel sub round</i>		
5			0.3	N	N	N			<i>f-c sand NPF</i>		
			0.2	N	N	N			<i>poorly graded</i>		
			0.8	N	N	N					
			0.2	N	N	N			<i>Slough, same as above</i>		<i>First recovery pulled out only 10.5' of 20'. Second attempt pulled out about 5' slough.</i>
			0.2	N	N	N					
		<i>No Recovery</i>							<i>No recovery</i>		<i>fell out of sampler</i>
20			0.7	N	N	N					
			0.2	N	N	N			<i>Silty sand gray, wet</i>		
			0.4	N	N	N			<i>tr gravel f-c subround f-m sand poorly graded</i>		
25											

IDW Drum Summary: Soil Cutting Drums _____ Purge Water Drums _____



Project Name: Earthquake Ready
Ducenside Bridge

Project Number: 2680-00

Boring Number: B-34

Logged By: Robert Schettler

Drilling Equipment/Rig#: Geo Probe

Date: 10/12/21

Sampler Type: Sonic Drilling

Ground Conditions: Cloudy

Groundwater Present (Y/N)

Drilling Contractor:

Depth to Water (ATD): 9.3'

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
								B 34		90g	
0			1.0	N	N	N		Silty sand w/ gravel & cobbles, gray, wet, f-c gravel subround →		f-c sand NPK timber fragment	
5			0.4	N	N	N		Sandy silt w/ trace gravel gray, wet →		f-c gravel, subround f sand	
			0.3	N	N	N		Silty sand, gray, wet f-m sand		timber pieces	
11.5			0.2	N	N	N		Silty sand, gray, wet f-c gravel, sub-round - sub sub angular →		f-c sand NPK	
15			0.2	N	N	N		Silt w/sand & gravel, gray, wet trace f-m gravel / sub round →		f sand L-M plastic becomes silty w/ gravel and cobbles	
16.5			0.1	N	N	N				No recovery sample fell out	
20			0.1	N	N	N					
25											

IDW Drum Summary: Soil Cutting Drums _____ Purge Water Drums _____



APEX COMPANIES, LLC



COLES+BETTS environmental consulting



REYNOLDS ENGINEERING, LLC

Project Name: Earthquake Ready Durnside Bridge

Project Number: 2680-00

Boring Number: B-29

Logged By: Robert Schettler

Drilling Equipment/Rig#: Ge3 Probe

Date: 10/12/21

Sampler Type: Sonic Drilling

Ground Conditions: Cloudy

Groundwater Present (Y/N)

Drilling Contractor:

Depth to Water (ATD): 9.3

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
								B29		800	
0	14:30								Silty sand w/ gravel gray, wet f-c gravel Subbrand		
3			0.3	N	N	N			f-c sand NPF		
6			0.3	N	N	N					
9	14:35		0.4	N	N	N			Silty Sand f sand well sorted		
12			0.4	N	N	N					
15		No Recovery									No Recovery Sample fell out

IDW Drum Summary: Soil Cutting Drums _____ Purge Water Drums _____

Logged By: *Robert Schettler*

Drilling Equipment/Rig#: *Geo Probe*

Date: *10/11/2021*

Sampler Type: *Sonic drilling*

Ground Conditions:

Groundwater Present (Y/N)

Drilling Contractor:

Depth to Water (ATD): *25 9.8 10.3*

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0								<i>B-35</i>		<i>8 02</i>	
0.2				<i>0.2</i>					<i>Sandy Gravel wet, f-c gravel, subround f-c sand NPF well graded</i>	<i>4-8 oz 1016</i>	<i>12 1/2 ft recovery for first 15 ft no sheen</i>
0.3				<i>0.3</i>	<i>N</i>	<i>N</i>	<i>IV</i>				
0.2				<i>0.2</i>						<i>4-8 oz 1020</i>	
1.3				<i>1.3</i>	<i>N</i>	<i>N</i>	<i>N</i>		<i>Silty Gravelly sand</i>		<i>no sheen</i>
0.6				<i>0.6</i>	<i>N</i>	<i>N</i>	<i>N</i>				
0.0		<i>no recovery</i>		<i>0.6</i>	<i>N</i>	<i>N</i>	<i>N</i>		<i>Sandy gravel w trace cobbles</i>	<i>4-8 oz 1024</i>	<i>No recovery ~ 11'-15' sample fell out</i>
0.0		<i>no recovery</i>		<i>0.6</i>							<i>no sheen</i>
0.0		<i>no recovery</i>		<i>0.0</i>	<i>N</i>	<i>N</i>	<i>N</i>		<i>Sandy silty gravel with cobble sub rounders well graded</i>		
0.0		<i>no recovery</i>		<i>0.6</i>							<i>No recovery 20'-25' sample fell out</i>
25		<i>no recovery</i>									<i>1100 - Move barge to B-36</i>

IDW Drum Summary: Soil Cutting Drums _____ Purge Water Drums _____



Project Name: *Geothruke Realty
Burside Bridge*
 Project Number: *2680-00*
 Boring Number: *B-36*

Logged By: *Robert Schotten*
 Date: *10/11/2021*
 Ground Conditions:
 Drilling Contractor:
 Drilling Equipment/Rig#: *Geo Probe*
 Sampler Type: *Sonic drilling*
 Groundwater Present (Y/N)
 Depth to Water (ATD): ~~*10.5'*~~ *9.3'*

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0								<i>B36</i>			
			<i>1.8</i>		<i>N</i>	<i>N</i>			<i>Silty sand gray, wet f-c sand NPF</i>		<i>begin drilling around 1025</i>
			<i>2.1</i>		<i>N</i>	<i>N</i>					
5			<i>1.8</i>		<i>N</i>	<i>N</i>			<i>Sand, Gravel in trace Cobble, gray wet</i>		
			<i>1.8</i>		<i>N</i>	<i>N</i>			<i>f-c gravel subround f-c sand</i>		
10			<i>0.8</i>		<i>N</i>	<i>N</i>			<i>Silty sand at 5.5'</i>		
			<i>1.7</i>		<i>N</i>	<i>N</i>					
			<i>6.7</i>		<i>N</i>	<i>N</i>					
15			<i>2.5</i>		<i>N</i>	<i>N</i>					
20		<i>No Recovery</i>									<i>No recovery sample fell out</i>
25											

IDW Drum Summary: Soil Cutting Drums _____ Purge Water Drums _____



APEX COMPANIES, LLC



COLES+BETTS environmental consulting



REYNOLDS ENGINEERING, LLC

Project Name: Earthquake Ready Burnside Bridge

Project Number: 2690-00

Boring Number: B39

Logged By: Robert Schottler

Drilling Equipment/Rig#: Geo Probe

Date: 10/11/21

Sampler Type: Sonic Drilling

Ground Conditions:

Groundwater Present (Y/N)

Drilling Contractor:

Depth to Water (ATD): 9.3'

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
								B39			
0		no recovery				N	N		No recovery, spoils sandy gravel gray		Sample fell at Lost upper 1-2' before bagging
			2.5			N	N				
			1.6			N	N		silty sand gray, wet fine sand NPF		
5			1.2			N	N				
			1.1			N	N		Sandy silt gray, wet fine sand npf		
			1.1			N	N				
10									no recovery		Sample fell at
15		no recovery									
20											
25											Pack up 1500

IDW Drum Summary: Soil Cutting Drums _____, Purge Water Drums _____



APEX COMPANIES, LLC



Project Name: **EQRB**

Project Number: **2680-00**

Boring Number: **B-25**

Logged By: **Paula Parrott**

Drilling Equipment/Rig#: **Sonic**

Date: **9/20/21**

Sampler Type: **H-DFE Sleeve**

Ground Conditions: **Sunny, 65°**

Groundwater Present (Y/N) **Y**

Drilling Contractor: **Western States**

Depth to Water (ATD): **≈ 75'**

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0		18/60	0-5	0.5	N	N	N		0-25' SAND, medium to coarse black sand, occasional layers of fine sub-rounded gravel, also black, loose, saturated	4 8-oz	Loose material = poor recovery
5				0.4	N	N	N				
		58/120	5-15	0.1	N	N	N				
10				0.3	N	N	N			4 8-oz	
15		47/120	15-25	0.2	N	N	N				
20				0.3	N	N	N			4 8-oz	
25				0.2	N	N	N			4 8-oz	
									Composited 0-10 10-25	4 8-oz	
										24 8w bottles	

IDW Drum Summary: Soil Cutting Drums _____, Purge Water Drums _____



APEX COMPANIES, LLC



COLES+BETTS environmental consulting



REYNOLDS ENGINEERING, LLC

Project Name: EQRB

Project Number: 2680-00

Boring Number: B-28

Logged By: Paula Parrott

Drilling Equipment/Rig#: Sonic

Date: 10/19/2021

Sampler Type: HDPE Sleeve

Ground Conditions: Overcast 60°F

Groundwater Present (Y/N) Y

Drilling Contractor: Western States

Depth to Water (ATD): ~77.5'

Depth, feet	Time	Total Core Recovery	Sample Interval	PID Result	Discoloration (Y/N)	Odor (Y/N)	Sheen (Y/N)	Sample ID	Sample Description	Sample Volume/Containers	Notes
0		6/28		0.1	N	N	N		0-25' SAND, medium to coarse black sand, occasional layers of fine subrounded gravel, also black, loose, saturated	4 8oz	Loose material made for somewhat poor recovery.
5		6/24		0.0	N	N	N			4 8oz	
10		6/25		0.2	N	N	N			4 8oz	
15		6/23		0.1	N	N	N	B-28(0-10)		4 8oz	Composited
20		6/25		0.3	N	N	N	B-28(10-25)		4 8oz	0-10, 10-25
25								B-28		24 bottles for GW sample	

IDW Drum Summary: Soil Cutting Drums _____, Purge Water Drums _____

Appendix C

Photo Log



Photo 1 - View of drilling at boring B-5 in the Mercy Corps parking lot near SW 1st Ave.



Photo 2 - View of clogged groundwater sampling tubing at boring B-5.



Photo 3 - View of drilling at boring B-6 in the Mercy Corps parking lot near SW Naito Pkwy.



Photo 4 - View of saturated sample from boring B-7 near SW Naito Pkwy.



Photo 5 - View of drilling at boring B-8 (2nd attempt).



Photo 6 - View of groundwater sampling at boring B-8 (2nd attempt).



Photo 7 - View of drilling at boring B-21 adjacent to the Tri-Met Light Rail lines along NW/SW 1st Ave.



Photo 8 - View of sample cores from drilling at boring B-21.



Photo 9 - View of drilling at boring B-22 along NW Naito Pkwy.



Photo 10 - View of soil subsampling from boring B-22 sonic cores.



Photo 11 - View of drilling set up at boring B-23 adjacent NW/SW Naito Pkwy.



Photo 12 - View of sonic cores from drilling at boring B-23.



Photo 13 - View of sample collected from boring B-15 along I-5 SB.



Photo 14 - View of drilling set up at boring B-18 adjacent to SE 2nd Ave.



Photo 15 - View of stained soil from boring B-18.



Photo 16 - View of petroleum contamination encountered during groundwater sampling at boring B-18.



Photo 17 - View of pavement coring for boring B-20 along E Burnside St near NE/SE Martin Luther King Jr Blvd.

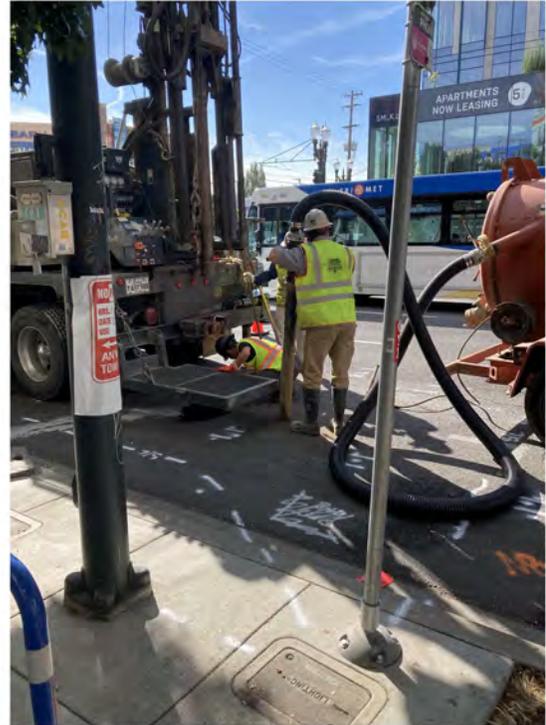


Photo 18 - View of vacuum clearance activities at boring B-20.



Photo 19 - View of former roadway cobble encountered at boring B-20.



Photo 20 - View of drilling activities at boring B-33 adjacent to the AMR maintenance building.



Photo 21 - View of petroleum encountered at boring B-33.

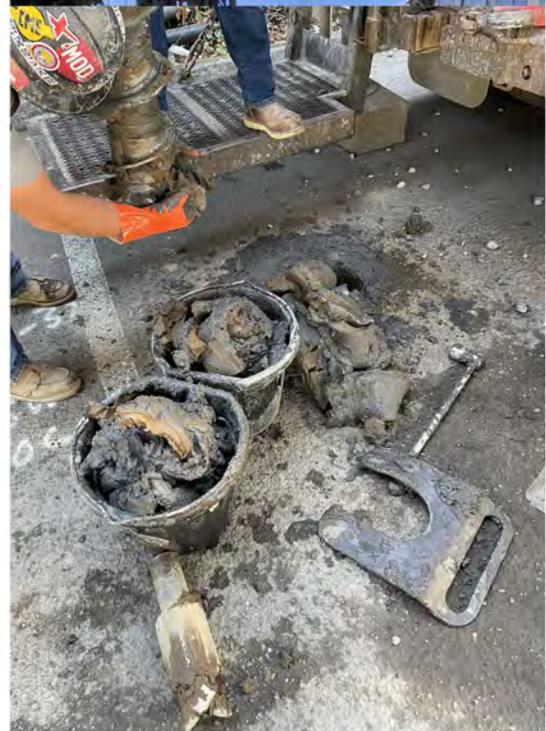


Photo 22 - View of petroleum-contaminated soils at boring B-33.



Photo 23 - View of barge and drilling set up at in-water boring B24, north of the bridge.



Photo 24 - View of sonic core and soil subsample at in-water boring B-35.



Photo 25 - View of barge and drilling set up at in-water boring B-25, south of the bridge.

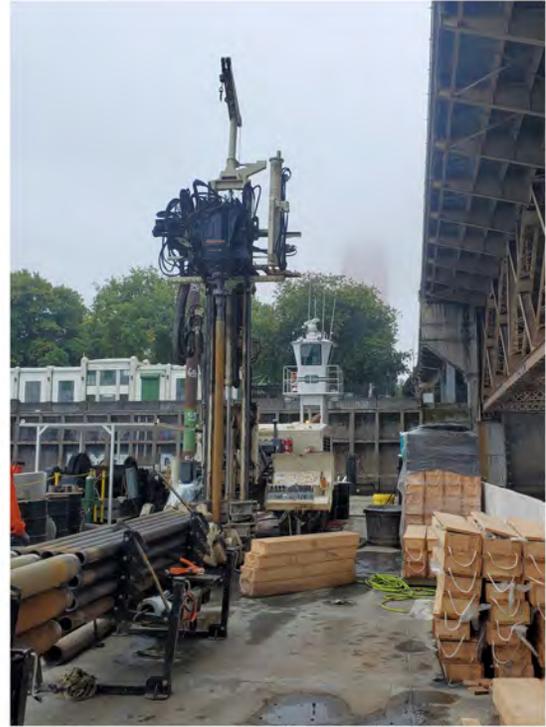


Photo 26 - View of drilling set up for in-water boring B-34.



Photo 27 - View of barge and drilling set up at in-water boring B-30, south of the bridge.



Photo 28 - View of drilling set up for in-water boring B-30.



Photo 29 - View of sonic cores from in-water boring B-30.



Photo 30 - View of sonic core and soil subsample at in-water boring B-36.



Photo 31 - View of barge sonic rig set up for in-water boring B-37.



Photo 32 - View of sonic core and soil subsample at in-water boring B-37.

Appendix D

Laboratory Data Packages



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, October 6, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A1H0845 - EQRB - CB319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A1H0845, which was received by the laboratory on 8/23/2021 at 12:30:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 4.7 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
-----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-17 7.5	A1H0845-01	Soil	08/23/21 09:28	08/23/21 12:30
B-17 10	A1H0845-02	Soil	08/23/21 09:36	08/23/21 12:30
B-17 12.5	A1H0845-03	Soil	08/23/21 09:42	08/23/21 12:30
B-17 15	A1H0845-04	Soil	08/23/21 09:50	08/23/21 12:30
B-17 17.5	A1H0845-05	Soil	08/23/21 09:57	08/23/21 12:30
B-17 20	A1H0845-06	Soil	08/23/21 10:03	08/23/21 12:30
B-17 25	A1H0845-07	Soil	08/23/21 10:23	08/23/21 12:30
B-17	A1H0845-08	Water	08/23/21 10:55	08/23/21 12:30
B-17 0-10C	A1H0845-09	Soil	08/23/21 09:28	08/23/21 12:30
B-17 10-25C	A1H0845-10	Soil	08/23/21 09:42	08/23/21 12:30

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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 (A1H0845-08)			Matrix: Water			Batch: 1080996		
Diesel	ND	0.0377	0.0755	mg/L	1	08/27/21 20:34	NWTPH-Dx LL	
Oil	0.318	0.0755	0.151	mg/L	1	08/27/21 20:34	NWTPH-Dx LL	F-03
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>08/27/21 20:34</i>	<i>NWTPH-Dx LL</i>
B-17 0-10C (A1H0845-09)			Matrix: Soil			Batch: 1090085		
Diesel	ND	12.2	25.0	mg/kg dry	1	09/02/21 18:44	NWTPH-Dx	
Oil	35.2	24.4	50.0	mg/kg dry	1	09/02/21 18:44	NWTPH-Dx	J
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/02/21 18:44</i>	<i>NWTPH-Dx</i>
B-17 10-25C (A1H0845-10)			Matrix: Soil			Batch: 1090085		
Diesel	ND	13.3	26.5	mg/kg dry	1	09/02/21 19:30	NWTPH-Dx	
Oil	51.3	26.5	53.1	mg/kg dry	1	09/02/21 19:30	NWTPH-Dx	J
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/02/21 19:30</i>	<i>NWTPH-Dx</i>

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 (A1H0845-08)			Matrix: Water			Batch: 1081028		
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	08/30/21 13:54	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>08/30/21 13:54</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>112 %</i>		<i>50-150 %</i>		<i>1</i>	<i>08/30/21 13:54</i>	<i>NWTPH-Gx (MS)</i>
B-17 0-10C (A1H0845-09)			Matrix: Soil			Batch: 1090069		COMP, V-15
Gasoline Range Organics	ND	3.49	6.99	mg/kg dry	50	09/02/21 15:11	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/02/21 15:11</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/02/21 15:11</i>	<i>NWTPH-Gx (MS)</i>
B-17 10-25C (A1H0845-10)			Matrix: Soil			Batch: 1090069		COMP, V-15
Gasoline Range Organics	ND	4.43	8.87	mg/kg dry	50	09/02/21 15:38	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/02/21 15:38</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/02/21 15:38</i>	<i>NWTPH-Gx (MS)</i>

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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 Tigard, OR 97223
 503-718-2323
 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 (A1H0845-08)			Matrix: Water			Batch: 1081028		
Acetone	ND	20.0	20.0	ug/L	1	08/30/21 13:54	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	08/30/21 13:54	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	08/30/21 13:54	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	08/30/21 13:54	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	08/30/21 13:54	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	08/30/21 13:54	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	08/30/21 13:54	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	08/30/21 13:54	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	08/30/21 13:54	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	08/30/21 13:54	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	08/30/21 13:54	EPA 8260D	

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Darrell Auvil, Client Services Manager



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Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 (A1H0845-08)				Matrix: Water		Batch: 1081028		
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	08/30/21 13:54	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	08/30/21 13:54	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	08/30/21 13:54	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	5.00	10.0	ug/L	1	08/30/21 13:54	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Naphthalene	ND	4.00	4.00	ug/L	1	08/30/21 13:54	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	08/30/21 13:54	EPA 8260D	
1,1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	08/30/21 13:54	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	08/30/21 13:54	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	08/30/21 13:54	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	08/30/21 13:54	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	08/30/21 13:54	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	08/30/21 13:54	EPA 8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 (A1H0845-08)				Matrix: Water		Batch: 1081028		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 117 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>08/30/21 13:54</i>	<i>EPA 8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>1</i>	<i>08/30/21 13:54</i>	<i>EPA 8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>1</i>	<i>08/30/21 13:54</i>	<i>EPA 8260D</i>
B-17 0-10C (A1H0845-09)				Matrix: Soil		Batch: 1090069		COMP, V-15
Acetone	ND	699	1400	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Acrylonitrile	ND	69.9	140	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Benzene	ND	6.99	14.0	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Bromobenzene	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Bromochloromethane	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Bromodichloromethane	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Bromoform	ND	69.9	140	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Bromomethane	ND	699	699	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
2-Butanone (MEK)	ND	349	699	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
n-Butylbenzene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
sec-Butylbenzene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
tert-Butylbenzene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Carbon disulfide	ND	349	699	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Carbon tetrachloride	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Chlorobenzene	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Chloroethane	ND	699	699	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Chloroform	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Chloromethane	ND	175	349	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
2-Chlorotoluene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
4-Chlorotoluene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Dibromochloromethane	ND	69.9	140	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	175	349	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Dibromomethane	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,2-Dichlorobenzene	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,3-Dichlorobenzene	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,4-Dichlorobenzene	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Dichlorodifluoromethane	ND	69.9	140	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,1-Dichloroethane	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
 Tigard, OR 97223
 503-718-2323
 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 0-10C (A1H0845-09)				Matrix: Soil		Batch: 1090069		COMP, V-15
1,2-Dichloroethane (EDC)	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,1-Dichloroethene	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
cis-1,2-Dichloroethene	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
trans-1,2-Dichloroethene	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,2-Dichloropropane	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,3-Dichloropropane	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
2,2-Dichloropropane	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,1-Dichloropropene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
cis-1,3-Dichloropropene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
trans-1,3-Dichloropropene	ND	69.9	140	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Ethylbenzene	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Hexachlorobutadiene	ND	69.9	140	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
2-Hexanone	ND	349	699	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Isopropylbenzene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
4-Isopropyltoluene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Methylene chloride	ND	349	699	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	349	699	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Naphthalene	ND	69.9	140	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
n-Propylbenzene	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Styrene	ND	69.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Tetrachloroethene (PCE)	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Toluene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,2,3-Trichlorobenzene	ND	175	349	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,2,4-Trichlorobenzene	ND	175	349	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,1,1-Trichloroethane	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,1,2-Trichloroethane	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Trichloroethene (TCE)	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Trichlorofluoromethane	ND	69.9	140	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,2,3-Trichloropropane	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
1,2,4-Trimethylbenzene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 0-10C (A1H0845-09)				Matrix: Soil		Batch: 1090069		COMP, V-15
1,3,5-Trimethylbenzene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
Vinyl chloride	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
m,p-Xylene	ND	34.9	69.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
o-Xylene	ND	17.5	34.9	ug/kg dry	50	09/02/21 15:11	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/02/21 15:11</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/02/21 15:11</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>1</i>	<i>09/02/21 15:11</i>	<i>5035A/8260D</i>

B-17 10-25C (A1H0845-10)				Matrix: Soil		Batch: 1090069		COMP, V-15
Acetone	ND	887	1770	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Acrylonitrile	ND	88.7	177	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Benzene	ND	8.87	17.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Bromobenzene	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Bromochloromethane	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Bromodichloromethane	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Bromoform	ND	88.7	177	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Bromomethane	ND	887	887	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
2-Butanone (MEK)	ND	443	887	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
n-Butylbenzene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
sec-Butylbenzene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
tert-Butylbenzene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Carbon disulfide	ND	443	887	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Carbon tetrachloride	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Chlorobenzene	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Chloroethane	ND	887	887	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Chloroform	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Chloromethane	ND	222	443	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
2-Chlorotoluene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
4-Chlorotoluene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Dibromochloromethane	ND	88.7	177	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	222	443	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Dibromomethane	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,2-Dichlorobenzene	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 10-25C (A1H0845-10)				Matrix: Soil		Batch: 1090069		COMP, V-15
1,3-Dichlorobenzene	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,4-Dichlorobenzene	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Dichlorodifluoromethane	ND	88.7	177	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,1-Dichloroethane	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,1-Dichloroethene	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
cis-1,2-Dichloroethene	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
trans-1,2-Dichloroethene	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,2-Dichloropropane	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,3-Dichloropropane	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
2,2-Dichloropropane	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,1-Dichloropropene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
cis-1,3-Dichloropropene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
trans-1,3-Dichloropropene	ND	88.7	177	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Ethylbenzene	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Hexachlorobutadiene	ND	88.7	177	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
2-Hexanone	ND	443	887	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Isopropylbenzene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
4-Isopropyltoluene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Methylene chloride	ND	443	887	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	443	887	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Naphthalene	ND	88.7	177	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
n-Propylbenzene	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Styrene	ND	88.7	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Tetrachloroethene (PCE)	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Toluene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,2,3-Trichlorobenzene	ND	222	443	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,2,4-Trichlorobenzene	ND	222	443	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,1,1-Trichloroethane	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,1,2-Trichloroethane	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts</p>	<p style="text-align: right;">Report ID: A1H0845 - 10 06 21 1038</p>
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 10-25C (A1H0845-10)				Matrix: Soil		Batch: 1090069		COMP, V-15
Trichloroethene (TCE)	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Trichlorofluoromethane	ND	88.7	177	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,2,3-Trichloropropane	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,2,4-Trimethylbenzene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
1,3,5-Trimethylbenzene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
Vinyl chloride	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
m,p-Xylene	ND	44.3	88.7	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
o-Xylene	ND	22.2	44.3	ug/kg dry	50	09/02/21 15:38	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/02/21 15:38</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/02/21 15:38</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/02/21 15:38</i>	<i>5035A/8260D</i>	

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 (A1H0845-08RE1)			Matrix: Water			Batch: 1081047		
Acenaphthene	ND	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Acenaphthylene	ND	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Anthracene	ND	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Benz(a)anthracene	0.0564	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Benzo(a)pyrene	0.0493	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Benzo(b)fluoranthene	0.0613	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Benzo(k)fluoranthene	0.0197	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	J
Benzo(g,h,i)perylene	0.0485	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Chrysene	0.0542	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Fluoranthene	0.0575	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Fluorene	ND	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	0.0420	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Naphthalene	ND	0.0381	0.0762	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
Phenanthrene	0.0356	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	J
Pyrene	0.0673	0.0190	0.0381	ug/L	1	08/30/21 16:24	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 47 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>08/30/21 16:24</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>39 %</i>		<i>50-134 %</i>		<i>1</i>	<i>08/30/21 16:24</i>	<i>EPA 8270E SIM S-03</i>

B-17 0-10C (A1H0845-09)			Matrix: Soil			Batch: 1081075		
Acenaphthene	ND	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	
Acenaphthylene	ND	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	
Anthracene	ND	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	
Benz(a)anthracene	15.0	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	
Benzo(a)pyrene	16.3	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	
Benzo(b)fluoranthene	23.4	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	M-05
Benzo(k)fluoranthene	7.78	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	J
Benzo(g,h,i)perylene	12.3	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	
Chrysene	16.3	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	
Fluoranthene	11.7	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	J
Fluorene	ND	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	12.4	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 0-10C (A1H0845-09)			Matrix: Soil			Batch: 1081075		
Naphthalene	ND	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	
Phenanthrene	7.72	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	J
Pyrene	13.7	6.10	12.2	ug/kg dry	1	08/31/21 11:30	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>08/31/21 11:30</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>105 %</i>		<i>54-127 %</i>		<i>1</i>	<i>08/31/21 11:30</i>	<i>EPA 8270E SIM</i>
B-17 10-25C (A1H0845-10)			Matrix: Soil			Batch: 1081075		
Acenaphthene	15.6	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Acenaphthylene	ND	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Anthracene	53.8	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Benz(a)anthracene	1290	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Benzo(a)pyrene	210	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Benzo(b)fluoranthene	662	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Benzo(k)fluoranthene	205	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	61.0	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Chrysene	1060	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Dibenz(a,h)anthracene	20.2	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Fluoranthene	3610	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Fluorene	17.4	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	82.6	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Naphthalene	49.2	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Phenanthrene	132	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
Pyrene	2990	6.97	13.9	ug/kg dry	1	08/31/21 11:56	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 81 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>08/31/21 11:56</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>107 %</i>		<i>54-127 %</i>		<i>1</i>	<i>08/31/21 11:56</i>	<i>EPA 8270E SIM</i>

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-17 0-10C (A1H0845-09)				Matrix: Soil					
Batch: 1081101									
Antimony	ND	0.621	1.24	mg/kg dry	10	08/31/21 18:39	EPA 6020B		
Arsenic	7.71	0.621	1.24	mg/kg dry	10	08/31/21 18:39	EPA 6020B		
Barium	143	0.621	1.24	mg/kg dry	10	08/31/21 18:39	EPA 6020B		
Cadmium	0.140	0.124	0.248	mg/kg dry	10	08/31/21 18:39	EPA 6020B	J	
Chromium	17.5	0.621	1.24	mg/kg dry	10	08/31/21 18:39	EPA 6020B		
Copper	26.2	1.24	2.48	mg/kg dry	10	08/31/21 18:39	EPA 6020B		
Lead	32.4	0.124	0.248	mg/kg dry	10	08/31/21 18:39	EPA 6020B		
Mercury	ND	0.0497	0.0994	mg/kg dry	10	08/31/21 18:39	EPA 6020B		
Selenium	0.912	0.621	1.24	mg/kg dry	10	08/31/21 18:39	EPA 6020B	J	
Silver	ND	0.124	0.248	mg/kg dry	10	08/31/21 18:39	EPA 6020B		
Zinc	101	2.48	4.97	mg/kg dry	10	08/31/21 18:39	EPA 6020B		

B-17 10-25C (A1H0845-10)				Matrix: Soil					
Batch: 1081101									
Antimony	ND	0.711	1.42	mg/kg dry	10	08/31/21 18:44	EPA 6020B		
Arsenic	6.98	0.711	1.42	mg/kg dry	10	08/31/21 18:44	EPA 6020B		
Barium	231	0.711	1.42	mg/kg dry	10	08/31/21 18:44	EPA 6020B		
Cadmium	0.213	0.142	0.285	mg/kg dry	10	08/31/21 18:44	EPA 6020B	J	
Chromium	23.6	0.711	1.42	mg/kg dry	10	08/31/21 18:44	EPA 6020B		
Copper	30.2	1.42	2.85	mg/kg dry	10	08/31/21 18:44	EPA 6020B		
Lead	110	0.142	0.285	mg/kg dry	10	08/31/21 18:44	EPA 6020B		
Mercury	0.215	0.0569	0.114	mg/kg dry	10	08/31/21 18:44	EPA 6020B		
Selenium	1.08	0.711	1.42	mg/kg dry	10	08/31/21 18:44	EPA 6020B	J	
Silver	ND	0.142	0.285	mg/kg dry	10	08/31/21 18:44	EPA 6020B		
Zinc	97.8	2.85	5.69	mg/kg dry	10	08/31/21 18:44	EPA 6020B		

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ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-17 (A1H0845-08)		Matrix: Water							
Batch: 1090063									
Arsenic	0.632	0.500	1.00	ug/L	1	09/02/21 23:01	EPA 6020B (Diss)	J	
Barium	114	0.500	1.00	ug/L	1	09/02/21 23:01	EPA 6020B (Diss)		
Cadmium	ND	0.100	0.200	ug/L	1	09/02/21 23:01	EPA 6020B (Diss)		
Chromium	ND	1.00	2.00	ug/L	1	09/02/21 23:01	EPA 6020B (Diss)		
Lead	ND	0.100	0.200	ug/L	1	09/02/21 23:01	EPA 6020B (Diss)		
Mercury	ND	0.0400	0.0800	ug/L	1	09/02/21 23:01	EPA 6020B (Diss)		
Selenium	ND	0.500	1.00	ug/L	1	09/02/21 23:01	EPA 6020B (Diss)		
Silver	ND	0.100	0.200	ug/L	1	09/02/21 23:01	EPA 6020B (Diss)		

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ANALYTICAL SAMPLE RESULTS

TCLP Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 10-25C (A1H0845-10)				Matrix: Soil				
Batch: 1090382								
Lead	ND	0.0250	0.0500	mg/L	10	09/10/21 15:51	1311/6020B	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 0-10C (A1H0845-09)				Matrix: Soil		Batch: 1081096		
% Solids	80.0	1.00	1.00	%	1	09/01/21 07:44	EPA 8000D	
B-17 10-25C (A1H0845-10)				Matrix: Soil		Batch: 1081096		
% Solids	70.3	1.00	1.00	%	1	09/01/21 07:44	EPA 8000D	

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ANALYTICAL SAMPLE RESULTS

TCLP Extraction by EPA 1311

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-17 10-25C (A1H0845-10)				Matrix: Soil		Batch: 1090321		
TCLP Extraction	PREP			N/A	1	09/09/21 18:00	EPA 1311	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1080996 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (1080996-BLK1)			Prepared: 08/27/21 10:39 Analyzed: 08/27/21 19:32									
<u>NWTPH-Dx LL</u>												
Diesel	ND	0.0364	0.0727	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.0727	0.145	mg/L	1	---	---	---	---	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 109 %		Limits: 50-150 %		Dilution: 1x						
LCS (1080996-BS1)			Prepared: 08/27/21 10:39 Analyzed: 08/27/21 19:53									
<u>NWTPH-Dx LL</u>												
Diesel	0.421	0.0400	0.0800	mg/L	1	0.500	---	84	36-132%	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 113 %		Limits: 50-150 %		Dilution: 1x						
LCS Dup (1080996-BSD1)			Prepared: 08/27/21 10:39 Analyzed: 08/27/21 20:14									Q-19
<u>NWTPH-Dx LL</u>												
Diesel	0.446	0.0400	0.0800	mg/L	1	0.500	---	89	36-132%	6	30%	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 114 %		Limits: 50-150 %		Dilution: 1x						
Batch 1090085 - EPA 3546 (Fuels)						Soil						
Blank (1090085-BLK1)			Prepared: 09/02/21 13:08 Analyzed: 09/02/21 17:59									
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 102 %		Limits: 50-150 %		Dilution: 1x						
LCS (1090085-BS1)			Prepared: 09/02/21 13:08 Analyzed: 09/02/21 18:22									
<u>NWTPH-Dx</u>												
Diesel	118	10.0	25.0	mg/kg wet	1	125	---	94	38-132%	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 107 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (1090085-DUP1)			Prepared: 09/02/21 13:08 Analyzed: 09/02/21 19:08									
<u>QC Source Sample: B-17 0-10C (A1H0845-09)</u>												
<u>NWTPH-Dx</u>												
Diesel	ND	11.5	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	40.7	23.1	50.0	mg/kg dry	1	---	35.2	---	---	15	30%	J

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090085 - EPA 3546 (Fuels)						Soil						
Duplicate (1090085-DUP1)						Prepared: 09/02/21 13:08 Analyzed: 09/02/21 19:08						
QC Source Sample: B-17 0-10C (A1H0845-09)												
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 92 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090085-DUP3)						Prepared: 09/02/21 13:08 Analyzed: 09/03/21 08:06						
QC Source Sample: Non-SDG (A1H0964-09RE1)												
Diesel	ND	12.5	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	224	24.9	50.0	mg/kg dry	1	---	184	---	---	20	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 90 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081028 - EPA 5030B						Water						
Blank (1081028-BLK1)			Prepared: 08/30/21 08:00 Analyzed: 08/30/21 11:11									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>111 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1081028-BS2)			Prepared: 08/30/21 08:00 Analyzed: 08/30/21 10:44									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	0.500	0.0500	0.100	mg/L	1	0.500	---	100	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>103 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1081028-DUP1)			Prepared: 08/30/21 10:44 Analyzed: 08/30/21 16:37									
<u>QC Source Sample: Non-SDG (A1H0851-03)</u>												
Gasoline Range Organics	1.20	0.500	1.00	mg/L	10	---	1.23	---	---	2	30%	F-12
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>116 %</i>		<i>50-150 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
Blank (1090069-BLK1)			Prepared: 09/02/21 09:00 Analyzed: 09/02/21 12:27									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090069-BS2)			Prepared: 09/02/21 09:00 Analyzed: 09/02/21 12:00									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	23.2	2.50	5.00	mg/kg wet	50	25.0	---	93	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090069-DUP1)			Prepared: 09/02/21 11:45 Analyzed: 09/02/21 18:19									V-15
<u>QC Source Sample: Non-SDG (A110056-02)</u>												
Gasoline Range Organics	ND	2.55	5.10	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081028 - EPA 5030B						Water						
Blank (1081028-BLK1)			Prepared: 08/30/21 08:00 Analyzed: 08/30/21 11:11									
<u>EPA 8260D</u>												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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 503-718-2323
 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081028 - EPA 5030B						Water						
Blank (1081028-BLK1)			Prepared: 08/30/21 08:00			Analyzed: 08/30/21 11:11						
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	4.00	4.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 116 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081028 - EPA 5030B						Water						
Blank (1081028-BLK1)						Prepared: 08/30/21 08:00 Analyzed: 08/30/21 11:11						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
LCS (1081028-BS1)						Prepared: 08/30/21 08:00 Analyzed: 08/30/21 10:09						
<u>EPA 8260D</u>												
Acetone	36.6	10.0	20.0	ug/L	1	40.0	---	92	80-120%	---	---	
Acrylonitrile	21.8	1.00	2.00	ug/L	1	20.0	---	109	80-120%	---	---	
Benzene	22.8	0.100	0.200	ug/L	1	20.0	---	114	80-120%	---	---	
Bromobenzene	18.9	0.250	0.500	ug/L	1	20.0	---	94	80-120%	---	---	
Bromochloromethane	20.9	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
Bromodichloromethane	21.3	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Bromoform	17.5	0.500	1.00	ug/L	1	20.0	---	88	80-120%	---	---	
Bromomethane	20.4	5.00	5.00	ug/L	1	20.0	---	102	80-120%	---	---	
2-Butanone (MEK)	40.4	5.00	10.0	ug/L	1	40.0	---	101	80-120%	---	---	
n-Butylbenzene	23.2	0.500	1.00	ug/L	1	20.0	---	116	80-120%	---	---	
sec-Butylbenzene	23.6	0.500	1.00	ug/L	1	20.0	---	118	80-120%	---	---	
tert-Butylbenzene	20.9	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
Carbon disulfide	20.9	5.00	10.0	ug/L	1	20.0	---	104	80-120%	---	---	
Carbon tetrachloride	23.7	0.500	1.00	ug/L	1	20.0	---	119	80-120%	---	---	
Chlorobenzene	21.2	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Chloroethane	14.8	5.00	5.00	ug/L	1	20.0	---	74	80-120%	---	---	ICV-01, Q-55
Chloroform	21.8	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
Chloromethane	25.9	2.50	5.00	ug/L	1	20.0	---	129	80-120%	---	---	Q-56
2-Chlorotoluene	20.7	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
4-Chlorotoluene	20.2	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Dibromochloromethane	18.3	0.500	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
1,2-Dibromo-3-chloropropane	17.5	2.50	5.00	ug/L	1	20.0	---	88	80-120%	---	---	
1,2-Dibromoethane (EDB)	21.4	0.250	0.500	ug/L	1	20.0	---	107	80-120%	---	---	
Dibromomethane	22.0	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
1,2-Dichlorobenzene	22.2	0.250	0.500	ug/L	1	20.0	---	111	80-120%	---	---	
1,3-Dichlorobenzene	22.0	0.250	0.500	ug/L	1	20.0	---	110	80-120%	---	---	
1,4-Dichlorobenzene	20.6	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Dichlorodifluoromethane	17.8	0.500	1.00	ug/L	1	20.0	---	89	80-120%	---	---	
1,1-Dichloroethane	22.8	0.200	0.400	ug/L	1	20.0	---	114	80-120%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081028 - EPA 5030B						Water						
LCS (1081028-BS1)			Prepared: 08/30/21 08:00 Analyzed: 08/30/21 10:09									
1,2-Dichloroethane (EDC)	21.3	0.200	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
1,1-Dichloroethene	21.5	0.200	0.400	ug/L	1	20.0	---	107	80-120%	---	---	
cis-1,2-Dichloroethene	21.4	0.200	0.400	ug/L	1	20.0	---	107	80-120%	---	---	
trans-1,2-Dichloroethene	21.5	0.200	0.400	ug/L	1	20.0	---	107	80-120%	---	---	
1,2-Dichloropropane	22.1	0.250	0.500	ug/L	1	20.0	---	111	80-120%	---	---	
1,3-Dichloropropane	20.3	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
2,2-Dichloropropane	32.0	0.500	1.00	ug/L	1	20.0	---	160	80-120%	---	---	Q-56
1,1-Dichloropropene	22.8	0.500	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
cis-1,3-Dichloropropene	20.3	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
trans-1,3-Dichloropropene	20.3	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Ethylbenzene	21.6	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
Hexachlorobutadiene	26.9	2.50	5.00	ug/L	1	20.0	---	135	80-120%	---	---	Q-56
2-Hexanone	35.7	5.00	10.0	ug/L	1	40.0	---	89	80-120%	---	---	
Isopropylbenzene	22.3	0.500	1.00	ug/L	1	20.0	---	112	80-120%	---	---	
4-Isopropyltoluene	22.0	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
Methylene chloride	21.8	5.00	10.0	ug/L	1	20.0	---	109	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	36.9	5.00	10.0	ug/L	1	40.0	---	92	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	24.1	0.500	1.00	ug/L	1	20.0	---	120	80-120%	---	---	
Naphthalene	15.6	4.00	4.00	ug/L	1	20.0	---	78	80-120%	---	---	Q-55
n-Propylbenzene	21.0	0.250	0.500	ug/L	1	20.0	---	105	80-120%	---	---	
Styrene	20.3	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,1,1,2-Tetrachloroethane	23.3	0.200	0.400	ug/L	1	20.0	---	116	80-120%	---	---	
1,1,2,2-Tetrachloroethane	19.6	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Tetrachloroethene (PCE)	21.6	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
Toluene	20.4	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
1,2,3-Trichlorobenzene	20.1	1.00	2.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,2,4-Trichlorobenzene	19.5	1.00	2.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,1,1-Trichloroethane	24.9	0.200	0.400	ug/L	1	20.0	---	125	80-120%	---	---	Q-56
1,1,2-Trichloroethane	21.3	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Trichloroethene (TCE)	22.1	0.200	0.400	ug/L	1	20.0	---	110	80-120%	---	---	
Trichlorofluoromethane	20.2	1.00	2.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,2,3-Trichloropropane	19.9	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2,4-Trimethylbenzene	23.0	0.500	1.00	ug/L	1	20.0	---	115	80-120%	---	---	
1,3,5-Trimethylbenzene	21.8	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: CB319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A1H0845 - 10 06 21 1038

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081028 - EPA 5030B						Water						
LCS (1081028-BS1)			Prepared: 08/30/21 08:00 Analyzed: 08/30/21 10:09									
Vinyl chloride	21.1	0.200	0.400	ug/L	1	20.0	---	105	80-120%	---	---	
m,p-Xylene	43.2	0.500	1.00	ug/L	1	40.0	---	108	80-120%	---	---	
o-Xylene	20.8	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>88 %</i>		<i>80-120 %</i>		<i>"</i>						

Duplicate (1081028-DUP1)			Prepared: 08/30/21 10:44 Analyzed: 08/30/21 16:37									
QC Source Sample: Non-SDG (A1H0851-03)												
Acetone	ND	100	200	ug/L	10	---	ND	---	---	---	30%	
Acrylonitrile	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%	
Benzene	ND	1.00	2.00	ug/L	10	---	ND	---	---	---	30%	
Bromobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Bromochloromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Bromodichloromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Bromoform	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Bromomethane	ND	50.0	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
n-Butylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Carbon disulfide	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Chlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Chloroethane	ND	50.0	50.0	ug/L	10	---	ND	---	---	---	30%	
Chloroform	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Chloromethane	ND	25.0	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Dibromochloromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	25.0	50.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Dibromomethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081028 - EPA 5030B						Water						
Duplicate (1081028-DUP1)			Prepared: 08/30/21 10:44 Analyzed: 08/30/21 16:37									
QC Source Sample: Non-SDG (A1H0851-03)												
1,3-Dichlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	4.70	2.00	4.00	ug/L	10	---	4.70	---	---	0	30%	
trans-1,2-Dichloroethene	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Ethylbenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	25.0	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Hexanone	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
Isopropylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Methylene chloride	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Naphthalene	ND	40.0	40.0	ug/L	10	---	ND	---	---	---	30%	
n-Propylbenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Styrene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	469	2.00	4.00	ug/L	10	---	492	---	---	5	30%	
Toluene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
-----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081028 - EPA 5030B												
Water												
Duplicate (1081028-DUP1)			Prepared: 08/30/21 10:44 Analyzed: 08/30/21 16:37									
QC Source Sample: Non-SDG (A1H0851-03)												
Trichloroethene (TCE)	57.8	2.00	4.00	ug/L	10	---	61.2	---	---	6	30%	
Trichlorofluoromethane	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Vinyl chloride	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
m,p-Xylene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
o-Xylene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 119 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						

Matrix Spike (1081028-MS1)			Prepared: 08/30/21 10:44 Analyzed: 08/30/21 15:16									
QC Source Sample: Non-SDG (A1H0851-01)												
EPA 8260D												
Acetone	44.2	10.0	20.0	ug/L	1	40.0	ND	110	39-160%	---	---	
Acrylonitrile	22.0	1.00	2.00	ug/L	1	20.0	ND	110	63-135%	---	---	
Benzene	22.8	0.100	0.200	ug/L	1	20.0	ND	114	79-120%	---	---	
Bromobenzene	18.2	0.250	0.500	ug/L	1	20.0	ND	91	80-120%	---	---	
Bromochloromethane	20.9	0.500	1.00	ug/L	1	20.0	ND	105	78-123%	---	---	
Bromodichloromethane	21.5	0.500	1.00	ug/L	1	20.0	ND	108	79-125%	---	---	
Bromoform	17.4	0.500	1.00	ug/L	1	20.0	ND	87	66-130%	---	---	
Bromomethane	19.4	5.00	5.00	ug/L	1	20.0	ND	97	53-141%	---	---	
2-Butanone (MEK)	41.9	5.00	10.0	ug/L	1	40.0	ND	105	56-143%	---	---	
n-Butylbenzene	20.4	0.500	1.00	ug/L	1	20.0	ND	102	75-128%	---	---	
sec-Butylbenzene	21.8	0.500	1.00	ug/L	1	20.0	ND	109	77-126%	---	---	
tert-Butylbenzene	19.5	0.500	1.00	ug/L	1	20.0	ND	98	78-124%	---	---	
Carbon disulfide	20.3	5.00	10.0	ug/L	1	20.0	ND	102	64-133%	---	---	
Carbon tetrachloride	23.4	0.500	1.00	ug/L	1	20.0	ND	117	72-136%	---	---	
Chlorobenzene	20.8	0.250	0.500	ug/L	1	20.0	ND	104	80-120%	---	---	
Chloroethane	17.1	5.00	5.00	ug/L	1	20.0	ND	86	60-138%	---	---	
Chloroform	22.2	0.500	1.00	ug/L	1	20.0	ND	111	79-124%	---	---	ICV-01, Q-54j

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
-----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081028 - EPA 5030B						Water						
Matrix Spike (1081028-MS1)						Prepared: 08/30/21 10:44 Analyzed: 08/30/21 15:16						
<u>QC Source Sample: Non-SDG (A1H0851-01)</u>												
Chloromethane	28.1	2.50	5.00	ug/L	1	20.0	ND	141	50-139%	---	---	Q-54g
2-Chlorotoluene	19.3	0.500	1.00	ug/L	1	20.0	ND	96	79-122%	---	---	
4-Chlorotoluene	19.2	0.500	1.00	ug/L	1	20.0	ND	96	78-122%	---	---	
Dibromochloromethane	18.1	0.500	1.00	ug/L	1	20.0	ND	91	74-126%	---	---	
1,2-Dibromo-3-chloropropane	17.2	2.50	5.00	ug/L	1	20.0	ND	86	62-128%	---	---	
1,2-Dibromoethane (EDB)	21.1	0.250	0.500	ug/L	1	20.0	ND	106	77-121%	---	---	
Dibromomethane	22.3	0.500	1.00	ug/L	1	20.0	ND	112	79-123%	---	---	
1,2-Dichlorobenzene	21.5	0.250	0.500	ug/L	1	20.0	ND	108	80-120%	---	---	
1,3-Dichlorobenzene	21.0	0.250	0.500	ug/L	1	20.0	ND	105	80-120%	---	---	
1,4-Dichlorobenzene	19.3	0.250	0.500	ug/L	1	20.0	ND	96	79-120%	---	---	
Dichlorodifluoromethane	16.8	0.500	1.00	ug/L	1	20.0	ND	84	32-152%	---	---	
1,1-Dichloroethane	22.6	0.200	0.400	ug/L	1	20.0	ND	113	77-125%	---	---	
1,2-Dichloroethane (EDC)	21.4	0.200	0.400	ug/L	1	20.0	ND	107	73-128%	---	---	
1,1-Dichloroethene	21.1	0.200	0.400	ug/L	1	20.0	ND	106	71-131%	---	---	
cis-1,2-Dichloroethene	21.1	0.200	0.400	ug/L	1	20.0	ND	105	78-123%	---	---	
trans-1,2-Dichloroethene	21.4	0.200	0.400	ug/L	1	20.0	ND	107	75-124%	---	---	
1,2-Dichloropropane	22.3	0.250	0.500	ug/L	1	20.0	ND	112	78-122%	---	---	
1,3-Dichloropropane	20.3	0.500	1.00	ug/L	1	20.0	ND	101	80-120%	---	---	
2,2-Dichloropropane	27.7	0.500	1.00	ug/L	1	20.0	ND	139	60-139%	---	---	Q-54c
1,1-Dichloropropene	22.4	0.500	1.00	ug/L	1	20.0	ND	112	79-125%	---	---	
cis-1,3-Dichloropropene	17.2	0.500	1.00	ug/L	1	20.0	ND	86	75-124%	---	---	
trans-1,3-Dichloropropene	19.0	0.500	1.00	ug/L	1	20.0	ND	95	73-127%	---	---	
Ethylbenzene	21.0	0.250	0.500	ug/L	1	20.0	ND	105	79-121%	---	---	
Hexachlorobutadiene	21.2	2.50	5.00	ug/L	1	20.0	ND	106	66-134%	---	---	Q-54b
2-Hexanone	36.0	5.00	10.0	ug/L	1	40.0	ND	90	57-139%	---	---	
Isopropylbenzene	21.4	0.500	1.00	ug/L	1	20.0	ND	107	72-131%	---	---	
4-Isopropyltoluene	20.0	0.500	1.00	ug/L	1	20.0	ND	100	77-127%	---	---	
Methylene chloride	22.4	5.00	10.0	ug/L	1	20.0	ND	112	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	38.2	5.00	10.0	ug/L	1	40.0	ND	95	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	23.6	0.500	1.00	ug/L	1	20.0	ND	118	71-124%	---	---	
Naphthalene	14.9	4.00	4.00	ug/L	1	20.0	ND	74	61-128%	---	---	Q-54h
n-Propylbenzene	19.5	0.250	0.500	ug/L	1	20.0	ND	97	76-126%	---	---	
Styrene	19.5	0.500	1.00	ug/L	1	20.0	ND	98	78-123%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081028 - EPA 5030B						Water						
Matrix Spike (1081028-MS1)						Prepared: 08/30/21 10:44 Analyzed: 08/30/21 15:16						
QC Source Sample: Non-SDG (A1H0851-01)												
1,1,1,2-Tetrachloroethane	23.0	0.200	0.400	ug/L	1	20.0	ND	115	78-124%	---	---	
1,1,2,2-Tetrachloroethane	19.2	0.250	0.500	ug/L	1	20.0	ND	96	71-121%	---	---	
Tetrachloroethene (PCE)	58.1	0.200	0.400	ug/L	1	20.0	39.2	94	74-129%	---	---	
Toluene	19.9	0.500	1.00	ug/L	1	20.0	ND	99	80-121%	---	---	
1,2,3-Trichlorobenzene	19.0	1.00	2.00	ug/L	1	20.0	ND	95	69-129%	---	---	
1,2,4-Trichlorobenzene	17.9	1.00	2.00	ug/L	1	20.0	ND	90	69-130%	---	---	
1,1,1-Trichloroethane	24.7	0.200	0.400	ug/L	1	20.0	ND	123	74-131%	---	---	Q-54d
1,1,2-Trichloroethane	21.3	0.250	0.500	ug/L	1	20.0	ND	107	80-120%	---	---	
Trichloroethene (TCE)	24.0	0.200	0.400	ug/L	1	20.0	2.24	109	79-123%	---	---	
Trichlorofluoromethane	21.3	1.00	2.00	ug/L	1	20.0	ND	107	65-141%	---	---	
1,2,3-Trichloropropane	19.4	0.500	1.00	ug/L	1	20.0	ND	97	73-122%	---	---	
1,2,4-Trimethylbenzene	21.5	0.500	1.00	ug/L	1	20.0	ND	107	76-124%	---	---	
1,3,5-Trimethylbenzene	20.5	0.500	1.00	ug/L	1	20.0	ND	102	75-124%	---	---	
Vinyl chloride	20.6	0.200	0.400	ug/L	1	20.0	ND	103	58-137%	---	---	
m,p-Xylene	41.9	0.500	1.00	ug/L	1	40.0	ND	105	80-121%	---	---	
o-Xylene	20.2	0.250	0.500	ug/L	1	20.0	ND	101	78-122%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>86 %</i>		<i>80-120 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
Blank (1090069-BLK1)			Prepared: 09/02/21 09:00 Analyzed: 09/02/21 12:27									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
Blank (1090069-BLK1)			Prepared: 09/02/21 09:00 Analyzed: 09/02/21 12:27									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	33.3	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 103 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
Blank (1090069-BLK1)						Prepared: 09/02/21 09:00 Analyzed: 09/02/21 12:27						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (1090069-BS1)						Prepared: 09/02/21 09:00 Analyzed: 09/02/21 11:33						
5035A/8260D												
Acetone	1830	500	1000	ug/kg wet	50	2000	---	91	80-120%	---	---	
Acrylonitrile	1080	50.0	100	ug/kg wet	50	1000	---	108	80-120%	---	---	
Benzene	1100	5.00	10.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Bromobenzene	993	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Bromochloromethane	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Bromodichloromethane	909	25.0	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
Bromoform	810	50.0	100	ug/kg wet	50	1000	---	81	80-120%	---	---	
Bromomethane	880	500	500	ug/kg wet	50	1000	---	88	80-120%	---	---	
2-Butanone (MEK)	2070	250	500	ug/kg wet	50	2000	---	104	80-120%	---	---	
n-Butylbenzene	904	25.0	50.0	ug/kg wet	50	1000	---	90	80-120%	---	---	
sec-Butylbenzene	912	25.0	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
tert-Butylbenzene	879	25.0	50.0	ug/kg wet	50	1000	---	88	80-120%	---	---	
Carbon disulfide	937	250	500	ug/kg wet	50	1000	---	94	80-120%	---	---	
Carbon tetrachloride	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Chlorobenzene	998	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Chloroethane	741	500	500	ug/kg wet	50	1000	---	74	80-120%	---	---	Q-55
Chloroform	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Chloromethane	1770	125	250	ug/kg wet	50	1000	---	177	80-120%	---	---	ICV-01, Q-56
2-Chlorotoluene	994	25.0	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
4-Chlorotoluene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Dibromochloromethane	850	50.0	100	ug/kg wet	50	1000	---	85	80-120%	---	---	
1,2-Dibromo-3-chloropropane	833	125	250	ug/kg wet	50	1000	---	83	80-120%	---	---	
1,2-Dibromoethane (EDB)	943	25.0	50.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
Dibromomethane	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,2-Dichlorobenzene	999	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,3-Dichlorobenzene	990	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,4-Dichlorobenzene	924	12.5	25.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
Dichlorodifluoromethane	2550	50.0	100	ug/kg wet	50	1000	---	255	80-120%	---	---	ICV-01, Q-56
1,1-Dichloroethane	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
LCS (1090069-BS1)			Prepared: 09/02/21 09:00 Analyzed: 09/02/21 11:33									
1,2-Dichloroethane (EDC)	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,1-Dichloroethene	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
cis-1,2-Dichloroethene	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
trans-1,2-Dichloroethene	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,2-Dichloropropane	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,3-Dichloropropane	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
2,2-Dichloropropane	1300	25.0	50.0	ug/kg wet	50	1000	---	130	80-120%	---	---	Q-56
1,1-Dichloropropene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
cis-1,3-Dichloropropene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
trans-1,3-Dichloropropene	960	50.0	100	ug/kg wet	50	1000	---	96	80-120%	---	---	
Ethylbenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Hexachlorobutadiene	865	50.0	100	ug/kg wet	50	1000	---	87	80-120%	---	---	
2-Hexanone	2030	250	500	ug/kg wet	50	2000	---	101	80-120%	---	---	
Isopropylbenzene	919	25.0	50.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
4-Isopropyltoluene	914	25.0	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
Methylene chloride	978	250	500	ug/kg wet	50	1000	---	98	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2010	250	500	ug/kg wet	50	2000	---	101	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Naphthalene	865	50.0	100	ug/kg wet	50	1000	---	86	80-120%	---	---	
n-Propylbenzene	1000	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Styrene	763	50.0	50.0	ug/kg wet	50	1000	---	76	80-120%	---	---	Q-55
1,1,1,2-Tetrachloroethane	903	25.0	50.0	ug/kg wet	50	1000	---	90	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Tetrachloroethene (PCE)	981	12.5	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
Toluene	990	25.0	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,2,3-Trichlorobenzene	908	125	250	ug/kg wet	50	1000	---	91	80-120%	---	---	
1,2,4-Trichlorobenzene	846	125	250	ug/kg wet	50	1000	---	85	80-120%	---	---	
1,1,1-Trichloroethane	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,1,2-Trichloroethane	998	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Trichloroethene (TCE)	1050	12.5	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Trichlorofluoromethane	809	50.0	100	ug/kg wet	50	1000	---	81	80-120%	---	---	
1,2,3-Trichloropropane	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,2,4-Trimethylbenzene	964	25.0	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
1,3,5-Trimethylbenzene	980	25.0	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
LCS (1090069-BS1)						Prepared: 09/02/21 09:00 Analyzed: 09/02/21 11:33						
Vinyl chloride	1270	12.5	25.0	ug/kg wet	50	1000	---	127	80-120%	---	---	Q-56
m,p-Xylene	1980	25.0	50.0	ug/kg wet	50	2000	---	99	80-120%	---	---	
o-Xylene	930	12.5	25.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1090069-DUP1)						Prepared: 09/02/21 11:45 Analyzed: 09/02/21 18:19							V-15
QC Source Sample: Non-SDG (A110056-02)													
Acetone	ND	510	1020	ug/kg dry	50	---	ND	---	---	---	30%		
Acrylonitrile	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
Benzene	ND	5.10	10.2	ug/kg dry	50	---	ND	---	---	---	30%		
Bromobenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
Bromochloromethane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Bromodichloromethane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Bromoform	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
Bromomethane	ND	510	510	ug/kg dry	50	---	ND	---	---	---	30%		
2-Butanone (MEK)	ND	255	510	ug/kg dry	50	---	ND	---	---	---	30%		
n-Butylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
sec-Butylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
tert-Butylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Carbon disulfide	ND	255	510	ug/kg dry	50	---	ND	---	---	---	30%		
Carbon tetrachloride	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Chlorobenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
Chloroethane	ND	510	510	ug/kg dry	50	---	ND	---	---	---	30%		
Chloroform	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Chloromethane	ND	127	255	ug/kg dry	50	---	ND	---	---	---	30%		
2-Chlorotoluene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
4-Chlorotoluene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Dibromochloromethane	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dibromo-3-chloropropane	ND	127	255	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dibromoethane (EDB)	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Dibromomethane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dichlorobenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: CB319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A1H0845 - 10 06 21 1038

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 1090069 - EPA 5035A							Soil						
Duplicate (1090069-DUP1)			Prepared: 09/02/21 11:45 Analyzed: 09/02/21 18:19						V-15				
QC Source Sample: Non-SDG (A110056-02)													
1,3-Dichlorobenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,4-Dichlorobenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
Dichlorodifluoromethane	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
1,1-Dichloroethane	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dichloroethane (EDC)	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,1-Dichloroethene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
cis-1,2-Dichloroethene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
trans-1,2-Dichloroethene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dichloropropane	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,3-Dichloropropane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
2,2-Dichloropropane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
1,1-Dichloropropene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
cis-1,3-Dichloropropene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
trans-1,3-Dichloropropene	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
Ethylbenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
Hexachlorobutadiene	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
2-Hexanone	ND	255	510	ug/kg dry	50	---	ND	---	---	---	30%		
Isopropylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
4-Isopropyltoluene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Methylene chloride	ND	255	510	ug/kg dry	50	---	ND	---	---	---	30%		
4-Methyl-2-pentanone (MiBK)	ND	255	510	ug/kg dry	50	---	ND	---	---	---	30%		
Methyl tert-butyl ether (MTBE)	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Naphthalene	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
n-Propylbenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
Styrene	ND	51.0	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,1,2-Tetrachloroethane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,2,2-Tetrachloroethane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Tetrachloroethene (PCE)	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
Toluene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,3-Trichlorobenzene	ND	127	255	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,4-Trichlorobenzene	ND	127	255	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,1-Trichloroethane	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,2-Trichloroethane	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 1090069 - EPA 5035A						Soil							
Duplicate (1090069-DUP1)			Prepared: 09/02/21 11:45 Analyzed: 09/02/21 18:19						V-15				
QC Source Sample: Non-SDG (A110056-02)													
Trichloroethene (TCE)	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
Trichlorofluoromethane	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,3-Trichloropropane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,4-Trimethylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
1,3,5-Trimethylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Vinyl chloride	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
m,p-Xylene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
o-Xylene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>							
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>							
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>							

Matrix Spike (1090069-MS1)						Prepared: 09/02/21 11:45 Analyzed: 09/02/21 19:13						V-15
QC Source Sample: Non-SDG (A110056-01)												
5035A/8260D												
Acetone	1780	456	912	ug/kg dry	50	1830	ND	98	36-164%	---	---	
Acrylonitrile	970	45.6	91.2	ug/kg dry	50	913	ND	106	65-134%	---	---	
Benzene	989	4.56	9.12	ug/kg dry	50	913	ND	108	77-121%	---	---	
Bromobenzene	891	11.4	22.8	ug/kg dry	50	913	ND	98	78-121%	---	---	
Bromochloromethane	1050	22.8	45.6	ug/kg dry	50	913	ND	115	78-125%	---	---	
Bromodichloromethane	815	22.8	45.6	ug/kg dry	50	913	ND	89	75-127%	---	---	
Bromoform	733	45.6	91.2	ug/kg dry	50	913	ND	80	67-132%	---	---	
Bromomethane	809	456	456	ug/kg dry	50	913	ND	89	53-143%	---	---	
2-Butanone (MEK)	1900	228	456	ug/kg dry	50	1830	ND	104	51-148%	---	---	
n-Butylbenzene	844	22.8	45.6	ug/kg dry	50	913	ND	93	70-128%	---	---	
sec-Butylbenzene	841	22.8	45.6	ug/kg dry	50	913	ND	92	73-126%	---	---	
tert-Butylbenzene	805	22.8	45.6	ug/kg dry	50	913	ND	88	73-125%	---	---	
Carbon disulfide	814	228	456	ug/kg dry	50	913	ND	89	63-132%	---	---	
Carbon tetrachloride	1000	22.8	45.6	ug/kg dry	50	913	ND	110	70-135%	---	---	
Chlorobenzene	904	11.4	22.8	ug/kg dry	50	913	ND	99	79-120%	---	---	
Chloroethane	763	456	456	ug/kg dry	50	913	ND	84	59-139%	---	---	Q-54j
Chloroform	983	22.8	45.6	ug/kg dry	50	913	ND	108	78-123%	---	---	

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A							Soil					
Matrix Spike (1090069-MS1)							Prepared: 09/02/21 11:45 Analyzed: 09/02/21 19:13				V-15	
QC Source Sample: Non-SDG (A110056-01)												
Chloromethane	1590	114	228	ug/kg dry	50	913	ND	174	50-136%	---	---	ICV-01, Q-54e
2-Chlorotoluene	889	22.8	45.6	ug/kg dry	50	913	ND	97	75-122%	---	---	
4-Chlorotoluene	900	22.8	45.6	ug/kg dry	50	913	ND	99	72-124%	---	---	
Dibromochloromethane	781	45.6	91.2	ug/kg dry	50	913	ND	86	74-126%	---	---	
1,2-Dibromo-3-chloropropane	726	114	228	ug/kg dry	50	913	ND	80	61-132%	---	---	
1,2-Dibromoethane (EDB)	859	22.8	45.6	ug/kg dry	50	913	ND	94	78-122%	---	---	
Dibromomethane	888	22.8	45.6	ug/kg dry	50	913	ND	97	78-125%	---	---	
1,2-Dichlorobenzene	887	11.4	22.8	ug/kg dry	50	913	ND	97	78-121%	---	---	
1,3-Dichlorobenzene	893	11.4	22.8	ug/kg dry	50	913	ND	98	77-121%	---	---	
1,4-Dichlorobenzene	831	11.4	22.8	ug/kg dry	50	913	ND	91	75-120%	---	---	
Dichlorodifluoromethane	2290	45.6	91.2	ug/kg dry	50	913	ND	250	29-149%	---	---	ICV-01, Q-54a
1,1-Dichloroethane	972	11.4	22.8	ug/kg dry	50	913	ND	107	76-125%	---	---	
1,2-Dichloroethane (EDC)	922	11.4	22.8	ug/kg dry	50	913	ND	101	73-128%	---	---	
1,1-Dichloroethene	936	11.4	22.8	ug/kg dry	50	913	ND	103	70-131%	---	---	
cis-1,2-Dichloroethene	1020	11.4	22.8	ug/kg dry	50	913	ND	112	77-123%	---	---	
trans-1,2-Dichloroethene	997	11.4	22.8	ug/kg dry	50	913	ND	109	74-125%	---	---	
1,2-Dichloropropane	1010	11.4	22.8	ug/kg dry	50	913	ND	111	76-123%	---	---	
1,3-Dichloropropane	936	22.8	45.6	ug/kg dry	50	913	ND	103	77-121%	---	---	
2,2-Dichloropropane	1110	22.8	45.6	ug/kg dry	50	913	ND	122	67-133%	---	---	Q-54
1,1-Dichloropropene	948	22.8	45.6	ug/kg dry	50	913	ND	104	76-125%	---	---	
cis-1,3-Dichloropropene	912	22.8	45.6	ug/kg dry	50	913	ND	100	74-126%	---	---	
trans-1,3-Dichloropropene	863	45.6	91.2	ug/kg dry	50	913	ND	95	71-130%	---	---	
Ethylbenzene	915	11.4	22.8	ug/kg dry	50	913	ND	100	76-122%	---	---	
Hexachlorobutadiene	1040	45.6	91.2	ug/kg dry	50	913	ND	114	61-135%	---	---	
2-Hexanone	1830	228	456	ug/kg dry	50	1830	ND	100	53-145%	---	---	
Isopropylbenzene	841	22.8	45.6	ug/kg dry	50	913	ND	92	68-134%	---	---	
4-Isopropyltoluene	837	22.8	45.6	ug/kg dry	50	913	ND	92	73-127%	---	---	
Methylene chloride	870	228	456	ug/kg dry	50	913	ND	95	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	1820	228	456	ug/kg dry	50	1830	ND	99	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1030	22.8	45.6	ug/kg dry	50	913	ND	113	73-125%	---	---	
Naphthalene	747	45.6	91.2	ug/kg dry	50	913	ND	82	62-129%	---	---	
n-Propylbenzene	892	11.4	22.8	ug/kg dry	50	913	ND	98	73-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
Matrix Spike (1090069-MS1)						Prepared: 09/02/21 11:45 Analyzed: 09/02/21 19:13						V-15
QC Source Sample: Non-SDG (A110056-01)												
Styrene	716	45.6	45.6	ug/kg dry	50	913	ND	78	76-124%	---	---	Q-54i
1,1,1,2-Tetrachloroethane	824	22.8	45.6	ug/kg dry	50	913	ND	90	78-125%	---	---	
1,1,2,2-Tetrachloroethane	919	22.8	45.6	ug/kg dry	50	913	ND	101	70-124%	---	---	
Tetrachloroethene (PCE)	877	11.4	22.8	ug/kg dry	50	913	ND	96	73-128%	---	---	
Toluene	901	22.8	45.6	ug/kg dry	50	913	ND	99	77-121%	---	---	
1,2,3-Trichlorobenzene	807	114	228	ug/kg dry	50	913	ND	88	66-130%	---	---	
1,2,4-Trichlorobenzene	766	114	228	ug/kg dry	50	913	ND	84	67-129%	---	---	
1,1,1-Trichloroethane	948	11.4	22.8	ug/kg dry	50	913	ND	104	73-130%	---	---	
1,1,2-Trichloroethane	915	11.4	22.8	ug/kg dry	50	913	ND	100	78-121%	---	---	
Trichloroethene (TCE)	934	11.4	22.8	ug/kg dry	50	913	ND	102	77-123%	---	---	
Trichlorofluoromethane	755	45.6	91.2	ug/kg dry	50	913	ND	83	62-140%	---	---	
1,2,3-Trichloropropane	913	22.8	45.6	ug/kg dry	50	913	ND	100	73-125%	---	---	
1,2,4-Trimethylbenzene	865	22.8	45.6	ug/kg dry	50	913	ND	95	75-123%	---	---	
1,3,5-Trimethylbenzene	872	22.8	45.6	ug/kg dry	50	913	ND	96	73-124%	---	---	
Vinyl chloride	1140	11.4	22.8	ug/kg dry	50	913	ND	125	56-135%	---	---	Q-54f
m,p-Xylene	1800	22.8	45.6	ug/kg dry	50	1830	ND	98	77-124%	---	---	
o-Xylene	858	11.4	22.8	ug/kg dry	50	913	ND	94	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

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ANALYTICAL REPORT

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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1080997 - EPA 3510C (Acid Extraction)						Water						
Blank (1080997-BLK1)						Prepared: 08/27/21 10:41 Analyzed: 08/27/21 19:31						
<u>EPA 8270E SIM</u>												
Benzo(a)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 84 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>103 %</i>		<i>50-134 %</i>		<i>"</i>						
LCS (1080997-BS1)						Prepared: 08/27/21 10:41 Analyzed: 08/27/21 19:56						
<u>EPA 8270E SIM</u>												
Benzo(a)pyrene	6.73	0.0200	0.0400	ug/L	1	8.00	---	84	54-128%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 83 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>92 %</i>		<i>50-134 %</i>		<i>"</i>						
LCS Dup (1080997-BSD1)						Prepared: 08/27/21 10:41 Analyzed: 08/27/21 20:21						
<u>EPA 8270E SIM</u>												
Benzo(a)pyrene	6.91	0.0200	0.0400	ug/L	1	8.00	---	86	54-128%	3	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>91 %</i>		<i>50-134 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081047 - EPA 3510C (Acid Extraction)						Water						
Blank (1081047-BLK1)			Prepared: 08/30/21 10:21 Analyzed: 08/30/21 15:08									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Acenaphthylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Benz(a)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Benzo(a)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Benzo(b)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Benzo(k)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Benzo(g,h,i)perylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Chrysene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Dibenz(a,h)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Fluorene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Naphthalene	ND	0.0364	0.0727	ug/L	1	---	---	---	---	---	---	---
Phenanthrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS (1081047-BS1)			Prepared: 08/30/21 10:21 Analyzed: 08/30/21 15:33									
<u>EPA 8270E SIM</u>												
Acenaphthene	6.60	0.0200	0.0400	ug/L	1	8.00	---	82	47-122%	---	---	---
Acenaphthylene	6.82	0.0200	0.0400	ug/L	1	8.00	---	85	41-130%	---	---	---
Anthracene	6.99	0.0200	0.0400	ug/L	1	8.00	---	87	57-123%	---	---	---
Benz(a)anthracene	7.04	0.0200	0.0400	ug/L	1	8.00	---	88	58-125%	---	---	---
Benzo(a)pyrene	7.39	0.0200	0.0400	ug/L	1	8.00	---	92	54-128%	---	---	---
Benzo(b)fluoranthene	7.44	0.0200	0.0400	ug/L	1	8.00	---	93	53-131%	---	---	---
Benzo(k)fluoranthene	7.76	0.0200	0.0400	ug/L	1	8.00	---	97	57-129%	---	---	---
Benzo(g,h,i)perylene	7.49	0.0200	0.0400	ug/L	1	8.00	---	94	50-134%	---	---	---
Chrysene	7.34	0.0200	0.0400	ug/L	1	8.00	---	92	59-123%	---	---	---
Dibenz(a,h)anthracene	7.45	0.0200	0.0400	ug/L	1	8.00	---	93	51-134%	---	---	---
Fluoranthene	6.83	0.0200	0.0400	ug/L	1	8.00	---	85	57-128%	---	---	---
Fluorene	6.57	0.0200	0.0400	ug/L	1	8.00	---	82	52-124%	---	---	---

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081047 - EPA 3510C (Acid Extraction)						Water						
LCS (1081047-BS1)						Prepared: 08/30/21 10:21 Analyzed: 08/30/21 15:33						
Indeno(1,2,3-cd)pyrene	7.14	0.0200	0.0400	ug/L	1	8.00	---	89	52-134%	---	---	
Naphthalene	6.18	0.0400	0.0800	ug/L	1	8.00	---	77	40-121%	---	---	
Phenanthrene	7.04	0.0200	0.0400	ug/L	1	8.00	---	88	59-120%	---	---	
Pyrene	6.68	0.0200	0.0400	ug/L	1	8.00	---	83	57-126%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 87 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>101 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS Dup (1081047-BSD1)						Prepared: 08/30/21 10:21 Analyzed: 08/30/21 15:58							Q-19
EPA 8270E SIM													
Acenaphthene	6.46	0.0200	0.0400	ug/L	1	8.00	---	81	47-122%	2	30%		
Acenaphthylene	6.68	0.0200	0.0400	ug/L	1	8.00	---	84	41-130%	2	30%		
Anthracene	6.77	0.0200	0.0400	ug/L	1	8.00	---	85	57-123%	3	30%		
Benz(a)anthracene	7.07	0.0200	0.0400	ug/L	1	8.00	---	88	58-125%	0.4	30%		
Benzo(a)pyrene	7.51	0.0200	0.0400	ug/L	1	8.00	---	94	54-128%	2	30%		
Benzo(b)fluoranthene	7.44	0.0200	0.0400	ug/L	1	8.00	---	93	53-131%	0.06	30%		
Benzo(k)fluoranthene	8.03	0.0200	0.0400	ug/L	1	8.00	---	100	57-129%	3	30%		
Benzo(g,h,i)perylene	7.47	0.0200	0.0400	ug/L	1	8.00	---	93	50-134%	0.3	30%		
Chrysene	7.41	0.0200	0.0400	ug/L	1	8.00	---	93	59-123%	0.9	30%		
Dibenz(a,h)anthracene	7.90	0.0200	0.0400	ug/L	1	8.00	---	99	51-134%	6	30%		
Fluoranthene	6.75	0.0200	0.0400	ug/L	1	8.00	---	84	57-128%	1	30%		
Fluorene	6.42	0.0200	0.0400	ug/L	1	8.00	---	80	52-124%	2	30%		
Indeno(1,2,3-cd)pyrene	7.18	0.0200	0.0400	ug/L	1	8.00	---	90	52-134%	0.5	30%		
Naphthalene	5.95	0.0400	0.0800	ug/L	1	8.00	---	74	40-121%	4	30%		
Phenanthrene	6.82	0.0200	0.0400	ug/L	1	8.00	---	85	59-120%	3	30%		
Pyrene	6.58	0.0200	0.0400	ug/L	1	8.00	---	82	57-126%	2	30%		
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>							
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>50-134 %</i>		<i>"</i>							

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081075 - EPA 3546												
Soil												
Blank (1081075-BLK1)												
						Prepared: 08/30/21 14:11 Analyzed: 08/30/21 18:31						
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>101 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1081075-BS1)												
						Prepared: 08/30/21 14:11 Analyzed: 08/30/21 18:56						
<u>EPA 8270E SIM</u>												
Acenaphthene	736	5.00	10.0	ug/kg wet	1	800	---	92	40-123%	---	---	
Acenaphthylene	771	5.00	10.0	ug/kg wet	1	800	---	96	32-132%	---	---	
Anthracene	741	5.00	10.0	ug/kg wet	1	800	---	93	47-123%	---	---	
Benz(a)anthracene	713	5.00	10.0	ug/kg wet	1	800	---	89	49-126%	---	---	
Benzo(a)pyrene	747	5.00	10.0	ug/kg wet	1	800	---	93	45-129%	---	---	
Benzo(b)fluoranthene	738	5.00	10.0	ug/kg wet	1	800	---	92	45-132%	---	---	
Benzo(k)fluoranthene	806	5.00	10.0	ug/kg wet	1	800	---	101	47-132%	---	---	
Benzo(g,h,i)perylene	769	5.00	10.0	ug/kg wet	1	800	---	96	43-134%	---	---	
Chrysene	754	5.00	10.0	ug/kg wet	1	800	---	94	50-124%	---	---	
Dibenz(a,h)anthracene	798	5.00	10.0	ug/kg wet	1	800	---	100	45-134%	---	---	
Fluoranthene	701	5.00	10.0	ug/kg wet	1	800	---	88	50-127%	---	---	
Fluorene	718	5.00	10.0	ug/kg wet	1	800	---	90	43-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081075 - EPA 3546												
Soil												
LCS (1081075-BS1)												
					Prepared: 08/30/21 14:11		Analyzed: 08/30/21 18:56					
Indeno(1,2,3-cd)pyrene	725	5.00	10.0	ug/kg wet	1	800	---	91	45-133%	---	---	
Naphthalene	713	5.00	10.0	ug/kg wet	1	800	---	89	35-123%	---	---	
Phenanthrene	739	5.00	10.0	ug/kg wet	1	800	---	92	50-121%	---	---	
Pyrene	687	5.00	10.0	ug/kg wet	1	800	---	86	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 88 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>95 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1081075-DUP1)													
					Prepared: 08/30/21 14:11		Analyzed: 08/30/21 19:47						H-06
QC Source Sample: Non-SDG (A1H0440-18)													
Acenaphthene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%		
Acenaphthylene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%		
Anthracene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%		
Benz(a)anthracene	8.76	6.56	13.1	ug/kg dry	1	---	12.3	---	---	33	30%	J, Q-05	
Benzo(a)pyrene	9.47	6.56	13.1	ug/kg dry	1	---	12.6	---	---	28	30%	J	
Benzo(b)fluoranthene	16.3	6.56	13.1	ug/kg dry	1	---	20.8	---	---	24	30%		
Benzo(k)fluoranthene	ND	6.56	13.1	ug/kg dry	1	---	7.88	---	---	***	30%	Q-05	
Benzo(g,h,i)perylene	13.1	6.56	13.1	ug/kg dry	1	---	18.5	---	---	34	30%	Q-05	
Chrysene	13.4	6.56	13.1	ug/kg dry	1	---	17.2	---	---	24	30%		
Dibenz(a,h)anthracene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%		
Fluoranthene	14.0	6.56	13.1	ug/kg dry	1	---	19.2	---	---	31	30%	Q-05	
Fluorene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%		
Indeno(1,2,3-cd)pyrene	10.4	6.56	13.1	ug/kg dry	1	---	15.6	---	---	40	30%	J, Q-05	
Naphthalene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%		
Phenanthrene	9.06	6.56	13.1	ug/kg dry	1	---	12.9	---	---	35	30%	J, Q-05	
Pyrene	15.7	6.56	13.1	ug/kg dry	1	---	21.5	---	---	32	30%	Q-05	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 81 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>							
<i>p-Terphenyl-d14 (Surr)</i>		<i>85 %</i>		<i>54-127 %</i>		<i>"</i>							

Matrix Spike (1081075-MS1)												
					Prepared: 08/30/21 14:11		Analyzed: 08/30/21 20:37					
QC Source Sample: Non-SDG (A1H0983-07)												
EPA 8270E SIM												
Acenaphthene	598	5.24	10.5	ug/kg dry	1	838	ND	71	40-123%	---	---	
Acenaphthylene	612	5.24	10.5	ug/kg dry	1	838	ND	73	32-132%	---	---	

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081075 - EPA 3546						Soil						
Matrix Spike (1081075-MS1)			Prepared: 08/30/21 14:11 Analyzed: 08/30/21 20:37									
QC Source Sample: Non-SDG (A1H0983-07)												
Anthracene	691	5.24	10.5	ug/kg dry	1	838	ND	82	47-123%	---	---	
Benz(a)anthracene	709	5.24	10.5	ug/kg dry	1	838	5.65	84	49-126%	---	---	
Benzo(a)pyrene	716	5.24	10.5	ug/kg dry	1	838	5.44	85	45-129%	---	---	
Benzo(b)fluoranthene	721	5.24	10.5	ug/kg dry	1	838	10.0	85	45-132%	---	---	
Benzo(k)fluoranthene	760	5.24	10.5	ug/kg dry	1	838	ND	91	47-132%	---	---	
Benzo(g,h,i)perylene	726	5.24	10.5	ug/kg dry	1	838	8.58	86	43-134%	---	---	
Chrysene	735	5.24	10.5	ug/kg dry	1	838	6.34	87	50-124%	---	---	
Dibenz(a,h)anthracene	676	5.24	10.5	ug/kg dry	1	838	ND	81	45-134%	---	---	
Fluoranthene	752	5.24	10.5	ug/kg dry	1	838	7.09	89	50-127%	---	---	
Fluorene	620	5.24	10.5	ug/kg dry	1	838	ND	74	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	663	5.24	10.5	ug/kg dry	1	838	7.26	78	45-133%	---	---	
Naphthalene	494	5.24	10.5	ug/kg dry	1	838	ND	59	35-123%	---	---	
Phenanthrene	808	5.24	10.5	ug/kg dry	1	838	ND	96	50-121%	---	---	
Pyrene	697	5.24	10.5	ug/kg dry	1	838	7.70	82	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 61 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>83 %</i>		<i>54-127 %</i>		<i>"</i>						

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----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081101 - EPA 3051A						Soil						
Blank (1081101-BLK1)			Prepared: 08/31/21 09:38 Analyzed: 08/31/21 17:33									
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	

Blank (1081101-BLK2)			Prepared: 08/31/21 09:38 Analyzed: 08/31/21 17:33									
<u>EPA 6020B</u>												
Antimony	ND	0.520	1.04	mg/kg wet	10	---	---	---	---	---	---	RSM
Arsenic	ND	0.520	1.04	mg/kg wet	10	---	---	---	---	---	---	RSM
Barium	ND	0.520	1.04	mg/kg wet	10	---	---	---	---	---	---	RSM
Cadmium	ND	0.104	0.208	mg/kg wet	10	---	---	---	---	---	---	RSM
Chromium	ND	0.520	1.04	mg/kg wet	10	---	---	---	---	---	---	RSM
Copper	ND	1.04	2.08	mg/kg wet	10	---	---	---	---	---	---	RSM
Lead	ND	0.104	0.208	mg/kg wet	10	---	---	---	---	---	---	RSM
Mercury	ND	0.0416	0.0832	mg/kg wet	10	---	---	---	---	---	---	RSM
Selenium	ND	0.520	1.04	mg/kg wet	10	---	---	---	---	---	---	RSM
Silver	ND	0.104	0.208	mg/kg wet	10	---	---	---	---	---	---	RSM
Zinc	ND	2.08	4.16	mg/kg wet	10	---	---	---	---	---	---	RSM

LCS (1081101-BS1)			Prepared: 08/31/21 09:38 Analyzed: 08/31/21 17:43									
<u>EPA 6020B</u>												
Antimony	24.2	0.500	1.00	mg/kg wet	10	25.0	---	97	80-120%	---	---	
Arsenic	49.3	0.500	1.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	
Barium	49.3	0.500	1.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	
Cadmium	49.2	0.100	0.200	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Chromium	47.8	0.500	1.00	mg/kg wet	10	50.0	---	96	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081101 - EPA 3051A						Soil						
LCS (1081101-BS1)						Prepared: 08/31/21 09:38 Analyzed: 08/31/21 17:43						
Copper	50.7	1.00	2.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Lead	51.6	0.100	0.200	mg/kg wet	10	50.0	---	103	80-120%	---	---	
Mercury	0.976	0.0400	0.0800	mg/kg wet	10	1.00	---	98	80-120%	---	---	
Selenium	23.8	0.500	1.00	mg/kg wet	10	25.0	---	95	80-120%	---	---	
Silver	26.0	0.100	0.200	mg/kg wet	10	25.0	---	104	80-120%	---	---	
Zinc	48.6	2.00	4.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	

Duplicate (1081101-DUP1)						Prepared: 08/31/21 09:38 Analyzed: 08/31/21 17:53						
<u>QC Source Sample: Non-SDG (A1H0440-18)</u>												
Antimony	ND	0.649	1.30	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	6.01	0.649	1.30	mg/kg dry	10	---	6.17	---	---	3	20%	
Barium	185	0.649	1.30	mg/kg dry	10	---	180	---	---	3	20%	
Cadmium	0.279	0.130	0.260	mg/kg dry	10	---	0.279	---	---	0.008	20%	
Chromium	24.5	0.649	1.30	mg/kg dry	10	---	24.4	---	---	0.5	20%	
Copper	34.4	1.30	2.60	mg/kg dry	10	---	34.6	---	---	0.7	20%	
Lead	18.0	0.130	0.260	mg/kg dry	10	---	19.4	---	---	7	20%	
Mercury	0.0563	0.0519	0.104	mg/kg dry	10	---	0.0599	---	---	6	20%	
Selenium	1.36	0.649	1.30	mg/kg dry	10	---	1.34	---	---	1	20%	
Silver	ND	0.130	0.260	mg/kg dry	10	---	0.197	---	---	***	20%	
Zinc	87.1	2.60	5.19	mg/kg dry	10	---	89.2	---	---	2	20%	

Matrix Spike (1081101-MS1)						Prepared: 08/31/21 09:38 Analyzed: 08/31/21 18:08						
<u>QC Source Sample: Non-SDG (A1H0440-18)</u>												
<u>EPA 6020B</u>												
Antimony	29.9	0.683	1.37	mg/kg dry	10	34.2	ND	87	75-125%	---	---	
Arsenic	71.0	0.683	1.37	mg/kg dry	10	68.3	6.17	95	75-125%	---	---	
Barium	240	0.683	1.37	mg/kg dry	10	68.3	180	88	75-125%	---	---	
Cadmium	66.9	0.137	0.273	mg/kg dry	10	68.3	0.279	98	75-125%	---	---	
Chromium	86.0	0.683	1.37	mg/kg dry	10	68.3	24.4	90	75-125%	---	---	
Copper	98.8	1.37	2.73	mg/kg dry	10	68.3	34.6	94	75-125%	---	---	
Lead	84.9	0.137	0.273	mg/kg dry	10	68.3	19.4	96	75-125%	---	---	
Mercury	1.32	0.0547	0.109	mg/kg dry	10	1.37	0.0599	92	75-125%	---	---	
Selenium	33.5	0.683	1.37	mg/kg dry	10	34.2	1.34	94	75-125%	---	---	
Silver	35.3	0.137	0.273	mg/kg dry	10	34.2	0.197	103	75-125%	---	---	

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EORB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
-----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081101 - EPA 3051A						Soil						
Matrix Spike (1081101-MS1)						Prepared: 08/31/21 09:38 Analyzed: 08/31/21 18:08						
<u>QC Source Sample: Non-SDG (A1H0440-18)</u>												
Zinc	142	2.73	5.47	mg/kg dry	10	68.3	89.2	77	75-125%	---	---	

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Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: CB319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A1H0845 - 10 06 21 1038

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090063 - Matrix Matched Direct Inject						Water						
Blank (1090063-BLK1)						Prepared: 09/02/21 09:13 Analyzed: 09/02/21 22:51						
<u>EPA 6020B (Diss)</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
LCS (1090063-BS1)						Prepared: 09/02/21 09:13 Analyzed: 09/02/21 22:56						
<u>EPA 6020B (Diss)</u>												
Arsenic	52.9	0.500	1.00	ug/L	1	55.6	---	95	80-120%	---	---	
Barium	55.9	0.500	1.00	ug/L	1	55.6	---	101	80-120%	---	---	
Cadmium	53.0	0.100	0.200	ug/L	1	55.6	---	95	80-120%	---	---	
Chromium	51.2	1.00	2.00	ug/L	1	55.6	---	92	80-120%	---	---	
Lead	55.9	0.100	0.200	ug/L	1	55.6	---	101	80-120%	---	---	
Mercury	1.09	0.0400	0.0800	ug/L	1	1.11	---	98	80-120%	---	---	
Selenium	27.2	0.500	1.00	ug/L	1	27.8	---	98	80-120%	---	---	
Silver	28.4	0.100	0.200	ug/L	1	27.8	---	102	80-120%	---	---	
Duplicate (1090063-DUP1)						Prepared: 09/02/21 09:13 Analyzed: 09/02/21 23:21						
<u>QC Source Sample: Non-SDG (A110017-15)</u>												
Arsenic	6.79	0.500	1.00	ug/L	1	---	6.73	---	---	0.9	20%	
Barium	45.9	0.500	1.00	ug/L	1	---	45.3	---	---	1	20%	
Cadmium	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Chromium	1.08	1.00	2.00	ug/L	1	---	1.03	---	---	5	20%	
Lead	0.706	0.100	0.200	ug/L	1	---	0.693	---	---	2	20%	
Mercury	ND	0.0400	0.0800	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (1090063-MS1)						Prepared: 09/02/21 09:13 Analyzed: 09/02/21 23:26						

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090063 - Matrix Matched Direct Inject						Water						
Matrix Spike (1090063-MS1)						Prepared: 09/02/21 09:13 Analyzed: 09/02/21 23:26						
<u>QC Source Sample: Non-SDG (A110017-15)</u>												
<u>EPA 6020B (Diss)</u>												
Arsenic	62.4	0.500	1.00	ug/L	1	55.6	6.73	100	75-125%	---	---	
Barium	100	0.500	1.00	ug/L	1	55.6	45.3	98	75-125%	---	---	
Cadmium	56.0	0.100	0.200	ug/L	1	55.6	ND	101	75-125%	---	---	
Chromium	52.8	1.00	2.00	ug/L	1	55.6	1.03	93	75-125%	---	---	
Lead	56.7	0.100	0.200	ug/L	1	55.6	0.693	101	75-125%	---	---	
Mercury	1.00	0.0400	0.0800	ug/L	1	1.11	ND	90	75-125%	---	---	
Selenium	28.1	0.500	1.00	ug/L	1	27.8	ND	101	75-125%	---	---	
Silver	25.1	0.100	0.200	ug/L	1	27.8	ND	90	75-125%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
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QUALITY CONTROL (QC) SAMPLE RESULTS

TCLP Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090382 - EPA 1311/3015						Solid						
Blank (1090382-BLK1)			Prepared: 09/10/21 13:22 Analyzed: 09/10/21 15:05									
<u>1311/6020B</u>												
Lead	ND	0.0250	0.0500	mg/L	10	---	---	---	---	---	---	TCLP
LCS (1090382-BS1)			Prepared: 09/10/21 13:22 Analyzed: 09/10/21 15:11									
<u>1311/6020B</u>												
Lead	5.23	0.0250	0.0500	mg/L	10	5.00	---	105	80-120%	---	---	TCLP
Matrix Spike (1090382-MS1)			Prepared: 09/10/21 13:22 Analyzed: 09/10/21 15:26									
<u>QC Source Sample: Non-SDG (A110189-01)</u>												
<u>1311/6020B</u>												
Lead	5.98	0.0250	0.0500	mg/L	10	5.00	ND	120	50-150%	---	---	
Matrix Spike (1090382-MS2)			Prepared: 09/10/21 13:22 Analyzed: 09/10/21 15:36									
<u>QC Source Sample: Non-SDG (A110275-01)</u>												
<u>1311/6020B</u>												
Lead	4.99	0.0250	0.0500	mg/L	10	5.00	ND	100	50-150%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081096 - Total Solids (Dry Weight)						Soil						
Duplicate (1081096-DUP1)			Prepared: 08/31/21 09:09 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H0795-62)</u>												
% Solids	97.7	1.00	1.00	%	1	---	97.6	---	---	0.06	10%	
Duplicate (1081096-DUP2)			Prepared: 08/31/21 09:09 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H0926-06)</u>												
% Solids	91.5	1.00	1.00	%	1	---	92.9	---	---	2	10%	
Duplicate (1081096-DUP3)			Prepared: 08/31/21 09:09 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H0931-11)</u>												
% Solids	75.1	1.00	1.00	%	1	---	77.0	---	---	3	10%	
Duplicate (1081096-DUP4)			Prepared: 08/31/21 09:09 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H1005-02)</u>												
% Solids	96.0	1.00	1.00	%	1	---	96.0	---	---	0.04	10%	
Duplicate (1081096-DUP5)			Prepared: 08/31/21 18:23 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H1017-01)</u>												
% Solids	80.5	1.00	1.00	%	1	---	80.3	---	---	0.3	10%	
Duplicate (1081096-DUP6)			Prepared: 08/31/21 18:23 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H1017-02)</u>												
% Solids	80.1	1.00	1.00	%	1	---	75.9	---	---	5	10%	
Duplicate (1081096-DUP7)			Prepared: 08/31/21 18:23 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H1017-03)</u>												
% Solids	78.0	1.00	1.00	%	1	---	79.5	---	---	2	10%	
Duplicate (1081096-DUP8)			Prepared: 08/31/21 18:23 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H1017-04)</u>												
% Solids	81.7	1.00	1.00	%	1	---	79.9	---	---	2	10%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081096 - Total Solids (Dry Weight)							Soil					
Duplicate (1081096-DUP9)					Prepared: 08/31/21 18:23 Analyzed: 09/01/21 07:44							
<u>QC Source Sample: Non-SDG (A1H1017-05)</u>												
% Solids	83.3	1.00	1.00	%	1	---	83.7	---	---	0.5	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1080996</u>							
A1H0845-08	Water	NWTPH-Dx LL	08/23/21 10:55	08/27/21 10:39	1060mL/2mL	1000mL/2mL	0.94

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090085</u>							
A1H0845-09	Soil	NWTPH-Dx	08/23/21 09:28	09/02/21 13:08	10.26g/5mL	10g/5mL	0.98
A1H0845-10	Soil	NWTPH-Dx	08/23/21 09:42	09/02/21 13:08	10.72g/5mL	10g/5mL	0.93

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1081028</u>							
A1H0845-08	Water	NWTPH-Gx (MS)	08/23/21 10:55	08/30/21 10:44	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090069</u>							
A1H0845-09	Soil	NWTPH-Gx (MS)	08/23/21 09:28	08/23/21 09:28	10.88g/10mL	5g/5mL	0.92
A1H0845-10	Soil	NWTPH-Gx (MS)	08/23/21 09:42	08/23/21 09:42	26.33g/25mL	5g/5mL	0.95

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1081028</u>							
A1H0845-08	Water	EPA 8260D	08/23/21 10:55	08/30/21 10:44	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090069</u>							
A1H0845-09	Soil	5035A/8260D	08/23/21 09:28	08/23/21 09:28	10.88g/10mL	5g/5mL	0.92
A1H0845-10	Soil	5035A/8260D	08/23/21 09:42	08/23/21 09:42	26.33g/25mL	5g/5mL	0.95

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

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SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

<u>Prep: EPA 3510C (Acid Extraction)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1081047</u>							
A1H0845-08RE1	Water	EPA 8270E SIM	08/23/21 10:55	08/30/21 10:21	1050mL/2mL	1000mL/2mL	0.95

<u>Prep: EPA 3546</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1081075</u>							
A1H0845-09	Soil	EPA 8270E SIM	08/23/21 09:28	08/30/21 14:11	10.24g/5mL	10g/5mL	0.98
A1H0845-10	Soil	EPA 8270E SIM	08/23/21 09:42	08/30/21 14:11	10.21g/5mL	10g/5mL	0.98

Total Metals by EPA 6020B (ICPMS)

<u>Prep: EPA 3051A</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1081101</u>							
A1H0845-09	Soil	EPA 6020B	08/23/21 09:28	08/31/21 09:38	0.503g/50mL	0.5g/50mL	0.99
A1H0845-10	Soil	EPA 6020B	08/23/21 09:42	08/31/21 09:38	0.5g/50mL	0.5g/50mL	1.00

Dissolved Metals by EPA 6020B (ICPMS)

<u>Prep: Matrix Matched Direct Inject</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090063</u>							
A1H0845-08	Water	EPA 6020B (Diss)	08/23/21 10:55	09/02/21 09:13	45mL/50mL	45mL/50mL	1.00

TCLP Metals by EPA 6020B (ICPMS)

<u>Prep: EPA 1311/3015</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090382</u>							
A1H0845-10	Soil	1311/6020B	08/23/21 09:42	09/10/21 13:22	10mL/50mL	10mL/50mL	1.00

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1081096</u>							
A1H0845-09	Soil	EPA 8000D	08/23/21 09:28	08/31/21 09:09			NA

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
-----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
A1H0845-10	Soil	EPA 8000D	08/23/21 09:42	08/31/21 09:09			NA

TCLP Extraction by EPA 1311

<u>Prep: EPA 1311 (TCLP)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090321</u>							
A1H0845-10	Soil	EPA 1311	08/23/21 09:42	09/09/21 18:00	100g/1985.5g	100g/2000g	NA

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Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

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6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: **EQRB**

Project Number: **CB319**

Project Manager: **Jill Betts**

Report ID:

A1H0845 - 10 06 21 1038

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- COMP** Sample is a composite of discrete samples. See prep information for details.
- F-03** The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.
- F-12** The result for this hydrocarbon range is primarily due to the presence of individual analyte peaks in the quantitation range. No fuel pattern detected.
- H-06** This sample was received, or the analysis requested, outside the recommended holding time.
- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +10%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +135%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +15%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +40%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +57%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +7%. The results are reported as Estimated Values.
- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +9%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -2%. The results are reported as Estimated Values.
- Q-54i** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -4%. The results are reported as Estimated Values.

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u>	Project: <u>EQRB</u>	<u>Report ID:</u>
5741 NE Flanders Street	Project Number: CB319	A1H0845 - 10 06 21 1038
Portland, OR 97213	Project Manager: Jill Betts	

- Q-54j** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -6%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- RSM** RSM Preparation Blank. Batch: 1080623.
- S-03** Reextraction and analysis, or analysis of laboratory duplicate, confirms surrogate failure due to sample matrix effect.
- TCLP** This batch QC sample was prepared with TCLP or SPLP fluid from preparation batch 1090321.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
-----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.
- "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1H0845 - 10 06 21 1038).

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1H0845 - 10 06 21 1038).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY *Reviewed*

Lab # **A1H0845** COC **1 of 4**

Project # **613219**

Company: **Cole & Betts**
Address: _____
Project Mgr: **Jill Betts**
Phone: _____

Project Name: **EQRB**
Email: _____
PO # _____

Project # **613219**
PO # _____

SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	ANALYSIS REQUEST				Archive	
						NWTFH-CID	NWTFH-DX	NWTFH-GX	8260 BTEX		
B-17-75		7/17/10	10:05	S	1						
B-17-10		7/17/10	10:05	S	1						
B-17-15		7/17/10	10:05	S	1						
B-17-175		7/17/10	10:05	S	1						
B-17-20		7/17/10	10:05	S	1						
B-17-25		7/17/10	10:05	S	1						
B-17		7/17/10	10:05	W	8						
B-17-D-10C											
B-17-10-25C											

Normal Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): **1 Day** 2 Day 3 Day 4 DAY 5 DAY Other: _____

SPECIAL INSTRUCTIONS:
Samples submitted with no instructions will be analyzed for groundwater sample.

RELINQUISHED BY: Signature: _____ Date: _____ Printed Name: _____ Company: _____	RECEIVED BY: Signature: _____ Date: _____ Printed Name: _____ Company: _____
-----------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------

Apex Laboratories

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Darrell Auvil, Client Services Manager

Page 63 of 65



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: CB319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A1H0845 - 10 06 21 1038

APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A1H0845 COC 1 of 1

Project Name: EQRB Project #: CB319

Project Mgr: Jill Betts PO # _____

Address: _____ Phone: _____ Email: _____

Sampled by: MB/L

Site Location: OR WA CA
AK ID _____

SAMPLE ID	LAB ID #	DATE	TIME	# OF CONTAINERS	TAT Requested (circle)				SPECIAL INSTRUCTIONS
					1 Day	2 Day	3 Day	Other	
B-17 7.5		8/31/11	9:18	5					<p>Normal Turn Around Time (TAT) = 10 Business Days</p> <p>Composit Sampled with 6 directions Will be e-mailed Metals field filtered for groundwater sample.</p>
B-17 10		9/1	9:36	5					
B-17 12.5		9/1	9:42	5					
B-17 15		9/1	9:50	5					
B-17 17.5		9/1	9:57	5					
B-17 20		10/8	10:08	5					
B-17 25		10/23	10:23	5					
B-17		10/25	10:55	8					

RELINQUISHED BY: Signature: [Signature] Date: 8/27/11

RECEIVED BY: Signature: [Signature] Date: _____

Printed Name: Jill Betts Printed Name: _____

Time: 12:30 Time: _____

Company: COLES & BETTS ENV. Company: _____

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EORB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0845 - 10 06 21 1038
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Element WO#: A1 H0845

Project/Project #: EORB #CB 319

Delivery Info:
Date/time received: 8/23/11 @ 1230 By: AKC
Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 8/23/11 @ 1235 By: AKC

Chain of Custody included? Yes No Custody seals? Yes No

Signed/dated by client? Yes No

Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>4.7</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Gel</u>						
Condition:	<u>Melty</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
Green dots applied to out of temperature samples? Yes No
Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 8/23/11 @ 945 By: (Signature)

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: _____

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: sed in all voas

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA

Comments: 1/2 HCl ambers B-17 pH ≈ 7, 1/2 ambers too full to preserve

Additional information:

Labeled by: (Signature) Witness: (Signature) Cooler Inspected by: (Signature)



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, October 6, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A1H0847 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A1H0847, which was received by the laboratory on 8/23/2021 at 12:30:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 4.7 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-18 2.5	A1H0847-01	Soil	08/23/21 09:18	08/23/21 12:30
B-18 5-6.5	A1H0847-02	Soil	08/23/21 09:30	08/23/21 12:30
B-18 7.5-9	A1H0847-03	Soil	08/23/21 09:40	08/23/21 12:30
B-18 10-11.5	A1H0847-04	Soil	08/23/21 09:55	08/23/21 12:30
B-18 12.5-14	A1H0847-05	Soil	08/23/21 10:02	08/23/21 12:30
B-18 15-16.5	A1H0847-06	Soil	08/23/21 10:12	08/23/21 12:30
B-18 17.5-19	A1H0847-07	Soil	08/23/21 10:17	08/23/21 12:30
B-18 20-21.5	A1H0847-08	Soil	08/23/21 10:25	08/23/21 12:30
B-18 25-26.5	A1H0847-09	Soil	08/23/21 10:35	08/23/21 12:30
B-18 0-10C	A1H0847-10	Soil	08/23/21 09:18	08/23/21 12:30
B-18 10-26C	A1H0847-11	Soil	08/23/21 09:55	08/23/21 12:30

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 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-18 0-10C (A1H0847-10)				Matrix: Soil		Batch: 1090085			
Diesel	ND	66.0	132	mg/kg dry	5	09/02/21 19:53	NWTPH-Dx		
Oil	361	132	264	mg/kg dry	5	09/02/21 19:53	NWTPH-Dx		
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 50-150 %</i>		<i>5</i>	<i>09/02/21 19:53</i>	<i>NWTPH-Dx</i>	<i>S-05</i>
B-18 10-26C (A1H0847-11)				Matrix: Soil		Batch: 1090085			
Diesel	ND	146	292	mg/kg dry	10	09/02/21 20:16	NWTPH-Dx		
Oil	1760	292	584	mg/kg dry	10	09/02/21 20:16	NWTPH-Dx		
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		<i>10</i>	<i>09/02/21 20:16</i>	<i>NWTPH-Dx</i>	<i>S-05</i>

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 0-10C (A1H0847-10)				Matrix: Soil		Batch: 1090069		COMP, V-15
Gasoline Range Organics	ND	3.95	7.90	mg/kg dry	50	09/02/21 16:05	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 104 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/02/21 16:05</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>98 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/02/21 16:05</i>	<i>NWTPH-Gx (MS)</i>
B-18 10-26C (A1H0847-11)				Matrix: Soil		Batch: 1090069		COMP, V-15
Gasoline Range Organics	5.67	4.99	9.97	mg/kg dry	50	09/02/21 16:32	NWTPH-Gx (MS)	J
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 111 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/02/21 16:32</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/02/21 16:32</i>	<i>NWTPH-Gx (MS)</i>

Apex Laboratories

Darrell Auvil, Client Services Manager

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 0-10C (A1H0847-10)				Matrix: Soil		Batch: 1090069		COMP, V-15
Acetone	ND	790	1580	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Acrylonitrile	ND	79.0	158	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Benzene	ND	7.90	15.8	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Bromobenzene	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Bromochloromethane	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Bromodichloromethane	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Bromoform	ND	79.0	158	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Bromomethane	ND	790	790	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
2-Butanone (MEK)	ND	395	790	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
n-Butylbenzene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
sec-Butylbenzene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
tert-Butylbenzene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Carbon disulfide	ND	395	790	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Carbon tetrachloride	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Chlorobenzene	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Chloroethane	ND	790	790	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Chloroform	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Chloromethane	ND	197	395	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
2-Chlorotoluene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
4-Chlorotoluene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Dibromochloromethane	ND	79.0	158	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	197	395	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Dibromomethane	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,2-Dichlorobenzene	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,3-Dichlorobenzene	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,4-Dichlorobenzene	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Dichlorodifluoromethane	ND	79.0	158	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,1-Dichloroethane	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,1-Dichloroethene	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
cis-1,2-Dichloroethene	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
trans-1,2-Dichloroethene	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 0-10C (A1H0847-10)				Matrix: Soil		Batch: 1090069		COMP, V-15
1,2-Dichloropropane	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,3-Dichloropropane	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
2,2-Dichloropropane	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,1-Dichloropropene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
cis-1,3-Dichloropropene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
trans-1,3-Dichloropropene	ND	79.0	158	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Ethylbenzene	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Hexachlorobutadiene	ND	79.0	158	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
2-Hexanone	ND	395	790	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Isopropylbenzene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
4-Isopropyltoluene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Methylene chloride	ND	395	790	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	395	790	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Naphthalene	ND	79.0	158	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
n-Propylbenzene	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Styrene	ND	79.0	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Tetrachloroethene (PCE)	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Toluene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,2,3-Trichlorobenzene	ND	197	395	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,2,4-Trichlorobenzene	ND	197	395	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,1,1-Trichloroethane	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,1,2-Trichloroethane	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Trichloroethene (TCE)	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Trichlorofluoromethane	ND	79.0	158	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,2,3-Trichloropropane	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,2,4-Trimethylbenzene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
1,3,5-Trimethylbenzene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
Vinyl chloride	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
m,p-Xylene	ND	39.5	79.0	ug/kg dry	50	09/02/21 16:05	5035A/8260D	
o-Xylene	ND	19.7	39.5	ug/kg dry	50	09/02/21 16:05	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 0-10C (A1H0847-10)				Matrix: Soil		Batch: 1090069		COMP, V-15
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/02/21 16:05</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/02/21 16:05</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>1</i>	<i>09/02/21 16:05</i>	<i>5035A/8260D</i>
B-18 10-26C (A1H0847-11)				Matrix: Soil		Batch: 1090069		COMP, V-15
Acetone	ND	997	1990	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Acrylonitrile	ND	99.7	199	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Benzene	13.0	9.97	19.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	J
Bromobenzene	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Bromochloromethane	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Bromodichloromethane	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Bromoform	ND	99.7	199	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Bromomethane	ND	997	997	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
2-Butanone (MEK)	ND	499	997	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
n-Butylbenzene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
sec-Butylbenzene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
tert-Butylbenzene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Carbon disulfide	ND	499	997	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Carbon tetrachloride	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Chlorobenzene	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Chloroethane	ND	997	997	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Chloroform	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Chloromethane	ND	249	499	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
2-Chlorotoluene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
4-Chlorotoluene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Dibromochloromethane	ND	99.7	199	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	249	499	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Dibromomethane	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,2-Dichlorobenzene	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,3-Dichlorobenzene	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,4-Dichlorobenzene	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Dichlorodifluoromethane	ND	99.7	199	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,1-Dichloroethane	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 10-26C (A1H0847-11)				Matrix: Soil		Batch: 1090069		COMP, V-15
1,2-Dichloroethane (EDC)	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,1-Dichloroethene	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
cis-1,2-Dichloroethene	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
trans-1,2-Dichloroethene	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,2-Dichloropropane	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,3-Dichloropropane	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
2,2-Dichloropropane	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,1-Dichloropropene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
cis-1,3-Dichloropropene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
trans-1,3-Dichloropropene	ND	99.7	199	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Ethylbenzene	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Hexachlorobutadiene	ND	99.7	199	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
2-Hexanone	ND	499	997	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Isopropylbenzene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
4-Isopropyltoluene	61.8	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	J
Methylene chloride	ND	499	997	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	499	997	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Naphthalene	637	99.7	199	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
n-Propylbenzene	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Styrene	ND	99.7	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Tetrachloroethene (PCE)	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Toluene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,2,3-Trichlorobenzene	ND	249	499	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,2,4-Trichlorobenzene	ND	249	499	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,1,1-Trichloroethane	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,1,2-Trichloroethane	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Trichloroethene (TCE)	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Trichlorofluoromethane	ND	99.7	199	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,2,3-Trichloropropane	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
1,2,4-Trimethylbenzene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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 Tigard, OR 97223
 503-718-2323
 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 10-26C (A1H0847-11)				Matrix: Soil		Batch: 1090069		COMP, V-15
1,3,5-Trimethylbenzene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
Vinyl chloride	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
m,p-Xylene	ND	49.9	99.7	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
o-Xylene	ND	24.9	49.9	ug/kg dry	50	09/02/21 16:32	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/02/21 16:32</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/02/21 16:32</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>1</i>	<i>09/02/21 16:32</i>	<i>5035A/8260D</i>

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ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 0-10C (A1H0847-10RE1)				Matrix: Soil		Batch: 1081075		
Acenaphthene	ND	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	
Acenaphthylene	ND	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	
Anthracene	ND	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	
Benz(a)anthracene	97.8	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	J
Benzo(a)pyrene	81.0	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	J
Benzo(b)fluoranthene	112	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	J
Benzo(k)fluoranthene	ND	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	
Benzo(g,h,i)perylene	83.2	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	J
Chrysene	124	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	J
Dibenz(a,h)anthracene	ND	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	
Fluoranthene	197	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	
Fluorene	ND	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	70.3	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	J
Naphthalene	136	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	
Phenanthrene	205	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	
Pyrene	168	64.1	128	ug/kg dry	10	08/31/21 20:06	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 73 %</i>		<i>Limits: 44-120 %</i>		<i>10</i>	<i>08/31/21 20:06</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>79 %</i>		<i>54-127 %</i>		<i>10</i>	<i>08/31/21 20:06</i>	<i>EPA 8270E SIM</i>

B-18 10-26C (A1H0847-11RE1)				Matrix: Soil		Batch: 1081075		
Acenaphthene	1270	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Acenaphthylene	382	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Anthracene	1080	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Benz(a)anthracene	1650	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Benzo(a)pyrene	1030	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Benzo(b)fluoranthene	1450	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Benzo(k)fluoranthene	519	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	690	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Chrysene	2200	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Dibenz(a,h)anthracene	136	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	J
Fluoranthene	8120	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Fluorene	1500	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	631	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 10-26C (A1H0847-11RE1)				Matrix: Soil		Batch: 1081075		
Naphthalene	3920	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Phenanthrene	7680	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
Pyrene	6030	76.1	152	ug/kg dry	10	08/31/21 20:31	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 76 %</i>		<i>Limits: 44-120 %</i>		<i>10</i>	<i>08/31/21 20:31</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>83 %</i>		<i>54-127 %</i>		<i>10</i>	<i>08/31/21 20:31</i>	<i>EPA 8270E SIM</i>

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 0-10C (A1H0847-10)				Matrix: Soil				
Batch: 1081101								
Antimony	1.13	0.641	1.28	mg/kg dry	10	08/31/21 18:49	EPA 6020B	J
Arsenic	7.94	0.641	1.28	mg/kg dry	10	08/31/21 18:49	EPA 6020B	
Barium	150	0.641	1.28	mg/kg dry	10	08/31/21 18:49	EPA 6020B	
Cadmium	0.188	0.128	0.256	mg/kg dry	10	08/31/21 18:49	EPA 6020B	J
Chromium	21.1	0.641	1.28	mg/kg dry	10	08/31/21 18:49	EPA 6020B	
Copper	42.4	1.28	2.56	mg/kg dry	10	08/31/21 18:49	EPA 6020B	
Lead	106	0.128	0.256	mg/kg dry	10	08/31/21 18:49	EPA 6020B	
Mercury	3.88	0.0513	0.103	mg/kg dry	10	08/31/21 18:49	EPA 6020B	
Selenium	0.793	0.641	1.28	mg/kg dry	10	08/31/21 18:49	EPA 6020B	J
Silver	0.156	0.128	0.256	mg/kg dry	10	08/31/21 18:49	EPA 6020B	J
Zinc	110	2.56	5.13	mg/kg dry	10	08/31/21 18:49	EPA 6020B	
B-18 10-26C (A1H0847-11)				Matrix: Soil				
Batch: 1090035								
Antimony	2.92	0.775	1.55	mg/kg dry	10	09/02/21 22:01	EPA 6020B	
Arsenic	5.38	0.775	1.55	mg/kg dry	10	09/02/21 22:01	EPA 6020B	
Barium	151	0.775	1.55	mg/kg dry	10	09/02/21 22:01	EPA 6020B	
Cadmium	0.274	0.155	0.310	mg/kg dry	10	09/02/21 22:01	EPA 6020B	J
Chromium	19.9	0.775	1.55	mg/kg dry	10	09/02/21 22:01	EPA 6020B	
Copper	98.1	1.55	3.10	mg/kg dry	10	09/02/21 22:01	EPA 6020B	
Lead	245	0.155	0.310	mg/kg dry	10	09/02/21 22:01	EPA 6020B	
Selenium	0.791	0.775	1.55	mg/kg dry	10	09/02/21 22:01	EPA 6020B	J
Silver	0.201	0.155	0.310	mg/kg dry	10	09/02/21 22:01	EPA 6020B	J
Zinc	159	3.10	6.20	mg/kg dry	10	09/02/21 22:01	EPA 6020B	
B-18 10-26C (A1H0847-11RE1)				Matrix: Soil				
Batch: 1090035								
Mercury	7.11	0.620	1.24	mg/kg dry	100	09/03/21 16:27	EPA 6020B	

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ANALYTICAL SAMPLE RESULTS

TCLP Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 0-10C (A1H0847-10)				Matrix: Soil				
Batch: 1090382								
Lead	0.0732	0.0250	0.0500	mg/L	10	09/10/21 15:56	1311/6020B	
B-18 10-26C (A1H0847-11)				Matrix: Soil				
Batch: 1090382								
Lead	0.0674	0.0250	0.0500	mg/L	10	09/10/21 16:01	1311/6020B	
Mercury	ND	0.00375	0.00700	mg/L	10	09/10/21 16:01	1311/6020B	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 0-10C (A1H0847-10)				Matrix: Soil		Batch: 1081096		
% Solids	75.3	1.00	1.00	%	1	09/01/21 07:44	EPA 8000D	
B-18 10-26C (A1H0847-11)				Matrix: Soil		Batch: 1081096		
% Solids	64.1	1.00	1.00	%	1	09/01/21 07:44	EPA 8000D	

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ANALYTICAL SAMPLE RESULTS

TCLP Extraction by EPA 1311

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-18 0-10C (A1H0847-10)				Matrix: Soil		Batch: 1090321		
TCLP Extraction	PREP			N/A	1	09/09/21 18:00	EPA 1311	
B-18 10-26C (A1H0847-11)				Matrix: Soil		Batch: 1090321		
TCLP Extraction	PREP			N/A	1	09/09/21 18:00	EPA 1311	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090085 - EPA 3546 (Fuels)						Soil						
Blank (1090085-BLK1)						Prepared: 09/02/21 13:08 Analyzed: 09/02/21 17:59						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1090085-BS1)						Prepared: 09/02/21 13:08 Analyzed: 09/02/21 18:22						
<u>NWTPH-Dx</u>												
Diesel	118	10.0	25.0	mg/kg wet	1	125	---	94	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090085-DUP1)						Prepared: 09/02/21 13:08 Analyzed: 09/02/21 19:08						
<u>QC Source Sample: Non-SDG (A1H0845-09)</u>												
Diesel	ND	11.5	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	40.7	23.1	50.0	mg/kg dry	1	---	35.2	---	---	15	30%	J
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 92 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090085-DUP3)						Prepared: 09/02/21 13:08 Analyzed: 09/03/21 08:06						
<u>QC Source Sample: Non-SDG (A1H0964-09RE1)</u>												
Diesel	ND	12.5	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	224	24.9	50.0	mg/kg dry	1	---	184	---	---	20	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 90 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
Blank (1090069-BLK1)			Prepared: 09/02/21 09:00 Analyzed: 09/02/21 12:27									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090069-BS2)			Prepared: 09/02/21 09:00 Analyzed: 09/02/21 12:00									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	23.2	2.50	5.00	mg/kg wet	50	25.0	---	93	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090069-DUP1)			Prepared: 09/02/21 11:45 Analyzed: 09/02/21 18:19									V-15
<u>QC Source Sample: Non-SDG (A110056-02)</u>												
Gasoline Range Organics	ND	2.55	5.10	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
Blank (1090069-BLK1)			Prepared: 09/02/21 09:00 Analyzed: 09/02/21 12:27									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
Blank (1090069-BLK1)			Prepared: 09/02/21 09:00 Analyzed: 09/02/21 12:27									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	33.3	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 103 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
Blank (1090069-BLK1)						Prepared: 09/02/21 09:00 Analyzed: 09/02/21 12:27						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (1090069-BS1)						Prepared: 09/02/21 09:00 Analyzed: 09/02/21 11:33						
5035A/8260D												
Acetone	1830	500	1000	ug/kg wet	50	2000	---	91	80-120%	---	---	
Acrylonitrile	1080	50.0	100	ug/kg wet	50	1000	---	108	80-120%	---	---	
Benzene	1100	5.00	10.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Bromobenzene	993	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Bromochloromethane	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Bromodichloromethane	909	25.0	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
Bromoform	810	50.0	100	ug/kg wet	50	1000	---	81	80-120%	---	---	
Bromomethane	880	500	500	ug/kg wet	50	1000	---	88	80-120%	---	---	
2-Butanone (MEK)	2070	250	500	ug/kg wet	50	2000	---	104	80-120%	---	---	
n-Butylbenzene	904	25.0	50.0	ug/kg wet	50	1000	---	90	80-120%	---	---	
sec-Butylbenzene	912	25.0	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
tert-Butylbenzene	879	25.0	50.0	ug/kg wet	50	1000	---	88	80-120%	---	---	
Carbon disulfide	937	250	500	ug/kg wet	50	1000	---	94	80-120%	---	---	
Carbon tetrachloride	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Chlorobenzene	998	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Chloroethane	741	500	500	ug/kg wet	50	1000	---	74	80-120%	---	---	Q-55
Chloroform	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Chloromethane	1770	125	250	ug/kg wet	50	1000	---	177	80-120%	---	---	ICV-01, Q-56
2-Chlorotoluene	994	25.0	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
4-Chlorotoluene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Dibromochloromethane	850	50.0	100	ug/kg wet	50	1000	---	85	80-120%	---	---	
1,2-Dibromo-3-chloropropane	833	125	250	ug/kg wet	50	1000	---	83	80-120%	---	---	
1,2-Dibromoethane (EDB)	943	25.0	50.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
Dibromomethane	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,2-Dichlorobenzene	999	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,3-Dichlorobenzene	990	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,4-Dichlorobenzene	924	12.5	25.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
Dichlorodifluoromethane	2550	50.0	100	ug/kg wet	50	1000	---	255	80-120%	---	---	ICV-01, Q-56
1,1-Dichloroethane	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323

ORELAP ID: OR100062

<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts</p>	<p style="text-align: right;">Report ID: A1H0847 - 10 06 21 1044</p>
--------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
LCS (1090069-BS1)			Prepared: 09/02/21 09:00 Analyzed: 09/02/21 11:33									
1,2-Dichloroethane (EDC)	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,1-Dichloroethene	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
cis-1,2-Dichloroethene	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
trans-1,2-Dichloroethene	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,2-Dichloropropane	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,3-Dichloropropane	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
2,2-Dichloropropane	1300	25.0	50.0	ug/kg wet	50	1000	---	130	80-120%	---	---	Q-56
1,1-Dichloropropene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
cis-1,3-Dichloropropene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
trans-1,3-Dichloropropene	960	50.0	100	ug/kg wet	50	1000	---	96	80-120%	---	---	
Ethylbenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Hexachlorobutadiene	865	50.0	100	ug/kg wet	50	1000	---	87	80-120%	---	---	
2-Hexanone	2030	250	500	ug/kg wet	50	2000	---	101	80-120%	---	---	
Isopropylbenzene	919	25.0	50.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
4-Isopropyltoluene	914	25.0	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
Methylene chloride	978	250	500	ug/kg wet	50	1000	---	98	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2010	250	500	ug/kg wet	50	2000	---	101	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Naphthalene	865	50.0	100	ug/kg wet	50	1000	---	86	80-120%	---	---	
n-Propylbenzene	1000	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Styrene	763	50.0	50.0	ug/kg wet	50	1000	---	76	80-120%	---	---	Q-55
1,1,1,2-Tetrachloroethane	903	25.0	50.0	ug/kg wet	50	1000	---	90	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Tetrachloroethene (PCE)	981	12.5	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
Toluene	990	25.0	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,2,3-Trichlorobenzene	908	125	250	ug/kg wet	50	1000	---	91	80-120%	---	---	
1,2,4-Trichlorobenzene	846	125	250	ug/kg wet	50	1000	---	85	80-120%	---	---	
1,1,1-Trichloroethane	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,1,2-Trichloroethane	998	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Trichloroethene (TCE)	1050	12.5	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Trichlorofluoromethane	809	50.0	100	ug/kg wet	50	1000	---	81	80-120%	---	---	
1,2,3-Trichloropropane	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,2,4-Trimethylbenzene	964	25.0	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
1,3,5-Trimethylbenzene	980	25.0	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
LCS (1090069-BS1)						Prepared: 09/02/21 09:00 Analyzed: 09/02/21 11:33						
Vinyl chloride	1270	12.5	25.0	ug/kg wet	50	1000	---	127	80-120%	---	---	Q-56
m,p-Xylene	1980	25.0	50.0	ug/kg wet	50	2000	---	99	80-120%	---	---	
o-Xylene	930	12.5	25.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1090069-DUP1)						Prepared: 09/02/21 11:45 Analyzed: 09/02/21 18:19						V-15
QC Source Sample: Non-SDG (A110056-02)												
Acetone	ND	510	1020	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	5.10	10.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	510	510	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	255	510	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	255	510	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	510	510	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	127	255	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	127	255	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 1090069 - EPA 5035A						Soil							
Duplicate (1090069-DUP1)			Prepared: 09/02/21 11:45 Analyzed: 09/02/21 18:19						V-15				
QC Source Sample: Non-SDG (A110056-02)													
1,3-Dichlorobenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,4-Dichlorobenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
Dichlorodifluoromethane	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
1,1-Dichloroethane	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dichloroethane (EDC)	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,1-Dichloroethene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
cis-1,2-Dichloroethene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
trans-1,2-Dichloroethene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dichloropropane	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,3-Dichloropropane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
2,2-Dichloropropane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
1,1-Dichloropropene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
cis-1,3-Dichloropropene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
trans-1,3-Dichloropropene	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
Ethylbenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
Hexachlorobutadiene	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
2-Hexanone	ND	255	510	ug/kg dry	50	---	ND	---	---	---	30%		
Isopropylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
4-Isopropyltoluene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Methylene chloride	ND	255	510	ug/kg dry	50	---	ND	---	---	---	30%		
4-Methyl-2-pentanone (MiBK)	ND	255	510	ug/kg dry	50	---	ND	---	---	---	30%		
Methyl tert-butyl ether (MTBE)	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Naphthalene	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%		
n-Propylbenzene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
Styrene	ND	51.0	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,1,2-Tetrachloroethane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,2,2-Tetrachloroethane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
Tetrachloroethene (PCE)	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
Toluene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,3-Trichlorobenzene	ND	127	255	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,4-Trichlorobenzene	ND	127	255	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,1-Trichloroethane	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,2-Trichloroethane	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%		

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A												
Soil												
Duplicate (1090069-DUP1)												
						Prepared: 09/02/21 11:45 Analyzed: 09/02/21 18:19						V-15
QC Source Sample: Non-SDG (A110056-02)												
Trichloroethene (TCE)	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	51.0	102	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	25.5	51.0	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	12.7	25.5	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (1090069-MS1)												
						Prepared: 09/02/21 11:45 Analyzed: 09/02/21 19:13						V-15
QC Source Sample: Non-SDG (A110056-01)												
5035A/8260D												
Acetone	1780	456	912	ug/kg dry	50	1830	ND	98	36-164%	---	---	
Acrylonitrile	970	45.6	91.2	ug/kg dry	50	913	ND	106	65-134%	---	---	
Benzene	989	4.56	9.12	ug/kg dry	50	913	ND	108	77-121%	---	---	
Bromobenzene	891	11.4	22.8	ug/kg dry	50	913	ND	98	78-121%	---	---	
Bromochloromethane	1050	22.8	45.6	ug/kg dry	50	913	ND	115	78-125%	---	---	
Bromodichloromethane	815	22.8	45.6	ug/kg dry	50	913	ND	89	75-127%	---	---	
Bromoform	733	45.6	91.2	ug/kg dry	50	913	ND	80	67-132%	---	---	
Bromomethane	809	456	456	ug/kg dry	50	913	ND	89	53-143%	---	---	
2-Butanone (MEK)	1900	228	456	ug/kg dry	50	1830	ND	104	51-148%	---	---	
n-Butylbenzene	844	22.8	45.6	ug/kg dry	50	913	ND	93	70-128%	---	---	
sec-Butylbenzene	841	22.8	45.6	ug/kg dry	50	913	ND	92	73-126%	---	---	
tert-Butylbenzene	805	22.8	45.6	ug/kg dry	50	913	ND	88	73-125%	---	---	
Carbon disulfide	814	228	456	ug/kg dry	50	913	ND	89	63-132%	---	---	
Carbon tetrachloride	1000	22.8	45.6	ug/kg dry	50	913	ND	110	70-135%	---	---	
Chlorobenzene	904	11.4	22.8	ug/kg dry	50	913	ND	99	79-120%	---	---	
Chloroethane	763	456	456	ug/kg dry	50	913	ND	84	59-139%	---	---	Q-54e
Chloroform	983	22.8	45.6	ug/kg dry	50	913	ND	108	78-123%	---	---	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
Matrix Spike (1090069-MS1)						Prepared: 09/02/21 11:45 Analyzed: 09/02/21 19:13						V-15
QC Source Sample: Non-SDG (A110056-01)												
Chloromethane	1590	114	228	ug/kg dry	50	913	ND	174	50-136%	---	---	ICV-01, Q-54b
2-Chlorotoluene	889	22.8	45.6	ug/kg dry	50	913	ND	97	75-122%	---	---	
4-Chlorotoluene	900	22.8	45.6	ug/kg dry	50	913	ND	99	72-124%	---	---	
Dibromochloromethane	781	45.6	91.2	ug/kg dry	50	913	ND	86	74-126%	---	---	
1,2-Dibromo-3-chloropropane	726	114	228	ug/kg dry	50	913	ND	80	61-132%	---	---	
1,2-Dibromoethane (EDB)	859	22.8	45.6	ug/kg dry	50	913	ND	94	78-122%	---	---	
Dibromomethane	888	22.8	45.6	ug/kg dry	50	913	ND	97	78-125%	---	---	
1,2-Dichlorobenzene	887	11.4	22.8	ug/kg dry	50	913	ND	97	78-121%	---	---	
1,3-Dichlorobenzene	893	11.4	22.8	ug/kg dry	50	913	ND	98	77-121%	---	---	
1,4-Dichlorobenzene	831	11.4	22.8	ug/kg dry	50	913	ND	91	75-120%	---	---	
Dichlorodifluoromethane	2290	45.6	91.2	ug/kg dry	50	913	ND	250	29-149%	---	---	ICV-01, Q-54a
1,1-Dichloroethane	972	11.4	22.8	ug/kg dry	50	913	ND	107	76-125%	---	---	
1,2-Dichloroethane (EDC)	922	11.4	22.8	ug/kg dry	50	913	ND	101	73-128%	---	---	
1,1-Dichloroethene	936	11.4	22.8	ug/kg dry	50	913	ND	103	70-131%	---	---	
cis-1,2-Dichloroethene	1020	11.4	22.8	ug/kg dry	50	913	ND	112	77-123%	---	---	
trans-1,2-Dichloroethene	997	11.4	22.8	ug/kg dry	50	913	ND	109	74-125%	---	---	
1,2-Dichloropropane	1010	11.4	22.8	ug/kg dry	50	913	ND	111	76-123%	---	---	
1,3-Dichloropropane	936	22.8	45.6	ug/kg dry	50	913	ND	103	77-121%	---	---	
2,2-Dichloropropane	1110	22.8	45.6	ug/kg dry	50	913	ND	122	67-133%	---	---	Q-54
1,1-Dichloropropene	948	22.8	45.6	ug/kg dry	50	913	ND	104	76-125%	---	---	
cis-1,3-Dichloropropene	912	22.8	45.6	ug/kg dry	50	913	ND	100	74-126%	---	---	
trans-1,3-Dichloropropene	863	45.6	91.2	ug/kg dry	50	913	ND	95	71-130%	---	---	
Ethylbenzene	915	11.4	22.8	ug/kg dry	50	913	ND	100	76-122%	---	---	
Hexachlorobutadiene	1040	45.6	91.2	ug/kg dry	50	913	ND	114	61-135%	---	---	
2-Hexanone	1830	228	456	ug/kg dry	50	1830	ND	100	53-145%	---	---	
Isopropylbenzene	841	22.8	45.6	ug/kg dry	50	913	ND	92	68-134%	---	---	
4-Isopropyltoluene	837	22.8	45.6	ug/kg dry	50	913	ND	92	73-127%	---	---	
Methylene chloride	870	228	456	ug/kg dry	50	913	ND	95	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	1820	228	456	ug/kg dry	50	1830	ND	99	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1030	22.8	45.6	ug/kg dry	50	913	ND	113	73-125%	---	---	
Naphthalene	747	45.6	91.2	ug/kg dry	50	913	ND	82	62-129%	---	---	
n-Propylbenzene	892	11.4	22.8	ug/kg dry	50	913	ND	98	73-125%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090069 - EPA 5035A						Soil						
Matrix Spike (1090069-MS1)						Prepared: 09/02/21 11:45 Analyzed: 09/02/21 19:13						V-15
QC Source Sample: Non-SDG (A110056-01)												
Styrene	716	45.6	45.6	ug/kg dry	50	913	ND	78	76-124%	---	---	Q-54d
1,1,1,2-Tetrachloroethane	824	22.8	45.6	ug/kg dry	50	913	ND	90	78-125%	---	---	
1,1,2,2-Tetrachloroethane	919	22.8	45.6	ug/kg dry	50	913	ND	101	70-124%	---	---	
Tetrachloroethene (PCE)	877	11.4	22.8	ug/kg dry	50	913	ND	96	73-128%	---	---	
Toluene	901	22.8	45.6	ug/kg dry	50	913	ND	99	77-121%	---	---	
1,2,3-Trichlorobenzene	807	114	228	ug/kg dry	50	913	ND	88	66-130%	---	---	
1,2,4-Trichlorobenzene	766	114	228	ug/kg dry	50	913	ND	84	67-129%	---	---	
1,1,1-Trichloroethane	948	11.4	22.8	ug/kg dry	50	913	ND	104	73-130%	---	---	
1,1,2-Trichloroethane	915	11.4	22.8	ug/kg dry	50	913	ND	100	78-121%	---	---	
Trichloroethene (TCE)	934	11.4	22.8	ug/kg dry	50	913	ND	102	77-123%	---	---	
Trichlorofluoromethane	755	45.6	91.2	ug/kg dry	50	913	ND	83	62-140%	---	---	
1,2,3-Trichloropropane	913	22.8	45.6	ug/kg dry	50	913	ND	100	73-125%	---	---	
1,2,4-Trimethylbenzene	865	22.8	45.6	ug/kg dry	50	913	ND	95	75-123%	---	---	
1,3,5-Trimethylbenzene	872	22.8	45.6	ug/kg dry	50	913	ND	96	73-124%	---	---	
Vinyl chloride	1140	11.4	22.8	ug/kg dry	50	913	ND	125	56-135%	---	---	Q-54c
m,p-Xylene	1800	22.8	45.6	ug/kg dry	50	1830	ND	98	77-124%	---	---	
o-Xylene	858	11.4	22.8	ug/kg dry	50	913	ND	94	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081075 - EPA 3546												
Soil												
Blank (1081075-BLK1)												
Prepared: 08/30/21 14:11 Analyzed: 08/30/21 18:31												
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>101 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1081075-BS1)												
Prepared: 08/30/21 14:11 Analyzed: 08/30/21 18:56												
<u>EPA 8270E SIM</u>												
Acenaphthene	736	5.00	10.0	ug/kg wet	1	800	---	92	40-123%	---	---	
Acenaphthylene	771	5.00	10.0	ug/kg wet	1	800	---	96	32-132%	---	---	
Anthracene	741	5.00	10.0	ug/kg wet	1	800	---	93	47-123%	---	---	
Benz(a)anthracene	713	5.00	10.0	ug/kg wet	1	800	---	89	49-126%	---	---	
Benzo(a)pyrene	747	5.00	10.0	ug/kg wet	1	800	---	93	45-129%	---	---	
Benzo(b)fluoranthene	738	5.00	10.0	ug/kg wet	1	800	---	92	45-132%	---	---	
Benzo(k)fluoranthene	806	5.00	10.0	ug/kg wet	1	800	---	101	47-132%	---	---	
Benzo(g,h,i)perylene	769	5.00	10.0	ug/kg wet	1	800	---	96	43-134%	---	---	
Chrysene	754	5.00	10.0	ug/kg wet	1	800	---	94	50-124%	---	---	
Dibenz(a,h)anthracene	798	5.00	10.0	ug/kg wet	1	800	---	100	45-134%	---	---	
Fluoranthene	701	5.00	10.0	ug/kg wet	1	800	---	88	50-127%	---	---	
Fluorene	718	5.00	10.0	ug/kg wet	1	800	---	90	43-125%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081075 - EPA 3546												
Soil												
LCS (1081075-BS1)												
Prepared: 08/30/21 14:11						Analyzed: 08/30/21 18:56						
Indeno(1,2,3-cd)pyrene	725	5.00	10.0	ug/kg wet	1	800	---	91	45-133%	---	---	
Naphthalene	713	5.00	10.0	ug/kg wet	1	800	---	89	35-123%	---	---	
Phenanthrene	739	5.00	10.0	ug/kg wet	1	800	---	92	50-121%	---	---	
Pyrene	687	5.00	10.0	ug/kg wet	1	800	---	86	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 88 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>95 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1081075-DUP1)												
Prepared: 08/30/21 14:11						Analyzed: 08/30/21 19:47						
QC Source Sample: Non-SDG (A1H0440-18)												
Acenaphthene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Anthracene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benz(a)anthracene	8.76	6.56	13.1	ug/kg dry	1	---	12.3	---	---	33	30%	Q-05, J
Benzo(a)pyrene	9.47	6.56	13.1	ug/kg dry	1	---	12.6	---	---	28	30%	J
Benzo(b)fluoranthene	16.3	6.56	13.1	ug/kg dry	1	---	20.8	---	---	24	30%	
Benzo(k)fluoranthene	ND	6.56	13.1	ug/kg dry	1	---	7.88	---	---	***	30%	Q-05
Benzo(g,h,i)perylene	13.1	6.56	13.1	ug/kg dry	1	---	18.5	---	---	34	30%	Q-05
Chrysene	13.4	6.56	13.1	ug/kg dry	1	---	17.2	---	---	24	30%	
Dibenz(a,h)anthracene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	14.0	6.56	13.1	ug/kg dry	1	---	19.2	---	---	31	30%	Q-05
Fluorene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	10.4	6.56	13.1	ug/kg dry	1	---	15.6	---	---	40	30%	Q-05, J
Naphthalene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Phenanthrene	9.06	6.56	13.1	ug/kg dry	1	---	12.9	---	---	35	30%	Q-05, J
Pyrene	15.7	6.56	13.1	ug/kg dry	1	---	21.5	---	---	32	30%	Q-05
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 81 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>85 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (1081075-MS1)												
Prepared: 08/30/21 14:11						Analyzed: 08/30/21 20:37						
QC Source Sample: Non-SDG (A1H0983-07)												
EPA 8270E SIM												
Acenaphthene	598	5.24	10.5	ug/kg dry	1	838	ND	71	40-123%	---	---	
Acenaphthylene	612	5.24	10.5	ug/kg dry	1	838	ND	73	32-132%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081075 - EPA 3546						Soil						
Matrix Spike (1081075-MS1)						Prepared: 08/30/21 14:11 Analyzed: 08/30/21 20:37						
QC Source Sample: Non-SDG (A1H0983-07)												
Anthracene	691	5.24	10.5	ug/kg dry	1	838	ND	82	47-123%	---	---	
Benz(a)anthracene	709	5.24	10.5	ug/kg dry	1	838	5.65	84	49-126%	---	---	
Benzo(a)pyrene	716	5.24	10.5	ug/kg dry	1	838	5.44	85	45-129%	---	---	
Benzo(b)fluoranthene	721	5.24	10.5	ug/kg dry	1	838	10.0	85	45-132%	---	---	
Benzo(k)fluoranthene	760	5.24	10.5	ug/kg dry	1	838	ND	91	47-132%	---	---	
Benzo(g,h,i)perylene	726	5.24	10.5	ug/kg dry	1	838	8.58	86	43-134%	---	---	
Chrysene	735	5.24	10.5	ug/kg dry	1	838	6.34	87	50-124%	---	---	
Dibenz(a,h)anthracene	676	5.24	10.5	ug/kg dry	1	838	ND	81	45-134%	---	---	
Fluoranthene	752	5.24	10.5	ug/kg dry	1	838	7.09	89	50-127%	---	---	
Fluorene	620	5.24	10.5	ug/kg dry	1	838	ND	74	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	663	5.24	10.5	ug/kg dry	1	838	7.26	78	45-133%	---	---	
Naphthalene	494	5.24	10.5	ug/kg dry	1	838	ND	59	35-123%	---	---	
Phenanthrene	808	5.24	10.5	ug/kg dry	1	838	ND	96	50-121%	---	---	
Pyrene	697	5.24	10.5	ug/kg dry	1	838	7.70	82	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 61 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>83 %</i>		<i>54-127 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081101 - EPA 3051A						Soil						
Blank (1081101-BLK1)			Prepared: 08/31/21 09:38 Analyzed: 08/31/21 17:33									
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	

Blank (1081101-BLK2)			Prepared: 08/31/21 09:38 Analyzed: 08/31/21 17:38									
<u>EPA 6020B</u>												
Antimony	ND	0.520	1.04	mg/kg wet	10	---	---	---	---	---	---	RSM
Arsenic	ND	0.520	1.04	mg/kg wet	10	---	---	---	---	---	---	RSM
Barium	ND	0.520	1.04	mg/kg wet	10	---	---	---	---	---	---	RSM
Cadmium	ND	0.104	0.208	mg/kg wet	10	---	---	---	---	---	---	RSM
Chromium	ND	0.520	1.04	mg/kg wet	10	---	---	---	---	---	---	RSM
Copper	ND	1.04	2.08	mg/kg wet	10	---	---	---	---	---	---	RSM
Lead	ND	0.104	0.208	mg/kg wet	10	---	---	---	---	---	---	RSM
Mercury	ND	0.0416	0.0832	mg/kg wet	10	---	---	---	---	---	---	RSM
Selenium	ND	0.520	1.04	mg/kg wet	10	---	---	---	---	---	---	RSM
Silver	ND	0.104	0.208	mg/kg wet	10	---	---	---	---	---	---	RSM
Zinc	ND	2.08	4.16	mg/kg wet	10	---	---	---	---	---	---	RSM

LCS (1081101-BS1)			Prepared: 08/31/21 09:38 Analyzed: 08/31/21 17:43									
<u>EPA 6020B</u>												
Antimony	24.2	0.500	1.00	mg/kg wet	10	25.0	---	97	80-120%	---	---	
Arsenic	49.3	0.500	1.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	
Barium	49.3	0.500	1.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	
Cadmium	49.2	0.100	0.200	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Chromium	47.8	0.500	1.00	mg/kg wet	10	50.0	---	96	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081101 - EPA 3051A						Soil						
LCS (1081101-BS1)						Prepared: 08/31/21 09:38 Analyzed: 08/31/21 17:43						
Copper	50.7	1.00	2.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Lead	51.6	0.100	0.200	mg/kg wet	10	50.0	---	103	80-120%	---	---	
Mercury	0.976	0.0400	0.0800	mg/kg wet	10	1.00	---	98	80-120%	---	---	
Selenium	23.8	0.500	1.00	mg/kg wet	10	25.0	---	95	80-120%	---	---	
Silver	26.0	0.100	0.200	mg/kg wet	10	25.0	---	104	80-120%	---	---	
Zinc	48.6	2.00	4.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	

Duplicate (1081101-DUP1)						Prepared: 08/31/21 09:38 Analyzed: 08/31/21 17:53						
<u>QC Source Sample: Non-SDG (A1H0440-18)</u>												
Antimony	ND	0.649	1.30	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	6.01	0.649	1.30	mg/kg dry	10	---	6.17	---	---	3	20%	
Barium	185	0.649	1.30	mg/kg dry	10	---	180	---	---	3	20%	
Cadmium	0.279	0.130	0.260	mg/kg dry	10	---	0.279	---	---	0.008	20%	
Chromium	24.5	0.649	1.30	mg/kg dry	10	---	24.4	---	---	0.5	20%	
Copper	34.4	1.30	2.60	mg/kg dry	10	---	34.6	---	---	0.7	20%	
Lead	18.0	0.130	0.260	mg/kg dry	10	---	19.4	---	---	7	20%	
Mercury	0.0563	0.0519	0.104	mg/kg dry	10	---	0.0599	---	---	6	20%	J
Selenium	1.36	0.649	1.30	mg/kg dry	10	---	1.34	---	---	1	20%	
Silver	ND	0.130	0.260	mg/kg dry	10	---	0.197	---	---	***	20%	
Zinc	87.1	2.60	5.19	mg/kg dry	10	---	89.2	---	---	2	20%	

Matrix Spike (1081101-MS1)						Prepared: 08/31/21 09:38 Analyzed: 08/31/21 18:08						
<u>QC Source Sample: Non-SDG (A1H0440-18)</u>												
<u>EPA 6020B</u>												
Antimony	29.9	0.683	1.37	mg/kg dry	10	34.2	ND	87	75-125%	---	---	
Arsenic	71.0	0.683	1.37	mg/kg dry	10	68.3	6.17	95	75-125%	---	---	
Barium	240	0.683	1.37	mg/kg dry	10	68.3	180	88	75-125%	---	---	
Cadmium	66.9	0.137	0.273	mg/kg dry	10	68.3	0.279	98	75-125%	---	---	
Chromium	86.0	0.683	1.37	mg/kg dry	10	68.3	24.4	90	75-125%	---	---	
Copper	98.8	1.37	2.73	mg/kg dry	10	68.3	34.6	94	75-125%	---	---	
Lead	84.9	0.137	0.273	mg/kg dry	10	68.3	19.4	96	75-125%	---	---	
Mercury	1.32	0.0547	0.109	mg/kg dry	10	1.37	0.0599	92	75-125%	---	---	
Selenium	33.5	0.683	1.37	mg/kg dry	10	34.2	1.34	94	75-125%	---	---	
Silver	35.3	0.137	0.273	mg/kg dry	10	34.2	0.197	103	75-125%	---	---	

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Darrell Auvil, Client Services Manager



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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081101 - EPA 3051A						Soil						
Matrix Spike (1081101-MS1)						Prepared: 08/31/21 09:38 Analyzed: 08/31/21 18:08						
<u>QC Source Sample: Non-SDG (A1H0440-18)</u>												
Zinc	142	2.73	5.47	mg/kg dry	10	68.3	89.2	77	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090035 - EPA 3051A												
Soil												
Blank (1090035-BLK1)												
						Prepared: 09/01/21 13:27 Analyzed: 09/02/21 21:11						
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	

LCS (1090035-BS1)												
						Prepared: 09/01/21 13:27 Analyzed: 09/02/21 21:26						
<u>EPA 6020B</u>												
Antimony	24.4	0.500	1.00	mg/kg wet	10	25.0	---	97	80-120%	---	---	
Arsenic	49.1	0.500	1.00	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Barium	51.1	0.500	1.00	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Cadmium	49.1	0.100	0.200	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Chromium	47.2	0.500	1.00	mg/kg wet	10	50.0	---	94	80-120%	---	---	
Copper	49.9	1.00	2.00	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Lead	50.8	0.100	0.200	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Mercury	0.963	0.0400	0.0800	mg/kg wet	10	1.00	---	96	80-120%	---	---	
Selenium	24.3	0.500	1.00	mg/kg wet	10	25.0	---	97	80-120%	---	---	
Silver	26.0	0.100	0.200	mg/kg wet	10	25.0	---	104	80-120%	---	---	
Zinc	48.4	2.00	4.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	

Duplicate (1090035-DUP1)												
						Prepared: 09/01/21 13:27 Analyzed: 09/02/21 21:46						
<u>QC Source Sample: Non-SDG (A1H0795-62)</u>												
Antimony	ND	0.550	1.10	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	4.56	0.550	1.10	mg/kg dry	10	---	4.19	---	---	8	20%	
Barium	213	0.550	1.10	mg/kg dry	10	---	197	---	---	8	20%	
Cadmium	0.133	0.110	0.220	mg/kg dry	10	---	ND	---	---		20%	J
Chromium	31.3	0.550	1.10	mg/kg dry	10	---	27.4	---	---	13	20%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090035 - EPA 3051A						Soil						
Duplicate (1090035-DUP1)			Prepared: 09/01/21 13:27 Analyzed: 09/02/21 21:46									
QC Source Sample: Non-SDG (A1H0795-62)												
Copper	21.9	1.10	2.20	mg/kg dry	10	---	19.7	---	---	11	20%	
Lead	7.51	0.110	0.220	mg/kg dry	10	---	6.97	---	---	7	20%	
Mercury	ND	0.0440	0.0879	mg/kg dry	10	---	ND	---	---	---	20%	
Selenium	0.807	0.550	1.10	mg/kg dry	10	---	0.743	---	---	8	20%	J
Silver	ND	0.110	0.220	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	77.7	2.20	4.40	mg/kg dry	10	---	70.3	---	---	10	20%	
Duplicate (1090035-DUP2)			Prepared: 09/01/21 13:27 Analyzed: 09/02/21 21:51									
QC Source Sample: Non-SDG (A1H0795-62)												
Antimony	ND	0.498	0.997	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	4.41	0.498	0.997	mg/kg dry	10	---	4.19	---	---	5	20%	
Barium	205	0.498	0.997	mg/kg dry	10	---	197	---	---	4	20%	
Cadmium	0.128	0.0997	0.199	mg/kg dry	10	---	0.103	---	---	21	20%	J
Chromium	28.5	0.498	0.997	mg/kg dry	10	---	27.4	---	---	4	20%	
Copper	20.9	0.997	1.99	mg/kg dry	10	---	19.7	---	---	6	20%	
Lead	7.17	0.0997	0.199	mg/kg dry	10	---	6.97	---	---	3	20%	
Mercury	ND	0.0399	0.0797	mg/kg dry	10	---	ND	---	---	---	20%	
Selenium	0.793	0.498	0.997	mg/kg dry	10	---	0.743	---	---	7	20%	J
Silver	ND	0.0997	0.199	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	73.0	1.99	3.99	mg/kg dry	10	---	70.3	---	---	4	20%	
Duplicate (1090035-DUP3)			Prepared: 09/01/21 13:27 Analyzed: 09/02/21 22:11									
QC Source Sample: Non-SDG (A1H0996-02)												
Antimony	ND	0.504	1.01	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	5.41	0.504	1.01	mg/kg dry	10	---	5.52	---	---	2	20%	
Barium	185	0.504	1.01	mg/kg dry	10	---	180	---	---	3	20%	
Cadmium	0.128	0.101	0.202	mg/kg dry	10	---	0.113	---	---	13	20%	J
Chromium	22.9	0.504	1.01	mg/kg dry	10	---	23.8	---	---	4	20%	
Copper	16.6	1.01	2.02	mg/kg dry	10	---	16.9	---	---	2	20%	
Lead	13.7	0.101	0.202	mg/kg dry	10	---	13.0	---	---	5	20%	
Mercury	ND	0.0403	0.0807	mg/kg dry	10	---	ND	---	---	---	20%	
Selenium	0.917	0.504	1.01	mg/kg dry	10	---	0.969	---	---	6	20%	J

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090035 - EPA 3051A												
Soil												
Duplicate (1090035-DUP3)												
						Prepared: 09/01/21 13:27 Analyzed: 09/02/21 22:11						
QC Source Sample: Non-SDG (A1H0996-02)												
Silver	ND	0.101	0.202	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	74.1	2.02	4.03	mg/kg dry	10	---	74.8	---	---	0.9	20%	

Duplicate (1090035-DUP4)												
						Prepared: 09/01/21 13:27 Analyzed: 09/02/21 22:16						
QC Source Sample: Non-SDG (A1H0996-02)												
Antimony	ND	0.535	1.07	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	5.89	0.535	1.07	mg/kg dry	10	---	5.52	---	---	7	20%	
Barium	194	0.535	1.07	mg/kg dry	10	---	180	---	---	8	20%	
Cadmium	0.153	0.107	0.214	mg/kg dry	10	---	0.113	---	---	30	20%	J
Chromium	24.6	0.535	1.07	mg/kg dry	10	---	23.8	---	---	3	20%	
Copper	17.9	1.07	2.14	mg/kg dry	10	---	16.9	---	---	6	20%	
Lead	14.9	0.107	0.214	mg/kg dry	10	---	13.0	---	---	13	20%	
Mercury	ND	0.0428	0.0856	mg/kg dry	10	---	ND	---	---	---	20%	
Selenium	0.991	0.535	1.07	mg/kg dry	10	---	0.969	---	---	2	20%	J
Silver	ND	0.107	0.214	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	77.9	2.14	4.28	mg/kg dry	10	---	74.8	---	---	4	20%	

Matrix Spike (1090035-MS1)												
						Prepared: 09/01/21 13:27 Analyzed: 09/02/21 21:56						
QC Source Sample: Non-SDG (A1H0795-62)												
EPA 6020B												
Antimony	20.3	0.493	0.987	mg/kg dry	10	24.7	ND	82	75-125%	---	---	
Arsenic	51.9	0.493	0.987	mg/kg dry	10	49.3	4.19	97	75-125%	---	---	
Barium	271	0.493	0.987	mg/kg dry	10	49.3	197	150	75-125%	---	---	Q-01
Cadmium	48.9	0.0987	0.197	mg/kg dry	10	49.3	0.103	99	75-125%	---	---	
Chromium	77.5	0.493	0.987	mg/kg dry	10	49.3	27.4	101	75-125%	---	---	
Copper	70.6	0.987	1.97	mg/kg dry	10	49.3	19.7	103	75-125%	---	---	
Lead	54.9	0.0987	0.197	mg/kg dry	10	49.3	6.97	97	75-125%	---	---	
Mercury	0.997	0.0395	0.0790	mg/kg dry	10	0.987	ND	101	75-125%	---	---	
Selenium	24.0	0.493	0.987	mg/kg dry	10	24.7	0.743	94	75-125%	---	---	
Silver	25.5	0.0987	0.197	mg/kg dry	10	24.7	ND	103	75-125%	---	---	
Zinc	132	1.97	3.95	mg/kg dry	10	49.3	70.3	125	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090035 - EPA 3051A						Soil						
Matrix Spike (1090035-MS2)						Prepared: 09/01/21 13:27 Analyzed: 09/02/21 22:21						
QC Source Sample: Non-SDG (A1H0996-02)												
EPA 6020B												
Antimony	24.7	0.546	1.09	mg/kg dry	10	27.3	ND	90	75-125%	---	---	
Arsenic	59.4	0.546	1.09	mg/kg dry	10	54.6	5.52	99	75-125%	---	---	
Barium	252	0.546	1.09	mg/kg dry	10	54.6	180	133	75-125%	---	---	Q-01
Cadmium	54.8	0.109	0.219	mg/kg dry	10	54.6	0.113	100	75-125%	---	---	
Chromium	77.9	0.546	1.09	mg/kg dry	10	54.6	23.8	99	75-125%	---	---	
Copper	71.7	1.09	2.19	mg/kg dry	10	54.6	16.9	100	75-125%	---	---	
Lead	69.3	0.109	0.219	mg/kg dry	10	54.6	13.0	103	75-125%	---	---	
Mercury	1.09	0.0437	0.0874	mg/kg dry	10	1.09	ND	99	75-125%	---	---	
Selenium	27.1	0.546	1.09	mg/kg dry	10	27.3	0.969	96	75-125%	---	---	
Silver	29.5	0.109	0.219	mg/kg dry	10	27.3	ND	108	75-125%	---	---	
Zinc	135	2.19	4.37	mg/kg dry	10	54.6	74.8	110	75-125%	---	---	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

TCLP Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090382 - EPA 1311/3015						Solid						
Blank (1090382-BLK1)			Prepared: 09/10/21 13:22 Analyzed: 09/10/21 15:05									
<u>1311/6020B</u>												
Lead	ND	0.0250	0.0500	mg/L	10	---	---	---	---	---	---	TCLP
Mercury	ND	0.00375	0.00700	mg/L	10	---	---	---	---	---	---	TCLP
LCS (1090382-BS1)			Prepared: 09/10/21 13:22 Analyzed: 09/10/21 15:11									
<u>1311/6020B</u>												
Lead	5.23	0.0250	0.0500	mg/L	10	5.00	---	105	80-120%	---	---	TCLP
Mercury	0.102	0.00375	0.00700	mg/L	10	0.100	---	102	80-120%	---	---	TCLP
Matrix Spike (1090382-MS1)			Prepared: 09/10/21 13:22 Analyzed: 09/10/21 15:26									
<u>QC Source Sample: Non-SDG (A110189-01)</u>												
<u>1311/6020B</u>												
Lead	5.98	0.0250	0.0500	mg/L	10	5.00	ND	120	50-150%	---	---	
Mercury	0.119	0.00375	0.00700	mg/L	10	0.100	ND	119	50-150%	---	---	
Matrix Spike (1090382-MS2)			Prepared: 09/10/21 13:22 Analyzed: 09/10/21 15:36									
<u>QC Source Sample: Non-SDG (A110275-01)</u>												
<u>1311/6020B</u>												
Lead	4.99	0.0250	0.0500	mg/L	10	5.00	ND	100	50-150%	---	---	
Mercury	0.0977	0.00375	0.00700	mg/L	10	0.100	ND	98	50-150%	---	---	

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081096 - Total Solids (Dry Weight)						Soil						
Duplicate (1081096-DUP1)			Prepared: 08/31/21 09:09 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H0795-62)</u>												
% Solids	97.7	1.00	1.00	%	1	---	97.6	---	---	0.06	10%	
Duplicate (1081096-DUP2)			Prepared: 08/31/21 09:09 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H0926-06)</u>												
% Solids	91.5	1.00	1.00	%	1	---	92.9	---	---	2	10%	
Duplicate (1081096-DUP3)			Prepared: 08/31/21 09:09 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H0931-11)</u>												
% Solids	75.1	1.00	1.00	%	1	---	77.0	---	---	3	10%	
Duplicate (1081096-DUP4)			Prepared: 08/31/21 09:09 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H1005-02)</u>												
% Solids	96.0	1.00	1.00	%	1	---	96.0	---	---	0.04	10%	
Duplicate (1081096-DUP5)			Prepared: 08/31/21 18:23 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H1017-01)</u>												
% Solids	80.5	1.00	1.00	%	1	---	80.3	---	---	0.3	10%	
Duplicate (1081096-DUP6)			Prepared: 08/31/21 18:23 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H1017-02)</u>												
% Solids	80.1	1.00	1.00	%	1	---	75.9	---	---	5	10%	
Duplicate (1081096-DUP7)			Prepared: 08/31/21 18:23 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H1017-03)</u>												
% Solids	78.0	1.00	1.00	%	1	---	79.5	---	---	2	10%	
Duplicate (1081096-DUP8)			Prepared: 08/31/21 18:23 Analyzed: 09/01/21 07:44									
<u>QC Source Sample: Non-SDG (A1H1017-04)</u>												
% Solids	81.7	1.00	1.00	%	1	---	79.9	---	---	2	10%	

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081096 - Total Solids (Dry Weight)							Soil					
Duplicate (1081096-DUP9)					Prepared: 08/31/21 18:23 Analyzed: 09/01/21 07:44							
<u>QC Source Sample: Non-SDG (A1H1017-05)</u>												
% Solids	83.3	1.00	1.00	%	1	---	83.7	---	---	0.5	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090085</u>							
A1H0847-10	Soil	NWTPH-Dx	08/23/21 09:18	09/02/21 13:08	10.06g/5mL	10g/5mL	0.99
A1H0847-11	Soil	NWTPH-Dx	08/23/21 09:55	09/02/21 13:08	10.68g/5mL	10g/5mL	0.94

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090069</u>							
A1H0847-10	Soil	NWTPH-Gx (MS)	08/23/21 09:18	08/23/21 09:18	15.92g/15mL	5g/5mL	0.94
A1H0847-11	Soil	NWTPH-Gx (MS)	08/23/21 09:55	08/23/21 09:55	32.61g/30mL	5g/5mL	0.92

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090069</u>							
A1H0847-10	Soil	5035A/8260D	08/23/21 09:18	08/23/21 09:18	15.92g/15mL	5g/5mL	0.94
A1H0847-11	Soil	5035A/8260D	08/23/21 09:55	08/23/21 09:55	32.61g/30mL	5g/5mL	0.92

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1081075</u>							
A1H0847-10RE1	Soil	EPA 8270E SIM	08/23/21 09:18	08/30/21 14:11	10.36g/5mL	10g/5mL	0.97
A1H0847-11RE1	Soil	EPA 8270E SIM	08/23/21 09:55	08/30/21 14:11	10.24g/5mL	10g/5mL	0.98

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1081101</u>							
A1H0847-10	Soil	EPA 6020B	08/23/21 09:18	08/31/21 09:38	0.518g/50mL	0.5g/50mL	0.97
<u>Batch: 1090035</u>							
A1H0847-11	Soil	EPA 6020B	08/23/21 09:55	09/01/21 13:27	0.503g/50mL	0.5g/50mL	0.99

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Total Metals by EPA 6020B (ICPMS)

<u>Prep: EPA 3051A</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
A1H0847-11RE1	Soil	EPA 6020B	08/23/21 09:55	09/01/21 13:27	0.503g/50mL	0.5g/50mL	0.99

TCLP Metals by EPA 6020B (ICPMS)

<u>Prep: EPA 1311/3015</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090382</u>							
A1H0847-10	Soil	1311/6020B	08/23/21 09:18	09/10/21 13:22	10mL/50mL	10mL/50mL	1.00
A1H0847-11	Soil	1311/6020B	08/23/21 09:55	09/10/21 13:22	10mL/50mL	10mL/50mL	1.00

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1081096</u>							
A1H0847-10	Soil	EPA 8000D	08/23/21 09:18	08/31/21 09:09			NA
A1H0847-11	Soil	EPA 8000D	08/23/21 09:55	08/31/21 09:09			NA

TCLP Extraction by EPA 1311

<u>Prep: EPA 1311 (TCLP)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090321</u>							
A1H0847-10	Soil	EPA 1311	08/23/21 09:18	09/09/21 18:00	100g/2004.9g	100g/2000g	NA
A1H0847-11	Soil	EPA 1311	08/23/21 09:55	09/09/21 18:00	100g/1982.4g	100g/2000g	NA

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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- COMP** Sample is a composite of discrete samples. See prep information for details.
- H-06** This sample was received, or the analysis requested, outside the recommended holding time.
- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +10%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +135%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +57%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +7%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -4%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -6%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- RSM** RSM Preparation Blank. Batch: 1080623.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- TCLP** This batch QC sample was prepared with TCLP or SPLP fluid from preparation batch 1090321.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1H0847 - 10 06 21 1044).

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

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Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Revised
A1H0847

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COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835	Apex Labs Chain of Custody No. <u>1044</u>																																																																																																																																																												
Project Manager: <u>Jill Betts</u> Project No.: <u>319</u> Project Name: <u>EORB</u> Collected by: <u>Jill Betts</u>	Lab Project No.: Liquid with Sediment Sample: Test Both: _____ Test Sediment: _____ Multi-Phase Sample: Test One (which): _____ Test Separately: _____																																																																																																																																																												
Comments: Metals analyzed by EPA Methods 2007/6020A/7471B. <i>Composite sample directions will be e-mailed</i>	Samples Received at AC (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) _____ Provide Preliminary Results: Yes _____ No _____																																																																																																																																																												
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Lab ID</th> <th>Sample #</th> <th>Date</th> <th>Time</th> <th>Sample Description</th> <th>Matrix</th> <th>Number of Containers</th> <th>NW PH-GX</th> <th>VOCs by EPA Method 8260B</th> <th>PAHs by EPA Method 8270SIM</th> <th>Total RCRA 6 Metals plus Antimony, Copper and Zinc</th> <th>Dissolved RCRA 6 metals</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>B10-25</td> <td>8/23/21</td> <td>9:10</td> <td></td> <td>B10-25</td> <td>X</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B10-5-15</td> <td></td> <td>9:30</td> <td></td> <td>B10-5-15</td> <td></td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B10-7-19</td> <td></td> <td>9:40</td> <td></td> <td>B10-7-19</td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B10-10-15</td> <td></td> <td>9:55</td> <td></td> <td>B10-10-15</td> <td></td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B10-12-14</td> <td></td> <td>10:02</td> <td></td> <td>B10-12-14</td> <td></td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B10-15-15</td> <td></td> <td>10:12</td> <td></td> <td>B10-15-15</td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B10-17-19</td> <td></td> <td>10:17</td> <td></td> <td>B10-17-19</td> <td></td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B10-20-215</td> <td></td> <td>10:25</td> <td></td> <td>B10-20-215</td> <td></td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B10-25-215</td> <td></td> <td>10:35</td> <td></td> <td>B10-25-215</td> <td></td> <td>3</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B10-0-106</td> <td></td> <td></td> <td></td> <td>see e-mail 8/27</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>B10-10-215</td> <td></td> <td></td> <td></td> <td>see e-mail 8/27</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Lab ID	Sample #	Date	Time	Sample Description	Matrix	Number of Containers	NW PH-GX	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Total RCRA 6 Metals plus Antimony, Copper and Zinc	Dissolved RCRA 6 metals	Remarks	B10-25	8/23/21	9:10		B10-25	X	1							B10-5-15		9:30		B10-5-15		2							B10-7-19		9:40		B10-7-19		1							B10-10-15		9:55		B10-10-15		2							B10-12-14		10:02		B10-12-14		3							B10-15-15		10:12		B10-15-15		1							B10-17-19		10:17		B10-17-19		2							B10-20-215		10:25		B10-20-215		3							B10-25-215		10:35		B10-25-215		3							B10-0-106				see e-mail 8/27									B10-10-215				see e-mail 8/27									Analyzes to be Performed: <input checked="" type="checkbox"/> NW PH-GX <input checked="" type="checkbox"/> VOCs by EPA Method 8260B <input checked="" type="checkbox"/> PAHs by EPA Method 8270SIM <input checked="" type="checkbox"/> Total RCRA 6 Metals plus Antimony, Copper and Zinc <input checked="" type="checkbox"/> Dissolved RCRA 6 metals
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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EORB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H0847 - 10 06 21 1044
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

A1H0847

CHAIN OF CUSTODY

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC
5741 NE Flanders St., Portland, OR 97213
office: 503-477-6150
mobile: 503-819-2835

Laboratory Apex Labs
Lab Project No. 101
Chain of Custody No. 101

Project Manager Jill Betts
Project No. 319
Project Name EORB
Collected by Jill Betts

Samples Received at 4C (Y or N) _____
Appropriate Containers Used (Y or N) _____
Provide Verbal Results (Y or N) _____ No
Provide Preliminary Results _____ Yes

Liquid with Sediment Sample
Test Filtere _____ Test Soilmont _____
Multi-Phase Sample
Test One (which) _____ Test Separately _____ State _____

Matrix
Soil _____
Water _____
Other _____

Number of Containers
Soil _____
Water _____
Other _____

Analyses to be Performed
VOCs by EPA Method 8260B _____
PAHs by EPA Method 8270SIM _____
Total CRRA 8 Metals plus Antimony, Copper and Zinc _____
Dissolved CRRA 8 metals _____

RUSH

Remarks
HELD

Company
Apex Labs

Date 5/23/21 Time 12:30
Date 5/23/21 Time _____
Date _____ Time _____

Company CFB
Company _____
Company _____

Relinquished by [Signature]
Relinquished by _____
Relinquished by _____

Comments
Metals analyzed by EPA Methods 200/6020A/7471B.
Composite sample directions will be e-mailed

Lab ID	Sample #	Date	Time	Sample Description	Matrix	Number of Containers	NW PH-GX	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Total CRRA 8 Metals plus Antimony, Copper and Zinc	Dissolved CRRA 8 metals	Remarks
	B10-215	8/23/21	9:10	B10-215	X	1						
	B10-515		9:30	B10-515		2						
	B10-715		9:40	B10-715		1						
	B10-115		9:55	B10-115		2						
	B10-115		10:02	B10-115		3						
	B10-115		10:12	B10-115		1						
	B10-115		10:17	B10-115		2						
	B10-215		10:25	B10-215		3						
	B10-215		10:35	B10-215	↓	3						

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Element WO#: A1 H0847

Project/Project #: EORB # 319

Delivery Info:
 Date/time received: 8/23/21 @ 1230 By: AKC
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 8/23/21 @ 1235 By: AKC

Chain of Custody included? Yes No Custody seals? Yes No

Signed/dated by client? Yes No

Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>4.7</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Gel</u>						
Condition:	<u>Melty</u>						

Cooler out of temp? (Y/N) Possible reason why: Green dots applied to out of temperature samples? Yes (No)

Out of temperature samples form initiated? Yes/No Yes/No

Sample Inspection: Date/time inspected: 8/26/21 @ 943 By: [Signature]

All samples intact? Yes No Comments: 30 8/26/21

Bottle labels/COCs agree? Yes No Comments: B18 7.5-9 container + 1/2 B 18 10-11.5 containers read date of 8/23/19

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: _____

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA

Comments: _____

Additional information:

Labeled by: [Signature] Witness: [Signature] Cooler Inspected by: [Signature]

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, October 6, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A1H0964 - EQRB - CB319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A1H0964, which was received by the laboratory on 8/27/2021 at 12:55:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler#1 6.4 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
-----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-16 5	A1H0964-01	Soil	08/27/21 08:55	08/27/21 12:55
B-16 7.5	A1H0964-02	Soil	08/27/21 09:02	08/27/21 12:55
B-16 10	A1H0964-03	Soil	08/27/21 09:11	08/27/21 12:55
B16 12.5	A1H0964-04	Soil	08/27/21 09:18	08/27/21 12:55
B16 15	A1H0964-05	Soil	08/27/21 09:27	08/27/21 12:55
B16 20	A1H0964-06	Soil	08/27/21 09:46	08/27/21 12:55
B-16	A1H0964-07	Water	08/27/21 10:45	08/27/21 12:55
B-16 0-10 C	A1H0964-08	Soil	08/27/21 08:55	08/27/21 12:55
B-16 10-20 C	A1H0964-09	Soil	08/27/21 09:18	08/27/21 12:55

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Darrell Auvil, Client Services Manager



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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 (A1H0964-07)			Matrix: Water			Batch: 1090052		
Diesel	0.157	0.0392	0.0784	mg/L	1	09/03/21 00:49	NWTPH-Dx LL	F-11
Oil	ND	0.0784	0.157	mg/L	1	09/03/21 00:49	NWTPH-Dx LL	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/03/21 00:49</i>	<i>NWTPH-Dx LL</i>
B-16 0-10 C (A1H0964-08)			Matrix: Soil			Batch: 1090085		
Diesel	ND	12.4	25.0	mg/kg dry	1	09/03/21 03:50	NWTPH-Dx	
Oil	31.8	24.7	50.0	mg/kg dry	1	09/03/21 03:50	NWTPH-Dx	J
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 84 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/03/21 03:50</i>	<i>NWTPH-Dx</i>
B-16 10-20 C (A1H0964-09RE1)			Matrix: Soil			Batch: 1090085		
Diesel	ND	11.5	25.0	mg/kg dry	1	09/03/21 07:25	NWTPH-Dx	
Oil	184	23.1	50.0	mg/kg dry	1	09/03/21 07:25	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 87 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/03/21 07:25</i>	<i>NWTPH-Dx</i>

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----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 (A1H0964-07)			Matrix: Water			Batch: 1081092		
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	08/31/21 15:06	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>08/31/21 15:06</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>1</i>	<i>08/31/21 15:06</i>	<i>NWTPH-Gx (MS)</i>
B-16 0-10 C (A1H0964-08)			Matrix: Soil			Batch: 1090317		COMP, V-15
Gasoline Range Organics	ND	3.71	7.43	mg/kg dry	50	09/09/21 22:57	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/09/21 22:57</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/09/21 22:57</i>	<i>NWTPH-Gx (MS)</i>
B-16 10-20 C (A1H0964-09)			Matrix: Soil			Batch: 1090317		COMP, V-15
Gasoline Range Organics	ND	3.68	7.35	mg/kg dry	50	09/09/21 23:23	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/09/21 23:23</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/09/21 23:23</i>	<i>NWTPH-Gx (MS)</i>

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 (A1H0964-07)			Matrix: Water			Batch: 1081092		
Acetone	ND	20.0	20.0	ug/L	1	08/31/21 15:06	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Benzene	ND	0.200	0.200	ug/L	1	08/31/21 15:06	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	08/31/21 15:06	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	08/31/21 15:06	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	08/31/21 15:06	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	08/31/21 15:06	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	08/31/21 15:06	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	08/31/21 15:06	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	08/31/21 15:06	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	08/31/21 15:06	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	08/31/21 15:06	EPA 8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 (A1H0964-07)			Matrix: Water			Batch: 1081092		
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	08/31/21 15:06	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	08/31/21 15:06	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	08/31/21 15:06	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	5.00	10.0	ug/L	1	08/31/21 15:06	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Naphthalene	ND	1.00	2.00	ug/L	1	08/31/21 15:06	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	08/31/21 15:06	EPA 8260D	
1,1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	08/31/21 15:06	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	08/31/21 15:06	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	08/31/21 15:06	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	08/31/21 15:06	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	08/31/21 15:06	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	08/31/21 15:06	EPA 8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 (A1H0964-07)			Matrix: Water		Batch: 1081092			
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>1 08/31/21 15:06</i>		<i>EPA 8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>1 08/31/21 15:06</i>		<i>EPA 8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>		<i>1 08/31/21 15:06</i>		<i>EPA 8260D</i>
B-16 0-10 C (A1H0964-08)			Matrix: Soil		Batch: 1090317 COMP, V-15			
Acetone	ND	743	1490	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Acrylonitrile	ND	74.3	149	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Benzene	ND	7.43	14.9	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Bromobenzene	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Bromochloromethane	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Bromodichloromethane	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Bromoform	ND	74.3	149	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Bromomethane	ND	743	743	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
2-Butanone (MEK)	ND	371	743	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
n-Butylbenzene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
sec-Butylbenzene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
tert-Butylbenzene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Carbon disulfide	ND	371	743	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Carbon tetrachloride	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Chlorobenzene	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Chloroethane	ND	371	743	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Chloroform	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Chloromethane	ND	186	371	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
2-Chlorotoluene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
4-Chlorotoluene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Dibromochloromethane	ND	74.3	149	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	186	371	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Dibromomethane	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,2-Dichlorobenzene	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,3-Dichlorobenzene	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,4-Dichlorobenzene	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Dichlorodifluoromethane	ND	74.3	149	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,1-Dichloroethane	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 0-10 C (A1H0964-08)				Matrix: Soil		Batch: 1090317		COMP, V-15
1,2-Dichloroethane (EDC)	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,1-Dichloroethene	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
cis-1,2-Dichloroethene	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
trans-1,2-Dichloroethene	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,2-Dichloropropane	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,3-Dichloropropane	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
2,2-Dichloropropane	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,1-Dichloropropene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
cis-1,3-Dichloropropene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
trans-1,3-Dichloropropene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Ethylbenzene	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Hexachlorobutadiene	ND	74.3	149	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
2-Hexanone	ND	371	743	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Isopropylbenzene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
4-Isopropyltoluene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Methylene chloride	ND	371	743	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	371	743	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Naphthalene	ND	74.3	149	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
n-Propylbenzene	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Styrene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Tetrachloroethene (PCE)	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Toluene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,2,3-Trichlorobenzene	ND	186	371	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,2,4-Trichlorobenzene	ND	186	371	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,1,1-Trichloroethane	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,1,2-Trichloroethane	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Trichloroethene (TCE)	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Trichlorofluoromethane	ND	74.3	149	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,2,3-Trichloropropane	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
1,2,4-Trimethylbenzene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 0-10 C (A1H0964-08)				Matrix: Soil		Batch: 1090317		COMP, V-15
1,3,5-Trimethylbenzene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
Vinyl chloride	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
m,p-Xylene	ND	37.1	74.3	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
o-Xylene	ND	18.6	37.1	ug/kg dry	50	09/09/21 22:57	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/09/21 22:57</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/09/21 22:57</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>1</i>	<i>09/09/21 22:57</i>	<i>5035A/8260D</i>

B-16 10-20 C (A1H0964-09)				Matrix: Soil		Batch: 1090317		COMP, V-15
Acetone	ND	735	1470	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Acrylonitrile	ND	73.5	147	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Benzene	ND	7.35	14.7	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Bromobenzene	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Bromochloromethane	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Bromodichloromethane	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Bromoform	ND	73.5	147	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Bromomethane	ND	735	735	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
2-Butanone (MEK)	ND	368	735	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
n-Butylbenzene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
sec-Butylbenzene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
tert-Butylbenzene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Carbon disulfide	ND	368	735	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Carbon tetrachloride	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Chlorobenzene	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Chloroethane	ND	368	735	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Chloroform	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Chloromethane	ND	184	368	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
2-Chlorotoluene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
4-Chlorotoluene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Dibromochloromethane	ND	73.5	147	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	184	368	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Dibromomethane	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,2-Dichlorobenzene	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 10-20 C (A1H0964-09)				Matrix: Soil		Batch: 1090317		COMP, V-15
1,3-Dichlorobenzene	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,4-Dichlorobenzene	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Dichlorodifluoromethane	ND	73.5	147	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,1-Dichloroethane	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,1-Dichloroethene	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
cis-1,2-Dichloroethene	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
trans-1,2-Dichloroethene	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,2-Dichloropropane	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,3-Dichloropropane	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
2,2-Dichloropropane	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,1-Dichloropropene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
cis-1,3-Dichloropropene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
trans-1,3-Dichloropropene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Ethylbenzene	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Hexachlorobutadiene	ND	73.5	147	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
2-Hexanone	ND	368	735	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Isopropylbenzene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
4-Isopropyltoluene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Methylene chloride	ND	368	735	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	368	735	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Naphthalene	ND	73.5	147	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
n-Propylbenzene	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Styrene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Tetrachloroethene (PCE)	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Toluene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,2,3-Trichlorobenzene	ND	184	368	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,2,4-Trichlorobenzene	ND	184	368	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,1,1-Trichloroethane	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,1,2-Trichloroethane	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts</p>	<p>Report ID: A1H0964 - 10 06 21 1501</p>
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 10-20 C (A1H0964-09)				Matrix: Soil		Batch: 1090317		COMP, V-15
Trichloroethene (TCE)	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Trichlorofluoromethane	ND	73.5	147	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,2,3-Trichloropropane	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,2,4-Trimethylbenzene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
1,3,5-Trimethylbenzene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
Vinyl chloride	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
m,p-Xylene	ND	36.8	73.5	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
o-Xylene	ND	18.4	36.8	ug/kg dry	50	09/09/21 23:23	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/09/21 23:23</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/09/21 23:23</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>1</i>	<i>09/09/21 23:23</i>	<i>5035A/8260D</i>

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 (A1H0964-07)			Matrix: Water			Batch: 1090017		
Acenaphthene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Acenaphthylene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Anthracene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Benz(a)anthracene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Benzo(a)pyrene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Chrysene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Fluoranthene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Fluorene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Naphthalene	ND	0.0396	0.0792	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Phenanthrene	ND	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	
Pyrene	0.0200	0.0198	0.0396	ug/L	1	09/01/21 15:37	EPA 8270E SIM	J
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 52 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>09/01/21 15:37</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>69 %</i>		<i>50-134 %</i>		<i>1</i>	<i>09/01/21 15:37</i>	<i>EPA 8270E SIM</i>

B-16 0-10 C (A1H0964-08RE1)			Matrix: Soil			Batch: 1081075		
Acenaphthene	ND	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	
Acenaphthylene	ND	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	
Anthracene	ND	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	
Benz(a)anthracene	11.4	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	J
Benzo(a)pyrene	10.8	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	J
Benzo(b)fluoranthene	15.8	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	M-05
Benzo(k)fluoranthene	ND	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	
Benzo(g,h,i)perylene	10.6	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	J
Chrysene	14.5	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	
Fluoranthene	25.3	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	
Fluorene	ND	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	10.0	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	J

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 0-10 C (A1H0964-08RE1)				Matrix: Soil		Batch: 1081075		
Naphthalene	6.20	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	J
Phenanthrene	19.3	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	
Pyrene	24.5	6.14	12.3	ug/kg dry	1	08/31/21 20:56	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>08/31/21 20:56</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>75 %</i>		<i>54-127 %</i>		<i>1</i>	<i>08/31/21 20:56</i>	<i>EPA 8270E SIM</i>
B-16 10-20 C (A1H0964-09RE1)				Matrix: Soil		Batch: 1081075		
Acenaphthene	23.3	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	J
Acenaphthylene	ND	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
Anthracene	62.7	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
Benz(a)anthracene	131	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
Benzo(a)pyrene	115	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
Benzo(b)fluoranthene	136	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	M-05
Benzo(k)fluoranthene	54.4	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	113	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
Chrysene	168	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
Fluoranthene	226	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
Fluorene	ND	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	90.4	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
Naphthalene	36.3	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	J
Phenanthrene	308	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
Pyrene	266	23.3	46.6	ug/kg dry	4	09/01/21 16:53	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 44-120 %</i>		<i>4</i>	<i>09/01/21 16:53</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>76 %</i>		<i>54-127 %</i>		<i>4</i>	<i>09/01/21 16:53</i>	<i>EPA 8270E SIM</i>

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 0-10 C (A1H0964-08)				Matrix: Soil				
Batch: 1090209								
Antimony	ND	0.634	1.27	mg/kg dry	10	09/07/21 22:30	EPA 6020B	
Arsenic	9.40	0.634	1.27	mg/kg dry	10	09/07/21 22:30	EPA 6020B	
Barium	181	0.634	1.27	mg/kg dry	10	09/07/21 22:30	EPA 6020B	
Chromium	23.2	0.634	1.27	mg/kg dry	10	09/07/21 22:30	EPA 6020B	
Copper	28.7	1.27	2.54	mg/kg dry	10	09/07/21 22:30	EPA 6020B	
Lead	340	0.127	0.254	mg/kg dry	10	09/07/21 22:30	EPA 6020B	
Mercury	ND	0.0507	0.101	mg/kg dry	10	09/07/21 22:30	EPA 6020B	
Selenium	ND	0.634	1.27	mg/kg dry	10	09/07/21 22:30	EPA 6020B	
Silver	ND	0.127	0.254	mg/kg dry	10	09/07/21 22:30	EPA 6020B	
Zinc	118	12.7	25.4	mg/kg dry	10	09/07/21 22:30	EPA 6020B	
B-16 0-10 C (A1H0964-08RE1)				Matrix: Soil				
Batch: 1090209								
Cadmium	0.189	0.127	0.254	mg/kg dry	10	09/08/21 17:19	EPA 6020B	J
B-16 10-20 C (A1H0964-09)				Matrix: Soil				
Batch: 1090209								
Antimony	ND	0.642	1.28	mg/kg dry	10	09/07/21 22:43	EPA 6020B	
Arsenic	5.05	0.642	1.28	mg/kg dry	10	09/07/21 22:43	EPA 6020B	
Barium	140	0.642	1.28	mg/kg dry	10	09/07/21 22:43	EPA 6020B	
Chromium	20.7	0.642	1.28	mg/kg dry	10	09/07/21 22:43	EPA 6020B	
Copper	31.6	1.28	2.57	mg/kg dry	10	09/07/21 22:43	EPA 6020B	
Lead	34.1	0.128	0.257	mg/kg dry	10	09/07/21 22:43	EPA 6020B	
Mercury	0.111	0.0514	0.103	mg/kg dry	10	09/07/21 22:43	EPA 6020B	
Selenium	ND	0.642	1.28	mg/kg dry	10	09/07/21 22:43	EPA 6020B	
Silver	ND	0.128	0.257	mg/kg dry	10	09/07/21 22:43	EPA 6020B	
Zinc	111	12.8	25.7	mg/kg dry	10	09/07/21 22:43	EPA 6020B	
B-16 10-20 C (A1H0964-09RE1)				Matrix: Soil				
Batch: 1090209								
Cadmium	0.190	0.128	0.257	mg/kg dry	10	09/08/21 17:23	EPA 6020B	J

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ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-16 (A1H0964-07)		Matrix: Water							
Batch: 1090298									
Arsenic	ND	0.500	1.00	ug/L	1	09/09/21 20:15	EPA 6020B (Diss)		
Barium	30.3	0.500	1.00	ug/L	1	09/09/21 20:15	EPA 6020B (Diss)		
Cadmium	ND	0.100	0.200	ug/L	1	09/09/21 20:15	EPA 6020B (Diss)		
Chromium	ND	1.00	2.00	ug/L	1	09/09/21 20:15	EPA 6020B (Diss)		
Lead	ND	0.100	0.200	ug/L	1	09/09/21 20:15	EPA 6020B (Diss)		
Mercury	ND	0.0400	0.0800	ug/L	1	09/09/21 20:15	EPA 6020B (Diss)		
Selenium	ND	0.500	1.00	ug/L	1	09/09/21 20:15	EPA 6020B (Diss)		
Silver	ND	0.100	0.200	ug/L	1	09/09/21 20:15	EPA 6020B (Diss)		

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ANALYTICAL SAMPLE RESULTS

TCLP Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 0-10 C (A1H0964-08)				Matrix: Soil				
Batch: 1091110								
Lead	0.409	0.0250	0.0500	mg/L	10	09/30/21 09:24	1311/6020B	TCLPa

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight									
Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-16 0-10 C (A1H0964-08)				Matrix: Soil			Batch: 1081035		
% Solids	76.7	1.00	1.00	%	1	08/31/21 07:48	EPA 8000D		
B-16 10-20 C (A1H0964-09)				Matrix: Soil			Batch: 1081035		
% Solids	78.9	1.00	1.00	%	1	08/31/21 07:48	EPA 8000D		

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ANALYTICAL SAMPLE RESULTS

TCLP Extraction by EPA 1311

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-16 0-10 C (A1H0964-08)				Matrix: Soil		Batch: 1091061		
TCLP Extraction	PREP			N/A	1	09/28/21 17:10	EPA 1311	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090052 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (1090052-BLK1)						Prepared: 09/02/21 07:23 Analyzed: 09/02/21 18:00						
<u>NWTPH-Dx LL</u>												
Diesel	ND	0.0364	0.0727	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.0727	0.145	mg/L	1	---	---	---	---	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 95 %		Limits: 50-150 %		Dilution: 1x						
LCS (1090052-BS1)						Prepared: 09/02/21 07:23 Analyzed: 09/02/21 18:22						
<u>NWTPH-Dx LL</u>												
Diesel	0.421	0.0400	0.0800	mg/L	1	0.500	---	84	36-132%	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 93 %		Limits: 50-150 %		Dilution: 1x						
LCS Dup (1090052-BSD1)						Prepared: 09/02/21 07:23 Analyzed: 09/02/21 18:43						
<u>NWTPH-Dx LL</u>												
Diesel	0.443	0.0400	0.0800	mg/L	1	0.500	---	89	36-132%	5	30%	Q-19
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 95 %		Limits: 50-150 %		Dilution: 1x						
Batch 1090085 - EPA 3546 (Fuels)						Soil						
Blank (1090085-BLK1)						Prepared: 09/02/21 13:08 Analyzed: 09/02/21 17:59						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 102 %		Limits: 50-150 %		Dilution: 1x						
LCS (1090085-BS1)						Prepared: 09/02/21 13:08 Analyzed: 09/02/21 18:22						
<u>NWTPH-Dx</u>												
Diesel	118	10.0	25.0	mg/kg wet	1	125	---	94	38-132%	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 107 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (1090085-DUP1)						Prepared: 09/02/21 13:08 Analyzed: 09/02/21 19:08						
<u>QC Source Sample: Non-SDG (A1H0845-09)</u>												
Diesel	ND	11.5	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	40.7	23.1	50.0	mg/kg dry	1	---	35.2	---	---	15	30%	J
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 92 %		Limits: 50-150 %		Dilution: 1x						

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090085 - EPA 3546 (Fuels)						Soil						
Duplicate (1090085-DUP3)						Prepared: 09/02/21 13:08 Analyzed: 09/03/21 08:06						
QC Source Sample: B-16 10-20 C (A1H0964-09RE1)												
NWTPH-Dx												
Diesel	ND	12.5	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	224	24.9	50.0	mg/kg dry	1	---	184	---	---	20	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 90 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081092 - EPA 5030B						Water						
Blank (1081092-BLK1)			Prepared: 08/31/21 08:00 Analyzed: 08/31/21 10:34									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>102 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1081092-BS2)			Prepared: 08/31/21 08:00 Analyzed: 08/31/21 09:40									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	0.460	0.0500	0.100	mg/L	1	0.500	---	92	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1081092-DUP1)			Prepared: 08/31/21 09:30 Analyzed: 08/31/21 15:33									
<u>QC Source Sample: B-16 (A1H0964-07)</u>												
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090317 - EPA 5035A						Soil						
Blank (1090317-BLK1)			Prepared: 09/09/21 09:00 Analyzed: 09/09/21 14:53									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>103 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090317-BS2)			Prepared: 09/09/21 09:00 Analyzed: 09/09/21 14:26									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	26.5	2.50	5.00	mg/kg wet	50	25.0	---	106	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 111 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>103 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090317-DUP1)			Prepared: 09/02/21 10:50 Analyzed: 09/09/21 20:15									TEMP
<u>QC Source Sample: Non-SDG (A110152-01)</u>												
Gasoline Range Organics	ND	4.72	9.44	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 108 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>103 %</i>		<i>50-150 %</i>		<i>"</i>						

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081092 - EPA 5030B						Water						
Blank (1081092-BLK1)			Prepared: 08/31/21 08:00 Analyzed: 08/31/21 10:34									
<u>EPA 8260D</u>												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081092 - EPA 5030B						Water						
Blank (1081092-BLK1)			Prepared: 08/31/21 08:00 Analyzed: 08/31/21 10:34									
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 99% Limits: 80-120% Dilution: 1x

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Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: CB319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A1H0964 - 10 06 21 1501

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081092 - EPA 5030B						Water						
Blank (1081092-BLK1)						Prepared: 08/31/21 08:00 Analyzed: 08/31/21 10:34						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		"						
LCS (1081092-BS1)						Prepared: 08/31/21 08:00 Analyzed: 08/31/21 09:07						
EPA 8260D												
Acetone	35.6	10.0	20.0	ug/L	1	40.0	---	89	80-120%	---	---	
Acrylonitrile	19.4	1.00	2.00	ug/L	1	20.0	---	97	80-120%	---	---	
Benzene	18.1	0.100	0.200	ug/L	1	20.0	---	91	80-120%	---	---	
Bromobenzene	17.9	0.250	0.500	ug/L	1	20.0	---	90	80-120%	---	---	
Bromochloromethane	19.0	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
Bromodichloromethane	20.3	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Bromoform	19.9	0.500	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
Bromomethane	26.1	5.00	5.00	ug/L	1	20.0	---	131	80-120%	---	---	Q-56
2-Butanone (MEK)	38.8	5.00	10.0	ug/L	1	40.0	---	97	80-120%	---	---	
n-Butylbenzene	19.2	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
sec-Butylbenzene	18.4	0.500	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
tert-Butylbenzene	18.5	0.500	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
Carbon disulfide	17.8	5.00	10.0	ug/L	1	20.0	---	89	80-120%	---	---	
Carbon tetrachloride	20.8	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
Chlorobenzene	18.1	0.250	0.500	ug/L	1	20.0	---	91	80-120%	---	---	
Chloroethane	20.7	5.00	5.00	ug/L	1	20.0	---	103	80-120%	---	---	
Chloroform	19.0	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
Chloromethane	20.5	2.50	5.00	ug/L	1	20.0	---	103	80-120%	---	---	
2-Chlorotoluene	19.0	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
4-Chlorotoluene	18.7	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Dibromochloromethane	21.0	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
1,2-Dibromo-3-chloropropane	19.5	2.50	5.00	ug/L	1	20.0	---	98	80-120%	---	---	
1,2-Dibromoethane (EDB)	19.5	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Dibromomethane	19.4	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,2-Dichlorobenzene	18.8	0.250	0.500	ug/L	1	20.0	---	94	80-120%	---	---	
1,3-Dichlorobenzene	18.2	0.250	0.500	ug/L	1	20.0	---	91	80-120%	---	---	
1,4-Dichlorobenzene	18.1	0.250	0.500	ug/L	1	20.0	---	91	80-120%	---	---	
Dichlorodifluoromethane	27.3	0.500	1.00	ug/L	1	20.0	---	137	80-120%	---	---	ICV-01, Q-56
1,1-Dichloroethane	18.6	0.200	0.400	ug/L	1	20.0	---	93	80-120%	---	---	

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081092 - EPA 5030B						Water						
LCS (1081092-BS1)			Prepared: 08/31/21 08:00 Analyzed: 08/31/21 09:07									
1,2-Dichloroethane (EDC)	18.9	0.200	0.400	ug/L	1	20.0	---	95	80-120%	---	---	
1,1-Dichloroethene	18.6	0.200	0.400	ug/L	1	20.0	---	93	80-120%	---	---	
cis-1,2-Dichloroethene	18.9	0.200	0.400	ug/L	1	20.0	---	95	80-120%	---	---	
trans-1,2-Dichloroethene	18.3	0.200	0.400	ug/L	1	20.0	---	92	80-120%	---	---	
1,2-Dichloropropane	18.5	0.250	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
1,3-Dichloropropane	19.1	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
2,2-Dichloropropane	21.4	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,1-Dichloropropene	18.1	0.500	1.00	ug/L	1	20.0	---	90	80-120%	---	---	
cis-1,3-Dichloropropene	19.9	0.500	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
trans-1,3-Dichloropropene	19.6	1.00	2.00	ug/L	1	20.0	---	98	80-120%	---	---	
Ethylbenzene	17.8	0.250	0.500	ug/L	1	20.0	---	89	80-120%	---	---	
Hexachlorobutadiene	17.2	2.50	5.00	ug/L	1	20.0	---	86	80-120%	---	---	
2-Hexanone	38.4	5.00	10.0	ug/L	1	40.0	---	96	80-120%	---	---	
Isopropylbenzene	18.2	0.500	1.00	ug/L	1	20.0	---	91	80-120%	---	---	
4-Isopropyltoluene	18.5	0.500	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
Methylene chloride	17.8	5.00	10.0	ug/L	1	20.0	---	89	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	40.6	5.00	10.0	ug/L	1	40.0	---	101	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	18.3	0.500	1.00	ug/L	1	20.0	---	91	80-120%	---	---	
Naphthalene	17.3	1.00	2.00	ug/L	1	20.0	---	86	80-120%	---	---	
n-Propylbenzene	18.5	0.250	0.500	ug/L	1	20.0	---	92	80-120%	---	---	
Styrene	19.2	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
1,1,1,2-Tetrachloroethane	22.5	0.200	0.400	ug/L	1	20.0	---	112	80-120%	---	---	
1,1,2,2-Tetrachloroethane	20.2	0.250	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
Tetrachloroethene (PCE)	17.8	0.200	0.400	ug/L	1	20.0	---	89	80-120%	---	---	
Toluene	17.6	0.500	1.00	ug/L	1	20.0	---	88	80-120%	---	---	
1,2,3-Trichlorobenzene	18.7	1.00	2.00	ug/L	1	20.0	---	93	80-120%	---	---	
1,2,4-Trichlorobenzene	18.4	1.00	2.00	ug/L	1	20.0	---	92	80-120%	---	---	
1,1,1-Trichloroethane	19.0	0.200	0.400	ug/L	1	20.0	---	95	80-120%	---	---	
1,1,2-Trichloroethane	19.0	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Trichloroethene (TCE)	18.3	0.200	0.400	ug/L	1	20.0	---	91	80-120%	---	---	
Trichlorofluoromethane	23.4	1.00	2.00	ug/L	1	20.0	---	117	80-120%	---	---	
1,2,3-Trichloropropane	19.7	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2,4-Trimethylbenzene	19.0	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
1,3,5-Trimethylbenzene	18.9	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: CB319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A1H0964 - 10 06 21 1501

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081092 - EPA 5030B						Water						
LCS (1081092-BS1)						Prepared: 08/31/21 08:00 Analyzed: 08/31/21 09:07						
Vinyl chloride	23.1	0.200	0.400	ug/L	1	20.0	---	116	80-120%	---	---	
m,p-Xylene	36.1	0.500	1.00	ug/L	1	40.0	---	90	80-120%	---	---	
o-Xylene	18.5	0.250	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						

Duplicate (1081092-DUP1) Prepared: 08/31/21 09:30 Analyzed: 08/31/21 15:33

QC Source Sample: B-16 (A1H0964-07)

EPA 8260D

Acetone	ND	20.0	20.0	ug/L	1	---	ND	---	---	---	30%
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%
Bromobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Bromoform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Bromomethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%
Chloroethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%
Chloroform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Chloromethane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%
Dibromomethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081092 - EPA 5030B						Water						
Duplicate (1081092-DUP1)			Prepared: 08/31/21 09:30 Analyzed: 08/31/21 15:33									
QC Source Sample: B-16 (A1H0964-07)												
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081092 - EPA 5030B												
Water												
Duplicate (1081092-DUP1)			Prepared: 08/31/21 09:30 Analyzed: 08/31/21 15:33									
QC Source Sample: B-16 (A1H0964-07)												
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>105 %</i>		<i>80-120 %</i>		<i>"</i>						

Matrix Spike (1081092-MS1)			Prepared: 08/31/21 09:30 Analyzed: 08/31/21 11:56									
QC Source Sample: Non-SDG (A1H0981-02)												
EPA 8260D												
Acetone	44.4	10.0	20.0	ug/L	1	40.0	ND	111	39-160%	---	---	
Acrylonitrile	22.0	1.00	2.00	ug/L	1	20.0	ND	110	63-135%	---	---	
Benzene	21.4	0.100	0.200	ug/L	1	20.0	ND	107	79-120%	---	---	
Bromobenzene	20.1	0.250	0.500	ug/L	1	20.0	ND	101	80-120%	---	---	
Bromochloromethane	21.3	0.500	1.00	ug/L	1	20.0	ND	107	78-123%	---	---	
Bromodichloromethane	23.2	0.500	1.00	ug/L	1	20.0	ND	116	79-125%	---	---	
Bromoform	22.1	0.500	1.00	ug/L	1	20.0	ND	110	66-130%	---	---	
Bromomethane	25.8	5.00	5.00	ug/L	1	20.0	ND	129	53-141%	---	---	Q-54
2-Butanone (MEK)	45.4	5.00	10.0	ug/L	1	40.0	ND	113	56-143%	---	---	
n-Butylbenzene	23.2	0.500	1.00	ug/L	1	20.0	ND	116	75-128%	---	---	
sec-Butylbenzene	22.1	0.500	1.00	ug/L	1	20.0	ND	110	77-126%	---	---	
tert-Butylbenzene	22.1	0.500	1.00	ug/L	1	20.0	ND	111	78-124%	---	---	
Carbon disulfide	21.6	5.00	10.0	ug/L	1	20.0	ND	108	64-133%	---	---	
Carbon tetrachloride	26.0	0.500	1.00	ug/L	1	20.0	ND	130	72-136%	---	---	
Chlorobenzene	21.2	0.250	0.500	ug/L	1	20.0	ND	106	80-120%	---	---	
Chloroethane	19.6	5.00	5.00	ug/L	1	20.0	ND	98	60-138%	---	---	
Chloroform	22.4	0.500	1.00	ug/L	1	20.0	ND	112	79-124%	---	---	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081092 - EPA 5030B						Water						
Matrix Spike (1081092-MS1)			Prepared: 08/31/21 09:30 Analyzed: 08/31/21 11:56									
QC Source Sample: Non-SDG (A1H0981-02)												
Chloromethane	21.2	2.50	5.00	ug/L	1	20.0	8.71	63	50-139%	---	---	
2-Chlorotoluene	21.9	0.500	1.00	ug/L	1	20.0	ND	109	79-122%	---	---	
4-Chlorotoluene	21.1	0.500	1.00	ug/L	1	20.0	ND	106	78-122%	---	---	
Dibromochloromethane	23.8	0.500	1.00	ug/L	1	20.0	ND	119	74-126%	---	---	
1,2-Dibromo-3-chloropropane	21.8	2.50	5.00	ug/L	1	20.0	ND	109	62-128%	---	---	
1,2-Dibromoethane (EDB)	21.9	0.250	0.500	ug/L	1	20.0	ND	110	77-121%	---	---	
Dibromomethane	22.4	0.500	1.00	ug/L	1	20.0	ND	112	79-123%	---	---	
1,2-Dichlorobenzene	21.1	0.250	0.500	ug/L	1	20.0	ND	106	80-120%	---	---	
1,3-Dichlorobenzene	20.4	0.250	0.500	ug/L	1	20.0	ND	102	80-120%	---	---	
1,4-Dichlorobenzene	20.3	0.250	0.500	ug/L	1	20.0	ND	101	79-120%	---	---	
Dichlorodifluoromethane	21.3	0.500	1.00	ug/L	1	20.0	ND	107	32-152%	---	---	ICV-01, Q-54b
1,1-Dichloroethane	22.0	0.200	0.400	ug/L	1	20.0	ND	110	77-125%	---	---	
1,2-Dichloroethane (EDC)	21.8	0.200	0.400	ug/L	1	20.0	ND	109	73-128%	---	---	
1,1-Dichloroethene	22.9	0.200	0.400	ug/L	1	20.0	ND	114	71-131%	---	---	
cis-1,2-Dichloroethene	22.9	0.200	0.400	ug/L	1	20.0	ND	114	78-123%	---	---	
trans-1,2-Dichloroethene	22.2	0.200	0.400	ug/L	1	20.0	ND	111	75-124%	---	---	
1,2-Dichloropropane	21.7	0.250	0.500	ug/L	1	20.0	ND	108	78-122%	---	---	
1,3-Dichloropropane	21.6	0.500	1.00	ug/L	1	20.0	ND	108	80-120%	---	---	
2,2-Dichloropropane	25.8	0.500	1.00	ug/L	1	20.0	ND	129	60-139%	---	---	
1,1-Dichloropropene	22.5	0.500	1.00	ug/L	1	20.0	ND	112	79-125%	---	---	
cis-1,3-Dichloropropene	22.2	0.500	1.00	ug/L	1	20.0	ND	111	75-124%	---	---	
trans-1,3-Dichloropropene	21.9	1.00	2.00	ug/L	1	20.0	ND	110	73-127%	---	---	
Ethylbenzene	21.6	0.250	0.500	ug/L	1	20.0	ND	108	79-121%	---	---	
Hexachlorobutadiene	21.1	2.50	5.00	ug/L	1	20.0	ND	105	66-134%	---	---	
2-Hexanone	45.5	5.00	10.0	ug/L	1	40.0	ND	114	57-139%	---	---	
Isopropylbenzene	22.3	0.500	1.00	ug/L	1	20.0	ND	111	72-131%	---	---	
4-Isopropyltoluene	22.3	0.500	1.00	ug/L	1	20.0	ND	111	77-127%	---	---	
Methylene chloride	19.7	5.00	10.0	ug/L	1	20.0	ND	99	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	46.7	5.00	10.0	ug/L	1	40.0	ND	117	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	20.4	0.500	1.00	ug/L	1	20.0	ND	102	71-124%	---	---	
Naphthalene	18.7	1.00	2.00	ug/L	1	20.0	ND	93	61-128%	---	---	
n-Propylbenzene	21.5	0.250	0.500	ug/L	1	20.0	ND	108	76-126%	---	---	
Styrene	20.9	0.500	1.00	ug/L	1	20.0	ND	104	78-123%	---	---	

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081092 - EPA 5030B						Water						
Matrix Spike (1081092-MS1)						Prepared: 08/31/21 09:30 Analyzed: 08/31/21 11:56						
QC Source Sample: Non-SDG (A1H0981-02)												
1,1,1,2-Tetrachloroethane	25.7	0.200	0.400	ug/L	1	20.0	ND	129	78-124%	---	---	Q-01
1,1,2,2-Tetrachloroethane	22.2	0.250	0.500	ug/L	1	20.0	ND	111	71-121%	---	---	
Tetrachloroethene (PCE)	22.1	0.200	0.400	ug/L	1	20.0	ND	110	74-129%	---	---	
Toluene	21.0	0.500	1.00	ug/L	1	20.0	ND	105	80-121%	---	---	
1,2,3-Trichlorobenzene	20.2	1.00	2.00	ug/L	1	20.0	ND	101	69-129%	---	---	
1,2,4-Trichlorobenzene	20.7	1.00	2.00	ug/L	1	20.0	ND	104	69-130%	---	---	
1,1,1-Trichloroethane	23.1	0.200	0.400	ug/L	1	20.0	ND	115	74-131%	---	---	
1,1,2-Trichloroethane	21.5	0.250	0.500	ug/L	1	20.0	ND	107	80-120%	---	---	
Trichloroethene (TCE)	22.2	0.200	0.400	ug/L	1	20.0	ND	111	79-123%	---	---	
Trichlorofluoromethane	24.5	1.00	2.00	ug/L	1	20.0	ND	122	65-141%	---	---	
1,2,3-Trichloropropane	21.6	0.500	1.00	ug/L	1	20.0	ND	108	73-122%	---	---	
1,2,4-Trimethylbenzene	21.1	0.500	1.00	ug/L	1	20.0	ND	105	76-124%	---	---	
1,3,5-Trimethylbenzene	21.6	0.500	1.00	ug/L	1	20.0	ND	108	75-124%	---	---	
Vinyl chloride	22.7	0.200	0.400	ug/L	1	20.0	ND	113	58-137%	---	---	
m,p-Xylene	43.1	0.500	1.00	ug/L	1	40.0	ND	108	80-121%	---	---	
o-Xylene	21.8	0.250	0.500	ug/L	1	20.0	ND	109	78-122%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090317 - EPA 5035A						Soil						
Blank (1090317-BLK1)			Prepared: 09/09/21 09:00 Analyzed: 09/09/21 14:53									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090317 - EPA 5035A						Soil						
Blank (1090317-BLK1)			Prepared: 09/09/21 09:00 Analyzed: 09/09/21 14:53									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 105 % Limits: 80-120 % Dilution: 1x

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090317 - EPA 5035A						Soil						
Blank (1090317-BLK1)						Prepared: 09/09/21 09:00 Analyzed: 09/09/21 14:53						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (1090317-BS1)						Prepared: 09/09/21 09:00 Analyzed: 09/09/21 13:59						
5035A/8260D												
Acetone	1980	500	1000	ug/kg wet	50	2000	---	99	80-120%	---	---	
Acrylonitrile	1100	50.0	100	ug/kg wet	50	1000	---	110	80-120%	---	---	
Benzene	1180	5.00	10.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
Bromobenzene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Bromochloromethane	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
Bromodichloromethane	1170	25.0	50.0	ug/kg wet	50	1000	---	117	80-120%	---	---	
Bromoform	846	50.0	100	ug/kg wet	50	1000	---	85	80-120%	---	---	
Bromomethane	1330	500	500	ug/kg wet	50	1000	---	133	80-120%	---	---	Q-56
2-Butanone (MEK)	2140	250	500	ug/kg wet	50	2000	---	107	80-120%	---	---	
n-Butylbenzene	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
sec-Butylbenzene	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
tert-Butylbenzene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Carbon disulfide	1380	250	500	ug/kg wet	50	1000	---	138	80-120%	---	---	Q-56
Carbon tetrachloride	1200	25.0	50.0	ug/kg wet	50	1000	---	120	80-120%	---	---	
Chlorobenzene	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Chloroethane	1080	250	500	ug/kg wet	50	1000	---	108	80-120%	---	---	
Chloroform	1180	25.0	50.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
Chloromethane	1130	125	250	ug/kg wet	50	1000	---	113	80-120%	---	---	
2-Chlorotoluene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
4-Chlorotoluene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Dibromochloromethane	904	50.0	100	ug/kg wet	50	1000	---	90	80-120%	---	---	
1,2-Dibromo-3-chloropropane	816	125	250	ug/kg wet	50	1000	---	82	80-120%	---	---	
1,2-Dibromoethane (EDB)	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Dibromomethane	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
1,2-Dichlorobenzene	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,3-Dichlorobenzene	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,4-Dichlorobenzene	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Dichlorodifluoromethane	1130	50.0	100	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,1-Dichloroethane	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	

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ANALYTICAL REPORT

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090317 - EPA 5035A						Soil						
LCS (1090317-BS1)						Prepared: 09/09/21 09:00 Analyzed: 09/09/21 13:59						
1,2-Dichloroethane (EDC)	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,1-Dichloroethene	1530	12.5	25.0	ug/kg wet	50	1000	---	153	80-120%	---	---	Q-56
cis-1,2-Dichloroethene	1190	12.5	25.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
trans-1,2-Dichloroethene	1220	12.5	25.0	ug/kg wet	50	1000	---	122	80-120%	---	---	Q-56
1,2-Dichloropropane	1180	12.5	25.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
1,3-Dichloropropane	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
2,2-Dichloropropane	1280	25.0	50.0	ug/kg wet	50	1000	---	128	80-120%	---	---	Q-56
1,1-Dichloropropene	1240	25.0	50.0	ug/kg wet	50	1000	---	124	80-120%	---	---	Q-56
cis-1,3-Dichloropropene	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
trans-1,3-Dichloropropene	990	25.0	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Ethylbenzene	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Hexachlorobutadiene	1060	50.0	100	ug/kg wet	50	1000	---	106	80-120%	---	---	
2-Hexanone	1840	250	500	ug/kg wet	50	2000	---	92	80-120%	---	---	
Isopropylbenzene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
4-Isopropyltoluene	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Methylene chloride	1250	250	500	ug/kg wet	50	1000	---	125	80-120%	---	---	Q-56
4-Methyl-2-pentanone (MiBK)	1850	250	500	ug/kg wet	50	2000	---	92	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Naphthalene	989	50.0	100	ug/kg wet	50	1000	---	99	80-120%	---	---	
n-Propylbenzene	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Styrene	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,1,2,2-Tetrachloroethane	967	25.0	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Tetrachloroethene (PCE)	1110	12.5	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Toluene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,2,3-Trichlorobenzene	1110	125	250	ug/kg wet	50	1000	---	111	80-120%	---	---	
1,2,4-Trichlorobenzene	1100	125	250	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,1,1-Trichloroethane	1260	12.5	25.0	ug/kg wet	50	1000	---	126	80-120%	---	---	Q-56
1,1,2-Trichloroethane	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Trichloroethene (TCE)	1250	12.5	25.0	ug/kg wet	50	1000	---	125	80-120%	---	---	Q-56
Trichlorofluoromethane	1130	50.0	100	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,2,3-Trichloropropane	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,2,4-Trimethylbenzene	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,3,5-Trimethylbenzene	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090317 - EPA 5035A						Soil						
LCS (1090317-BS1)						Prepared: 09/09/21 09:00 Analyzed: 09/09/21 13:59						
Vinyl chloride	1150	12.5	25.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
m,p-Xylene	2040	25.0	50.0	ug/kg wet	50	2000	---	102	80-120%	---	---	
o-Xylene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1090317-DUP1)												TEMP
QC Source Sample: Non-SDG (A110152-01)												
Acetone	ND	944	1890	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	94.4	189	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	9.44	18.9	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	94.4	189	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	944	944	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	472	944	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	472	944	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	472	944	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	236	472	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	94.4	189	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	236	472	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 1090317 - EPA 5035A							Soil						
Duplicate (1090317-DUP1)			Prepared: 09/02/21 10:50 Analyzed: 09/09/21 20:15						TEMP				
QC Source Sample: Non-SDG (A110152-01)													
1,3-Dichlorobenzene	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
1,4-Dichlorobenzene	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
Dichlorodifluoromethane	ND	94.4	189	ug/kg dry	50	---	ND	---	---	---	30%		
1,1-Dichloroethane	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dichloroethane (EDC)	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
1,1-Dichloroethene	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
cis-1,2-Dichloroethene	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
trans-1,2-Dichloroethene	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
1,2-Dichloropropane	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
1,3-Dichloropropane	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%		
2,2-Dichloropropane	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%		
1,1-Dichloropropene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%		
cis-1,3-Dichloropropene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%		
trans-1,3-Dichloropropene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%		
Ethylbenzene	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
Hexachlorobutadiene	ND	94.4	189	ug/kg dry	50	---	ND	---	---	---	30%		
2-Hexanone	ND	472	944	ug/kg dry	50	---	ND	---	---	---	30%		
Isopropylbenzene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%		
4-Isopropyltoluene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%		
Methylene chloride	ND	472	944	ug/kg dry	50	---	ND	---	---	---	30%		
4-Methyl-2-pentanone (MiBK)	ND	472	944	ug/kg dry	50	---	ND	---	---	---	30%		
Methyl tert-butyl ether (MTBE)	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%		
Naphthalene	ND	94.4	189	ug/kg dry	50	---	ND	---	---	---	30%		
n-Propylbenzene	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
Styrene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,1,2-Tetrachloroethane	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,2,2-Tetrachloroethane	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%		
Tetrachloroethene (PCE)	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
Toluene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,3-Trichlorobenzene	ND	236	472	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,4-Trichlorobenzene	ND	236	472	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,1-Trichloroethane	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,2-Trichloroethane	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%		

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090317 - EPA 5035A												
Soil												
Duplicate (1090317-DUP1)												
						Prepared: 09/02/21 10:50			Analyzed: 09/09/21 20:15			TEMP
QC Source Sample: Non-SDG (A110152-01)												
Trichloroethene (TCE)	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	94.4	189	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	47.2	94.4	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	23.6	47.2	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (1090317-MS1)												
						Prepared: 09/02/21 15:20			Analyzed: 09/10/21 00:17			TEMP
QC Source Sample: Non-SDG (A110152-07)												
5035A/8260D												
Acetone	2980	771	1540	ug/kg dry	50	3090	ND	97	36-164%	---	---	
Acrylonitrile	1600	77.1	154	ug/kg dry	50	1550	ND	104	65-134%	---	---	
Benzene	1670	7.71	15.4	ug/kg dry	50	1550	ND	108	77-121%	---	---	
Bromobenzene	1520	19.3	38.6	ug/kg dry	50	1550	ND	98	78-121%	---	---	
Bromochloromethane	1630	38.6	77.1	ug/kg dry	50	1550	ND	105	78-125%	---	---	
Bromodichloromethane	1700	38.6	77.1	ug/kg dry	50	1550	ND	110	75-127%	---	---	
Bromoform	1200	77.1	154	ug/kg dry	50	1550	ND	78	67-132%	---	---	
Bromomethane	1890	771	771	ug/kg dry	50	1550	ND	122	53-143%	---	---	Q-54a
2-Butanone (MEK)	3140	386	771	ug/kg dry	50	3090	ND	102	51-148%	---	---	
n-Butylbenzene	1420	38.6	77.1	ug/kg dry	50	1550	ND	92	70-128%	---	---	
sec-Butylbenzene	1520	38.6	77.1	ug/kg dry	50	1550	ND	99	73-126%	---	---	
tert-Butylbenzene	1430	38.6	77.1	ug/kg dry	50	1550	ND	92	73-125%	---	---	
Carbon disulfide	1960	386	771	ug/kg dry	50	1550	ND	127	63-132%	---	---	Q-54c
Carbon tetrachloride	1710	38.6	77.1	ug/kg dry	50	1550	ND	110	70-135%	---	---	
Chlorobenzene	1540	19.3	38.6	ug/kg dry	50	1550	ND	100	79-120%	---	---	
Chloroethane	2100	386	771	ug/kg dry	50	1550	ND	136	59-139%	---	---	
Chloroform	1740	38.6	77.1	ug/kg dry	50	1550	ND	112	78-123%	---	---	
Chloromethane	1370	193	386	ug/kg dry	50	1550	ND	89	50-136%	---	---	

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Darrell Auvil, Client Services Manager



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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090317 - EPA 5035A						Soil						
Matrix Spike (1090317-MS1)						Prepared: 09/02/21 15:20 Analyzed: 09/10/21 00:17						TEMP
QC Source Sample: Non-SDG (A110152-07)												
2-Chlorotoluene	1480	38.6	77.1	ug/kg dry	50	1550	ND	96	75-122%	---	---	
4-Chlorotoluene	1480	38.6	77.1	ug/kg dry	50	1550	ND	96	72-124%	---	---	
Dibromochloromethane	1310	77.1	154	ug/kg dry	50	1550	ND	85	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1220	193	386	ug/kg dry	50	1550	ND	79	61-132%	---	---	
1,2-Dibromoethane (EDB)	1570	38.6	77.1	ug/kg dry	50	1550	ND	102	78-122%	---	---	
Dibromomethane	1610	38.6	77.1	ug/kg dry	50	1550	ND	104	78-125%	---	---	
1,2-Dichlorobenzene	1470	19.3	38.6	ug/kg dry	50	1550	ND	95	78-121%	---	---	
1,3-Dichlorobenzene	1500	19.3	38.6	ug/kg dry	50	1550	ND	97	77-121%	---	---	
1,4-Dichlorobenzene	1470	19.3	38.6	ug/kg dry	50	1550	ND	95	75-120%	---	---	
Dichlorodifluoromethane	1420	77.1	154	ug/kg dry	50	1550	ND	92	29-149%	---	---	
1,1-Dichloroethane	1780	19.3	38.6	ug/kg dry	50	1550	ND	115	76-125%	---	---	
1,2-Dichloroethane (EDC)	1630	19.3	38.6	ug/kg dry	50	1550	ND	106	73-128%	---	---	
1,1-Dichloroethene	2140	19.3	38.6	ug/kg dry	50	1550	ND	139	70-131%	---	---	Q-54e
cis-1,2-Dichloroethene	1730	19.3	38.6	ug/kg dry	50	1550	ND	112	77-123%	---	---	
trans-1,2-Dichloroethene	1760	19.3	38.6	ug/kg dry	50	1550	ND	114	74-125%	---	---	Q-54d
1,2-Dichloropropane	1690	19.3	38.6	ug/kg dry	50	1550	ND	110	76-123%	---	---	
1,3-Dichloropropane	1570	38.6	77.1	ug/kg dry	50	1550	ND	102	77-121%	---	---	
2,2-Dichloropropane	1620	38.6	77.1	ug/kg dry	50	1550	ND	105	67-133%	---	---	Q-54i
1,1-Dichloropropene	1750	38.6	77.1	ug/kg dry	50	1550	ND	113	76-125%	---	---	Q-54f
cis-1,3-Dichloropropene	1660	38.6	77.1	ug/kg dry	50	1550	ND	107	74-126%	---	---	
trans-1,3-Dichloropropene	1410	38.6	77.1	ug/kg dry	50	1550	ND	91	71-130%	---	---	
Ethylbenzene	1500	19.3	38.6	ug/kg dry	50	1550	ND	97	76-122%	---	---	
Hexachlorobutadiene	1420	77.1	154	ug/kg dry	50	1550	ND	92	61-135%	---	---	
2-Hexanone	2650	386	771	ug/kg dry	50	3090	ND	86	53-145%	---	---	
Isopropylbenzene	1530	38.6	77.1	ug/kg dry	50	1550	ND	99	68-134%	---	---	
4-Isopropyltoluene	1490	38.6	77.1	ug/kg dry	50	1550	ND	96	73-127%	---	---	
Methylene chloride	1720	386	771	ug/kg dry	50	1550	ND	111	70-128%	---	---	Q-54g
4-Methyl-2-pentanone (MiBK)	2740	386	771	ug/kg dry	50	3090	ND	89	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1640	38.6	77.1	ug/kg dry	50	1550	ND	106	73-125%	---	---	
Naphthalene	1410	77.1	154	ug/kg dry	50	1550	ND	91	62-129%	---	---	
n-Propylbenzene	1520	19.3	38.6	ug/kg dry	50	1550	ND	99	73-125%	---	---	
Styrene	1530	38.6	77.1	ug/kg dry	50	1550	ND	99	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1560	19.3	38.6	ug/kg dry	50	1550	ND	101	78-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090317 - EPA 5035A						Soil						
Matrix Spike (1090317-MS1)						Prepared: 09/02/21 15:20 Analyzed: 09/10/21 00:17						TEMP
QC Source Sample: Non-SDG (A110152-07)												
1,1,2,2-Tetrachloroethane	1450	38.6	77.1	ug/kg dry	50	1550	ND	94	70-124%	---	---	
Tetrachloroethene (PCE)	1580	19.3	38.6	ug/kg dry	50	1550	ND	102	73-128%	---	---	
Toluene	1530	38.6	77.1	ug/kg dry	50	1550	ND	99	77-121%	---	---	
1,2,3-Trichlorobenzene	1520	193	386	ug/kg dry	50	1550	ND	98	66-130%	---	---	
1,2,4-Trichlorobenzene	1490	193	386	ug/kg dry	50	1550	ND	96	67-129%	---	---	
1,1,1-Trichloroethane	1790	19.3	38.6	ug/kg dry	50	1550	ND	116	73-130%	---	---	Q-54h
1,1,2-Trichloroethane	1590	19.3	38.6	ug/kg dry	50	1550	ND	103	78-121%	---	---	
Trichloroethene (TCE)	1750	19.3	38.6	ug/kg dry	50	1550	ND	113	77-123%	---	---	Q-54g
Trichlorofluoromethane	1770	77.1	154	ug/kg dry	50	1550	ND	115	62-140%	---	---	
1,2,3-Trichloropropane	1510	38.6	77.1	ug/kg dry	50	1550	ND	98	73-125%	---	---	
1,2,4-Trimethylbenzene	1540	38.6	77.1	ug/kg dry	50	1550	ND	100	75-123%	---	---	
1,3,5-Trimethylbenzene	1540	38.6	77.1	ug/kg dry	50	1550	ND	100	73-124%	---	---	
Vinyl chloride	1540	19.3	38.6	ug/kg dry	50	1550	ND	100	56-135%	---	---	
m,p-Xylene	2920	38.6	77.1	ug/kg dry	50	3090	ND	95	77-124%	---	---	
o-Xylene	1460	19.3	38.6	ug/kg dry	50	1550	ND	95	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>"</i>						

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----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081075 - EPA 3546						Soil						
Blank (1081075-BLK1)			Prepared: 08/30/21 14:11 Analyzed: 08/30/21 18:31									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>101 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1081075-BS1)			Prepared: 08/30/21 14:11 Analyzed: 08/30/21 18:56									
<u>EPA 8270E SIM</u>												
Acenaphthene	736	5.00	10.0	ug/kg wet	1	800	---	92	40-123%	---	---	
Acenaphthylene	771	5.00	10.0	ug/kg wet	1	800	---	96	32-132%	---	---	
Anthracene	741	5.00	10.0	ug/kg wet	1	800	---	93	47-123%	---	---	
Benz(a)anthracene	713	5.00	10.0	ug/kg wet	1	800	---	89	49-126%	---	---	
Benzo(a)pyrene	747	5.00	10.0	ug/kg wet	1	800	---	93	45-129%	---	---	
Benzo(b)fluoranthene	738	5.00	10.0	ug/kg wet	1	800	---	92	45-132%	---	---	
Benzo(k)fluoranthene	806	5.00	10.0	ug/kg wet	1	800	---	101	47-132%	---	---	
Benzo(g,h,i)perylene	769	5.00	10.0	ug/kg wet	1	800	---	96	43-134%	---	---	
Chrysene	754	5.00	10.0	ug/kg wet	1	800	---	94	50-124%	---	---	
Dibenz(a,h)anthracene	798	5.00	10.0	ug/kg wet	1	800	---	100	45-134%	---	---	
Fluoranthene	701	5.00	10.0	ug/kg wet	1	800	---	88	50-127%	---	---	
Fluorene	718	5.00	10.0	ug/kg wet	1	800	---	90	43-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081075 - EPA 3546												
						Soil						
LCS (1081075-BS1)				Prepared: 08/30/21 14:11		Analyzed: 08/30/21 18:56						
Indeno(1,2,3-cd)pyrene	725	5.00	10.0	ug/kg wet	1	800	---	91	45-133%	---	---	
Naphthalene	713	5.00	10.0	ug/kg wet	1	800	---	89	35-123%	---	---	
Phenanthrene	739	5.00	10.0	ug/kg wet	1	800	---	92	50-121%	---	---	
Pyrene	687	5.00	10.0	ug/kg wet	1	800	---	86	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 88 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>95 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1081075-DUP1)												H-06
Prepared: 08/30/21 14:11						Analyzed: 08/30/21 19:47						
QC Source Sample: Non-SDG (A1H0440-18)												
Acenaphthene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Anthracene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benz(a)anthracene	8.76	6.56	13.1	ug/kg dry	1	---	12.3	---	---	33	30%	Q-05, J
Benzo(a)pyrene	9.47	6.56	13.1	ug/kg dry	1	---	12.6	---	---	28	30%	J
Benzo(b)fluoranthene	16.3	6.56	13.1	ug/kg dry	1	---	20.8	---	---	24	30%	
Benzo(k)fluoranthene	ND	6.56	13.1	ug/kg dry	1	---	7.88	---	---	***	30%	Q-05
Benzo(g,h,i)perylene	13.1	6.56	13.1	ug/kg dry	1	---	18.5	---	---	34	30%	Q-05
Chrysene	13.4	6.56	13.1	ug/kg dry	1	---	17.2	---	---	24	30%	
Dibenz(a,h)anthracene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	14.0	6.56	13.1	ug/kg dry	1	---	19.2	---	---	31	30%	Q-05
Fluorene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	10.4	6.56	13.1	ug/kg dry	1	---	15.6	---	---	40	30%	Q-05, J
Naphthalene	ND	6.56	13.1	ug/kg dry	1	---	ND	---	---	---	30%	
Phenanthrene	9.06	6.56	13.1	ug/kg dry	1	---	12.9	---	---	35	30%	Q-05, J
Pyrene	15.7	6.56	13.1	ug/kg dry	1	---	21.5	---	---	32	30%	Q-05
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 81 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>85 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (1081075-MS1)												
Prepared: 08/30/21 14:11						Analyzed: 08/30/21 20:37						
QC Source Sample: Non-SDG (A1H0983-07)												
EPA 8270E SIM												
Acenaphthene	598	5.24	10.5	ug/kg dry	1	838	ND	71	40-123%	---	---	
Acenaphthylene	612	5.24	10.5	ug/kg dry	1	838	ND	73	32-132%	---	---	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081075 - EPA 3546						Soil						
Matrix Spike (1081075-MS1)						Prepared: 08/30/21 14:11 Analyzed: 08/30/21 20:37						
QC Source Sample: Non-SDG (A1H0983-07)												
Anthracene	691	5.24	10.5	ug/kg dry	1	838	ND	82	47-123%	---	---	
Benz(a)anthracene	709	5.24	10.5	ug/kg dry	1	838	5.65	84	49-126%	---	---	
Benzo(a)pyrene	716	5.24	10.5	ug/kg dry	1	838	5.44	85	45-129%	---	---	
Benzo(b)fluoranthene	721	5.24	10.5	ug/kg dry	1	838	10.0	85	45-132%	---	---	
Benzo(k)fluoranthene	760	5.24	10.5	ug/kg dry	1	838	ND	91	47-132%	---	---	
Benzo(g,h,i)perylene	726	5.24	10.5	ug/kg dry	1	838	8.58	86	43-134%	---	---	
Chrysene	735	5.24	10.5	ug/kg dry	1	838	6.34	87	50-124%	---	---	
Dibenz(a,h)anthracene	676	5.24	10.5	ug/kg dry	1	838	ND	81	45-134%	---	---	
Fluoranthene	752	5.24	10.5	ug/kg dry	1	838	7.09	89	50-127%	---	---	
Fluorene	620	5.24	10.5	ug/kg dry	1	838	ND	74	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	663	5.24	10.5	ug/kg dry	1	838	7.26	78	45-133%	---	---	
Naphthalene	494	5.24	10.5	ug/kg dry	1	838	ND	59	35-123%	---	---	
Phenanthrene	808	5.24	10.5	ug/kg dry	1	838	ND	96	50-121%	---	---	
Pyrene	697	5.24	10.5	ug/kg dry	1	838	7.70	82	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 61 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>83 %</i>		<i>54-127 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090017 - EPA 3510C (Acid Extraction)						Water						
Blank (1090017-BLK1)						Prepared: 09/01/21 10:14 Analyzed: 09/01/21 14:21						
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0364	0.0727	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 72 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>93 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS (1090017-BS1)						Prepared: 09/01/21 10:14 Analyzed: 09/01/21 14:46						
<u>EPA 8270E SIM</u>												
Acenaphthene	5.88	0.0200	0.0400	ug/L	1	8.00	---	73	47-122%	---	---	
Acenaphthylene	6.14	0.0200	0.0400	ug/L	1	8.00	---	77	41-130%	---	---	
Anthracene	6.51	0.0200	0.0400	ug/L	1	8.00	---	81	57-123%	---	---	
Benz(a)anthracene	6.65	0.0200	0.0400	ug/L	1	8.00	---	83	58-125%	---	---	
Benzo(a)pyrene	6.94	0.0200	0.0400	ug/L	1	8.00	---	87	54-128%	---	---	
Benzo(b)fluoranthene	6.71	0.0200	0.0400	ug/L	1	8.00	---	84	53-131%	---	---	
Benzo(k)fluoranthene	7.55	0.0200	0.0400	ug/L	1	8.00	---	94	57-129%	---	---	
Benzo(g,h,i)perylene	7.47	0.0200	0.0400	ug/L	1	8.00	---	93	50-134%	---	---	
Chrysene	6.97	0.0200	0.0400	ug/L	1	8.00	---	87	59-123%	---	---	
Dibenz(a,h)anthracene	7.59	0.0200	0.0400	ug/L	1	8.00	---	95	51-134%	---	---	
Fluoranthene	5.94	0.0200	0.0400	ug/L	1	8.00	---	74	57-128%	---	---	
Fluorene	5.85	0.0200	0.0400	ug/L	1	8.00	---	73	52-124%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090017 - EPA 3510C (Acid Extraction)						Water						
LCS (1090017-BS1)						Prepared: 09/01/21 10:14 Analyzed: 09/01/21 14:46						
Indeno(1,2,3-cd)pyrene	6.74	0.0200	0.0400	ug/L	1	8.00	---	84	52-134%	---	---	
Naphthalene	4.95	0.0400	0.0800	ug/L	1	8.00	---	62	40-121%	---	---	
Phenanthrene	6.51	0.0200	0.0400	ug/L	1	8.00	---	81	59-120%	---	---	
Pyrene	5.86	0.0200	0.0400	ug/L	1	8.00	---	73	57-126%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>82 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS Dup (1090017-BSD1)						Prepared: 09/01/21 10:14 Analyzed: 09/01/21 15:12							Q-19
EPA 8270E SIM													
Acenaphthene	5.76	0.0200	0.0400	ug/L	1	8.00	---	72	47-122%	2	30%		
Acenaphthylene	5.99	0.0200	0.0400	ug/L	1	8.00	---	75	41-130%	2	30%		
Anthracene	6.44	0.0200	0.0400	ug/L	1	8.00	---	81	57-123%	1	30%		
Benz(a)anthracene	6.60	0.0200	0.0400	ug/L	1	8.00	---	83	58-125%	0.8	30%		
Benzo(a)pyrene	6.90	0.0200	0.0400	ug/L	1	8.00	---	86	54-128%	0.6	30%		
Benzo(b)fluoranthene	6.77	0.0200	0.0400	ug/L	1	8.00	---	85	53-131%	1	30%		
Benzo(k)fluoranthene	7.43	0.0200	0.0400	ug/L	1	8.00	---	93	57-129%	2	30%		
Benzo(g,h,i)perylene	7.55	0.0200	0.0400	ug/L	1	8.00	---	94	50-134%	1	30%		
Chrysene	6.95	0.0200	0.0400	ug/L	1	8.00	---	87	59-123%	0.4	30%		
Dibenz(a,h)anthracene	7.58	0.0200	0.0400	ug/L	1	8.00	---	95	51-134%	0.2	30%		
Fluoranthene	5.99	0.0200	0.0400	ug/L	1	8.00	---	75	57-128%	0.9	30%		
Fluorene	5.62	0.0200	0.0400	ug/L	1	8.00	---	70	52-124%	4	30%		
Indeno(1,2,3-cd)pyrene	6.75	0.0200	0.0400	ug/L	1	8.00	---	84	52-134%	0.2	30%		
Naphthalene	5.09	0.0400	0.0800	ug/L	1	8.00	---	64	40-121%	3	30%		
Phenanthrene	6.52	0.0200	0.0400	ug/L	1	8.00	---	82	59-120%	0.2	30%		
Pyrene	5.89	0.0200	0.0400	ug/L	1	8.00	---	74	57-126%	0.6	30%		
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 73 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>							
<i>p-Terphenyl-d14 (Surr)</i>		<i>77 %</i>		<i>50-134 %</i>		<i>"</i>							

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----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090209 - EPA 3051A						Soil						
Blank (1090209-BLK1)			Prepared: 09/07/21 13:21 Analyzed: 09/07/21 21:50									
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	9.62	19.2	mg/kg wet	10	---	---	---	---	---	---	
Blank (1090209-BLK2)			Prepared: 09/07/21 13:21 Analyzed: 09/08/21 16:26									
<u>EPA 6020B</u>												
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	Q-16
LCS (1090209-BS1)			Prepared: 09/07/21 13:21 Analyzed: 09/07/21 21:54									
<u>EPA 6020B</u>												
Antimony	24.5	0.500	1.00	mg/kg wet	10	25.0	---	98	80-120%	---	---	
Arsenic	49.2	0.500	1.00	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Barium	48.6	0.500	1.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Chromium	46.3	0.500	1.00	mg/kg wet	10	50.0	---	93	80-120%	---	---	
Copper	50.6	1.00	2.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Lead	50.1	0.100	0.200	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Mercury	0.963	0.0400	0.0800	mg/kg wet	10	1.00	---	96	80-120%	---	---	
Selenium	24.6	0.500	1.00	mg/kg wet	10	25.0	---	99	80-120%	---	---	
Silver	27.3	0.100	0.200	mg/kg wet	10	25.0	---	109	80-120%	---	---	
Zinc	49.4	10.0	20.0	mg/kg wet	10	50.0	---	99	80-120%	---	---	
LCS (1090209-BS2)			Prepared: 09/07/21 13:21 Analyzed: 09/08/21 16:30									
<u>EPA 6020B</u>												
Cadmium	51.2	0.100	0.200	mg/kg wet	10	50.0	---	102	80-120%	---	---	Q-16
Duplicate (1090209-DUP1)			Prepared: 09/07/21 13:21 Analyzed: 09/07/21 22:03									

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090209 - EPA 3051A						Soil						
Duplicate (1090209-DUP1)			Prepared: 09/07/21 13:21 Analyzed: 09/07/21 22:03									
<u>QC Source Sample: Non-SDG (A1H0559-04)</u>												
Antimony	ND	0.574	1.15	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	3.57	0.574	1.15	mg/kg dry	10	---	3.65	---	---	2	20%	
Barium	75.8	0.574	1.15	mg/kg dry	10	---	100	---	---	28	20%	Q-04
Chromium	14.9	0.574	1.15	mg/kg dry	10	---	13.4	---	---	10	20%	
Copper	15.4	1.15	2.30	mg/kg dry	10	---	14.1	---	---	8	20%	
Lead	9.61	0.115	0.230	mg/kg dry	10	---	8.50	---	---	12	20%	
Selenium	ND	0.574	1.15	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	0.115	0.230	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	49.8	11.5	23.0	mg/kg dry	10	---	44.8	---	---	10	20%	
Duplicate (1090209-DUP2)			Prepared: 09/07/21 13:21 Analyzed: 09/08/21 16:39									
<u>QC Source Sample: Non-SDG (A1H0559-04)</u>												
Mercury	8.19	0.459	0.919	mg/kg dry	100	---	ND	---	---		20%	Q-01, Q-04, Q-16
Duplicate (1090209-DUP3)			Prepared: 09/07/21 13:21 Analyzed: 09/08/21 16:43									
<u>QC Source Sample: Non-SDG (A1H0559-04RE1)</u>												
Cadmium	ND	0.115	0.230	mg/kg dry	10	---	ND	---	---	---	20%	Q-16
Matrix Spike (1090209-MS1)			Prepared: 09/07/21 13:21 Analyzed: 09/07/21 22:08									
<u>QC Source Sample: Non-SDG (A1H0559-04)</u>												
<u>EPA 6020B</u>												
Antimony	26.7	0.583	1.17	mg/kg dry	10	29.2	ND	92	75-125%	---	---	
Arsenic	58.8	0.583	1.17	mg/kg dry	10	58.3	3.65	95	75-125%	---	---	
Barium	135	0.583	1.17	mg/kg dry	10	58.3	100	59	75-125%	---	---	Q-04
Chromium	67.5	0.583	1.17	mg/kg dry	10	58.3	13.4	93	75-125%	---	---	
Copper	70.9	1.17	2.33	mg/kg dry	10	58.3	14.1	97	75-125%	---	---	
Lead	67.5	0.117	0.233	mg/kg dry	10	58.3	8.50	101	75-125%	---	---	
Mercury	1.14	0.0466	0.0933	mg/kg dry	10	1.17	ND	98	75-125%	---	---	
Selenium	26.1	0.583	1.17	mg/kg dry	10	29.2	ND	89	75-125%	---	---	
Silver	28.9	0.117	0.233	mg/kg dry	10	29.2	ND	99	75-125%	---	---	
Zinc	102	11.7	23.3	mg/kg dry	10	58.3	44.8	99	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090209 - EPA 3051A						Soil						
Matrix Spike (1090209-MS3)						Prepared: 09/07/21 13:21 Analyzed: 09/08/21 18:04						
<u>QC Source Sample: Non-SDG (A1H0559-04RE1)</u>												
<u>EPA 6020B</u>												
Cadmium	55.5	0.117	0.233	mg/kg dry	10	58.3	ND	95	75-125%	---	---	Q-16, Q-58

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090298 - Matrix Matched Direct Inject						Water						
Blank (1090298-BLK1)						Prepared: 09/09/21 08:44 Analyzed: 09/09/21 20:07						
<u>EPA 6020B (Diss)</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
LCS (1090298-BS1)						Prepared: 09/09/21 08:44 Analyzed: 09/09/21 20:11						
<u>EPA 6020B (Diss)</u>												
Arsenic	55.0	0.500	1.00	ug/L	1	55.6	---	99	80-120%	---	---	
Barium	53.6	0.500	1.00	ug/L	1	55.6	---	96	80-120%	---	---	
Cadmium	55.8	0.100	0.200	ug/L	1	55.6	---	101	80-120%	---	---	
Chromium	52.6	1.00	2.00	ug/L	1	55.6	---	95	80-120%	---	---	
Lead	56.2	0.100	0.200	ug/L	1	55.6	---	101	80-120%	---	---	
Mercury	1.08	0.0400	0.0800	ug/L	1	1.11	---	97	80-120%	---	---	
Selenium	27.3	0.500	1.00	ug/L	1	27.8	---	98	80-120%	---	---	
Silver	29.1	0.100	0.200	ug/L	1	27.8	---	105	80-120%	---	---	
Duplicate (1090298-DUP1)						Prepared: 09/09/21 08:44 Analyzed: 09/09/21 20:33						
<u>QC Source Sample: Non-SDG (A110136-12)</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	
Barium	69.1	0.500	1.00	ug/L	1	---	71.4	---	---	3	20%	
Cadmium	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Chromium	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	20%	
Lead	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Mercury	ND	0.0400	0.0800	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (1090298-MS1)						Prepared: 09/09/21 08:44 Analyzed: 09/09/21 20:46						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090298 - Matrix Matched Direct Inject						Water						
Matrix Spike (1090298-MS1)						Prepared: 09/09/21 08:44 Analyzed: 09/09/21 20:46						
<u>QC Source Sample: Non-SDG (A110136-12)</u>												
<u>EPA 6020B (Diss)</u>												
Arsenic	56.4	0.500	1.00	ug/L	1	55.6	ND	101	75-125%	---	---	
Barium	124	0.500	1.00	ug/L	1	55.6	71.4	95	75-125%	---	---	
Chromium	53.7	1.00	2.00	ug/L	1	55.6	ND	97	75-125%	---	---	
Lead	56.5	0.100	0.200	ug/L	1	55.6	ND	102	75-125%	---	---	
Mercury	1.08	0.0400	0.0800	ug/L	1	1.11	ND	97	75-125%	---	---	
Selenium	27.6	0.500	1.00	ug/L	1	27.8	ND	99	75-125%	---	---	

Matrix Spike (1090298-MS2)						Prepared: 09/09/21 08:44 Analyzed: 09/10/21 21:01						
<u>QC Source Sample: Non-SDG (A110136-12)</u>												
<u>EPA 6020B (Diss)</u>												
Arsenic	57.0	0.500	1.00	ug/L	1	55.6	ND	103	75-125%	---	---	
Cadmium	56.1	0.100	0.200	ug/L	1	55.6	ND	101	75-125%	---	---	
Chromium	55.5	1.00	2.00	ug/L	1	55.6	ND	100	75-125%	---	---	
Silver	29.9	0.100	0.200	ug/L	1	27.8	ND	108	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

TCLP Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091110 - EPA 1311/3015						Soil						
Blank (1091110-BLK1)			Prepared: 09/29/21 11:30 Analyzed: 09/30/21 08:57									
<u>1311/6020B</u>												
Lead	ND	0.0250	0.0500	mg/L	10	---	---	---	---	---	---	TCLP
LCS (1091110-BS1)			Prepared: 09/29/21 11:30 Analyzed: 09/30/21 09:02									
<u>1311/6020B</u>												
Lead	4.44	0.0250	0.0500	mg/L	10	5.00	---	89	80-120%	---	---	TCLP
Matrix Spike (1091110-MS1)			Prepared: 09/29/21 11:30 Analyzed: 09/30/21 09:29									
<u>QC Source Sample: B-16 0-10 C (A1H0964-08)</u>												
<u>1311/6020B</u>												
Lead	4.93	0.0250	0.0500	mg/L	10	5.00	0.409	90	50-150%	---	---	
Matrix Spike (1091110-MS2)			Prepared: 09/29/21 11:30 Analyzed: 09/30/21 09:38									
<u>QC Source Sample: Non-SDG (A1H0565-01)</u>												
<u>1311/6020B</u>												
Lead	4.43	0.0250	0.0500	mg/L	10	5.00	ND	89	50-150%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081035 - Total Solids (Dry Weight)						Soil						
Duplicate (1081035-DUP1)			Prepared: 08/30/21 09:07 Analyzed: 08/31/21 07:48									
<u>QC Source Sample: Non-SDG (A1H0919-03)</u>												
% Solids	96.1	1.00	1.00	%	1	---	95.7	---	---	0.4	10%	
Duplicate (1081035-DUP2)			Prepared: 08/30/21 09:07 Analyzed: 08/31/21 07:48									
<u>QC Source Sample: Non-SDG (A1H0931-12)</u>												
% Solids	86.1	1.00	1.00	%	1	---	86.0	---	---	0.1	10%	
Duplicate (1081035-DUP3)			Prepared: 08/30/21 09:07 Analyzed: 08/31/21 07:48									
<u>QC Source Sample: Non-SDG (A1H0940-02)</u>												
% Solids	88.6	1.00	1.00	%	1	---	88.2	---	---	0.4	10%	
Duplicate (1081035-DUP4)			Prepared: 08/30/21 09:07 Analyzed: 08/31/21 07:48									
<u>QC Source Sample: Non-SDG (A1H0953-02)</u>												
% Solids	87.1	1.00	1.00	%	1	---	85.6	---	---	2	10%	
Duplicate (1081035-DUP5)			Prepared: 08/30/21 09:07 Analyzed: 08/31/21 07:48									
<u>QC Source Sample: B-16 10-20 C (A1H0964-09)</u>												
<u>EPA 8000D</u>												
% Solids	81.5	1.00	1.00	%	1	---	78.9	---	---	3	10%	
Duplicate (1081035-DUP6)			Prepared: 08/30/21 18:36 Analyzed: 08/31/21 07:48									
<u>QC Source Sample: Non-SDG (A1H1000-01)</u>												
% Solids	78.7	1.00	1.00	%	1	---	75.3	---	---	4	10%	
Duplicate (1081035-DUP7)			Prepared: 08/30/21 18:36 Analyzed: 08/31/21 07:48									
<u>QC Source Sample: Non-SDG (A1H1001-01)</u>												
% Solids	74.7	1.00	1.00	%	1	---	74.9	---	---	0.3	10%	
Duplicate (1081035-DUP8)			Prepared: 08/30/21 18:36 Analyzed: 08/31/21 07:48									
<u>QC Source Sample: Non-SDG (A1H1002-01)</u>												
% Solids	89.8	1.00	1.00	%	1	---	89.5	---	---	0.4	10%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1081035 - Total Solids (Dry Weight)							Soil					
Duplicate (1081035-DUP9)			Prepared: 08/30/21 18:36 Analyzed: 08/31/21 07:48									
<u>QC Source Sample: Non-SDG (A1H1003-01)</u>												
% Solids	94.0	1.00	1.00	%	1	---	94.1	---	---	0.07	10%	
Duplicate (1081035-DUPA)			Prepared: 08/30/21 18:36 Analyzed: 08/31/21 07:48									
<u>QC Source Sample: Non-SDG (A1H1004-01)</u>												
% Solids	77.3	1.00	1.00	%	1	---	78.6	---	---	2	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090052</u>							
A1H0964-07	Water	NWTPH-Dx LL	08/27/21 10:45	09/02/21 10:10	1020mL/2mL	1000mL/2mL	0.98

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090085</u>							
A1H0964-08	Soil	NWTPH-Dx	08/27/21 08:55	09/02/21 13:08	10.55g/5mL	10g/5mL	0.95
A1H0964-09RE1	Soil	NWTPH-Dx	08/27/21 09:18	09/02/21 13:08	10.97g/5mL	10g/5mL	0.91

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1081092</u>							
A1H0964-07	Water	NWTPH-Gx (MS)	08/27/21 10:45	08/31/21 09:30	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090317</u>							
A1H0964-08	Soil	NWTPH-Gx (MS)	08/27/21 08:55	08/27/21 08:55	16.56g/15mL	5g/5mL	0.91
A1H0964-09	Soil	NWTPH-Gx (MS)	08/27/21 09:18	08/27/21 09:18	15.79g/15mL	5g/5mL	0.95

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1081092</u>							
A1H0964-07	Water	EPA 8260D	08/27/21 10:45	08/31/21 09:30	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090317</u>							
A1H0964-08	Soil	5035A/8260D	08/27/21 08:55	08/27/21 08:55	16.56g/15mL	5g/5mL	0.91
A1H0964-09	Soil	5035A/8260D	08/27/21 09:18	08/27/21 09:18	15.79g/15mL	5g/5mL	0.95

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

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SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3510C (Acid Extraction)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090017</u>							
A1H0964-07	Water	EPA 8270E SIM	08/27/21 10:45	09/01/21 10:14	1010mL/2mL	1000mL/2mL	0.99

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1081075</u>							
A1H0964-08RE1	Soil	EPA 8270E SIM	08/27/21 08:55	08/30/21 14:11	10.62g/5mL	10g/5mL	0.94
A1H0964-09RE1	Soil	EPA 8270E SIM	08/27/21 09:18	08/30/21 14:11	10.88g/5mL	10g/5mL	0.92

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090209</u>							
A1H0964-08	Soil	EPA 6020B	08/27/21 08:55	09/07/21 13:21	0.514g/50mL	0.5g/50mL	0.97
A1H0964-08RE1	Soil	EPA 6020B	08/27/21 08:55	09/07/21 13:21	0.514g/50mL	0.5g/50mL	0.97
A1H0964-09	Soil	EPA 6020B	08/27/21 09:18	09/07/21 13:21	0.493g/50mL	0.5g/50mL	1.01
A1H0964-09RE1	Soil	EPA 6020B	08/27/21 09:18	09/07/21 13:21	0.493g/50mL	0.5g/50mL	1.01

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090298</u>							
A1H0964-07	Water	EPA 6020B (Diss)	08/27/21 10:45	09/09/21 08:44	45mL/50mL	45mL/50mL	1.00

TCLP Metals by EPA 6020B (ICPMS)

Prep: EPA 1311/3015					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1091110</u>							
A1H0964-08	Soil	1311/6020B	08/27/21 08:55	09/29/21 11:30	10mL/50mL	10mL/50mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
-----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1081035</u>							
A1H0964-08	Soil	EPA 8000D	08/27/21 08:55	08/30/21 09:07			NA
A1H0964-09	Soil	EPA 8000D	08/27/21 09:18	08/30/21 09:07			NA

TCLP Extraction by EPA 1311

<u>Prep: EPA 1311 (TCLP)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1091061</u>							
A1H0964-08	Soil	EPA 1311	08/27/21 08:55	09/28/21 17:10	52g/1044.4g	100g/2000g	NA

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-----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- COMP** Sample is a composite of discrete samples. See prep information for details.
- F-11** The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
- H-06** This sample was received, or the analysis requested, outside the recommended holding time.
- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +11%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +13%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +17%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +18%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +2%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +33%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +4%. The results are reported as Estimated Values.
- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +6%. The results are reported as Estimated Values.
- Q-54i** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +8%. The results are reported as Estimated Values.

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u>	Project: <u>EQRB</u>	<u>Report ID:</u>
5741 NE Flanders Street	Project Number: CB319	A1H0964 - 10 06 21 1501
Portland, OR 97213	Project Manager: Jill Betts	

- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- Q-58** Matrix Spike Duplicate QC Sample is actually a Serial Dilution of the Matrix Spike. Reported as MSD for calculation purposes only.
- TCLP** This batch QC sample was prepared with TCLP or SPLP fluid from preparation batch 1091061.
- TCLPa** Limited sample volume. Leachate was prepared using less than the recommended amount of sample per EPA 1311 or 1312. To maintain consistency in leaching, the standard ratio of sample to leachate fluid was maintained.
- TEMP** Sample(s) received outside of recommended temperature. See Case Narrative.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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-----------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.
- "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1H0964 - 10 06 21 1501)

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1H0964 - 10 06 21 1501).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: CB319 Project Manager: Jill Betts	Report ID: A1H0964 - 10 06 21 1501
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APEX LABS COOLER RECEIPT FORM

Client: Coles & Betts Env. Element WO#: A1H0964

Project/Project #: EQRB #CB319

Delivery Info:
 Date/time received: 8/27/11 @ 1255 By: AKC
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 8/27/11 @ 1255 By: AKC
 Chain of Custody included? Yes No Custody seals? Yes No
 Signed/dated by client? Yes No
 Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>6.4</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Gel</u>						
Condition:	<u>Melty</u>						

Cooler out of temp? (Y/N) Possible reason why: Recently sampled
 Green dots applied to out of temperature samples? Yes No
 Out of temperature samples form initiated? Yes No
Sample Inspection: Date/time inspected: 8/28/11 @ 11:45 By: FAG
 All samples intact? Yes No Comments: _____

 Bottle labels/COCs agree? Yes No Comments: _____

 COC/container discrepancies form initiated? Yes No
 Containers/volumes received appropriate for analysis? Yes No Comments: B-16 Nitric poly is field filtered

 Do VOA vials have visible headspace? Yes No NA
 Comments: 3/3 vials B-16 have sed

 Water samples: pH checked: Yes No NA pH appropriate? Yes No NA
 Comments: _____

Additional information:

 Labeled by: FAG Witness: WAS Cooler Inspected by: AKC

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Wednesday, October 6, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A1H1020 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A1H1020, which was received by the laboratory on 8/31/2021 at 12:14:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 5.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
----------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-08 2.5	A1H1020-01	Soil	08/30/21 09:57	08/31/21 12:14
B-08 5	A1H1020-02	Soil	08/30/21 10:03	08/31/21 12:14
B-08 7.5	A1H1020-03	Soil	08/30/21 10:28	08/31/21 12:14
B-08 10	A1H1020-04	Soil	08/30/21 10:32	08/31/21 12:14
B-08 0-10C	A1H1020-05	Soil	08/30/21 09:57	08/31/21 12:14

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-08 0-10C (A1H1020-05)				Matrix: Soil		Batch: 1090114		
Diesel	ND	10.7	25.0	mg/kg dry	1	09/03/21 23:39	NWTPH-Dx	
Oil	290	21.3	50.0	mg/kg dry	1	09/03/21 23:39	NWTPH-Dx	F-03
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/03/21 23:39</i>	<i>NWTPH-Dx</i>

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----------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-08 0-10C (A1H1020-05)				Matrix: Soil		Batch: 1090445		COMP, V-15
Gasoline Range Organics	ND	2.80	5.60	mg/kg dry	50	09/13/21 16:26	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 111 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/13/21 16:26</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/13/21 16:26</i>	<i>NWTPH-Gx (MS)</i>

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-08 0-10C (A1H1020-05)				Matrix: Soil		Batch: 1090445		COMP, V-15
Acetone	ND	560	1120	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Acrylonitrile	ND	56.0	112	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Benzene	74.4	5.60	11.2	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Bromobenzene	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Bromochloromethane	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Bromodichloromethane	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Bromoform	ND	56.0	112	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Bromomethane	ND	560	560	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
2-Butanone (MEK)	ND	280	560	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
n-Butylbenzene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
sec-Butylbenzene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
tert-Butylbenzene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Carbon disulfide	ND	280	560	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Carbon tetrachloride	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Chlorobenzene	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Chloroethane	ND	280	560	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Chloroform	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Chloromethane	ND	140	280	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
2-Chlorotoluene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
4-Chlorotoluene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Dibromochloromethane	ND	56.0	112	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	140	280	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Dibromomethane	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,2-Dichlorobenzene	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,3-Dichlorobenzene	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,4-Dichlorobenzene	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Dichlorodifluoromethane	ND	56.0	112	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,1-Dichloroethane	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,1-Dichloroethene	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
cis-1,2-Dichloroethene	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
trans-1,2-Dichloroethene	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-08 0-10C (A1H1020-05)				Matrix: Soil		Batch: 1090445		COMP, V-15
1,2-Dichloropropane	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,3-Dichloropropane	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
2,2-Dichloropropane	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,1-Dichloropropene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
cis-1,3-Dichloropropene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
trans-1,3-Dichloropropene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Ethylbenzene	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Hexachlorobutadiene	ND	56.0	112	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
2-Hexanone	ND	280	560	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Isopropylbenzene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
4-Isopropyltoluene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Methylene chloride	ND	280	560	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	280	560	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Naphthalene	524	56.0	112	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
n-Propylbenzene	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Styrene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,1,1,2,2-Tetrachloroethane	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Tetrachloroethene (PCE)	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Toluene	77.8	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,2,3-Trichlorobenzene	ND	140	280	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,2,4-Trichlorobenzene	ND	140	280	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,1,1-Trichloroethane	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,1,2-Trichloroethane	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Trichloroethene (TCE)	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Trichlorofluoromethane	ND	56.0	112	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,2,3-Trichloropropane	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,2,4-Trimethylbenzene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
1,3,5-Trimethylbenzene	ND	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
Vinyl chloride	ND	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
m,p-Xylene	58.2	28.0	56.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	
o-Xylene	16.8	14.0	28.0	ug/kg dry	50	09/13/21 16:26	5035A/8260D	J

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-08 0-10C (A1H1020-05)				Matrix: Soil		Batch: 1090445		COMP, V-15
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/13/21 16:26</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/13/21 16:26</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/13/21 16:26</i>	<i>5035A/8260D</i>	

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-08 0-10C (A1H1020-05)				Matrix: Soil		Batch: 1090178		
Acenaphthene	239	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	
Acenaphthylene	1090	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	
Anthracene	1510	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	
Benz(a)anthracene	4030	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	
Benzo(a)pyrene	3580	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	
Benzo(k)fluoranthene	1500	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	1720	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	
Chrysene	3310	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	
Dibenz(a,h)anthracene	401	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	
Fluorene	853	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	1900	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	
Naphthalene	581	5.09	10.2	ug/kg dry	1	09/07/21 20:52	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>09/07/21 20:52</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>106 %</i>		<i>54-127 %</i>		<i>1</i>	<i>09/07/21 20:52</i>	<i>EPA 8270E SIM</i>

B-08 0-10C (A1H1020-05RE1)				Matrix: Soil		Batch: 1090178		
Benzo(b)fluoranthene	3770	50.9	102	ug/kg dry	10	09/08/21 15:45	EPA 8270E SIM	M-05
Fluoranthene	7510	50.9	102	ug/kg dry	10	09/08/21 15:45	EPA 8270E SIM	
Phenanthrene	5970	50.9	102	ug/kg dry	10	09/08/21 15:45	EPA 8270E SIM	
Pyrene	7060	50.9	102	ug/kg dry	10	09/08/21 15:45	EPA 8270E SIM	

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-08 0-10C (A1H1020-05)				Matrix: Soil				
Batch: 1090354								
Antimony	ND	0.546	1.09	mg/kg dry	10	09/10/21 19:54	EPA 6020B	
Barium	69.9	0.546	1.09	mg/kg dry	10	09/10/21 19:54	EPA 6020B	
Cadmium	ND	0.109	0.218	mg/kg dry	10	09/10/21 19:54	EPA 6020B	
Lead	8.27	0.109	0.218	mg/kg dry	10	09/10/21 19:54	EPA 6020B	
Mercury	ND	0.0437	0.0874	mg/kg dry	10	09/10/21 19:54	EPA 6020B	
Silver	ND	0.109	0.218	mg/kg dry	10	09/10/21 19:54	EPA 6020B	

B-08 0-10C (A1H1020-05RE1)				Matrix: Soil				
Batch: 1090354								
Arsenic	1.98	0.546	1.09	mg/kg dry	10	09/13/21 15:34	EPA 6020B	
Chromium	12.9	0.546	1.09	mg/kg dry	10	09/13/21 15:34	EPA 6020B	
Copper	15.9	1.09	2.18	mg/kg dry	10	09/13/21 15:34	EPA 6020B	
Selenium	ND	0.546	1.09	mg/kg dry	10	09/13/21 15:34	EPA 6020B	
Zinc	41.8	2.18	4.37	mg/kg dry	10	09/13/21 15:34	EPA 6020B	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-08 0-10C (A1H1020-05)				Matrix: Soil		Batch: 1090067		
% Solids	92.9	1.00	1.00	%	1	09/03/21 07:37	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090114 - EPA 3546 (Fuels)						Soil						
Blank (1090114-BLK1)						Prepared: 09/03/21 07:29 Analyzed: 09/03/21 22:17						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
Mineral Oil	ND	18.2	36.4	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 87 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1090114-BS1)						Prepared: 09/03/21 07:29 Analyzed: 09/03/21 22:38						
<u>NWTPH-Dx</u>												
Diesel	108	10.0	25.0	mg/kg wet	1	125	---	87	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 90 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090114-DUP1)						Prepared: 09/03/21 07:29 Analyzed: 09/03/21 23:18						
<u>QC Source Sample: Non-SDG (A1H1023-01)</u>												
Diesel	ND	9.67	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	19.3	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
Mineral Oil	96.7	19.3	38.7	mg/kg dry	1	---	99.0	---	---	2	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090114-DUP2)						Prepared: 09/03/21 12:12 Analyzed: 09/04/21 08:24						
<u>QC Source Sample: Non-SDG (A1H0055-01RE1)</u>												
Diesel	ND	11.8	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	64.8	23.7	50.0	mg/kg dry	1	---	70.0	---	---	8	30%	
Mineral Oil	ND	23.7	47.3	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090445 - EPA 5035A						Soil						
Blank (1090445-BLK1)			Prepared: 09/13/21 09:00 Analyzed: 09/13/21 15:32									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 108 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090445-BS2)			Prepared: 09/13/21 09:00 Analyzed: 09/13/21 15:05									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	26.4	2.50	5.00	mg/kg wet	50	25.0	---	106	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 111 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>103 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090445-DUP1)			Prepared: 09/09/21 09:45 Analyzed: 09/13/21 17:20									
<u>QC Source Sample: Non-SDG (A110277-01)</u>												
Gasoline Range Organics	ND	4.00	8.00	mg/kg dry	50	---	4.62	---	---	***	30%	Q-05
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 113 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090445 - EPA 5035A						Soil						
Blank (1090445-BLK1)			Prepared: 09/13/21 09:00 Analyzed: 09/13/21 15:32									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090445 - EPA 5035A						Soil						
Blank (1090445-BLK1)			Prepared: 09/13/21 09:00 Analyzed: 09/13/21 15:32									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 105 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090445 - EPA 5035A						Soil						
Blank (1090445-BLK1)						Prepared: 09/13/21 09:00 Analyzed: 09/13/21 15:32						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (1090445-BS1)						Prepared: 09/13/21 09:00 Analyzed: 09/13/21 14:38						
5035A/8260D												
Acetone	1860	500	1000	ug/kg wet	50	2000	---	93	80-120%	---	---	
Acrylonitrile	1030	50.0	100	ug/kg wet	50	1000	---	103	80-120%	---	---	
Benzene	1140	5.00	10.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
Bromobenzene	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Bromochloromethane	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Bromodichloromethane	1190	25.0	50.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
Bromoform	856	50.0	100	ug/kg wet	50	1000	---	86	80-120%	---	---	
Bromomethane	1330	500	500	ug/kg wet	50	1000	---	133	80-120%	---	---	Q-56
2-Butanone (MEK)	1950	250	500	ug/kg wet	50	2000	---	98	80-120%	---	---	
n-Butylbenzene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
sec-Butylbenzene	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
tert-Butylbenzene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Carbon disulfide	1380	250	500	ug/kg wet	50	1000	---	138	80-120%	---	---	Q-56
Carbon tetrachloride	1250	25.0	50.0	ug/kg wet	50	1000	---	125	80-120%	---	---	Q-56
Chlorobenzene	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Chloroethane	1060	250	500	ug/kg wet	50	1000	---	106	80-120%	---	---	
Chloroform	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Chloromethane	930	125	250	ug/kg wet	50	1000	---	93	80-120%	---	---	
2-Chlorotoluene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
4-Chlorotoluene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Dibromochloromethane	934	50.0	100	ug/kg wet	50	1000	---	93	80-120%	---	---	
1,2-Dibromo-3-chloropropane	904	125	250	ug/kg wet	50	1000	---	90	80-120%	---	---	
1,2-Dibromoethane (EDB)	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Dibromomethane	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,2-Dichlorobenzene	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,3-Dichlorobenzene	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,4-Dichlorobenzene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Dichlorodifluoromethane	932	50.0	100	ug/kg wet	50	1000	---	93	80-120%	---	---	
1,1-Dichloroethane	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090445 - EPA 5035A						Soil						
LCS (1090445-BS1)			Prepared: 09/13/21 09:00 Analyzed: 09/13/21 14:38									
1,2-Dichloroethane (EDC)	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,1-Dichloroethene	1450	12.5	25.0	ug/kg wet	50	1000	---	145	80-120%	---	---	Q-56
cis-1,2-Dichloroethene	1180	12.5	25.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
trans-1,2-Dichloroethene	1170	12.5	25.0	ug/kg wet	50	1000	---	117	80-120%	---	---	
1,2-Dichloropropane	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,3-Dichloropropane	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
2,2-Dichloropropane	1320	25.0	50.0	ug/kg wet	50	1000	---	132	80-120%	---	---	Q-56
1,1-Dichloropropene	1230	25.0	50.0	ug/kg wet	50	1000	---	123	80-120%	---	---	Q-56
cis-1,3-Dichloropropene	1180	25.0	50.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
trans-1,3-Dichloropropene	992	25.0	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Ethylbenzene	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Hexachlorobutadiene	1080	50.0	100	ug/kg wet	50	1000	---	108	80-120%	---	---	
2-Hexanone	1670	250	500	ug/kg wet	50	2000	---	84	80-120%	---	---	
Isopropylbenzene	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
4-Isopropyltoluene	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Methylene chloride	1150	250	500	ug/kg wet	50	1000	---	115	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	1690	250	500	ug/kg wet	50	2000	---	84	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Naphthalene	1010	50.0	100	ug/kg wet	50	1000	---	101	80-120%	---	---	
n-Propylbenzene	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Styrene	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,1,2,2-Tetrachloroethane	955	25.0	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
Tetrachloroethene (PCE)	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Toluene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,2,3-Trichlorobenzene	1100	125	250	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,2,4-Trichlorobenzene	1090	125	250	ug/kg wet	50	1000	---	109	80-120%	---	---	
1,1,1-Trichloroethane	1250	12.5	25.0	ug/kg wet	50	1000	---	125	80-120%	---	---	Q-56
1,1,2-Trichloroethane	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Trichloroethene (TCE)	1220	12.5	25.0	ug/kg wet	50	1000	---	122	80-120%	---	---	Q-56
Trichlorofluoromethane	1040	50.0	100	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,2,3-Trichloropropane	972	25.0	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
1,2,4-Trimethylbenzene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,3,5-Trimethylbenzene	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090445 - EPA 5035A						Soil						
LCS (1090445-BS1)						Prepared: 09/13/21 09:00 Analyzed: 09/13/21 14:38						
Vinyl chloride	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
m,p-Xylene	2000	25.0	50.0	ug/kg wet	50	2000	---	100	80-120%	---	---	
o-Xylene	996	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1090445-DUP1)						Prepared: 09/09/21 09:45 Analyzed: 09/13/21 17:20						
QC Source Sample: Non-SDG (A110277-01)												
Acetone	ND	800	1600	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	80.0	160	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	8.00	16.0	ug/kg dry	50	---	16.6	---	---	***	30%	Q-05
Bromobenzene	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	80.0	160	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	800	800	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	400	800	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	400	800	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	400	800	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	200	400	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	80.0	160	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	200	400	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090445 - EPA 5035A							Soil					
Duplicate (1090445-DUP1)			Prepared: 09/09/21 09:45 Analyzed: 09/13/21 17:20									
QC Source Sample: Non-SDG (A110277-01)												
1,3-Dichlorobenzene	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	80.0	160	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	80.0	160	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	400	800	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	400	800	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	400	800	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	80.0	160	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	200	400	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	200	400	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090445 - EPA 5035A												
Soil												
Duplicate (1090445-DUP1)												
Prepared: 09/09/21 09:45 Analyzed: 09/13/21 17:20												
QC Source Sample: Non-SDG (A110277-01)												
Trichloroethene (TCE)	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	80.0	160	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	40.0	80.0	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	20.0	40.0	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 108 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (1090445-MS1)												
Prepared: 09/09/21 12:00 Analyzed: 09/13/21 20:28												
QC Source Sample: Non-SDG (A110277-07)												
5035A/8260D												
Acetone	3390	829	1660	ug/kg dry	50	3320	ND	102	36-164%	---	---	
Acrylonitrile	1890	82.9	166	ug/kg dry	50	1660	ND	114	65-134%	---	---	
Benzene	1970	8.29	16.6	ug/kg dry	50	1660	ND	119	77-121%	---	---	
Bromobenzene	1710	20.7	41.5	ug/kg dry	50	1660	ND	103	78-121%	---	---	
Bromochloromethane	1900	41.5	82.9	ug/kg dry	50	1660	ND	114	78-125%	---	---	
Bromodichloromethane	1980	41.5	82.9	ug/kg dry	50	1660	ND	120	75-127%	---	---	
Bromoform	1480	82.9	166	ug/kg dry	50	1660	ND	89	67-132%	---	---	
Bromomethane	2360	829	829	ug/kg dry	50	1660	ND	142	53-143%	---	---	Q-54a
2-Butanone (MEK)	3630	415	829	ug/kg dry	50	3320	ND	109	51-148%	---	---	
n-Butylbenzene	1670	41.5	82.9	ug/kg dry	50	1660	ND	101	70-128%	---	---	
sec-Butylbenzene	1780	41.5	82.9	ug/kg dry	50	1660	ND	108	73-126%	---	---	
tert-Butylbenzene	1650	41.5	82.9	ug/kg dry	50	1660	ND	99	73-125%	---	---	
Carbon disulfide	2250	415	829	ug/kg dry	50	1660	ND	136	63-132%	---	---	Q-54b
Carbon tetrachloride	2010	41.5	82.9	ug/kg dry	50	1660	ND	121	70-135%	---	---	Q-54f
Chlorobenzene	1740	20.7	41.5	ug/kg dry	50	1660	ND	105	79-120%	---	---	
Chloroethane	2530	415	829	ug/kg dry	50	1660	ND	152	59-139%	---	---	Q-01
Chloroform	1980	41.5	82.9	ug/kg dry	50	1660	ND	119	78-123%	---	---	
Chloromethane	1590	207	415	ug/kg dry	50	1660	ND	96	50-136%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090445 - EPA 5035A						Soil						
Matrix Spike (1090445-MS1)						Prepared: 09/09/21 12:00 Analyzed: 09/13/21 20:28						
QC Source Sample: Non-SDG (A110277-07)												
2-Chlorotoluene	1720	41.5	82.9	ug/kg dry	50	1660	ND	104	75-122%	---	---	
4-Chlorotoluene	1680	41.5	82.9	ug/kg dry	50	1660	ND	101	72-124%	---	---	
Dibromochloromethane	1560	82.9	166	ug/kg dry	50	1660	ND	94	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1470	207	415	ug/kg dry	50	1660	ND	88	61-132%	---	---	
1,2-Dibromoethane (EDB)	1800	41.5	82.9	ug/kg dry	50	1660	ND	109	78-122%	---	---	
Dibromomethane	1860	41.5	82.9	ug/kg dry	50	1660	ND	112	78-125%	---	---	
1,2-Dichlorobenzene	1670	20.7	41.5	ug/kg dry	50	1660	ND	101	78-121%	---	---	
1,3-Dichlorobenzene	1700	20.7	41.5	ug/kg dry	50	1660	ND	102	77-121%	---	---	
1,4-Dichlorobenzene	1690	20.7	41.5	ug/kg dry	50	1660	ND	102	75-120%	---	---	
Dichlorodifluoromethane	1530	82.9	166	ug/kg dry	50	1660	ND	92	29-149%	---	---	
1,1-Dichloroethane	2050	20.7	41.5	ug/kg dry	50	1660	ND	123	76-125%	---	---	
1,2-Dichloroethane (EDC)	1870	20.7	41.5	ug/kg dry	50	1660	ND	113	73-128%	---	---	
1,1-Dichloroethene	2480	20.7	41.5	ug/kg dry	50	1660	ND	149	70-131%	---	---	Q-54d
cis-1,2-Dichloroethene	2020	20.7	41.5	ug/kg dry	50	1660	ND	122	77-123%	---	---	
trans-1,2-Dichloroethene	2010	20.7	41.5	ug/kg dry	50	1660	ND	121	74-125%	---	---	
1,2-Dichloropropane	1950	20.7	41.5	ug/kg dry	50	1660	ND	118	76-123%	---	---	
1,3-Dichloropropane	1770	41.5	82.9	ug/kg dry	50	1660	ND	107	77-121%	---	---	
2,2-Dichloropropane	1930	41.5	82.9	ug/kg dry	50	1660	ND	116	67-133%	---	---	Q-54
1,1-Dichloropropene	2030	41.5	82.9	ug/kg dry	50	1660	ND	122	76-125%	---	---	Q-54e
cis-1,3-Dichloropropene	1930	41.5	82.9	ug/kg dry	50	1660	ND	116	74-126%	---	---	
trans-1,3-Dichloropropene	1630	41.5	82.9	ug/kg dry	50	1660	ND	99	71-130%	---	---	
Ethylbenzene	1750	20.7	41.5	ug/kg dry	50	1660	57.2	102	76-122%	---	---	
Hexachlorobutadiene	1590	82.9	166	ug/kg dry	50	1660	ND	96	61-135%	---	---	
2-Hexanone	2980	41.5	82.9	ug/kg dry	50	3320	ND	90	53-145%	---	---	
Isopropylbenzene	1790	41.5	82.9	ug/kg dry	50	1660	ND	108	68-134%	---	---	
4-Isopropyltoluene	1740	41.5	82.9	ug/kg dry	50	1660	ND	105	73-127%	---	---	
Methylene chloride	1940	41.5	82.9	ug/kg dry	50	1660	ND	117	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	3020	41.5	82.9	ug/kg dry	50	3320	ND	91	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1900	41.5	82.9	ug/kg dry	50	1660	ND	115	73-125%	---	---	
Naphthalene	1660	82.9	166	ug/kg dry	50	1660	ND	100	62-129%	---	---	
n-Propylbenzene	1780	20.7	41.5	ug/kg dry	50	1660	60.6	104	73-125%	---	---	
Styrene	1750	41.5	82.9	ug/kg dry	50	1660	ND	105	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1770	20.7	41.5	ug/kg dry	50	1660	ND	106	78-125%	---	---	

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Darrell Auvil, Client Services Manager



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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090445 - EPA 5035A						Soil						
Matrix Spike (1090445-MS1)						Prepared: 09/09/21 12:00 Analyzed: 09/13/21 20:28						
QC Source Sample: Non-SDG (A110277-07)												
1,1,2,2-Tetrachloroethane	1610	41.5	82.9	ug/kg dry	50	1660	ND	97	70-124%	---	---	
Tetrachloroethene (PCE)	1830	20.7	41.5	ug/kg dry	50	1660	ND	110	73-128%	---	---	
Toluene	1730	41.5	82.9	ug/kg dry	50	1660	ND	104	77-121%	---	---	
1,2,3-Trichlorobenzene	1700	207	415	ug/kg dry	50	1660	ND	103	66-130%	---	---	
1,2,4-Trichlorobenzene	1720	207	415	ug/kg dry	50	1660	ND	103	67-129%	---	---	
1,1,1-Trichloroethane	2110	20.7	41.5	ug/kg dry	50	1660	ND	127	73-130%	---	---	Q-54f
1,1,2-Trichloroethane	1790	20.7	41.5	ug/kg dry	50	1660	ND	108	78-121%	---	---	
Trichloroethene (TCE)	2060	20.7	41.5	ug/kg dry	50	1660	ND	124	77-123%	---	---	Q-54c
Trichlorofluoromethane	2180	82.9	166	ug/kg dry	50	1660	ND	131	62-140%	---	---	
1,2,3-Trichloropropane	1600	41.5	82.9	ug/kg dry	50	1660	ND	96	73-125%	---	---	
1,2,4-Trimethylbenzene	1820	41.5	82.9	ug/kg dry	50	1660	82.9	105	75-123%	---	---	
1,3,5-Trimethylbenzene	1760	41.5	82.9	ug/kg dry	50	1660	ND	106	73-124%	---	---	
Vinyl chloride	1780	20.7	41.5	ug/kg dry	50	1660	ND	107	56-135%	---	---	
m,p-Xylene	3340	41.5	82.9	ug/kg dry	50	3320	ND	101	77-124%	---	---	
o-Xylene	1670	20.7	41.5	ug/kg dry	50	1660	ND	101	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 109 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>"</i>						

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090178 - EPA 3546						Soil						
Blank (1090178-BLK1)			Prepared: 09/07/21 08:04 Analyzed: 09/07/21 11:32									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 90 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>96 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1090178-BS1)			Prepared: 09/07/21 08:04 Analyzed: 09/07/21 11:58									
<u>EPA 8270E SIM</u>												
Acenaphthene	721	5.00	10.0	ug/kg wet	1	800	---	90	40-123%	---	---	
Acenaphthylene	746	5.00	10.0	ug/kg wet	1	800	---	93	32-132%	---	---	
Anthracene	717	5.00	10.0	ug/kg wet	1	800	---	90	47-123%	---	---	
Benz(a)anthracene	705	5.00	10.0	ug/kg wet	1	800	---	88	49-126%	---	---	
Benzo(a)pyrene	718	5.00	10.0	ug/kg wet	1	800	---	90	45-129%	---	---	
Benzo(b)fluoranthene	738	5.00	10.0	ug/kg wet	1	800	---	92	45-132%	---	---	
Benzo(k)fluoranthene	821	5.00	10.0	ug/kg wet	1	800	---	103	47-132%	---	---	
Benzo(g,h,i)perylene	715	5.00	10.0	ug/kg wet	1	800	---	89	43-134%	---	---	
Chrysene	721	5.00	10.0	ug/kg wet	1	800	---	90	50-124%	---	---	
Dibenz(a,h)anthracene	713	5.00	10.0	ug/kg wet	1	800	---	89	45-134%	---	---	
Fluoranthene	678	5.00	10.0	ug/kg wet	1	800	---	85	50-127%	---	---	
Fluorene	700	5.00	10.0	ug/kg wet	1	800	---	88	43-125%	---	---	

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090178 - EPA 3546												
Soil												
LCS (1090178-BS1)												
						Prepared: 09/07/21 08:04 Analyzed: 09/07/21 11:58						
Indeno(1,2,3-cd)pyrene	709	5.00	10.0	ug/kg wet	1	800	---	89	45-133%	---	---	
Naphthalene	699	5.00	10.0	ug/kg wet	1	800	---	87	35-123%	---	---	
Phenanthrene	720	5.00	10.0	ug/kg wet	1	800	---	90	50-121%	---	---	
Pyrene	669	5.00	10.0	ug/kg wet	1	800	---	84	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 88 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>91 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1090178-DUP1)												
						Prepared: 09/07/21 08:04 Analyzed: 09/07/21 13:12						
QC Source Sample: Non-SDG (A1H0899-06)												
Acenaphthene	ND	153	153	ug/kg dry	1	---	ND	---	---	---	30%	R-02
Acenaphthylene	ND	37.0	37.0	ug/kg dry	1	---	ND	---	---	---	30%	R-02
Anthracene	ND	67.1	67.1	ug/kg dry	1	---	ND	---	---	---	30%	R-02
Benz(a)anthracene	ND	6.84	13.7	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(a)pyrene	ND	6.84	13.7	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	6.84	13.7	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	6.84	13.7	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	6.84	13.7	ug/kg dry	1	---	ND	---	---	---	30%	
Chrysene	ND	6.84	13.7	ug/kg dry	1	---	ND	---	---	---	30%	
Dibenz(a,h)anthracene	ND	6.84	13.7	ug/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	15.1	6.84	13.7	ug/kg dry	1	---	17.3	---	---	14	30%	
Fluorene	243	6.84	13.7	ug/kg dry	1	---	279	---	---	14	30%	
Indeno(1,2,3-cd)pyrene	ND	6.84	13.7	ug/kg dry	1	---	ND	---	---	---	30%	
Naphthalene	ND	43.8	43.8	ug/kg dry	1	---	ND	---	---	---	30%	R-02
Phenanthrene	622	6.84	13.7	ug/kg dry	1	---	691	---	---	10	30%	
Pyrene	32.2	6.84	13.7	ug/kg dry	1	---	38.9	---	---	19	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>83 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (1090178-MS1)												
						Prepared: 09/07/21 08:04 Analyzed: 09/07/21 14:03						
QC Source Sample: Non-SDG (A1H0136-09)												
EPA 8270E SIM												
Acenaphthene	738	5.28	10.6	ug/kg dry	1	845	ND	87	40-123%	---	---	
Acenaphthylene	764	5.28	10.6	ug/kg dry	1	845	ND	90	32-132%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090178 - EPA 3546						Soil						
Matrix Spike (1090178-MS1)						Prepared: 09/07/21 08:04 Analyzed: 09/07/21 14:03						
QC Source Sample: Non-SDG (A110136-09)												
Anthracene	718	5.28	10.6	ug/kg dry	1	845	ND	85	47-123%	---	---	
Benz(a)anthracene	694	5.28	10.6	ug/kg dry	1	845	ND	82	49-126%	---	---	
Benzo(a)pyrene	678	5.28	10.6	ug/kg dry	1	845	ND	80	45-129%	---	---	
Benzo(b)fluoranthene	747	5.28	10.6	ug/kg dry	1	845	ND	88	45-132%	---	---	
Benzo(k)fluoranthene	812	5.28	10.6	ug/kg dry	1	845	ND	96	47-132%	---	---	
Benzo(g,h,i)perylene	698	5.28	10.6	ug/kg dry	1	845	ND	83	43-134%	---	---	
Chrysene	719	5.28	10.6	ug/kg dry	1	845	ND	85	50-124%	---	---	
Dibenz(a,h)anthracene	725	5.28	10.6	ug/kg dry	1	845	ND	86	45-134%	---	---	
Fluoranthene	691	5.28	10.6	ug/kg dry	1	845	ND	82	50-127%	---	---	
Fluorene	719	5.28	10.6	ug/kg dry	1	845	ND	85	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	679	5.28	10.6	ug/kg dry	1	845	ND	80	45-133%	---	---	
Naphthalene	730	5.28	10.6	ug/kg dry	1	845	ND	86	35-123%	---	---	
Phenanthrene	735	5.28	10.6	ug/kg dry	1	845	ND	87	50-121%	---	---	
Pyrene	668	5.28	10.6	ug/kg dry	1	845	ND	79	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>86 %</i>		<i>54-127 %</i>		<i>"</i>						

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090354 - EPA 3051A						Soil						
Blank (1090354-BLK1)						Prepared: 09/10/21 08:44 Analyzed: 09/10/21 18:52						
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	
Blank (1090354-BLK2)						Prepared: 09/10/21 08:44 Analyzed: 09/13/21 14:33						
<u>EPA 6020B</u>												
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	Q-16
LCS (1090354-BS1)						Prepared: 09/10/21 08:44 Analyzed: 09/10/21 18:57						
<u>EPA 6020B</u>												
Antimony	24.8	0.500	1.00	mg/kg wet	10	25.0	---	99	80-120%	---	---	
Arsenic	49.4	0.500	1.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	
Barium	51.4	0.500	1.00	mg/kg wet	10	50.0	---	103	80-120%	---	---	
Cadmium	48.8	0.100	0.200	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Chromium	49.3	0.500	1.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	
Copper	50.5	1.00	2.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Lead	51.9	0.100	0.200	mg/kg wet	10	50.0	---	104	80-120%	---	---	
Mercury	1.01	0.0400	0.0800	mg/kg wet	10	1.00	---	101	80-120%	---	---	
Silver	27.1	0.100	0.200	mg/kg wet	10	25.0	---	108	80-120%	---	---	
Zinc	49.5	2.00	4.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	
LCS (1090354-BS2)						Prepared: 09/10/21 08:44 Analyzed: 09/13/21 14:38						
<u>EPA 6020B</u>												
Selenium	24.9	0.500	1.00	mg/kg wet	10	25.0	---	100	80-120%	---	---	Q-16
Duplicate (1090354-DUP1)						Prepared: 09/10/21 08:44 Analyzed: 09/10/21 19:22						

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ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090354 - EPA 3051A						Soil						
Matrix Spike (1090354-MS2)						Prepared: 09/10/21 08:44 Analyzed: 09/13/21 15:09						
<u>QC Source Sample: Non-SDG (A1H0968-02RE1)</u>												
Selenium	26.1	0.507	1.01	mg/kg dry	10	25.3	ND	103	75-125%	---	---	Q-16

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090067 - Total Solids (Dry Weight)							Soil					
Duplicate (1090067-DUP1)			Prepared: 09/02/21 09:06 Analyzed: 09/03/21 07:37									
<u>QC Source Sample: Non-SDG (A1H0996-02)</u>												
% Solids	98.0	1.00	1.00	%	1	---	97.8	---	---	0.2	10%	
Duplicate (1090067-DUP2)			Prepared: 09/02/21 09:06 Analyzed: 09/03/21 07:37									
<u>QC Source Sample: Non-SDG (A1H0017-03)</u>												
% Solids	63.8	1.00	1.00	%	1	---	63.6	---	---	0.4	10%	
Duplicate (1090067-DUP3)			Prepared: 09/02/21 09:06 Analyzed: 09/03/21 07:37									
<u>QC Source Sample: Non-SDG (A1H0033-01)</u>												
% Solids	83.8	1.00	1.00	%	1	---	85.5	---	---	2	10%	
Duplicate (1090067-DUP4)			Prepared: 09/02/21 09:06 Analyzed: 09/03/21 07:37									
<u>QC Source Sample: Non-SDG (A1H0036-03)</u>												
% Solids	86.8	1.00	1.00	%	1	---	86.3	---	---	0.5	10%	
Duplicate (1090067-DUP5)			Prepared: 09/02/21 09:06 Analyzed: 09/03/21 07:37									
<u>QC Source Sample: Non-SDG (A1H0037-07)</u>												
% Solids	79.8	1.00	1.00	%	1	---	79.8	---	---	0.01	10%	
Duplicate (1090067-DUP6)			Prepared: 09/02/21 18:24 Analyzed: 09/03/21 07:37									
<u>QC Source Sample: Non-SDG (A1H0055-01)</u>												
% Solids	81.3	1.00	1.00	%	1	---	81.6	---	---	0.4	10%	
Duplicate (1090067-DUP7)			Prepared: 09/02/21 18:24 Analyzed: 09/03/21 07:37									
<u>QC Source Sample: Non-SDG (A1H0055-02)</u>												
% Solids	80.9	1.00	1.00	%	1	---	80.4	---	---	0.6	10%	
Duplicate (1090067-DUP8)			Prepared: 09/02/21 20:55 Analyzed: 09/03/21 07:37									
<u>QC Source Sample: Non-SDG (A1H0940-12)</u>												
% Solids	98.5	1.00	1.00	%	1	---	98.5	---	---	0.003	10%	

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	--------------------	-------	----------	-----------------	------------------	-------	-----------------	-----	--------------	-------

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090114</u>							
A1H1020-05	Soil	NWTPH-Dx	08/30/21 09:57	09/03/21 12:12	10.1g/5mL	10g/5mL	0.99

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090445</u>							
A1H1020-05	Soil	NWTPH-Gx (MS)	08/30/21 09:57	08/30/21 09:57	20.66g/20mL	5g/5mL	0.97

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090445</u>							
A1H1020-05	Soil	5035A/8260D	08/30/21 09:57	08/30/21 09:57	20.66g/20mL	5g/5mL	0.97

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090178</u>							
A1H1020-05	Soil	EPA 8270E SIM	08/30/21 09:57	09/07/21 08:04	10.57g/5mL	10g/5mL	0.95
A1H1020-05RE1	Soil	EPA 8270E SIM	08/30/21 09:57	09/07/21 08:04	10.57g/5mL	10g/5mL	0.95

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090354</u>							
A1H1020-05	Soil	EPA 6020B	08/30/21 09:57	09/10/21 08:44	0.493g/50mL	0.5g/50mL	1.01
A1H1020-05RE1	Soil	EPA 6020B	08/30/21 09:57	09/10/21 08:44	0.493g/50mL	0.5g/50mL	1.01

Percent Dry Weight

Prep: Total Solids (Dry Weight)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090067</u>							
A1H1020-05	Soil	EPA 8000D	08/30/21 09:57	09/02/21 09:06			NA

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: EQRB

Project Number: 319

Project Manager: Jill Betts

Report ID:

A1H1020 - 10 06 21 1050

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- COMP Sample is a composite of discrete samples. See prep information for details.
- F-03 The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.
- J Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-05 Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- Q-01 Spike recovery and/or RPD is outside acceptance limits.
- Q-04 Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05 Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-16 Reanalysis of an original Batch QC sample.
- Q-54 Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +12%. The results are reported as Estimated Values.
- Q-54a Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +13%. The results are reported as Estimated Values.
- Q-54b Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +18%. The results are reported as Estimated Values.
- Q-54c Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +2%. The results are reported as Estimated Values.
- Q-54d Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +25%. The results are reported as Estimated Values.
- Q-54e Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +3%. The results are reported as Estimated Values.
- Q-54f Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
- Q-56 Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-02 The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- V-15 Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1H1020 - 10 06 21 1050).

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1H1020 - 10 06 21 1050).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

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Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1H1020 - 10 06 21 1050
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APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Environmental Consulting LLC Element WO#: A1 H1020

Project/Project #: EQRB #319

Delivery Info:
 Date/time received: 8/31/21 @ 1214 By: JF
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 8/31/21 @ 1215 By: AKK

Chain of Custody included? Yes No Custody seals? Yes No

Signed/dated by client? Yes No

Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>5.8</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Gel</u>						
Condition:	<u>Good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____

Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 8/31/21 @ 1256 By: HAS

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: _____

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: _____

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA

Comments: _____

Additional information:

Labeled by: HAS Witness: [Signature] Cooler Inspected by: AKK



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, October 6, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A110084 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A110084, which was received by the laboratory on 9/2/2021 at 8:25:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler#1 5.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B33 7.5-9	A110084-01	Soil	09/01/21 12:20	09/02/21 08:25
B33 10-11.5	A110084-02	Soil	09/01/21 12:27	09/02/21 08:25
B33 12.5-14	A110084-03	Soil	09/01/21 12:35	09/02/21 08:25
B33 15-16.5	A110084-04	Soil	09/01/21 13:05	09/02/21 08:25
B33 17.5-19	A110084-05	Soil	09/01/21 14:30	09/02/21 08:25
B33 20-21.5	A110084-06	Soil	09/01/21 14:40	09/02/21 08:25
B33 22.5-24	A110084-07	Soil	09/01/21 14:55	09/02/21 08:25
B33 25-26.5	A110084-08	Soil	09/01/21 15:15	09/02/21 08:25
B33 10-26.5	A110084-09	Soil	09/01/21 12:27	09/02/21 08:25

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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 7.5-9 (A110084-01)			Matrix: Soil		Batch: 1090287			
Diesel	ND	12.6	25.2	mg/kg dry	1	09/09/21 23:46	NWTPH-Dx	
Oil	282	25.2	50.4	mg/kg dry	1	09/09/21 23:46	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 94 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/09/21 23:46</i>	<i>NWTPH-Dx</i>	
B33 15-16.5 (A110084-04)			Matrix: Soil		Batch: 1090288			
Diesel	27400	502	1000	mg/kg dry	40	09/09/21 16:53	NWTPH-Dx	F-13, F-15
Oil	26000	1000	2010	mg/kg dry	40	09/09/21 16:53	NWTPH-Dx	F-16
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: %</i>		<i>Limits: 50-150 %</i>	<i>40</i>	<i>09/09/21 16:53</i>	<i>NWTPH-Dx</i>	<i>S-01</i>
B33 10-26.5 (A110084-09)			Matrix: Soil		Batch: 1090287			
Diesel	2310	133	266	mg/kg dry	10	09/10/21 00:09	NWTPH-Dx	F-13, F-15
Oil	3370	266	532	mg/kg dry	10	09/10/21 00:09	NWTPH-Dx	F-16
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>	<i>10</i>	<i>09/10/21 00:09</i>	<i>NWTPH-Dx</i>	<i>S-05</i>

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ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 7.5-9 (A110084-01)				Matrix: Soil		Batch: 1090527		V-15
Gasoline Range Organics	ND	3.57	7.13	mg/kg dry	50	09/15/21 15:29	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/15/21 15:29</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/15/21 15:29</i>	<i>NWTPH-Gx (MS)</i>
B33 15-16.5 (A110084-04)				Matrix: Soil		Batch: 1090527		V-15
Gasoline Range Organics	353	3.48	6.97	mg/kg dry	50	09/15/21 15:56	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 220 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/15/21 15:56</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>110 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/15/21 15:56</i>	<i>NWTPH-Gx (MS)</i>
B33 10-26.5 (A110084-09)				Matrix: Soil		Batch: 1090527		COMP, V-15
Gasoline Range Organics	63.7	3.82	7.64	mg/kg dry	50	09/15/21 15:03	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 165 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/15/21 15:03</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/15/21 15:03</i>	<i>NWTPH-Gx (MS)</i>

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 7.5-9 (A110084-01)				Matrix: Soil		Batch: 1090527		V-15
Acetone	ND	713	1430	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Acrylonitrile	ND	71.3	143	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Benzene	ND	7.13	14.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Bromobenzene	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Bromochloromethane	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Bromodichloromethane	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Bromoform	ND	71.3	143	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Bromomethane	ND	713	713	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
2-Butanone (MEK)	ND	357	713	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
n-Butylbenzene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
sec-Butylbenzene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
tert-Butylbenzene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Carbon disulfide	ND	357	713	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Carbon tetrachloride	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Chlorobenzene	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Chloroethane	ND	357	713	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Chloroform	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Chloromethane	ND	178	357	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
2-Chlorotoluene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
4-Chlorotoluene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Dibromochloromethane	ND	71.3	143	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	178	357	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Dibromomethane	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,2-Dichlorobenzene	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,3-Dichlorobenzene	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,4-Dichlorobenzene	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Dichlorodifluoromethane	ND	71.3	143	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,1-Dichloroethane	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,1-Dichloroethene	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
cis-1,2-Dichloroethene	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
trans-1,2-Dichloroethene	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 7.5-9 (A110084-01)				Matrix: Soil		Batch: 1090527		V-15
1,2-Dichloropropane	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,3-Dichloropropane	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
2,2-Dichloropropane	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,1-Dichloropropene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
cis-1,3-Dichloropropene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
trans-1,3-Dichloropropene	ND	71.3	143	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Ethylbenzene	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Hexachlorobutadiene	ND	71.3	143	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
2-Hexanone	ND	357	713	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Isopropylbenzene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
4-Isopropyltoluene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Methylene chloride	ND	357	713	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	357	713	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Naphthalene	ND	143	143	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
n-Propylbenzene	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Styrene	ND	71.3	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Tetrachloroethene (PCE)	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Toluene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,2,3-Trichlorobenzene	ND	178	357	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,2,4-Trichlorobenzene	ND	357	357	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,1,1-Trichloroethane	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,1,2-Trichloroethane	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Trichloroethene (TCE)	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Trichlorofluoromethane	ND	71.3	143	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,2,3-Trichloropropane	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,2,4-Trimethylbenzene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
1,3,5-Trimethylbenzene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
Vinyl chloride	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
m,p-Xylene	ND	35.7	71.3	ug/kg dry	50	09/15/21 15:29	5035A/8260D	
o-Xylene	ND	17.8	35.7	ug/kg dry	50	09/15/21 15:29	5035A/8260D	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 7.5-9 (A110084-01)				Matrix: Soil		Batch: 1090527		V-15
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		09/15/21 15:29	5035A/8260D	
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		09/15/21 15:29	5035A/8260D	
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		09/15/21 15:29	5035A/8260D	
B33 15-16.5 (A110084-04)				Matrix: Soil		Batch: 1090527		V-15
Acetone	ND	697	1390	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Acrylonitrile	ND	69.7	139	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Benzene	ND	6.97	13.9	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Bromobenzene	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Bromochloromethane	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Bromodichloromethane	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Bromoform	ND	69.7	139	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Bromomethane	ND	697	697	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
2-Butanone (MEK)	ND	348	697	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
n-Butylbenzene	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
sec-Butylbenzene	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
tert-Butylbenzene	ND	383	383	ug/kg dry	50	09/15/21 15:56	5035A/8260D	R-02
Carbon disulfide	ND	348	697	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Carbon tetrachloride	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Chlorobenzene	ND	34.8	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Chloroethane	ND	348	697	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Chloroform	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Chloromethane	ND	174	348	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
2-Chlorotoluene	ND	139	139	ug/kg dry	50	09/15/21 15:56	5035A/8260D	R-02
4-Chlorotoluene	ND	69.7	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Dibromochloromethane	ND	69.7	139	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	174	348	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Dibromomethane	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,2-Dichlorobenzene	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,3-Dichlorobenzene	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,4-Dichlorobenzene	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Dichlorodifluoromethane	ND	69.7	139	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,1-Dichloroethane	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 15-16.5 (A110084-04)				Matrix: Soil		Batch: 1090527		V-15
1,2-Dichloroethane (EDC)	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,1-Dichloroethene	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
cis-1,2-Dichloroethene	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
trans-1,2-Dichloroethene	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,2-Dichloropropane	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,3-Dichloropropane	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
2,2-Dichloropropane	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,1-Dichloropropene	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
cis-1,3-Dichloropropene	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
trans-1,3-Dichloropropene	ND	69.7	139	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Ethylbenzene	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Hexachlorobutadiene	ND	69.7	139	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
2-Hexanone	ND	697	697	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Isopropylbenzene	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
4-Isopropyltoluene	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Methylene chloride	ND	348	697	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	348	697	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Naphthalene	ND	348	348	ug/kg dry	50	09/15/21 15:56	5035A/8260D	R-02
n-Propylbenzene	ND	34.8	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Styrene	ND	69.7	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	2020	2020	ug/kg dry	50	09/15/21 15:56	5035A/8260D	R-02
Tetrachloroethene (PCE)	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Toluene	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,2,3-Trichlorobenzene	ND	174	348	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,2,4-Trichlorobenzene	ND	348	348	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,1,1-Trichloroethane	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,1,2-Trichloroethane	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Trichloroethene (TCE)	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Trichlorofluoromethane	ND	69.7	139	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,2,3-Trichloropropane	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
1,2,4-Trimethylbenzene	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 15-16.5 (A110084-04)				Matrix: Soil		Batch: 1090527		V-15
1,3,5-Trimethylbenzene	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
Vinyl chloride	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
m,p-Xylene	ND	34.8	69.7	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
o-Xylene	ND	17.4	34.8	ug/kg dry	50	09/15/21 15:56	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/15/21 15:56</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/15/21 15:56</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/15/21 15:56</i>	<i>5035A/8260D</i>	
B33 10-26.5 (A110084-09)				Matrix: Soil		Batch: 1090527		COMP, V-15
Acetone	ND	764	1530	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Acrylonitrile	ND	76.4	153	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Benzene	ND	7.64	15.3	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Bromobenzene	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Bromochloromethane	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Bromodichloromethane	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Bromoform	ND	76.4	153	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Bromomethane	ND	764	764	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
2-Butanone (MEK)	ND	382	764	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
n-Butylbenzene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
sec-Butylbenzene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
tert-Butylbenzene	ND	76.4	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Carbon disulfide	ND	382	764	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Carbon tetrachloride	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Chlorobenzene	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Chloroethane	ND	382	764	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Chloroform	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Chloromethane	ND	191	382	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
2-Chlorotoluene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
4-Chlorotoluene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Dibromochloromethane	ND	76.4	153	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	191	382	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Dibromomethane	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,2-Dichlorobenzene	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 10-26.5 (A110084-09)				Matrix: Soil		Batch: 1090527		COMP, V-15
1,3-Dichlorobenzene	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,4-Dichlorobenzene	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Dichlorodifluoromethane	ND	76.4	153	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,1-Dichloroethane	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,1-Dichloroethene	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
cis-1,2-Dichloroethene	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
trans-1,2-Dichloroethene	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,2-Dichloropropane	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,3-Dichloropropane	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
2,2-Dichloropropane	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,1-Dichloropropene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
cis-1,3-Dichloropropene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
trans-1,3-Dichloropropene	ND	76.4	153	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Ethylbenzene	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Hexachlorobutadiene	ND	76.4	153	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
2-Hexanone	ND	382	764	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Isopropylbenzene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
4-Isopropyltoluene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Methylene chloride	ND	382	764	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	382	764	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Naphthalene	ND	153	153	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
n-Propylbenzene	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Styrene	ND	76.4	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	611	611	ug/kg dry	50	09/15/21 15:03	5035A/8260D	R-02
Tetrachloroethene (PCE)	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
Toluene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,2,3-Trichlorobenzene	ND	191	382	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,2,4-Trichlorobenzene	ND	382	382	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,1,1-Trichloroethane	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	
1,1,2-Trichloroethane	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B33 10-26.5 (A110084-09)				Matrix: Soil		Batch: 1090527		COMP, V-15	
Trichloroethene (TCE)	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D		
Trichlorofluoromethane	ND	76.4	153	ug/kg dry	50	09/15/21 15:03	5035A/8260D		
1,2,3-Trichloropropane	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D		
1,2,4-Trimethylbenzene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D		
1,3,5-Trimethylbenzene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D		
Vinyl chloride	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D		
m,p-Xylene	ND	38.2	76.4	ug/kg dry	50	09/15/21 15:03	5035A/8260D		
o-Xylene	ND	19.1	38.2	ug/kg dry	50	09/15/21 15:03	5035A/8260D		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/15/21 15:03</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>				<i>97 %</i>		<i>80-120 %</i>	<i>1</i>	<i>09/15/21 15:03</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>				<i>99 %</i>		<i>79-120 %</i>	<i>1</i>	<i>09/15/21 15:03</i>	<i>5035A/8260D</i>

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ANALYTICAL SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 15-16.5 (A110084-04RE1)				Matrix: Soil		Batch: 1090344		C-07
Aroclor 1016	ND	6.38	12.8	ug/kg dry	1	09/13/21 12:07	EPA 8082A	
Aroclor 1221	ND	6.38	12.8	ug/kg dry	1	09/13/21 12:07	EPA 8082A	
Aroclor 1232	ND	6.38	12.8	ug/kg dry	1	09/13/21 12:07	EPA 8082A	
Aroclor 1242	ND	6.38	12.8	ug/kg dry	1	09/13/21 12:07	EPA 8082A	
Aroclor 1248	ND	6.38	12.8	ug/kg dry	1	09/13/21 12:07	EPA 8082A	
Aroclor 1254	ND	6.38	12.8	ug/kg dry	1	09/13/21 12:07	EPA 8082A	
Aroclor 1260	ND	6.38	12.8	ug/kg dry	1	09/13/21 12:07	EPA 8082A	
<i>Surrogate: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 76 %</i>		<i>Limits: 60-125 %</i>		<i>1</i>	<i>09/13/21 12:07</i>	<i>EPA 8082A</i>

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 7.5-9 (A110084-01RE1)				Matrix: Soil		Batch: 1090326		
Acenaphthene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Acenaphthylene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Anthracene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Benz(a)anthracene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Benzo(a)pyrene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Chrysene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Fluoranthene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Fluorene	7.21	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	J
Indeno(1,2,3-cd)pyrene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Naphthalene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Phenanthrene	13.7	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
Pyrene	ND	6.31	12.6	ug/kg dry	1	09/10/21 17:25	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 70 %</i>		<i>Limits: 44-120 %</i>	<i>1</i>	<i>09/10/21 17:25</i>	<i>EPA 8270E SIM</i>	
<i>p-Terphenyl-d14 (Surr)</i>		<i>86 %</i>		<i>54-127 %</i>	<i>1</i>	<i>09/10/21 17:25</i>	<i>EPA 8270E SIM</i>	

B33 10-26.5 (A110084-09)				Matrix: Soil		Batch: 1090326		
Acenaphthene	257	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	J
Acenaphthylene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
Anthracene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
Benz(a)anthracene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
Benzo(a)pyrene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
Chrysene	ND	482	482	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	R-02
Dibenz(a,h)anthracene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
Fluoranthene	181	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	J
Fluorene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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 503-718-2323
 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 10-26.5 (A110084-09)				Matrix: Soil		Batch: 1090326		
Naphthalene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
Phenanthrene	ND	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
Pyrene	284	134	268	ug/kg dry	20	09/10/21 00:43	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 68 %</i>		<i>Limits: 44-120 %</i>		<i>20</i>	<i>09/10/21 00:43</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>76 %</i>		<i>54-127 %</i>		<i>20</i>	<i>09/10/21 00:43</i>	<i>EPA 8270E SIM</i>

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ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 15-16.5 (A110084-04)				Matrix: Soil		Batch: 1090326		
Acenaphthene	1550	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	Q-42
Acenaphthylene	ND	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Anthracene	ND	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Benz(a)anthracene	ND	858	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Benzo(a)pyrene	ND	1280	1280	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Benzo(b)fluoranthene	ND	1280	1280	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Benzo(k)fluoranthene	ND	642	1280	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Benzo(g,h,i)perylene	ND	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Chrysene	ND	1960	1960	ug/kg dry	100	09/09/21 19:40	EPA 8270E	R-02
Dibenz(a,h)anthracene	ND	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Fluoranthene	893	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	Q-42
Fluorene	ND	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Indeno(1,2,3-cd)pyrene	ND	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
1-Methylnaphthalene	ND	858	1710	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2-Methylnaphthalene	ND	858	1710	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Naphthalene	ND	858	1710	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Phenanthrene	ND	1160	1160	ug/kg dry	100	09/09/21 19:40	EPA 8270E	R-02
Pyrene	1290	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	Q-42
Carbazole	ND	642	1280	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Dibenzofuran	ND	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2-Chlorophenol	ND	2140	4270	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
4-Chloro-3-methylphenol	ND	4270	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2,4-Dichlorophenol	ND	2140	4270	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2,4-Dimethylphenol	ND	2140	4270	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2,4-Dinitrophenol	ND	10700	21400	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
4,6-Dinitro-2-methylphenol	ND	10700	21400	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2-Methylphenol	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
3+4-Methylphenol(s)	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2-Nitrophenol	ND	4270	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
4-Nitrophenol	ND	8580	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Pentachlorophenol (PCP)	ND	4270	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Phenol	ND	858	1710	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2,3,4,6-Tetrachlorophenol	ND	2140	4270	ug/kg dry	100	09/09/21 19:40	EPA 8270E	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 15-16.5 (A110084-04)				Matrix: Soil		Batch: 1090326		
2,3,5,6-Tetrachlorophenol	ND	2140	4270	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2,4,5-Trichlorophenol	ND	2140	4270	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Nitrobenzene	ND	4270	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2,4,6-Trichlorophenol	ND	2140	4270	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Bis(2-ethylhexyl)phthalate	ND	6420	12800	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Butyl benzyl phthalate	ND	4270	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Diethylphthalate	ND	4270	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Dimethylphthalate	ND	4270	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Di-n-butylphthalate	ND	4270	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Di-n-octyl phthalate	ND	4270	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
N-Nitrosodimethylamine	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
N-Nitroso-di-n-propylamine	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
N-Nitrosodiphenylamine	ND	5300	5300	ug/kg dry	100	09/09/21 19:40	EPA 8270E	R-02
Bis(2-Chloroethoxy) methane	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Bis(2-Chloroethyl) ether	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2,2'-Oxybis(1-Chloropropane)	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Hexachlorobenzene	ND	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Hexachlorobutadiene	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Hexachlorocyclopentadiene	ND	2140	4270	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Hexachloroethane	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2-Chloronaphthalene	ND	427	858	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
1,2,4-Trichlorobenzene	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
4-Bromophenyl phenyl ether	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
4-Chlorophenyl phenyl ether	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Aniline	ND	2140	4270	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
4-Chloroaniline	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2-Nitroaniline	ND	8580	17100	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
3-Nitroaniline	ND	8580	17100	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
4-Nitroaniline	ND	8580	17100	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2,4-Dinitrotoluene	ND	4270	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
2,6-Dinitrotoluene	ND	4270	8580	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Benzoic acid	ND	53600	107000	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Benzyl alcohol	ND	2140	4270	ug/kg dry	100	09/09/21 19:40	EPA 8270E	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 15-16.5 (A110084-04)				Matrix: Soil		Batch: 1090326		
Isophorone	ND	2140	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Azobenzene (1,2-DPH)	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Bis(2-Ethylhexyl) adipate	ND	10700	21400	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
3,3'-Dichlorobenzidine	ND	8580	17100	ug/kg dry	100	09/09/21 19:40	EPA 8270E	Q-52
1,2-Dinitrobenzene	ND	10700	21400	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
1,3-Dinitrobenzene	ND	10700	21400	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
1,4-Dinitrobenzene	ND	10700	21400	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
Pyridine	ND	2140	4270	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
1,2-Dichlorobenzene	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
1,3-Dichlorobenzene	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
1,4-Dichlorobenzene	ND	1070	2140	ug/kg dry	100	09/09/21 19:40	EPA 8270E	
<i>Surrogate: Nitrobenzene-d5 (Surr)</i>			<i>Recovery: 612 %</i>	<i>Limits: 37-122 %</i>	<i>100</i>	<i>09/09/21 19:40</i>	<i>EPA 8270E</i>	<i>S-05</i>
<i>2-Fluorobiphenyl (Surr)</i>			<i>86 %</i>	<i>44-120 %</i>	<i>100</i>	<i>09/09/21 19:40</i>	<i>EPA 8270E</i>	<i>S-05</i>
<i>Phenol-d6 (Surr)</i>			<i>72 %</i>	<i>33-122 %</i>	<i>100</i>	<i>09/09/21 19:40</i>	<i>EPA 8270E</i>	<i>S-05</i>
<i>p-Terphenyl-d14 (Surr)</i>			<i>100 %</i>	<i>54-127 %</i>	<i>100</i>	<i>09/09/21 19:40</i>	<i>EPA 8270E</i>	<i>S-05</i>
<i>2-Fluorophenol (Surr)</i>			<i>64 %</i>	<i>35-120 %</i>	<i>100</i>	<i>09/09/21 19:40</i>	<i>EPA 8270E</i>	<i>S-05</i>
<i>2,4,6-Tribromophenol (Surr)</i>			<i>359 %</i>	<i>39-132 %</i>	<i>100</i>	<i>09/09/21 19:40</i>	<i>EPA 8270E</i>	<i>S-05</i>

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 7.5-9 (A110084-01RE2) Matrix: Soil								
Batch: 1090630								
Antimony	ND	0.664	1.33	mg/kg dry	10	09/17/21 15:33	EPA 6020B	
Arsenic	7.53	0.664	1.33	mg/kg dry	10	09/17/21 15:33	EPA 6020B	
Barium	150	0.664	1.33	mg/kg dry	10	09/17/21 15:33	EPA 6020B	
Cadmium	0.163	0.133	0.266	mg/kg dry	10	09/17/21 15:33	EPA 6020B	J
Chromium	19.0	0.664	1.33	mg/kg dry	10	09/17/21 15:33	EPA 6020B	
Copper	25.1	1.33	2.66	mg/kg dry	10	09/17/21 15:33	EPA 6020B	
Lead	10.2	0.133	0.266	mg/kg dry	10	09/17/21 15:33	EPA 6020B	
Mercury	ND	0.0531	0.106	mg/kg dry	10	09/17/21 15:33	EPA 6020B	
Selenium	ND	0.664	1.33	mg/kg dry	10	09/17/21 15:33	EPA 6020B	
Silver	ND	0.133	0.266	mg/kg dry	10	09/17/21 15:33	EPA 6020B	
Zinc	73.0	2.66	5.31	mg/kg dry	10	09/17/21 15:33	EPA 6020B	

B33 15-16.5 (A110084-04RE2) Matrix: Soil								
Batch: 1090630								
Antimony	ND	0.664	1.33	mg/kg dry	10	09/17/21 15:38	EPA 6020B	
Arsenic	3.58	0.664	1.33	mg/kg dry	10	09/17/21 15:38	EPA 6020B	
Barium	97.9	0.664	1.33	mg/kg dry	10	09/17/21 15:38	EPA 6020B	
Cadmium	ND	0.133	0.266	mg/kg dry	10	09/17/21 15:38	EPA 6020B	
Chromium	12.9	0.664	1.33	mg/kg dry	10	09/17/21 15:38	EPA 6020B	
Copper	15.7	1.33	2.66	mg/kg dry	10	09/17/21 15:38	EPA 6020B	
Lead	2.44	0.133	0.266	mg/kg dry	10	09/17/21 15:38	EPA 6020B	
Mercury	ND	0.0531	0.106	mg/kg dry	10	09/17/21 15:38	EPA 6020B	
Selenium	ND	0.664	1.33	mg/kg dry	10	09/17/21 15:38	EPA 6020B	
Silver	ND	0.133	0.266	mg/kg dry	10	09/17/21 15:38	EPA 6020B	
Zinc	42.3	2.66	5.31	mg/kg dry	10	09/17/21 15:38	EPA 6020B	

B33 10-26.5 (A110084-09RE2) Matrix: Soil								
Batch: 1090630								
Antimony	ND	0.709	1.42	mg/kg dry	10	09/17/21 15:42	EPA 6020B	
Arsenic	4.91	0.709	1.42	mg/kg dry	10	09/17/21 15:42	EPA 6020B	
Barium	345	0.709	1.42	mg/kg dry	10	09/17/21 15:42	EPA 6020B	
Cadmium	0.177	0.142	0.284	mg/kg dry	10	09/17/21 15:42	EPA 6020B	J
Chromium	32.2	0.709	1.42	mg/kg dry	10	09/17/21 15:42	EPA 6020B	

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B33 10-26.5 (A110084-09RE2)				Matrix: Soil				
Copper	35.1	1.42	2.84	mg/kg dry	10	09/17/21 15:42	EPA 6020B	
Lead	8.29	0.142	0.284	mg/kg dry	10	09/17/21 15:42	EPA 6020B	
Mercury	ND	0.0567	0.113	mg/kg dry	10	09/17/21 15:42	EPA 6020B	
Silver	ND	0.142	0.284	mg/kg dry	10	09/17/21 15:42	EPA 6020B	
Zinc	84.0	2.84	5.67	mg/kg dry	10	09/17/21 15:42	EPA 6020B	
B33 10-26.5 (A110084-09RE3)				Matrix: Soil				
Batch: 1090630								
Selenium	ND	0.709	1.42	mg/kg dry	10	09/17/21 23:16	EPA 6020B	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight									
Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B33 7.5-9 (A110084-01)				Matrix: Soil		Batch: 1090191			
% Solids	75.9	1.00	1.00	%	1	09/08/21 07:45	EPA 8000D		
B33 15-16.5 (A110084-04)				Matrix: Soil		Batch: 1090191			
% Solids	77.6	1.00	1.00	%	1	09/08/21 07:45	EPA 8000D		
B33 10-26.5 (A110084-09)				Matrix: Soil		Batch: 1090191			
% Solids	73.0	1.00	1.00	%	1	09/08/21 07:45	EPA 8000D		

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090287 - EPA 3546 (Fuels)						Soil						
Blank (1090287-BLK1)			Prepared: 09/09/21 07:22 Analyzed: 09/09/21 16:07									
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1090287-BS1)						Prepared: 09/09/21 07:22 Analyzed: 09/09/21 16:30						
<u>NWTPH-Dx</u>												
Diesel	115	10.0	25.0	mg/kg wet	1	125	---	92	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090287-DUP2)						Prepared: 09/09/21 07:22 Analyzed: 09/10/21 03:10						
<u>QC Source Sample: Non-SDG (A110131-06)</u>												
Diesel	ND	11.4	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	22.8	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Batch 1090288 - EPA 3546 (Fuels)						Soil						
Blank (1090288-BLK1)			Prepared: 09/09/21 07:23 Analyzed: 09/09/21 16:07									
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1090288-BS1)						Prepared: 09/09/21 07:23 Analyzed: 09/09/21 16:30						
<u>NWTPH-Dx</u>												
Diesel	119	10.0	25.0	mg/kg wet	1	125	---	95	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090288-DUP1)						Prepared: 09/09/21 07:23 Analyzed: 09/09/21 17:16						
<u>QC Source Sample: B33 15-16.5 (A110084-04)</u>												
<u>NWTPH-Dx</u>												
Diesel	33000	504	1010	mg/kg dry	40	---	27400	---	---	19	30%	F-13, F-15

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ANALYTICAL REPORT

Apex Laboratories, LLC

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 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090288 - EPA 3546 (Fuels)						Soil						
Duplicate (1090288-DUP1)						Prepared: 09/09/21 07:23 Analyzed: 09/09/21 17:16						
<u>QC Source Sample: B33 15-16.5 (A110084-04)</u>												
Oil	32100	1010	2010	mg/kg dry	40	---	26000	---	---	21	30%	F-16
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 40x</i>			<i>S-01</i>			
Duplicate (1090288-DUP2)						Prepared: 09/09/21 10:03 Analyzed: 09/09/21 23:46						
<u>QC Source Sample: Non-SDG (A110136-07)</u>												
Diesel	ND	11.9	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	23.8	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 54 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090527 - EPA 5035A						Soil						
Blank (1090527-BLK1)			Prepared: 09/15/21 09:00 Analyzed: 09/15/21 11:27									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090527-BS2)			Prepared: 09/15/21 09:00 Analyzed: 09/15/21 11:00									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	23.5	2.50	5.00	mg/kg wet	50	25.0	---	94	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090527-DUP1)			Prepared: 09/02/21 16:10 Analyzed: 09/15/21 17:17									
<u>QC Source Sample: Non-SDG (A110153-02)</u>												
Gasoline Range Organics	ND	2.90	5.79	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>100 %</i>		<i>50-150 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090527 - EPA 5035A						Soil						
Blank (1090527-BLK1)			Prepared: 09/15/21 09:00 Analyzed: 09/15/21 11:27									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090527 - EPA 5035A						Soil						
Blank (1090527-BLK1)			Prepared: 09/15/21 09:00 Analyzed: 09/15/21 11:27									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	66.7	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	33.3	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	167	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 105 % Limits: 80-120 % Dilution: 1x

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110084 - 10 06 21 1244

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090527 - EPA 5035A						Soil						
Blank (1090527-BLK1)						Prepared: 09/15/21 09:00 Analyzed: 09/15/21 11:27						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (1090527-BS1)						Prepared: 09/15/21 09:00 Analyzed: 09/15/21 10:33						
5035A/8260D												
Acetone	1970	500	1000	ug/kg wet	50	2000	---	98	80-120%	---	---	
Acrylonitrile	1100	50.0	100	ug/kg wet	50	1000	---	110	80-120%	---	---	
Benzene	1090	5.00	10.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Bromobenzene	966	12.5	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Bromochloromethane	1230	25.0	50.0	ug/kg wet	50	1000	---	123	80-120%	---	---	Q-56
Bromodichloromethane	968	25.0	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Bromoform	884	50.0	100	ug/kg wet	50	1000	---	88	80-120%	---	---	
Bromomethane	878	500	500	ug/kg wet	50	1000	---	88	80-120%	---	---	
2-Butanone (MEK)	2180	250	500	ug/kg wet	50	2000	---	109	80-120%	---	---	
n-Butylbenzene	859	25.0	50.0	ug/kg wet	50	1000	---	86	80-120%	---	---	
sec-Butylbenzene	875	25.0	50.0	ug/kg wet	50	1000	---	88	80-120%	---	---	
tert-Butylbenzene	852	25.0	50.0	ug/kg wet	50	1000	---	85	80-120%	---	---	
Carbon disulfide	1030	250	500	ug/kg wet	50	1000	---	103	80-120%	---	---	
Carbon tetrachloride	1180	25.0	50.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
Chlorobenzene	993	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Chloroethane	869	250	500	ug/kg wet	50	1000	---	87	80-120%	---	---	
Chloroform	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Chloromethane	1720	125	250	ug/kg wet	50	1000	---	172	80-120%	---	---	ICV-01, Q-56
2-Chlorotoluene	957	25.0	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
4-Chlorotoluene	969	25.0	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Dibromochloromethane	909	50.0	100	ug/kg wet	50	1000	---	91	80-120%	---	---	
1,2-Dibromo-3-chloropropane	899	125	250	ug/kg wet	50	1000	---	90	80-120%	---	---	
1,2-Dibromoethane (EDB)	955	25.0	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
Dibromomethane	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,2-Dichlorobenzene	975	12.5	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
1,3-Dichlorobenzene	985	12.5	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,4-Dichlorobenzene	930	12.5	25.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
Dichlorodifluoromethane	2430	50.0	100	ug/kg wet	50	1000	---	243	80-120%	---	---	ICV-01, Q-56
1,1-Dichloroethane	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090527 - EPA 5035A						Soil						
LCS (1090527-BS1)			Prepared: 09/15/21 09:00 Analyzed: 09/15/21 10:33									
1,2-Dichloroethane (EDC)	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,1-Dichloroethene	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
cis-1,2-Dichloroethene	1110	12.5	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
trans-1,2-Dichloroethene	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,2-Dichloropropane	1140	12.5	25.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
1,3-Dichloropropane	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
2,2-Dichloropropane	1320	25.0	50.0	ug/kg wet	50	1000	---	132	80-120%	---	---	Q-56
1,1-Dichloropropene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
cis-1,3-Dichloropropene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
trans-1,3-Dichloropropene	988	50.0	100	ug/kg wet	50	1000	---	99	80-120%	---	---	
Ethylbenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Hexachlorobutadiene	886	50.0	100	ug/kg wet	50	1000	---	89	80-120%	---	---	
2-Hexanone	2030	250	500	ug/kg wet	50	2000	---	101	80-120%	---	---	
Isopropylbenzene	880	25.0	50.0	ug/kg wet	50	1000	---	88	80-120%	---	---	
4-Isopropyltoluene	856	25.0	50.0	ug/kg wet	50	1000	---	86	80-120%	---	---	
Methylene chloride	999	250	500	ug/kg wet	50	1000	---	100	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2010	250	500	ug/kg wet	50	2000	---	101	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Naphthalene	702	100	100	ug/kg wet	50	1000	---	70	80-120%	---	---	Q-55
n-Propylbenzene	986	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Styrene	743	50.0	50.0	ug/kg wet	50	1000	---	74	80-120%	---	---	Q-55
1,1,1,2-Tetrachloroethane	932	25.0	50.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Tetrachloroethene (PCE)	965	12.5	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Toluene	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,2,3-Trichlorobenzene	832	125	250	ug/kg wet	50	1000	---	83	80-120%	---	---	
1,2,4-Trichlorobenzene	765	250	250	ug/kg wet	50	1000	---	76	80-120%	---	---	Q-55
1,1,1-Trichloroethane	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,1,2-Trichloroethane	998	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Trichloroethene (TCE)	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Trichlorofluoromethane	961	50.0	100	ug/kg wet	50	1000	---	96	80-120%	---	---	
1,2,3-Trichloropropane	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,2,4-Trimethylbenzene	934	25.0	50.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
1,3,5-Trimethylbenzene	925	25.0	50.0	ug/kg wet	50	1000	---	92	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090527 - EPA 5035A						Soil						
LCS (1090527-BS1)						Prepared: 09/15/21 09:00 Analyzed: 09/15/21 10:33						
Vinyl chloride	1190	12.5	25.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
m,p-Xylene	1960	25.0	50.0	ug/kg wet	50	2000	---	98	80-120%	---	---	
o-Xylene	895	12.5	25.0	ug/kg wet	50	1000	---	89	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>106 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1090527-DUP1)						Prepared: 09/02/21 16:10 Analyzed: 09/15/21 17:17						
QC Source Sample: Non-SDG (A110153-02)												
Acetone	ND	579	1160	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	57.9	116	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	5.79	11.6	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	57.9	116	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	579	579	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	290	579	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	290	579	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	290	579	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	145	290	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	57.9	116	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	145	290	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110084 - 10 06 21 1244

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
							Soil					
Batch 1090527 - EPA 5035A												
Duplicate (1090527-DUP1)			Prepared: 09/02/21 16:10 Analyzed: 09/15/21 17:17									
QC Source Sample: Non-SDG (A110153-02)												
1,3-Dichlorobenzene	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	57.9	116	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	57.9	116	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	57.9	116	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	290	579	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	290	579	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	290	579	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	116	116	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	57.9	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	145	290	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	290	290	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090527 - EPA 5035A												
Soil												
Duplicate (1090527-DUP1)			Prepared: 09/02/21 16:10 Analyzed: 09/15/21 17:17									
QC Source Sample: Non-SDG (A110153-02)												
Trichloroethene (TCE)	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	57.9	116	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	29.0	57.9	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	14.5	29.0	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (1090527-MS1)												
Prepared: 09/03/21 12:25 Analyzed: 09/15/21 19:05												
QC Source Sample: Non-SDG (A110153-15)												
5035A/8260D												
Acetone	5250	1250	2500	ug/kg dry	50	5010	ND	105	36-164%	---	---	
Acrylonitrile	2650	125	250	ug/kg dry	50	2500	ND	106	65-134%	---	---	
Benzene	2800	12.5	25.0	ug/kg dry	50	2500	ND	112	77-121%	---	---	
Bromobenzene	2490	31.3	62.6	ug/kg dry	50	2500	ND	100	78-121%	---	---	
Bromochloromethane	3070	62.6	125	ug/kg dry	50	2500	ND	123	78-125%	---	---	Q-54b
Bromodichloromethane	2430	62.6	125	ug/kg dry	50	2500	ND	97	75-127%	---	---	
Bromoform	2200	125	250	ug/kg dry	50	2500	ND	88	67-132%	---	---	
Bromomethane	2750	1250	1250	ug/kg dry	50	2500	ND	110	53-143%	---	---	
2-Butanone (MEK)	5450	626	1250	ug/kg dry	50	5010	ND	109	51-148%	---	---	
n-Butylbenzene	2170	62.6	125	ug/kg dry	50	2500	ND	87	70-128%	---	---	
sec-Butylbenzene	2260	62.6	125	ug/kg dry	50	2500	ND	90	73-126%	---	---	
tert-Butylbenzene	2140	62.6	125	ug/kg dry	50	2500	ND	86	73-125%	---	---	
Carbon disulfide	2530	626	1250	ug/kg dry	50	2500	ND	101	63-132%	---	---	
Carbon tetrachloride	3030	62.6	125	ug/kg dry	50	2500	ND	121	70-135%	---	---	
Chlorobenzene	2540	31.3	62.6	ug/kg dry	50	2500	ND	102	79-120%	---	---	
Chloroethane	2580	626	1250	ug/kg dry	50	2500	ND	103	59-139%	---	---	
Chloroform	2820	62.6	125	ug/kg dry	50	2500	ND	113	78-123%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090527 - EPA 5035A						Soil						
Matrix Spike (1090527-MS1)			Prepared: 09/03/21 12:25 Analyzed: 09/15/21 19:05									
QC Source Sample: Non-SDG (A110153-15)												
Chloromethane	4280	313	626	ug/kg dry	50	2500	ND	171	50-136%	---	---	ICV-01, Q-54c
2-Chlorotoluene	2480	62.6	125	ug/kg dry	50	2500	ND	99	75-122%	---	---	
4-Chlorotoluene	2480	62.6	125	ug/kg dry	50	2500	ND	99	72-124%	---	---	
Dibromochloromethane	2280	125	250	ug/kg dry	50	2500	ND	91	74-126%	---	---	
1,2-Dibromo-3-chloropropane	2150	313	626	ug/kg dry	50	2500	ND	86	61-132%	---	---	
1,2-Dibromoethane (EDB)	2400	62.6	125	ug/kg dry	50	2500	ND	96	78-122%	---	---	
Dibromomethane	2650	62.6	125	ug/kg dry	50	2500	ND	106	78-125%	---	---	
1,2-Dichlorobenzene	2440	31.3	62.6	ug/kg dry	50	2500	ND	98	78-121%	---	---	
1,3-Dichlorobenzene	2520	31.3	62.6	ug/kg dry	50	2500	ND	100	77-121%	---	---	
1,4-Dichlorobenzene	2300	31.3	62.6	ug/kg dry	50	2500	ND	92	75-120%	---	---	
Dichlorodifluoromethane	6220	125	250	ug/kg dry	50	2500	ND	249	29-149%	---	---	ICV-01, Q-54a
1,1-Dichloroethane	2810	31.3	62.6	ug/kg dry	50	2500	ND	112	76-125%	---	---	
1,2-Dichloroethane (EDC)	2670	31.3	62.6	ug/kg dry	50	2500	ND	107	73-128%	---	---	
1,1-Dichloroethene	2790	31.3	62.6	ug/kg dry	50	2500	ND	111	70-131%	---	---	
cis-1,2-Dichloroethene	2840	31.3	62.6	ug/kg dry	50	2500	ND	113	77-123%	---	---	
trans-1,2-Dichloroethene	2870	31.3	62.6	ug/kg dry	50	2500	ND	115	74-125%	---	---	
1,2-Dichloropropane	2910	31.3	62.6	ug/kg dry	50	2500	ND	116	76-123%	---	---	
1,3-Dichloropropane	2580	62.6	125	ug/kg dry	50	2500	ND	103	77-121%	---	---	
2,2-Dichloropropane	3220	62.6	125	ug/kg dry	50	2500	ND	129	67-133%	---	---	Q-54
1,1-Dichloropropene	2660	62.6	125	ug/kg dry	50	2500	ND	106	76-125%	---	---	
cis-1,3-Dichloropropene	2490	62.6	125	ug/kg dry	50	2500	ND	100	74-126%	---	---	
trans-1,3-Dichloropropene	2390	125	250	ug/kg dry	50	2500	ND	95	71-130%	---	---	
Ethylbenzene	2500	31.3	62.6	ug/kg dry	50	2500	ND	100	76-122%	---	---	
Hexachlorobutadiene	2210	125	250	ug/kg dry	50	2500	ND	88	61-135%	---	---	
2-Hexanone	4830	626	1250	ug/kg dry	50	5010	ND	96	53-145%	---	---	
Isopropylbenzene	2270	62.6	125	ug/kg dry	50	2500	ND	91	68-134%	---	---	
4-Isopropyltoluene	2200	62.6	125	ug/kg dry	50	2500	ND	88	73-127%	---	---	
Methylene chloride	2510	626	1250	ug/kg dry	50	2500	ND	100	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	4910	626	1250	ug/kg dry	50	5010	ND	98	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	2880	62.6	125	ug/kg dry	50	2500	ND	115	73-125%	---	---	
Naphthalene	1870	250	250	ug/kg dry	50	2500	ND	75	62-129%	---	---	Q-54d
n-Propylbenzene	2460	31.3	62.6	ug/kg dry	50	2500	ND	98	73-125%	---	---	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090527 - EPA 5035A						Soil						
Matrix Spike (1090527-MS1)			Prepared: 09/03/21 12:25 Analyzed: 09/15/21 19:05									
QC Source Sample: Non-SDG (A110153-15)												
Styrene	1940	125	125	ug/kg dry	50	2500	ND	78	76-124%	---	---	Q-54f
1,1,1,2-Tetrachloroethane	2320	62.6	125	ug/kg dry	50	2500	ND	93	78-125%	---	---	
1,1,2,2-Tetrachloroethane	2590	62.6	125	ug/kg dry	50	2500	ND	104	70-124%	---	---	
Tetrachloroethene (PCE)	2420	31.3	62.6	ug/kg dry	50	2500	ND	97	73-128%	---	---	
Toluene	2500	62.6	125	ug/kg dry	50	2500	ND	100	77-121%	---	---	
1,2,3-Trichlorobenzene	2090	313	626	ug/kg dry	50	2500	ND	84	66-130%	---	---	
1,2,4-Trichlorobenzene	1950	626	626	ug/kg dry	50	2500	ND	78	67-129%	---	---	Q-54e
1,1,1-Trichloroethane	2760	31.3	62.6	ug/kg dry	50	2500	ND	110	73-130%	---	---	
1,1,2-Trichloroethane	2570	31.3	62.6	ug/kg dry	50	2500	ND	103	78-121%	---	---	
Trichloroethene (TCE)	2660	31.3	62.6	ug/kg dry	50	2500	ND	106	77-123%	---	---	
Trichlorofluoromethane	2580	125	250	ug/kg dry	50	2500	ND	103	62-140%	---	---	
1,2,3-Trichloropropane	2580	62.6	125	ug/kg dry	50	2500	ND	103	73-125%	---	---	
1,2,4-Trimethylbenzene	2340	62.6	125	ug/kg dry	50	2500	ND	94	75-123%	---	---	
1,3,5-Trimethylbenzene	2390	62.6	125	ug/kg dry	50	2500	ND	95	73-124%	---	---	
Vinyl chloride	3130	31.3	62.6	ug/kg dry	50	2500	ND	125	56-135%	---	---	
m,p-Xylene	4960	62.6	125	ug/kg dry	50	5010	ND	99	77-124%	---	---	
o-Xylene	2320	31.3	62.6	ug/kg dry	50	2500	ND	92	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

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ANALYTICAL REPORT

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 1090344 - EPA 3546						Soil							
Blank (1090344-BLK1)			Prepared: 09/10/21 08:10 Analyzed: 09/10/21 16:26						C-07				
<u>EPA 8082A</u>													
Aroclor 1016	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1221	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1232	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1242	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1248	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1254	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---		
Aroclor 1260	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---		
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 60-125 %</i>		<i>Dilution: 1x</i>							
LCS (1090344-BS1)			Prepared: 09/10/21 08:10 Analyzed: 09/10/21 16:44						C-07				
<u>EPA 8082A</u>													
Aroclor 1016	207	5.00	10.0	ug/kg wet	1	250	---	83	47-134%	---	---		
Aroclor 1260	236	5.00	10.0	ug/kg wet	1	250	---	95	53-140%	---	---		
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 60-125 %</i>		<i>Dilution: 1x</i>							
Duplicate (1090344-DUP2)			Prepared: 09/10/21 08:10 Analyzed: 09/13/21 10:38						C-07				
<u>QC Source Sample: Non-SDG (A110116-08RE1)</u>													
Aroclor 1016	ND	104	207	ug/kg dry	20	---	ND	---	---	---	30%		
Aroclor 1221	ND	104	207	ug/kg dry	20	---	ND	---	---	---	30%		
Aroclor 1232	ND	104	207	ug/kg dry	20	---	ND	---	---	---	30%		
Aroclor 1242	ND	104	207	ug/kg dry	20	---	ND	---	---	---	30%		
Aroclor 1248	ND	104	207	ug/kg dry	20	---	ND	---	---	---	30%		
Aroclor 1254	957	104	207	ug/kg dry	20	---	7040	---	---	152	30%	Q-17	
Aroclor 1260	ND	104	207	ug/kg dry	20	---	1190	---	---	***	30%	Q-17	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 201 %</i>		<i>Limits: 60-125 %</i>		<i>Dilution: 20x</i>						S-03	
Matrix Spike (1090344-MS2)			Prepared: 09/10/21 08:10 Analyzed: 09/13/21 11:32						C-07				
<u>QC Source Sample: Non-SDG (A110116-08RE1)</u>													
<u>EPA 8082A</u>													
Aroclor 1016	1090	107	213	ug/kg dry	20	266	ND	408	47-134%	---	---	Q-01	
Aroclor 1260	348	107	213	ug/kg dry	20	266	1190	-315	53-140%	---	---	Q-01	
<i>Surr: Decachlorobiphenyl (Surr)</i>		<i>Recovery: 177 %</i>		<i>Limits: 60-125 %</i>		<i>Dilution: 20x</i>						S-03	

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polychlorinated Biphenyls by EPA 8082A

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090344 - EPA 3546							Soil					

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546												
Soil												
Blank (1090326-BLK1)												
						Prepared: 09/09/21 14:51 Analyzed: 09/09/21 22:37						
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 72 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>76 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1090326-BS1)												
						Prepared: 09/09/21 14:51 Analyzed: 09/09/21 23:02						
<u>EPA 8270E SIM</u>												
Acenaphthene	466	1.33	2.67	ug/kg wet	1	533	---	87	40-123%	---	---	
Acenaphthylene	486	1.33	2.67	ug/kg wet	1	533	---	91	32-132%	---	---	
Anthracene	469	1.33	2.67	ug/kg wet	1	533	---	88	47-123%	---	---	
Benz(a)anthracene	455	1.33	2.67	ug/kg wet	1	533	---	85	49-126%	---	---	
Benzo(a)pyrene	471	1.33	2.67	ug/kg wet	1	533	---	88	45-129%	---	---	
Benzo(b)fluoranthene	474	1.33	2.67	ug/kg wet	1	533	---	89	45-132%	---	---	
Benzo(k)fluoranthene	493	1.33	2.67	ug/kg wet	1	533	---	92	47-132%	---	---	
Benzo(g,h,i)perylene	459	1.33	2.67	ug/kg wet	1	533	---	86	43-134%	---	---	
Chrysene	469	1.33	2.67	ug/kg wet	1	533	---	88	50-124%	---	---	
Dibenz(a,h)anthracene	504	1.33	2.67	ug/kg wet	1	533	---	94	45-134%	---	---	
Fluoranthene	468	1.33	2.67	ug/kg wet	1	533	---	88	50-127%	---	---	
Fluorene	453	1.33	2.67	ug/kg wet	1	533	---	85	43-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546												
Soil												
LCS (1090326-BS1)												
						Prepared: 09/09/21 14:51 Analyzed: 09/09/21 23:02						
Indeno(1,2,3-cd)pyrene	444	1.33	2.67	ug/kg wet	1	533	---	83	45-133%	---	---	
Naphthalene	442	1.33	2.67	ug/kg wet	1	533	---	83	35-123%	---	---	
Phenanthrene	460	1.33	2.67	ug/kg wet	1	533	---	86	50-121%	---	---	
Pyrene	470	1.33	2.67	ug/kg wet	1	533	---	88	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>82 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1090326-DUP1)												
						Prepared: 09/09/21 14:51 Analyzed: 09/10/21 00:18						
QC Source Sample: B33 15-16.5 (A110084-04)												
EPA 8270E SIM												
Acenaphthene	2550	425	851	ug/kg dry	100	---	1390	---	---	59	30%	Q-04
Acenaphthylene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Anthracene	ND	851	851	ug/kg dry	100	---	ND	---	---	---	30%	
Benz(a)anthracene	ND	851	851	ug/kg dry	100	---	ND	---	---	---	30%	
Benzo(a)pyrene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	851	851	ug/kg dry	100	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Chrysene	ND	3740	3740	ug/kg dry	100	---	ND	---	---	---	30%	R-02
Dibenz(a,h)anthracene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Fluoranthene	1340	425	851	ug/kg dry	100	---	766	---	---	55	30%	Q-04
Fluorene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Naphthalene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Phenanthrene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Pyrene	2090	425	851	ug/kg dry	100	---	1190	---	---	55	30%	Q-04
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 100x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (1090326-MS1)												
						Prepared: 09/09/21 14:51 Analyzed: 09/10/21 01:34						
QC Source Sample: Non-SDG (A110189-01)												
EPA 8270E SIM												
Acenaphthene	1150	174	348	ug/kg dry	10	557	ND	206	40-123%	---	---	Q-01

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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546						Soil						
Matrix Spike (1090326-MS1)						Prepared: 09/09/21 14:51 Analyzed: 09/10/21 01:34						
QC Source Sample: Non-SDG (A110189-01)												
Acenaphthylene	1110	174	348	ug/kg dry	10	557	ND	198	32-132%	---	---	Q-01
Anthracene	1030	174	348	ug/kg dry	10	557	ND	185	47-123%	---	---	Q-01
Benz(a)anthracene	1110	174	348	ug/kg dry	10	557	ND	198	49-126%	---	---	Q-01
Benzo(a)pyrene	1010	174	348	ug/kg dry	10	557	ND	182	45-129%	---	---	Q-01
Benzo(b)fluoranthene	1010	174	348	ug/kg dry	10	557	ND	182	45-132%	---	---	Q-01
Benzo(k)fluoranthene	1000	174	348	ug/kg dry	10	557	ND	180	47-132%	---	---	Q-01
Benzo(g,h,i)perylene	1080	174	348	ug/kg dry	10	557	ND	194	43-134%	---	---	Q-01
Chrysene	1050	174	348	ug/kg dry	10	557	ND	188	50-124%	---	---	Q-01
Dibenz(a,h)anthracene	976	174	348	ug/kg dry	10	557	ND	175	45-134%	---	---	Q-01
Fluoranthene	1050	174	348	ug/kg dry	10	557	ND	189	50-127%	---	---	Q-01
Fluorene	1060	174	348	ug/kg dry	10	557	ND	190	43-125%	---	---	Q-01
Indeno(1,2,3-cd)pyrene	1050	174	348	ug/kg dry	10	557	ND	189	45-133%	---	---	Q-01
Naphthalene	1080	174	348	ug/kg dry	10	557	ND	193	35-123%	---	---	Q-01
Phenanthrene	1200	174	348	ug/kg dry	10	557	ND	215	50-121%	---	---	Q-01
Pyrene	1100	174	348	ug/kg dry	10	557	ND	198	47-127%	---	---	Q-01
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 180 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 10x</i>					S-05	
<i>p-Terphenyl-d14 (Surr)</i>		<i>223 %</i>		<i>54-127 %</i>		<i>"</i>					S-05	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546						Soil						
Blank (1090326-BLK2)			Prepared: 09/09/21 14:51 Analyzed: 09/09/21 18:28									
<u>EPA 8270E</u>												
Acenaphthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	1.87	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	1.87	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	1.87	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	2.50	5.00	ug/kg wet	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	2.50	5.00	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	2.50	5.00	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Carbazole	ND	1.87	3.75	ug/kg wet	1	---	---	---	---	---	---	
Dibenzofuran	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
2-Chlorophenol	ND	6.25	12.5	ug/kg wet	1	---	---	---	---	---	---	
4-Chloro-3-methylphenol	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
2,4-Dichlorophenol	ND	6.25	12.5	ug/kg wet	1	---	---	---	---	---	---	
2,4-Dimethylphenol	ND	6.25	12.5	ug/kg wet	1	---	---	---	---	---	---	
2,4-Dinitrophenol	ND	31.2	62.5	ug/kg wet	1	---	---	---	---	---	---	
4,6-Dinitro-2-methylphenol	ND	31.2	62.5	ug/kg wet	1	---	---	---	---	---	---	
2-Methylphenol	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
3+4-Methylphenol(s)	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
2-Nitrophenol	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
4-Nitrophenol	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
Pentachlorophenol (PCP)	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
Phenol	ND	2.50	5.00	ug/kg wet	1	---	---	---	---	---	---	
2,3,4,6-Tetrachlorophenol	ND	6.25	12.5	ug/kg wet	1	---	---	---	---	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546						Soil						
Blank (1090326-BLK2)			Prepared: 09/09/21 14:51 Analyzed: 09/09/21 18:28									
2,3,5,6-Tetrachlorophenol	ND	6.25	12.5	ug/kg wet	1	---	---	---	---	---	---	
2,4,5-Trichlorophenol	ND	6.25	12.5	ug/kg wet	1	---	---	---	---	---	---	
Nitrobenzene	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
2,4,6-Trichlorophenol	ND	6.25	12.5	ug/kg wet	1	---	---	---	---	---	---	
Bis(2-ethylhexyl)phthalate	ND	18.7	37.5	ug/kg wet	1	---	---	---	---	---	---	
Butyl benzyl phthalate	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
Diethylphthalate	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
Dimethylphthalate	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
Di-n-butylphthalate	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
Di-n-octyl phthalate	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
N-Nitrosodimethylamine	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
N-Nitroso-di-n-propylamine	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
N-Nitrosodiphenylamine	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Bis(2-Chloroethoxy) methane	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Bis(2-Chloroethyl) ether	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
2,2'-Oxybis(1-Chloropropane)	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Hexachlorobenzene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Hexachlorocyclopentadiene	ND	6.25	12.5	ug/kg wet	1	---	---	---	---	---	---	
Hexachloroethane	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
2-Chloronaphthalene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
4-Bromophenyl phenyl ether	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
4-Chlorophenyl phenyl ether	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Aniline	ND	6.25	12.5	ug/kg wet	1	---	---	---	---	---	---	
4-Chloroaniline	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
2-Nitroaniline	ND	25.0	50.0	ug/kg wet	1	---	---	---	---	---	---	
3-Nitroaniline	ND	25.0	50.0	ug/kg wet	1	---	---	---	---	---	---	
4-Nitroaniline	ND	25.0	50.0	ug/kg wet	1	---	---	---	---	---	---	
2,4-Dinitrotoluene	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
2,6-Dinitrotoluene	ND	12.5	25.0	ug/kg wet	1	---	---	---	---	---	---	
Benzoic acid	ND	157	312	ug/kg wet	1	---	---	---	---	---	---	
Benzyl alcohol	ND	6.25	12.5	ug/kg wet	1	---	---	---	---	---	---	
Isophorone	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546						Soil						
Blank (1090326-BLK2)			Prepared: 09/09/21 14:51 Analyzed: 09/09/21 18:28									
Azobenzene (1,2-DPH)	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Bis(2-Ethylhexyl) adipate	ND	31.2	62.5	ug/kg wet	1	---	---	---	---	---	---	
3,3'-Dichlorobenzidine	ND	25.0	50.0	ug/kg wet	1	---	---	---	---	---	---	Q-52
1,2-Dinitrobenzene	ND	31.2	62.5	ug/kg wet	1	---	---	---	---	---	---	
1,3-Dinitrobenzene	ND	31.2	62.5	ug/kg wet	1	---	---	---	---	---	---	
1,4-Dinitrobenzene	ND	31.2	62.5	ug/kg wet	1	---	---	---	---	---	---	
Pyridine	ND	6.25	12.5	ug/kg wet	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 77 %</i>		<i>Limits: 37-122 %</i>		<i>Dilution: 1x</i>						
<i>2-Fluorobiphenyl (Surr)</i>		<i>72 %</i>		<i>44-120 %</i>		<i>"</i>						
<i>Phenol-d6 (Surr)</i>		<i>78 %</i>		<i>33-122 %</i>		<i>"</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>81 %</i>		<i>54-127 %</i>		<i>"</i>						
<i>2-Fluorophenol (Surr)</i>		<i>73 %</i>		<i>35-120 %</i>		<i>"</i>						
<i>2,4,6-Tribromophenol (Surr)</i>		<i>77 %</i>		<i>39-132 %</i>		<i>"</i>						
LCS (1090326-BS2)			Prepared: 09/09/21 14:51 Analyzed: 09/09/21 19:04									
EPA 8270E												
Acenaphthene	455	2.66	5.34	ug/kg wet	2	533	---	85	40-123%	---	---	
Acenaphthylene	501	2.66	5.34	ug/kg wet	2	533	---	94	32-132%	---	---	
Anthracene	493	2.66	5.34	ug/kg wet	2	533	---	92	47-123%	---	---	
Benz(a)anthracene	471	2.66	5.34	ug/kg wet	2	533	---	88	49-126%	---	---	
Benzo(a)pyrene	486	4.00	8.00	ug/kg wet	2	533	---	91	45-129%	---	---	
Benzo(b)fluoranthene	473	4.00	8.00	ug/kg wet	2	533	---	89	45-132%	---	---	
Benzo(k)fluoranthene	476	4.00	8.00	ug/kg wet	2	533	---	89	47-132%	---	---	
Benzo(g,h,i)perylene	495	2.66	5.34	ug/kg wet	2	533	---	93	43-134%	---	---	
Chrysene	472	2.66	5.34	ug/kg wet	2	533	---	88	50-124%	---	---	
Dibenz(a,h)anthracene	496	2.66	5.34	ug/kg wet	2	533	---	93	45-134%	---	---	
Fluoranthene	501	2.66	5.34	ug/kg wet	2	533	---	94	50-127%	---	---	
Fluorene	484	2.66	5.34	ug/kg wet	2	533	---	91	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	456	2.66	5.34	ug/kg wet	2	533	---	86	45-133%	---	---	
1-Methylnaphthalene	457	5.34	10.7	ug/kg wet	2	533	---	86	40-120%	---	---	
2-Methylnaphthalene	457	5.34	10.7	ug/kg wet	2	533	---	86	38-122%	---	---	

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546						Soil						
LCS (1090326-BS2)						Prepared: 09/09/21 14:51 Analyzed: 09/09/21 19:04						
Naphthalene	445	5.34	10.7	ug/kg wet	2	533	---	83	35-123%	---	---	
Phenanthrene	460	2.66	5.34	ug/kg wet	2	533	---	86	50-121%	---	---	
Pyrene	505	2.66	5.34	ug/kg wet	2	533	---	95	47-127%	---	---	
Carbazole	500	4.00	8.00	ug/kg wet	2	533	---	94	50-123%	---	---	
Dibenzofuran	462	2.66	5.34	ug/kg wet	2	533	---	87	44-120%	---	---	
2-Chlorophenol	500	13.3	26.6	ug/kg wet	2	533	---	94	34-121%	---	---	
4-Chloro-3-methylphenol	486	26.6	53.4	ug/kg wet	2	533	---	91	45-122%	---	---	
2,4-Dichlorophenol	507	13.3	26.6	ug/kg wet	2	533	---	95	40-122%	---	---	
2,4-Dimethylphenol	525	13.3	26.6	ug/kg wet	2	533	---	98	30-127%	---	---	
2,4-Dinitrophenol	725	66.6	133	ug/kg wet	2	533	---	136	10-137%	---	---	Q-41
4,6-Dinitro-2-methylphenol	663	66.6	133	ug/kg wet	2	533	---	124	29-132%	---	---	Q-41
2-Methylphenol	499	6.66	13.3	ug/kg wet	2	533	---	94	32-122%	---	---	
3+4-Methylphenol(s)	519	6.66	13.3	ug/kg wet	2	533	---	97	34-120%	---	---	
2-Nitrophenol	555	26.6	53.4	ug/kg wet	2	533	---	104	36-123%	---	---	
4-Nitrophenol	523	26.6	53.4	ug/kg wet	2	533	---	98	30-132%	---	---	
Pentachlorophenol (PCP)	514	26.6	53.4	ug/kg wet	2	533	---	96	25-133%	---	---	
Phenol	518	5.34	10.7	ug/kg wet	2	533	---	97	34-121%	---	---	
2,3,4,6-Tetrachlorophenol	525	13.3	26.6	ug/kg wet	2	533	---	98	44-125%	---	---	
2,3,5,6-Tetrachlorophenol	545	13.3	26.6	ug/kg wet	2	533	---	102	40-120%	---	---	
2,4,5-Trichlorophenol	510	13.3	26.6	ug/kg wet	2	533	---	96	41-124%	---	---	
Nitrobenzene	500	26.6	53.4	ug/kg wet	2	533	---	94	34-122%	---	---	
2,4,6-Trichlorophenol	528	13.3	26.6	ug/kg wet	2	533	---	99	39-126%	---	---	
Bis(2-ethylhexyl)phthalate	469	40.0	80.0	ug/kg wet	2	533	---	88	51-133%	---	---	
Butyl benzyl phthalate	475	26.6	53.4	ug/kg wet	2	533	---	89	48-132%	---	---	
Diethylphthalate	476	26.6	53.4	ug/kg wet	2	533	---	89	50-124%	---	---	
Dimethylphthalate	468	26.6	53.4	ug/kg wet	2	533	---	88	48-124%	---	---	
Di-n-butylphthalate	511	26.6	53.4	ug/kg wet	2	533	---	96	51-128%	---	---	
Di-n-octyl phthalate	456	26.6	53.4	ug/kg wet	2	533	---	85	45-140%	---	---	
N-Nitrosodimethylamine	436	6.66	13.3	ug/kg wet	2	533	---	82	23-120%	---	---	
N-Nitroso-di-n-propylamine	469	6.66	13.3	ug/kg wet	2	533	---	88	36-120%	---	---	
N-Nitrosodiphenylamine	514	6.66	13.3	ug/kg wet	2	533	---	96	38-127%	---	---	
Bis(2-Chloroethoxy) methane	481	6.66	13.3	ug/kg wet	2	533	---	90	36-121%	---	---	
Bis(2-Chloroethyl) ether	458	6.66	13.3	ug/kg wet	2	533	---	86	31-120%	---	---	
2,2'-Oxybis(1-Chloropropane)	482	6.66	13.3	ug/kg wet	2	533	---	90	33-131%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110084 - 10 06 21 1244

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546						Soil						
LCS (1090326-BS2)			Prepared: 09/09/21 14:51 Analyzed: 09/09/21 19:04									
Hexachlorobenzene	464	2.66	5.34	ug/kg wet	2	533	---	87	45-122%	---	---	
Hexachlorobutadiene	425	6.66	13.3	ug/kg wet	2	533	---	80	32-123%	---	---	
Hexachlorocyclopentadiene	521	13.3	26.6	ug/kg wet	2	533	---	98	10-140%	---	---	
Hexachloroethane	425	6.66	13.3	ug/kg wet	2	533	---	80	28-120%	---	---	
2-Chloronaphthalene	461	2.66	5.34	ug/kg wet	2	533	---	87	41-120%	---	---	
1,2,4-Trichlorobenzene	438	6.66	13.3	ug/kg wet	2	533	---	82	34-120%	---	---	
4-Bromophenyl phenyl ether	495	6.66	13.3	ug/kg wet	2	533	---	93	46-124%	---	---	
4-Chlorophenyl phenyl ether	480	6.66	13.3	ug/kg wet	2	533	---	90	45-121%	---	---	
Aniline	413	13.3	26.6	ug/kg wet	2	533	---	78	10-120%	---	---	
4-Chloroaniline	363	6.66	13.3	ug/kg wet	2	533	---	68	17-120%	---	---	
2-Nitroaniline	512	53.4	107	ug/kg wet	2	533	---	96	44-127%	---	---	
3-Nitroaniline	485	53.4	107	ug/kg wet	2	533	---	91	33-120%	---	---	
4-Nitroaniline	386	53.4	107	ug/kg wet	2	533	---	72	70-138%	---	---	
2,4-Dinitrotoluene	541	26.6	53.4	ug/kg wet	2	533	---	101	48-126%	---	---	
2,6-Dinitrotoluene	526	26.6	53.4	ug/kg wet	2	533	---	99	46-124%	---	---	
Benzoic acid	933	334	666	ug/kg wet	2	1070	---	87	10-140%	---	---	Q-31
Benzyl alcohol	471	13.3	26.6	ug/kg wet	2	533	---	88	29-122%	---	---	
Isophorone	493	6.66	13.3	ug/kg wet	2	533	---	92	30-122%	---	---	
Azobenzene (1,2-DPH)	486	6.66	13.3	ug/kg wet	2	533	---	91	39-125%	---	---	
Bis(2-Ethylhexyl) adipate	505	66.6	133	ug/kg wet	2	533	---	95	61-121%	---	---	
3,3'-Dichlorobenzidine	1890	53.4	107	ug/kg wet	2	1070	---	177	22-121%	---	---	Q-29, Q-31
1,2-Dinitrobenzene	523	66.6	133	ug/kg wet	2	533	---	98	44-120%	---	---	
1,3-Dinitrobenzene	575	66.6	133	ug/kg wet	2	533	---	108	43-127%	---	---	
1,4-Dinitrobenzene	593	66.6	133	ug/kg wet	2	533	---	111	37-132%	---	---	Q-41
Pyridine	328	13.3	26.6	ug/kg wet	2	533	---	62	10-120%	---	---	
1,2-Dichlorobenzene	418	6.66	13.3	ug/kg wet	2	533	---	78	33-120%	---	---	
1,3-Dichlorobenzene	413	6.66	13.3	ug/kg wet	2	533	---	77	30-120%	---	---	
1,4-Dichlorobenzene	416	6.66	13.3	ug/kg wet	2	533	---	78	31-120%	---	---	
<i>Surr: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 89 %</i>		<i>Limits: 37-122 %</i>		<i>Dilution: 2x</i>						
<i>2-Fluorobiphenyl (Surr)</i>		<i>77 %</i>		<i>44-120 %</i>		<i>"</i>						
<i>Phenol-d6 (Surr)</i>		<i>86 %</i>		<i>33-122 %</i>		<i>"</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>82 %</i>		<i>54-127 %</i>		<i>"</i>						
<i>2-Fluorophenol (Surr)</i>		<i>83 %</i>		<i>35-120 %</i>		<i>"</i>						
<i>2,4,6-Tribromophenol (Surr)</i>		<i>98 %</i>		<i>39-132 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546						Soil						
Duplicate (1090326-DUP2)						Prepared: 09/09/21 14:51 Analyzed: 09/09/21 20:17						
QC Source Sample: B33 15-16.5 (A110084-04)												
EPA 8270E												
Acenaphthene	3260	424	852	ug/kg dry	100	---	1550	---	---	71	30%	Q-17
Acenaphthylene	ND	424	852	ug/kg dry	100	---	ND	---	---	---	30%	
Anthracene	ND	1660	1660	ug/kg dry	100	---	ND	---	---	---	30%	R-02
Benz(a)anthracene	ND	925	925	ug/kg dry	100	---	ND	---	---	---	30%	R-02
Benzo(a)pyrene	ND	1280	1280	ug/kg dry	100	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	1280	1280	ug/kg dry	100	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	638	1280	ug/kg dry	100	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	424	852	ug/kg dry	100	---	ND	---	---	---	30%	
Chrysene	ND	3770	3770	ug/kg dry	100	---	ND	---	---	---	30%	R-02
Dibenz(a,h)anthracene	ND	424	852	ug/kg dry	100	---	ND	---	---	---	30%	
Fluoranthene	1570	424	852	ug/kg dry	100	---	893	---	---	55	30%	Q-17
Fluorene	ND	424	852	ug/kg dry	100	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	424	852	ug/kg dry	100	---	ND	---	---	---	30%	
1-Methylnaphthalene	ND	852	1700	ug/kg dry	100	---	ND	---	---	---	30%	
2-Methylnaphthalene	ND	852	1700	ug/kg dry	100	---	ND	---	---	---	30%	
Naphthalene	ND	852	1700	ug/kg dry	100	---	ND	---	---	---	30%	
Phenanthrene	ND	1120	1120	ug/kg dry	100	---	ND	---	---	---	30%	R-02
Pyrene	2400	424	852	ug/kg dry	100	---	1290	---	---	60	30%	Q-17
Carbazole	ND	638	1280	ug/kg dry	100	---	ND	---	---	---	30%	
Dibenzofuran	ND	424	852	ug/kg dry	100	---	ND	---	---	---	30%	
2-Chlorophenol	ND	2130	4240	ug/kg dry	100	---	ND	---	---	---	30%	
4-Chloro-3-methylphenol	ND	8520	8520	ug/kg dry	100	---	ND	---	---	---	30%	
2,4-Dichlorophenol	ND	2130	4240	ug/kg dry	100	---	ND	---	---	---	30%	
2,4-Dimethylphenol	ND	4240	4240	ug/kg dry	100	---	ND	---	---	---	30%	
2,4-Dinitrophenol	ND	10600	21300	ug/kg dry	100	---	ND	---	---	---	30%	
4,6-Dinitro-2-methylphenol	ND	10600	21300	ug/kg dry	100	---	ND	---	---	---	30%	
2-Methylphenol	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
3+4-Methylphenol(s)	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
2-Nitrophenol	ND	4240	8520	ug/kg dry	100	---	ND	---	---	---	30%	
4-Nitrophenol	ND	4240	8520	ug/kg dry	100	---	ND	---	---	---	30%	
Pentachlorophenol (PCP)	ND	4240	8520	ug/kg dry	100	---	ND	---	---	---	30%	

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546						Soil						
Duplicate (1090326-DUP2)			Prepared: 09/09/21 14:51 Analyzed: 09/09/21 20:17									
QC Source Sample: B33 15-16.5 (A110084-04)												
Phenol	ND	852	1700	ug/kg dry	100	---	ND	---	---	---	30%	
2,3,4,6-Tetrachlorophenol	ND	2130	4240	ug/kg dry	100	---	ND	---	---	---	30%	
2,3,5,6-Tetrachlorophenol	ND	2130	4240	ug/kg dry	100	---	ND	---	---	---	30%	
2,4,5-Trichlorophenol	ND	2130	4240	ug/kg dry	100	---	ND	---	---	---	30%	
Nitrobenzene	ND	4240	8520	ug/kg dry	100	---	ND	---	---	---	30%	
2,4,6-Trichlorophenol	ND	2130	4240	ug/kg dry	100	---	ND	---	---	---	30%	
Bis(2-ethylhexyl)phthalate	ND	6380	12800	ug/kg dry	100	---	ND	---	---	---	30%	
Butyl benzyl phthalate	ND	4240	8520	ug/kg dry	100	---	ND	---	---	---	30%	
Diethylphthalate	ND	4240	8520	ug/kg dry	100	---	ND	---	---	---	30%	
Dimethylphthalate	ND	4240	8520	ug/kg dry	100	---	ND	---	---	---	30%	
Di-n-butylphthalate	ND	4240	8520	ug/kg dry	100	---	ND	---	---	---	30%	
Di-n-octyl phthalate	ND	4240	8520	ug/kg dry	100	---	ND	---	---	---	30%	
N-Nitrosodimethylamine	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
N-Nitroso-di-n-propylamine	ND	2200	2200	ug/kg dry	100	---	ND	---	---	---	30%	R-02
N-Nitrosodiphenylamine	ND	10500	10500	ug/kg dry	100	---	ND	---	---	---	30%	R-02
Bis(2-Chloroethoxy) methane	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
Bis(2-Chloroethyl) ether	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
2,2'-Oxybis(1-Chloropropane)	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
Hexachlorobenzene	ND	424	852	ug/kg dry	100	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
Hexachlorocyclopentadiene	ND	2130	4240	ug/kg dry	100	---	ND	---	---	---	30%	
Hexachloroethane	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
2-Chloronaphthalene	ND	424	852	ug/kg dry	100	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
4-Bromophenyl phenyl ether	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
4-Chlorophenyl phenyl ether	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
Aniline	ND	2130	4240	ug/kg dry	100	---	ND	---	---	---	30%	
4-Chloroaniline	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
2-Nitroaniline	ND	8520	17000	ug/kg dry	100	---	ND	---	---	---	30%	
3-Nitroaniline	ND	8520	17000	ug/kg dry	100	---	ND	---	---	---	30%	
4-Nitroaniline	ND	8520	17000	ug/kg dry	100	---	ND	---	---	---	30%	
2,4-Dinitrotoluene	ND	8520	8520	ug/kg dry	100	---	ND	---	---	---	30%	
2,6-Dinitrotoluene	ND	8520	8520	ug/kg dry	100	---	ND	---	---	---	30%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270E

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546						Soil						
Duplicate (1090326-DUP2)			Prepared: 09/09/21 14:51 Analyzed: 09/09/21 20:17									
QC Source Sample: B33 15-16.5 (A110084-04)												
Benzoic acid	ND	53300	106000	ug/kg dry	100	---	ND	---	---	---	30%	
Benzyl alcohol	ND	2130	4240	ug/kg dry	100	---	ND	---	---	---	30%	
Isophorone	ND	3920	3920	ug/kg dry	100	---	ND	---	---	---	30%	R-02
Azobenzene (1,2-DPH)	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
Bis(2-Ethylhexyl) adipate	ND	10600	21300	ug/kg dry	100	---	ND	---	---	---	30%	
3,3'-Dichlorobenzidine	ND	8520	17000	ug/kg dry	100	---	ND	---	---	---	30%	Q-52
1,2-Dinitrobenzene	ND	10600	21300	ug/kg dry	100	---	ND	---	---	---	30%	
1,3-Dinitrobenzene	ND	10600	21300	ug/kg dry	100	---	ND	---	---	---	30%	
1,4-Dinitrobenzene	ND	10600	21300	ug/kg dry	100	---	ND	---	---	---	30%	
Pyridine	ND	2130	4240	ug/kg dry	100	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	1060	2130	ug/kg dry	100	---	ND	---	---	---	30%	
<i>Surr: Nitrobenzene-d5 (Surr)</i>		<i>Recovery: 1080 %</i>		<i>Limits: 37-122 %</i>		<i>Dilution: 100x</i>					S-05	
<i>2-Fluorobiphenyl (Surr)</i>		<i>86 %</i>		<i>44-120 %</i>		<i>"</i>					S-05	
<i>Phenol-d6 (Surr)</i>		<i>97 %</i>		<i>33-122 %</i>		<i>"</i>					S-05	
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>54-127 %</i>		<i>"</i>					S-05	
<i>2-Fluorophenol (Surr)</i>		<i>70 %</i>		<i>35-120 %</i>		<i>"</i>					S-05	
<i>2,4,6-Tribromophenol (Surr)</i>		<i>369 %</i>		<i>39-132 %</i>		<i>"</i>					S-05	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090417 - EPA 3051A						Soil						
Blank (1090417-BLK3)			Prepared: 09/13/21 08:28 Analyzed: 09/14/21 21:32									
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	Q-16
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	Q-16
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	Q-16
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	Q-16
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	Q-16
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	Q-16
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	Q-16
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	Q-16
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	Q-16
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	Q-16
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	Q-16
<u>LCS (1090417-BS3)</u>												
										Prepared: 09/13/21 08:28 Analyzed: 09/14/21 21:36		
<u>EPA 6020B</u>												
Antimony	25.0	0.500	1.00	mg/kg wet	10	25.0	---	100	80-120%	---	---	Q-16, Q-41
Arsenic	51.3	0.500	1.00	mg/kg wet	10	50.0	---	103	80-120%	---	---	Q-16
Barium	49.7	0.500	1.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	Q-16
Cadmium	50.1	0.100	0.200	mg/kg wet	10	50.0	---	100	80-120%	---	---	Q-16
Chromium	51.3	0.500	1.00	mg/kg wet	10	50.0	---	103	80-120%	---	---	Q-16
Copper	52.3	1.00	2.00	mg/kg wet	10	50.0	---	105	80-120%	---	---	Q-16
Lead	51.6	0.100	0.200	mg/kg wet	10	50.0	---	103	80-120%	---	---	Q-16
Mercury	1.05	0.0400	0.0800	mg/kg wet	10	1.00	---	105	80-120%	---	---	Q-16
Selenium	25.1	0.500	1.00	mg/kg wet	10	25.0	---	101	80-120%	---	---	Q-16
Silver	26.1	0.100	0.200	mg/kg wet	10	25.0	---	104	80-120%	---	---	Q-16
Zinc	54.2	2.00	4.00	mg/kg wet	10	50.0	---	108	80-120%	---	---	Q-16

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Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110084 - 10 06 21 1244

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090630 - EPA 3051A												
Soil												
Blank (1090630-BLK1)												
Prepared: 09/16/21 15:19 Analyzed: 09/17/21 14:40												
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	

LCS (1090630-BS1)												
Prepared: 09/16/21 15:19 Analyzed: 09/17/21 14:45												
<u>EPA 6020B</u>												
Antimony	26.0	0.500	1.00	mg/kg wet	10	25.0	---	104	80-120%	---	---	Q-41
Arsenic	48.5	0.500	1.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Barium	48.7	0.500	1.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Cadmium	49.0	0.100	0.200	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Chromium	48.2	0.500	1.00	mg/kg wet	10	50.0	---	96	80-120%	---	---	
Copper	52.3	1.00	2.00	mg/kg wet	10	50.0	---	105	80-120%	---	---	
Lead	51.2	0.100	0.200	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Mercury	1.01	0.0400	0.0800	mg/kg wet	10	1.00	---	101	80-120%	---	---	
Selenium	25.8	0.500	1.00	mg/kg wet	10	25.0	---	103	80-120%	---	---	
Silver	26.1	0.100	0.200	mg/kg wet	10	25.0	---	104	80-120%	---	---	
Zinc	52.7	2.00	4.00	mg/kg wet	10	50.0	---	105	80-120%	---	---	

Duplicate (1090630-DUP1)												
Prepared: 09/16/21 15:19 Analyzed: 09/17/21 15:07												
<u>QC Source Sample: Non-SDG (A110096-04RE2)</u>												
Antimony	ND	0.686	1.37	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	3.63	0.686	1.37	mg/kg dry	10	---	3.75	---	---	3	20%	
Barium	102	0.686	1.37	mg/kg dry	10	---	139	---	---	31	20%	Q-29
Cadmium	ND	0.137	0.274	mg/kg dry	10	---	ND	---	---	---	20%	
Chromium	18.1	0.686	1.37	mg/kg dry	10	---	19.6	---	---	8	20%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090630 - EPA 3051A						Soil						
Duplicate (1090630-DUP1)			Prepared: 09/16/21 15:19 Analyzed: 09/17/21 15:07									
<u>QC Source Sample: Non-SDG (A110096-04RE2)</u>												
Copper	17.1	1.37	2.74	mg/kg dry	10	---	20.2	---	---	17	20%	
Lead	4.43	0.137	0.274	mg/kg dry	10	---	5.39	---	---	20	20%	
Mercury	ND	0.0548	0.110	mg/kg dry	10	---	ND	---	---	---	20%	
Selenium	ND	0.686	1.37	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	0.137	0.274	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	53.0	2.74	5.48	mg/kg dry	10	---	57.2	---	---	8	20%	

Matrix Spike (1090630-MS1)			Prepared: 09/16/21 15:19 Analyzed: 09/17/21 15:25									
<u>QC Source Sample: Non-SDG (A110096-04RE2)</u>												
<u>EPA 6020B</u>												
Antimony	35.5	0.718	1.44	mg/kg dry	10	35.9	ND	99	75-125%	---	---	Q-41
Arsenic	74.1	0.718	1.44	mg/kg dry	10	71.8	3.75	98	75-125%	---	---	
Barium	182	0.718	1.44	mg/kg dry	10	71.8	139	59	75-125%	---	---	Q-04
Cadmium	71.4	0.144	0.287	mg/kg dry	10	71.8	ND	99	75-125%	---	---	
Chromium	86.5	0.718	1.44	mg/kg dry	10	71.8	19.6	93	75-125%	---	---	
Copper	90.7	1.44	2.87	mg/kg dry	10	71.8	20.2	98	75-125%	---	---	
Lead	78.7	0.144	0.287	mg/kg dry	10	71.8	5.39	102	75-125%	---	---	
Mercury	1.49	0.0574	0.115	mg/kg dry	10	1.44	ND	104	75-125%	---	---	
Selenium	37.7	0.718	1.44	mg/kg dry	10	35.9	ND	105	75-125%	---	---	
Silver	36.9	0.144	0.287	mg/kg dry	10	35.9	ND	103	75-125%	---	---	
Zinc	130	2.87	5.74	mg/kg dry	10	71.8	57.2	101	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090191 - Total Solids (Dry Weight)							Soil					
Duplicate (1090191-DUP1)			Prepared: 09/07/21 10:02 Analyzed: 09/08/21 07:45									
<u>QC Source Sample: Non-SDG (A110045-01)</u>												
% Solids	81.7	1.00	1.00	%	1	---	82.7	---	---	1	10%	
Duplicate (1090191-DUP2)			Prepared: 09/07/21 10:02 Analyzed: 09/08/21 07:45									
<u>QC Source Sample: Non-SDG (A110065-02)</u>												
% Solids	65.8	1.00	1.00	%	1	---	68.3	---	---	4	10%	
Duplicate (1090191-DUP3)			Prepared: 09/07/21 10:02 Analyzed: 09/08/21 07:45									
<u>QC Source Sample: Non-SDG (A110072-07)</u>												
% Solids	76.9	1.00	1.00	%	1	---	76.2	---	---	0.9	10%	
Duplicate (1090191-DUP4)			Prepared: 09/07/21 10:02 Analyzed: 09/08/21 07:45									
<u>QC Source Sample: Non-SDG (A110096-04)</u>												
% Solids	75.7	1.00	1.00	%	1	---	74.7	---	---	1	10%	
Duplicate (1090191-DUP5)			Prepared: 09/07/21 10:02 Analyzed: 09/08/21 07:45									
<u>QC Source Sample: Non-SDG (A110118-01)</u>												
% Solids	93.8	1.00	1.00	%	1	---	94.2	---	---	0.4	10%	
Duplicate (1090191-DUP6)			Prepared: 09/07/21 19:29 Analyzed: 09/08/21 07:45									
<u>QC Source Sample: Non-SDG (A110164-01)</u>												
% Solids	92.1	1.00	1.00	%	1	---	93.6	---	---	2	10%	
Duplicate (1090191-DUP7)			Prepared: 09/07/21 19:29 Analyzed: 09/08/21 07:45									
<u>QC Source Sample: Non-SDG (A110184-01)</u>												
% Solids	99.3	1.00	1.00	%	1	---	99.1	---	---	0.2	10%	
Duplicate (1090191-DUP8)			Prepared: 09/07/21 19:29 Analyzed: 09/08/21 07:45									
<u>QC Source Sample: Non-SDG (A110184-02)</u>												
% Solids	99.4	1.00	1.00	%	1	---	99.1	---	---	0.3	10%	

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090191 - Total Solids (Dry Weight)							Soil					
Duplicate (1090191-DUP9)					Prepared: 09/07/21 19:29 Analyzed: 09/08/21 07:45							
<u>QC Source Sample: Non-SDG (A110184-03)</u>												
% Solids	99.2	1.00	1.00	%	1	---	99.2	---	---	0.05	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090287</u>							
A110084-01	Soil	NWTPH-Dx	09/01/21 12:20	09/09/21 07:22	10.45g/5mL	10g/5mL	0.96
A110084-09	Soil	NWTPH-Dx	09/01/21 12:27	09/09/21 07:22	10.29g/5mL	10g/5mL	0.97
<u>Batch: 1090288</u>							
A110084-04	Soil	NWTPH-Dx	09/01/21 13:05	09/09/21 07:23	10.27g/5mL	10g/5mL	0.97

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090527</u>							
A110084-01	Soil	NWTPH-Gx (MS)	09/01/21 12:20	09/02/21 17:42	5.94g/5mL	5g/5mL	0.84
A110084-04	Soil	NWTPH-Gx (MS)	09/01/21 13:05	09/02/21 17:42	5.83g/5mL	5g/5mL	0.86
A110084-09	Soil	NWTPH-Gx (MS)	09/01/21 12:27	09/01/21 12:27	41.4g/35mL	5g/5mL	0.85

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090527</u>							
A110084-01	Soil	5035A/8260D	09/01/21 12:20	09/02/21 17:42	5.94g/5mL	5g/5mL	0.84
A110084-04	Soil	5035A/8260D	09/01/21 13:05	09/02/21 17:42	5.83g/5mL	5g/5mL	0.86
A110084-09	Soil	5035A/8260D	09/01/21 12:27	09/01/21 12:27	41.4g/35mL	5g/5mL	0.85

Polychlorinated Biphenyls by EPA 8082A

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090344</u>							
A110084-04RE1	Soil	EPA 8082A	09/01/21 13:05	09/10/21 10:09	10.09g/5mL	10g/5mL	0.99

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090326</u>							

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

<u>Prep: EPA 3546</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
A110084-01RE1	Soil	EPA 8270E SIM	09/01/21 12:20	09/09/21 14:51	10.44g/5mL	10g/5mL	0.96
A110084-09	Soil	EPA 8270E SIM	09/01/21 12:27	09/09/21 14:51	10.23g/5mL	10g/5mL	0.98

Semivolatile Organic Compounds by EPA 8270E

<u>Prep: EPA 3546</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090326</u>							
A110084-04	Soil	EPA 8270E	09/01/21 13:05	09/09/21 14:51	15.04g/5mL	15g/2mL	2.49

Total Metals by EPA 6020B (ICPMS)

<u>Prep: EPA 3051A</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090630</u>							
A110084-01RE2	Soil	EPA 6020B	09/01/21 12:20	09/16/21 15:19	0.496g/50mL	0.5g/50mL	1.01
A110084-04RE2	Soil	EPA 6020B	09/01/21 13:05	09/16/21 15:19	0.485g/50mL	0.5g/50mL	1.03
A110084-09RE2	Soil	EPA 6020B	09/01/21 12:27	09/16/21 15:19	0.483g/50mL	0.5g/50mL	1.04
A110084-09RE3	Soil	EPA 6020B	09/01/21 12:27	09/16/21 15:19	0.483g/50mL	0.5g/50mL	1.04

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090191</u>							
A110084-01	Soil	EPA 8000D	09/01/21 12:20	09/07/21 19:29			NA
A110084-04	Soil	EPA 8000D	09/01/21 13:05	09/07/21 19:29			NA
A110084-09	Soil	EPA 8000D	09/01/21 12:27	09/07/21 19:29			NA

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- C-07** Extract has undergone Sulfuric Acid Cleanup by EPA 3665A, Sulfur Cleanup by EPA 3660B, and Florisil Cleanup by EPA 3620B in order to minimize matrix interference.
- COMP** Sample is a composite of discrete samples. See prep information for details.
- F-13** The chromatographic pattern does not resemble the fuel standard used for quantitation
- F-15** Results for diesel are estimated due to overlap from the reported oil result.
- F-16** Results for oil are estimated due to overlap from the reported diesel result.
- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
 - J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-17** RPD between original and duplicate sample is outside of established control limits.
- Q-29** Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
- Q-31** Estimated Results. Recovery of Continuing Calibration Verification sample below lower control limit for this analyte. Results are likely biased low.
- Q-41** Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- Q-42** Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
- Q-52** Due to known erratic recoveries, the result and reporting levels for this analyte are reported as Estimated Values. This analyte may not have passed all QC requirements for this method.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +12%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +123%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +3%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +52%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -10%. The results are reported as Estimated Values.

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts</p>	<p style="text-align: right;"><u>Report ID:</u> A110084 - 10 06 21 1244</p>
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- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -4%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -6%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-01** Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
- S-03** Reextraction and analysis, or analysis of laboratory duplicate, confirms surrogate failure due to sample matrix effect.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- S-08** TPH-Gx Surrogate recovery cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract. See 8260 results for accurate Surrogate recovery.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A110084 - 10 06 21 1244).

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
--------	----------	--------	---------	--------	---------------

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110084 - 10 06 21 1244
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COLES + BETTS ENVIRONMENTAL CONSULTING, LLC
 5741 NE Flanders St., Portland, OR 97213
 office: 503-477-6150
 mobile: 503-819-2835

Project Manager: Jill Betts
 Project No: 319
 Project Name: EQRB
 Collected by: Jill Betts

Comments:
 Metals analyzed by EPA Methods 200.620A/7471B.
 Free product encountered in B-33 15-16S
 B33 10-26.5 = B33 10-11.5 + B33 10.5-14 +
 B33 15-16.5 + B33 17.5-19 + B33 20-21.5 +
 B33 22.5-24 + B33 25-26.5

CHAIN OF CUSTODY

A110084

Chain of Custody No. 1 of 1

Apex Labs

Lab Project No.

Lab ID	Sample #	Date	Time	Sample Description	Matrix			Number of Containers	Analytes to be Performed						Remarks				
					Soil	Water	Other		NW PH-G	NW PH-DX	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Total RCA & Metals plus Antimony, Copper and Zinc	Dissolved RCA & metals		RUSH			
B33 7.5-9	9-1-12	10:00			X			1											
B33 10-11.5		12:27						1											
B33 12.5-14		12:35						1											
B33 15-16.5		1:05						2	✓										
B33 17.5-19		2:20						3	✓										
B33 20-21.5		2:40						3	✓										
B33 22.5-24		2:55						2	✓										
B33 25-26.5		3:15						2	✓										
B33 0-10																			
B33 10-26.5																			
Relinquished by: Jill Betts				Company: COLES+BETTS ENV.				Date: 9-2-21				Time: 7:25				Received by: [Signature]			
Relinquished by: [Signature]				Company: [Signature]				Date: 9-2-21				Time: 8:05				Received by: [Signature]			
Relinquished by: [Signature]				Company: [Signature]				Date: 9-2-21				Time: 8:15				Received by: [Signature]			

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APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Environmental Consulting, LLC Element WO#: A1 T0084

Project/Project #: EQRB | 319

Delivery Info:
 Date/time received: 9/2/21 @ 825 By: SO
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 9/2/21 @ 825 By: SO

Chain of Custody included? Yes No Custody seals? Yes No

Signed/dated by client? Yes No

Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>5.8</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>gel</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
 Green dots applied to out of temperature samples? Yes No
 Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 9/2/21 @ 1711 By: JS

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: _____

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: _____

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA

Comments: _____

Additional information:

Labeled by: JS Witness: SO Cooler Inspected by: JS



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, October 6, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A110192 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A110192, which was received by the laboratory on 9/7/2021 at 2:23:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 13.7 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B19 12.5	A110192-02	Soil	09/07/21 11:47	09/07/21 14:23
B19 15	A110192-03	Soil	09/07/21 11:53	09/07/21 14:23
B19 17.5	A110192-04	Soil	09/07/21 11:59	09/07/21 14:23
B19 20	A110192-05	Soil	09/07/21 12:06	09/07/21 14:23
B19 25	A110192-06	Soil	09/07/21 12:15	09/07/21 14:23
B-19	A110192-07	Water	09/07/21 12:35	09/07/21 14:23
B19 10-25C	A110192-08	Soil	09/07/21 11:47	09/07/21 14:23

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 (A110192-07)			Matrix: Water			Batch: 1090442		
Diesel	ND	0.0471	0.0941	mg/L	1	09/13/21 19:07	NWTPH-Dx LL	
Oil	ND	0.0941	0.188	mg/L	1	09/13/21 19:07	NWTPH-Dx LL	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/13/21 19:07</i>	<i>NWTPH-Dx LL</i>
B19 10-25C (A110192-08)			Matrix: Soil			Batch: 1090436		
Diesel	ND	10.2	25.0	mg/kg dry	1	09/13/21 19:47	NWTPH-Dx	
Oil	ND	20.4	50.0	mg/kg dry	1	09/13/21 19:47	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 88 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/13/21 19:47</i>	<i>NWTPH-Dx</i>

Apex Laboratories

Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 (A110192-07)			Matrix: Water			Batch: 1090289		
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	09/09/21 18:30	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/09/21 18:30</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>100 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/09/21 18:30</i>	<i>NWTPH-Gx (MS)</i>
B19 10-25C (A110192-08)			Matrix: Soil			Batch: 1090590		COMP, V-15
Gasoline Range Organics	ND	2.63	5.26	mg/kg dry	50	09/16/21 15:53	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/16/21 15:53</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/16/21 15:53</i>	<i>NWTPH-Gx (MS)</i>

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 (A110192-07)				Matrix: Water		Batch: 1090289		
Acetone	ND	20.0	20.0	ug/L	1	09/09/21 18:30	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	09/09/21 18:30	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	09/09/21 18:30	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	09/09/21 18:30	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	09/09/21 18:30	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	09/09/21 18:30	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	09/09/21 18:30	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	09/09/21 18:30	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	09/09/21 18:30	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	09/09/21 18:30	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	09/09/21 18:30	EPA 8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 (A110192-07)			Matrix: Water			Batch: 1090289		
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	09/09/21 18:30	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	09/09/21 18:30	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	09/09/21 18:30	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	5.00	10.0	ug/L	1	09/09/21 18:30	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Naphthalene	ND	1.00	2.00	ug/L	1	09/09/21 18:30	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	09/09/21 18:30	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	
Tetrachloroethene (PCE)	0.224	0.200	0.400	ug/L	1	09/09/21 18:30	EPA 8260D	J
Toluene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	09/09/21 18:30	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	09/09/21 18:30	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	09/09/21 18:30	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	09/09/21 18:30	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	09/09/21 18:30	EPA 8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 (A110192-07)				Matrix: Water		Batch: 1090289		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/09/21 18:30</i>	<i>EPA 8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/09/21 18:30</i>	<i>EPA 8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/09/21 18:30</i>	<i>EPA 8260D</i>
B19 10-25C (A110192-08)				Matrix: Soil		Batch: 1090590		COMP, V-15
Acetone	ND	526	1050	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Acrylonitrile	ND	52.6	105	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Benzene	ND	5.26	10.5	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Bromobenzene	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Bromochloromethane	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Bromodichloromethane	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Bromoform	ND	52.6	105	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Bromomethane	ND	526	526	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
2-Butanone (MEK)	ND	263	526	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
n-Butylbenzene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
sec-Butylbenzene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
tert-Butylbenzene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Carbon disulfide	ND	263	526	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Carbon tetrachloride	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Chlorobenzene	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Chloroethane	ND	263	526	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Chloroform	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Chloromethane	ND	131	263	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
2-Chlorotoluene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
4-Chlorotoluene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Dibromochloromethane	ND	52.6	105	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	263	263	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Dibromomethane	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,2-Dichlorobenzene	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,3-Dichlorobenzene	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,4-Dichlorobenzene	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Dichlorodifluoromethane	ND	52.6	105	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,1-Dichloroethane	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B19 10-25C (A110192-08)				Matrix: Soil		Batch: 1090590		COMP, V-15
1,2-Dichloroethane (EDC)	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,1-Dichloroethene	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
cis-1,2-Dichloroethene	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
trans-1,2-Dichloroethene	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,2-Dichloropropane	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,3-Dichloropropane	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
2,2-Dichloropropane	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,1-Dichloropropene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
cis-1,3-Dichloropropene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
trans-1,3-Dichloropropene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Ethylbenzene	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Hexachlorobutadiene	ND	52.6	105	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
2-Hexanone	ND	263	526	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Isopropylbenzene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
4-Isopropyltoluene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Methylene chloride	ND	263	526	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	263	526	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Naphthalene	ND	52.6	105	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
n-Propylbenzene	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Styrene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Tetrachloroethene (PCE)	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Toluene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,2,3-Trichlorobenzene	ND	131	263	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,2,4-Trichlorobenzene	ND	131	263	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,1,1-Trichloroethane	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,1,2-Trichloroethane	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Trichloroethene (TCE)	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Trichlorofluoromethane	ND	52.6	105	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,2,3-Trichloropropane	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
1,2,4-Trimethylbenzene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts</p>	<p style="text-align: right;">Report ID: A110192 - 10 06 21 1131</p>
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B19 10-25C (A110192-08)				Matrix: Soil		Batch: 1090590		COMP, V-15
1,3,5-Trimethylbenzene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
Vinyl chloride	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
m,p-Xylene	ND	26.3	52.6	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
o-Xylene	ND	13.1	26.3	ug/kg dry	50	09/16/21 15:53	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 108 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/16/21 15:53</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/16/21 15:53</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>1</i>	<i>09/16/21 15:53</i>	<i>5035A/8260D</i>

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
				Matrix: Water	Batch: 1090315			
B-19 (A110192-07)								
Acenaphthene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Acenaphthylene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Anthracene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Benz(a)anthracene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Benzo(a)pyrene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Chrysene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Fluoranthene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Fluorene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Naphthalene	ND	0.0381	0.0762	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Phenanthrene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
Pyrene	ND	0.0190	0.0381	ug/L	1	09/09/21 21:21	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 45 %</i>		<i>Limits: 44-120 %</i>	<i>1</i>	<i>09/09/21 21:21</i>	<i>EPA 8270E SIM</i>	
<i>p-Terphenyl-d14 (Surr)</i>		<i>68 %</i>		<i>50-134 %</i>	<i>1</i>	<i>09/09/21 21:21</i>	<i>EPA 8270E SIM</i>	

				Matrix: Soil	Batch: 1090326			
B19 10-25C (A110192-08)								
Acenaphthene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Acenaphthylene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Anthracene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Benz(a)anthracene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Benzo(a)pyrene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Chrysene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Fluoranthene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Fluorene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	

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ANALYTICAL REPORT

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B19 10-25C (A110192-08)				Matrix: Soil		Batch: 1090326		
Naphthalene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Phenanthrene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
Pyrene	ND	5.31	10.6	ug/kg dry	1	09/10/21 01:59	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>09/10/21 01:59</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>99 %</i>		<i>54-127 %</i>		<i>1</i>	<i>09/10/21 01:59</i>	<i>EPA 8270E SIM</i>

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B19 10-25C (A110192-08)				Matrix: Soil				
Batch: 1090601								
Antimony	ND	0.583	1.17	mg/kg dry	10	09/17/21 19:47	EPA 6020B	
Arsenic	2.49	0.583	1.17	mg/kg dry	10	09/17/21 19:47	EPA 6020B	
Barium	78.4	0.583	1.17	mg/kg dry	10	09/17/21 19:47	EPA 6020B	
Cadmium	ND	0.117	0.233	mg/kg dry	10	09/17/21 19:47	EPA 6020B	
Chromium	15.0	0.583	1.17	mg/kg dry	10	09/17/21 19:47	EPA 6020B	
Copper	19.5	1.17	2.33	mg/kg dry	10	09/17/21 19:47	EPA 6020B	
Lead	3.50	0.117	0.233	mg/kg dry	10	09/17/21 19:47	EPA 6020B	
Mercury	ND	0.0467	0.0933	mg/kg dry	10	09/17/21 19:47	EPA 6020B	
Selenium	0.617	0.583	1.17	mg/kg dry	10	09/17/21 19:47	EPA 6020B	J
Silver	ND	0.117	0.233	mg/kg dry	10	09/17/21 19:47	EPA 6020B	
Zinc	40.3	2.33	4.67	mg/kg dry	10	09/17/21 19:47	EPA 6020B	

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-19 (A110192-07)		Matrix: Water							
Batch: 1090684									
Arsenic	0.680	0.500	1.00	ug/L	1	09/19/21 01:40	EPA 6020B (Diss)	J	
Barium	12.0	0.500	1.00	ug/L	1	09/19/21 01:40	EPA 6020B (Diss)		
Cadmium	ND	0.100	0.200	ug/L	1	09/19/21 01:40	EPA 6020B (Diss)		
Chromium	ND	1.00	2.00	ug/L	1	09/19/21 01:40	EPA 6020B (Diss)		
Lead	ND	0.100	0.200	ug/L	1	09/19/21 01:40	EPA 6020B (Diss)		
Mercury	ND	0.0400	0.0800	ug/L	1	09/19/21 01:40	EPA 6020B (Diss)		
Selenium	ND	0.500	1.00	ug/L	1	09/19/21 01:40	EPA 6020B (Diss)		
Silver	ND	0.100	0.200	ug/L	1	09/19/21 01:40	EPA 6020B (Diss)		

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B19 10-25C (A110192-08)				Matrix: Soil		Batch: 1090304		
% Solids	91.8	1.00	1.00	%	1	09/10/21 08:50	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090436 - EPA 3546 (Fuels)						Soil						
Blank (1090436-BLK1)			Prepared: 09/13/21 12:48 Analyzed: 09/13/21 18:05									
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1090436-BS1)			Prepared: 09/13/21 12:48 Analyzed: 09/13/21 18:25									
<u>NWTPH-Dx</u>												
Diesel	98.2	10.0	25.0	mg/kg wet	1	125	---	79	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090436-DUP1)			Prepared: 09/13/21 12:48 Analyzed: 09/13/21 19:06									
<u>QC Source Sample: Non-SDG (A110191-04)</u>												
Diesel	ND	11.6	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	64.7	23.3	50.0	mg/kg dry	1	---	36.4	---	---	56	30%	F-03, Q-05
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 89 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090436-DUP2)			Prepared: 09/13/21 12:48 Analyzed: 09/13/21 21:48									
<u>QC Source Sample: Non-SDG (A110302-01)</u>												
Diesel	ND	12.7	25.5	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	25.5	51.0	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 19 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						S-06
Batch 1090442 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (1090442-BLK1)			Prepared: 09/13/21 13:11 Analyzed: 09/13/21 18:05									
<u>NWTPH-Dx LL</u>												
Diesel	ND	0.0400	0.0800	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.0800	0.160	mg/L	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1090442-BS1)			Prepared: 09/13/21 13:11 Analyzed: 09/13/21 18:25									
<u>NWTPH-Dx LL</u>												
Diesel	0.466	0.0400	0.0800	mg/L	1	0.500	---	93	36-132%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090442 - EPA 3510C (Fuels/Acid Ext.)						Water						
LCS (1090442-BS1)						Prepared: 09/13/21 13:11 Analyzed: 09/13/21 18:25						
<i>Surr: o-Terphenyl (Surr)</i>						<i>Recovery: 105 % Limits: 50-150 % Dilution: 1x</i>						
LCS Dup (1090442-BSD1)						Prepared: 09/13/21 13:11 Analyzed: 09/13/21 18:46						
<u>NWTPH-Dx LL</u>						Q-19						
Diesel	0.487	0.0400	0.0800	mg/L	1	0.500	---	97	36-132%	5	30%	
<i>Surr: o-Terphenyl (Surr)</i>						<i>Recovery: 105 % Limits: 50-150 % Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090289 - EPA 5030B						Water						
Blank (1090289-BLK1)			Prepared: 09/09/21 07:30 Analyzed: 09/09/21 10:27									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>100 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090289-BS2)			Prepared: 09/09/21 07:30 Analyzed: 09/09/21 10:00									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	0.463	0.0500	0.100	mg/L	1	0.500	---	93	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090289-DUP1)			Prepared: 09/09/21 08:38 Analyzed: 09/09/21 14:56									
<u>QC Source Sample: Non-SDG (A110158-01)</u>												
Gasoline Range Organics	0.868	0.0500	0.100	mg/L	1	---	0.848	---	---	2	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090590 - EPA 5035A						Soil						
Blank (1090590-BLK1)			Prepared: 09/16/21 09:00 Analyzed: 09/16/21 11:24									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 109 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>103 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090590-BS2)			Prepared: 09/16/21 09:00 Analyzed: 09/16/21 10:57									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	25.5	2.50	5.00	mg/kg wet	50	25.0	---	102	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 114 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090590-DUP1)			Prepared: 09/07/21 11:15 Analyzed: 09/16/21 13:12									
<u>QC Source Sample: Non-SDG (A110191-04)</u>												
Gasoline Range Organics	ND	3.43	6.85	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 113 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090289 - EPA 5030B						Water						
Blank (1090289-BLK1)			Prepared: 09/09/21 07:30 Analyzed: 09/09/21 10:27									
<u>EPA 8260D</u>												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090289 - EPA 5030B						Water						
Blank (1090289-BLK1)			Prepared: 09/09/21 07:30 Analyzed: 09/09/21 10:27									
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 99 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090289 - EPA 5030B						Water						
Blank (1090289-BLK1)						Prepared: 09/09/21 07:30 Analyzed: 09/09/21 10:27						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>		<i>"</i>						
LCS (1090289-BS1)						Prepared: 09/09/21 07:30 Analyzed: 09/09/21 09:30						
EPA 8260D												
Acetone	42.2	10.0	20.0	ug/L	1	40.0	---	105	80-120%	---	---	
Acrylonitrile	21.4	1.00	2.00	ug/L	1	20.0	---	107	80-120%	---	---	
Benzene	20.7	0.100	0.200	ug/L	1	20.0	---	104	80-120%	---	---	
Bromobenzene	19.7	0.250	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Bromochloromethane	20.9	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
Bromodichloromethane	23.3	0.500	1.00	ug/L	1	20.0	---	116	80-120%	---	---	
Bromoform	24.0	0.500	1.00	ug/L	1	20.0	---	120	80-120%	---	---	
Bromomethane	28.3	5.00	5.00	ug/L	1	20.0	---	141	80-120%	---	---	Q-56
2-Butanone (MEK)	45.1	5.00	10.0	ug/L	1	40.0	---	113	80-120%	---	---	
n-Butylbenzene	23.0	0.500	1.00	ug/L	1	20.0	---	115	80-120%	---	---	
sec-Butylbenzene	21.3	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
tert-Butylbenzene	20.7	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
Carbon disulfide	20.8	5.00	10.0	ug/L	1	20.0	---	104	80-120%	---	---	
Carbon tetrachloride	26.7	0.500	1.00	ug/L	1	20.0	---	134	80-120%	---	---	Q-56
Chlorobenzene	20.7	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Chloroethane	19.2	5.00	5.00	ug/L	1	20.0	---	96	80-120%	---	---	
Chloroform	21.9	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
Chloromethane	20.0	2.50	5.00	ug/L	1	20.0	---	100	80-120%	---	---	
2-Chlorotoluene	21.6	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
4-Chlorotoluene	21.3	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
Dibromochloromethane	23.7	0.500	1.00	ug/L	1	20.0	---	119	80-120%	---	---	
1,2-Dibromo-3-chloropropane	21.6	2.50	5.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,2-Dibromoethane (EDB)	20.9	0.250	0.500	ug/L	1	20.0	---	105	80-120%	---	---	
Dibromomethane	21.5	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,2-Dichlorobenzene	21.3	0.250	0.500	ug/L	1	20.0	---	107	80-120%	---	---	
1,3-Dichlorobenzene	20.8	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
1,4-Dichlorobenzene	20.5	0.250	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
Dichlorodifluoromethane	22.1	0.500	1.00	ug/L	1	20.0	---	111	80-120%	---	---	ICV-01
1,1-Dichloroethane	21.5	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090289 - EPA 5030B						Water						
LCS (1090289-BS1)			Prepared: 09/09/21 07:30 Analyzed: 09/09/21 09:30									
1,2-Dichloroethane (EDC)	21.7	0.200	0.400	ug/L	1	20.0	---	109	80-120%	---	---	
1,1-Dichloroethene	22.0	0.200	0.400	ug/L	1	20.0	---	110	80-120%	---	---	
cis-1,2-Dichloroethene	21.6	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
trans-1,2-Dichloroethene	21.7	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
1,2-Dichloropropane	21.3	0.250	0.500	ug/L	1	20.0	---	107	80-120%	---	---	
1,3-Dichloropropane	20.8	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
2,2-Dichloropropane	30.1	0.500	1.00	ug/L	1	20.0	---	150	80-120%	---	---	Q-56
1,1-Dichloropropene	21.2	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
cis-1,3-Dichloropropene	23.6	0.500	1.00	ug/L	1	20.0	---	118	80-120%	---	---	
trans-1,3-Dichloropropene	24.1	1.00	2.00	ug/L	1	20.0	---	121	80-120%	---	---	Q-56
Ethylbenzene	20.9	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Hexachlorobutadiene	22.2	2.50	5.00	ug/L	1	20.0	---	111	80-120%	---	---	
2-Hexanone	44.3	5.00	10.0	ug/L	1	40.0	---	111	80-120%	---	---	
Isopropylbenzene	21.0	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
4-Isopropyltoluene	21.5	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Methylene chloride	20.2	5.00	10.0	ug/L	1	20.0	---	101	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	45.5	5.00	10.0	ug/L	1	40.0	---	114	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	19.9	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
Naphthalene	17.8	1.00	2.00	ug/L	1	20.0	---	89	80-120%	---	---	
n-Propylbenzene	21.2	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Styrene	21.5	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,1,1,2-Tetrachloroethane	26.6	0.200	0.400	ug/L	1	20.0	---	133	80-120%	---	---	Q-56
1,1,2,2-Tetrachloroethane	22.0	0.250	0.500	ug/L	1	20.0	---	110	80-120%	---	---	
Tetrachloroethene (PCE)	20.9	0.200	0.400	ug/L	1	20.0	---	105	80-120%	---	---	
Toluene	19.7	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2,3-Trichlorobenzene	21.0	1.00	2.00	ug/L	1	20.0	---	105	80-120%	---	---	
1,2,4-Trichlorobenzene	21.3	1.00	2.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,1,1-Trichloroethane	22.4	0.200	0.400	ug/L	1	20.0	---	112	80-120%	---	---	
1,1,2-Trichloroethane	20.5	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Trichloroethene (TCE)	20.7	0.200	0.400	ug/L	1	20.0	---	103	80-120%	---	---	
Trichlorofluoromethane	23.9	1.00	2.00	ug/L	1	20.0	---	119	80-120%	---	---	
1,2,3-Trichloropropane	21.5	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,2,4-Trimethylbenzene	21.5	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,3,5-Trimethylbenzene	21.2	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090289 - EPA 5030B						Water						
LCS (1090289-BS1)						Prepared: 09/09/21 07:30 Analyzed: 09/09/21 09:30						
Vinyl chloride	21.7	0.200	0.400	ug/L	1	20.0	---	109	80-120%	---	---	
m,p-Xylene	41.6	0.500	1.00	ug/L	1	40.0	---	104	80-120%	---	---	
o-Xylene	20.4	0.250	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99%</i>		<i>Limits: 80-120%</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99%</i>		<i>80-120%</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98%</i>		<i>80-120%</i>		<i>"</i>						

Duplicate (1090289-DUP1)						Prepared: 09/09/21 08:38 Analyzed: 09/09/21 14:56						
QC Source Sample: Non-SDG (A110158-01)												
Acetone	21.8	10.0	20.0	ug/L	1	---	24.5	---	---	12	30%	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromoform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromomethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
n-Butylbenzene	1.56	0.500	1.00	ug/L	1	---	1.52	---	---	3	30%	
sec-Butylbenzene	3.80	0.500	1.00	ug/L	1	---	3.79	---	---	0.4	30%	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Chloroethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
Chloroform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Chloromethane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110192 - 10 06 21 1131

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090289 - EPA 5030B						Water						
Duplicate (1090289-DUP1)			Prepared: 09/09/21 08:38 Analyzed: 09/09/21 14:56									
QC Source Sample: Non-SDG (A110158-01)												
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	6.66	0.200	0.400	ug/L	1	---	6.72	---	---	0.9	30%	
trans-1,2-Dichloroethene	0.288	0.200	0.400	ug/L	1	---	0.347	---	---	19	30%	J
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	2.23	0.500	1.00	ug/L	1	---	2.20	---	---	1	30%	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	4.34	0.250	0.500	ug/L	1	---	4.24	---	---	2	30%	
Styrene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	17.3	0.200	0.400	ug/L	1	---	20.8	---	---	18	30%	
Toluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090289 - EPA 5030B												
Water												
Duplicate (1090289-DUP1)												
Prepared: 09/09/21 08:38 Analyzed: 09/09/21 14:56												
QC Source Sample: Non-SDG (A110158-01)												
Trichloroethene (TCE)	7.08	0.200	0.400	ug/L	1	---	7.69	---	---	8	30%	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	0.220	0.200	0.400	ug/L	1	---	0.246	---	---	11	30%	J
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr) Recovery: 99 % Limits: 80-120 % Dilution: 1x												
Toluene-d8 (Surr) 101 % 80-120 % "												
4-Bromofluorobenzene (Surr) 101 % 80-120 % "												

Matrix Spike (1090289-MS1)												
Prepared: 09/09/21 08:38 Analyzed: 09/09/21 17:37												
QC Source Sample: Non-SDG (A110158-06)												
EPA 8260D												
Acetone	53.4	10.0	20.0	ug/L	1	40.0	ND	97	39-160%	---	---	
Acrylonitrile	23.2	1.00	2.00	ug/L	1	20.0	ND	116	63-135%	---	---	
Benzene	22.7	0.100	0.200	ug/L	1	20.0	ND	113	79-120%	---	---	
Bromobenzene	20.5	0.250	0.500	ug/L	1	20.0	ND	103	80-120%	---	---	
Bromochloromethane	22.6	0.500	1.00	ug/L	1	20.0	ND	113	78-123%	---	---	
Bromodichloromethane	24.6	0.500	1.00	ug/L	1	20.0	ND	123	79-125%	---	---	
Bromoform	24.9	0.500	1.00	ug/L	1	20.0	ND	125	66-130%	---	---	
Bromomethane	32.8	5.00	5.00	ug/L	1	20.0	ND	164	53-141%	---	---	Q-54d
2-Butanone (MEK)	51.0	5.00	10.0	ug/L	1	40.0	ND	127	56-143%	---	---	
n-Butylbenzene	23.2	0.500	1.00	ug/L	1	20.0	ND	116	75-128%	---	---	
sec-Butylbenzene	21.9	0.500	1.00	ug/L	1	20.0	ND	110	77-126%	---	---	
tert-Butylbenzene	22.1	0.500	1.00	ug/L	1	20.0	ND	110	78-124%	---	---	
Carbon disulfide	23.2	5.00	10.0	ug/L	1	20.0	ND	116	64-133%	---	---	
Carbon tetrachloride	30.2	0.500	1.00	ug/L	1	20.0	ND	151	72-136%	---	---	Q-54c
Chlorobenzene	22.1	0.250	0.500	ug/L	1	20.0	ND	111	80-120%	---	---	
Chloroethane	22.8	5.00	5.00	ug/L	1	20.0	ND	114	60-138%	---	---	
Chloroform	23.7	0.500	1.00	ug/L	1	20.0	ND	118	79-124%	---	---	
Chloromethane	22.5	2.50	5.00	ug/L	1	20.0	ND	113	50-139%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090289 - EPA 5030B												
Water												
Matrix Spike (1090289-MS1)												
Prepared: 09/09/21 08:38 Analyzed: 09/09/21 17:37												
QC Source Sample: Non-SDG (A110158-06)												
2-Chlorotoluene	22.3	0.500	1.00	ug/L	1	20.0	ND	112	79-122%	---	---	
4-Chlorotoluene	21.8	0.500	1.00	ug/L	1	20.0	ND	109	78-122%	---	---	
Dibromochloromethane	25.5	0.500	1.00	ug/L	1	20.0	ND	128	74-126%	---	---	Q-01
1,2-Dibromo-3-chloropropane	22.7	2.50	5.00	ug/L	1	20.0	ND	114	62-128%	---	---	
1,2-Dibromoethane (EDB)	22.7	0.250	0.500	ug/L	1	20.0	ND	114	77-121%	---	---	
Dibromomethane	22.8	0.500	1.00	ug/L	1	20.0	ND	114	79-123%	---	---	
1,2-Dichlorobenzene	21.6	0.250	0.500	ug/L	1	20.0	ND	108	80-120%	---	---	
1,3-Dichlorobenzene	21.0	0.250	0.500	ug/L	1	20.0	ND	105	80-120%	---	---	
1,4-Dichlorobenzene	20.7	0.250	0.500	ug/L	1	20.0	ND	104	79-120%	---	---	
Dichlorodifluoromethane	25.4	0.500	1.00	ug/L	1	20.0	ND	127	32-152%	---	---	ICV-01
1,1-Dichloroethane	23.5	0.200	0.400	ug/L	1	20.0	ND	118	77-125%	---	---	
1,2-Dichloroethane (EDC)	22.9	0.200	0.400	ug/L	1	20.0	ND	114	73-128%	---	---	
1,1-Dichloroethene	24.3	0.200	0.400	ug/L	1	20.0	ND	121	71-131%	---	---	
cis-1,2-Dichloroethene	24.6	0.200	0.400	ug/L	1	20.0	0.720	120	78-123%	---	---	
trans-1,2-Dichloroethene	23.7	0.200	0.400	ug/L	1	20.0	ND	119	75-124%	---	---	
1,2-Dichloropropane	22.7	0.250	0.500	ug/L	1	20.0	ND	114	78-122%	---	---	
1,3-Dichloropropane	22.7	0.500	1.00	ug/L	1	20.0	ND	113	80-120%	---	---	
2,2-Dichloropropane	30.5	0.500	1.00	ug/L	1	20.0	ND	152	60-139%	---	---	Q-54g
1,1-Dichloropropene	23.4	0.500	1.00	ug/L	1	20.0	ND	117	79-125%	---	---	
cis-1,3-Dichloropropene	23.6	0.500	1.00	ug/L	1	20.0	ND	118	75-124%	---	---	
trans-1,3-Dichloropropene	25.0	1.00	2.00	ug/L	1	20.0	ND	125	73-127%	---	---	Q-54
Ethylbenzene	22.7	0.250	0.500	ug/L	1	20.0	ND	114	79-121%	---	---	
Hexachlorobutadiene	21.0	2.50	5.00	ug/L	1	20.0	ND	105	66-134%	---	---	
2-Hexanone	48.5	5.00	10.0	ug/L	1	40.0	ND	121	57-139%	---	---	
Isopropylbenzene	23.0	0.500	1.00	ug/L	1	20.0	ND	115	72-131%	---	---	
4-Isopropyltoluene	21.6	0.500	1.00	ug/L	1	20.0	ND	108	77-127%	---	---	
Methylene chloride	20.8	5.00	10.0	ug/L	1	20.0	ND	104	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	49.8	5.00	10.0	ug/L	1	40.0	ND	124	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	21.3	0.500	1.00	ug/L	1	20.0	ND	106	71-124%	---	---	
Naphthalene	18.0	1.00	2.00	ug/L	1	20.0	ND	90	61-128%	---	---	
n-Propylbenzene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	76-126%	---	---	
Styrene	17.9	0.500	1.00	ug/L	1	20.0	ND	90	78-123%	---	---	
1,1,1,2-Tetrachloroethane	28.2	0.200	0.400	ug/L	1	20.0	ND	141	78-124%	---	---	Q-54b

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090289 - EPA 5030B						Water						
Matrix Spike (1090289-MS1)						Prepared: 09/09/21 08:38 Analyzed: 09/09/21 17:37						
QC Source Sample: Non-SDG (A110158-06)												
1,1,2,2-Tetrachloroethane	22.8	0.250	0.500	ug/L	1	20.0	ND	114	71-121%	---	---	
Tetrachloroethene (PCE)	27.4	0.200	0.400	ug/L	1	20.0	4.33	115	74-129%	---	---	
Toluene	21.9	0.500	1.00	ug/L	1	20.0	ND	110	80-121%	---	---	
1,2,3-Trichlorobenzene	19.7	1.00	2.00	ug/L	1	20.0	ND	99	69-129%	---	---	
1,2,4-Trichlorobenzene	20.3	1.00	2.00	ug/L	1	20.0	ND	101	69-130%	---	---	
1,1,1-Trichloroethane	25.4	0.200	0.400	ug/L	1	20.0	ND	127	74-131%	---	---	
1,1,2-Trichloroethane	22.4	0.250	0.500	ug/L	1	20.0	ND	112	80-120%	---	---	
Trichloroethene (TCE)	23.7	0.200	0.400	ug/L	1	20.0	0.706	115	79-123%	---	---	
Trichlorofluoromethane	27.2	1.00	2.00	ug/L	1	20.0	ND	136	65-141%	---	---	
1,2,3-Trichloropropane	22.7	0.500	1.00	ug/L	1	20.0	ND	113	73-122%	---	---	
1,2,4-Trimethylbenzene	19.6	0.500	1.00	ug/L	1	20.0	ND	98	76-124%	---	---	
1,3,5-Trimethylbenzene	20.9	0.500	1.00	ug/L	1	20.0	ND	105	75-124%	---	---	
Vinyl chloride	24.5	0.200	0.400	ug/L	1	20.0	ND	122	58-137%	---	---	
m,p-Xylene	44.3	0.500	1.00	ug/L	1	40.0	ND	111	80-121%	---	---	
o-Xylene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	78-122%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090590 - EPA 5035A						Soil						
Blank (1090590-BLK1)			Prepared: 09/16/21 09:00 Analyzed: 09/16/21 11:24									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	167	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090590 - EPA 5035A						Soil						
Blank (1090590-BLK1)			Prepared: 09/16/21 09:00 Analyzed: 09/16/21 11:24									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 105 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090590 - EPA 5035A						Soil						
Blank (1090590-BLK1)						Prepared: 09/16/21 09:00 Analyzed: 09/16/21 11:24						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (1090590-BS1)						Prepared: 09/16/21 09:00 Analyzed: 09/16/21 10:30						
5035A/8260D												
Acetone	1840	500	1000	ug/kg wet	50	2000	---	92	80-120%	---	---	
Acrylonitrile	1020	50.0	100	ug/kg wet	50	1000	---	102	80-120%	---	---	
Benzene	1140	5.00	10.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
Bromobenzene	986	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Bromochloromethane	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Bromodichloromethane	1200	25.0	50.0	ug/kg wet	50	1000	---	120	80-120%	---	---	
Bromoform	908	50.0	100	ug/kg wet	50	1000	---	91	80-120%	---	---	
Bromomethane	1320	500	500	ug/kg wet	50	1000	---	132	80-120%	---	---	Q-56
2-Butanone (MEK)	1970	250	500	ug/kg wet	50	2000	---	99	80-120%	---	---	
n-Butylbenzene	980	25.0	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
sec-Butylbenzene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
tert-Butylbenzene	954	25.0	50.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
Carbon disulfide	1330	250	500	ug/kg wet	50	1000	---	133	80-120%	---	---	Q-56
Carbon tetrachloride	1230	25.0	50.0	ug/kg wet	50	1000	---	123	80-120%	---	---	Q-56
Chlorobenzene	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Chloroethane	975	250	500	ug/kg wet	50	1000	---	98	80-120%	---	---	
Chloroform	1170	25.0	50.0	ug/kg wet	50	1000	---	117	80-120%	---	---	
Chloromethane	983	125	250	ug/kg wet	50	1000	---	98	80-120%	---	---	
2-Chlorotoluene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
4-Chlorotoluene	968	25.0	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Dibromochloromethane	965	50.0	100	ug/kg wet	50	1000	---	96	80-120%	---	---	
1,2-Dibromo-3-chloropropane	778	250	250	ug/kg wet	50	1000	---	78	80-120%	---	---	Q-55
1,2-Dibromoethane (EDB)	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Dibromomethane	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,2-Dichlorobenzene	990	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,3-Dichlorobenzene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,4-Dichlorobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Dichlorodifluoromethane	1100	50.0	100	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,1-Dichloroethane	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090590 - EPA 5035A						Soil						
LCS (1090590-BS1)			Prepared: 09/16/21 09:00 Analyzed: 09/16/21 10:30									
1,2-Dichloroethane (EDC)	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,1-Dichloroethene	1420	12.5	25.0	ug/kg wet	50	1000	---	142	80-120%	---	---	Q-56
cis-1,2-Dichloroethene	1170	12.5	25.0	ug/kg wet	50	1000	---	117	80-120%	---	---	
trans-1,2-Dichloroethene	1180	12.5	25.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
1,2-Dichloropropane	1150	12.5	25.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,3-Dichloropropane	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
2,2-Dichloropropane	1320	25.0	50.0	ug/kg wet	50	1000	---	132	80-120%	---	---	Q-56
1,1-Dichloropropene	1210	25.0	50.0	ug/kg wet	50	1000	---	121	80-120%	---	---	Q-56
cis-1,3-Dichloropropene	1200	25.0	50.0	ug/kg wet	50	1000	---	120	80-120%	---	---	
trans-1,3-Dichloropropene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Ethylbenzene	990	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Hexachlorobutadiene	1010	50.0	100	ug/kg wet	50	1000	---	101	80-120%	---	---	
2-Hexanone	1690	250	500	ug/kg wet	50	2000	---	84	80-120%	---	---	
Isopropylbenzene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
4-Isopropyltoluene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Methylene chloride	1170	250	500	ug/kg wet	50	1000	---	117	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	1730	250	500	ug/kg wet	50	2000	---	87	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
Naphthalene	940	50.0	100	ug/kg wet	50	1000	---	94	80-120%	---	---	
n-Propylbenzene	1000	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Styrene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,1,2,2-Tetrachloroethane	892	25.0	50.0	ug/kg wet	50	1000	---	89	80-120%	---	---	
Tetrachloroethene (PCE)	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Toluene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,2,3-Trichlorobenzene	1040	125	250	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,2,4-Trichlorobenzene	1040	125	250	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,1,1-Trichloroethane	1240	12.5	25.0	ug/kg wet	50	1000	---	124	80-120%	---	---	Q-56
1,1,2-Trichloroethane	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Trichloroethene (TCE)	1250	12.5	25.0	ug/kg wet	50	1000	---	125	80-120%	---	---	Q-56
Trichlorofluoromethane	950	50.0	100	ug/kg wet	50	1000	---	95	80-120%	---	---	
1,2,3-Trichloropropane	956	25.0	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
1,2,4-Trimethylbenzene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,3,5-Trimethylbenzene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090590 - EPA 5035A						Soil						
LCS (1090590-BS1)						Prepared: 09/16/21 09:00 Analyzed: 09/16/21 10:30						
Vinyl chloride	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
m,p-Xylene	1980	25.0	50.0	ug/kg wet	50	2000	---	99	80-120%	---	---	
o-Xylene	1000	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 108 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1090590-DUP1)						Prepared: 09/07/21 11:15 Analyzed: 09/16/21 13:12						
QC Source Sample: Non-SDG (A110191-04)												
Acetone	ND	685	1370	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	68.5	137	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	6.85	13.7	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	68.5	137	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	685	685	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	343	685	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	343	685	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	343	685	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	171	343	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	68.5	137	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	343	343	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090590 - EPA 5035A							Soil					
Duplicate (1090590-DUP1)			Prepared: 09/07/21 11:15 Analyzed: 09/16/21 13:12									
QC Source Sample: Non-SDG (A110191-04)												
1,3-Dichlorobenzene	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	68.5	137	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	68.5	137	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	343	685	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	343	685	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	343	685	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	68.5	137	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	171	343	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	171	343	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090590 - EPA 5035A												
Soil												
Duplicate (1090590-DUP1)												
						Prepared: 09/07/21 11:15 Analyzed: 09/16/21 13:12						
QC Source Sample: Non-SDG (A110191-04)												
Trichloroethene (TCE)	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	68.5	137	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	34.3	68.5	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	17.1	34.3	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 109 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (1090590-MS1)												
						Prepared: 09/08/21 14:50 Analyzed: 09/16/21 14:59						
QC Source Sample: Non-SDG (A110255-09)												
5035A/8260D												
Acetone	2120	521	1040	ug/kg dry	50	2090	ND	101	36-164%	---	---	
Acrylonitrile	1130	52.1	104	ug/kg dry	50	1040	ND	109	65-134%	---	---	
Benzene	1200	5.21	10.4	ug/kg dry	50	1040	ND	115	77-121%	---	---	
Bromobenzene	1020	13.0	26.1	ug/kg dry	50	1040	ND	98	78-121%	---	---	
Bromochloromethane	1100	26.1	52.1	ug/kg dry	50	1040	ND	105	78-125%	---	---	
Bromodichloromethane	1210	26.1	52.1	ug/kg dry	50	1040	ND	116	75-127%	---	---	
Bromoform	899	52.1	104	ug/kg dry	50	1040	ND	86	67-132%	---	---	
Bromomethane	1390	521	521	ug/kg dry	50	1040	ND	133	53-143%	---	---	Q-54a
2-Butanone (MEK)	2190	261	521	ug/kg dry	50	2090	ND	105	51-148%	---	---	
n-Butylbenzene	991	26.1	52.1	ug/kg dry	50	1040	ND	95	70-128%	---	---	
sec-Butylbenzene	1060	26.1	52.1	ug/kg dry	50	1040	ND	102	73-126%	---	---	
tert-Butylbenzene	991	26.1	52.1	ug/kg dry	50	1040	ND	95	73-125%	---	---	
Carbon disulfide	1410	261	521	ug/kg dry	50	1040	ND	135	63-132%	---	---	Q-54b
Carbon tetrachloride	1240	26.1	52.1	ug/kg dry	50	1040	ND	119	70-135%	---	---	Q-54f
Chlorobenzene	1080	13.0	26.1	ug/kg dry	50	1040	ND	103	79-120%	---	---	
Chloroethane	1290	261	521	ug/kg dry	50	1040	ND	124	59-139%	---	---	
Chloroform	1210	26.1	52.1	ug/kg dry	50	1040	ND	116	78-123%	---	---	
Chloromethane	986	130	261	ug/kg dry	50	1040	ND	94	50-136%	---	---	

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090590 - EPA 5035A						Soil						
Matrix Spike (1090590-MS1)			Prepared: 09/08/21 14:50 Analyzed: 09/16/21 14:59									
QC Source Sample: Non-SDG (A110255-09)												
2-Chlorotoluene	1030	26.1	52.1	ug/kg dry	50	1040	ND	99	75-122%	---	---	
4-Chlorotoluene	1010	26.1	52.1	ug/kg dry	50	1040	ND	96	72-124%	---	---	
Dibromochloromethane	975	52.1	104	ug/kg dry	50	1040	ND	93	74-126%	---	---	
1,2-Dibromo-3-chloropropane	813	261	261	ug/kg dry	50	1040	ND	78	61-132%	---	---	Q-54j
1,2-Dibromoethane (EDB)	1130	26.1	52.1	ug/kg dry	50	1040	ND	108	78-122%	---	---	
Dibromomethane	1130	26.1	52.1	ug/kg dry	50	1040	ND	108	78-125%	---	---	
1,2-Dichlorobenzene	1020	13.0	26.1	ug/kg dry	50	1040	ND	97	78-121%	---	---	
1,3-Dichlorobenzene	1030	13.0	26.1	ug/kg dry	50	1040	ND	98	77-121%	---	---	
1,4-Dichlorobenzene	1030	13.0	26.1	ug/kg dry	50	1040	ND	98	75-120%	---	---	
Dichlorodifluoromethane	1150	52.1	104	ug/kg dry	50	1040	ND	110	29-149%	---	---	
1,1-Dichloroethane	1240	13.0	26.1	ug/kg dry	50	1040	ND	119	76-125%	---	---	
1,2-Dichloroethane (EDC)	1110	13.0	26.1	ug/kg dry	50	1040	ND	107	73-128%	---	---	
1,1-Dichloroethene	1490	13.0	26.1	ug/kg dry	50	1040	ND	143	70-131%	---	---	Q-54e
cis-1,2-Dichloroethene	1220	13.0	26.1	ug/kg dry	50	1040	ND	117	77-123%	---	---	
trans-1,2-Dichloroethene	1230	13.0	26.1	ug/kg dry	50	1040	ND	118	74-125%	---	---	
1,2-Dichloropropane	1190	13.0	26.1	ug/kg dry	50	1040	ND	114	76-123%	---	---	
1,3-Dichloropropane	1110	26.1	52.1	ug/kg dry	50	1040	ND	106	77-121%	---	---	
2,2-Dichloropropane	1250	26.1	52.1	ug/kg dry	50	1040	ND	120	67-133%	---	---	Q-54a
1,1-Dichloropropene	1230	26.1	52.1	ug/kg dry	50	1040	ND	118	76-125%	---	---	Q-54
cis-1,3-Dichloropropene	1230	26.1	52.1	ug/kg dry	50	1040	ND	118	74-126%	---	---	
trans-1,3-Dichloropropene	1030	26.1	52.1	ug/kg dry	50	1040	ND	99	71-130%	---	---	
Ethylbenzene	1020	13.0	26.1	ug/kg dry	50	1040	ND	97	76-122%	---	---	
Hexachlorobutadiene	1030	52.1	104	ug/kg dry	50	1040	ND	98	61-135%	---	---	
2-Hexanone	1700	261	521	ug/kg dry	50	2090	ND	82	53-145%	---	---	
Isopropylbenzene	1040	26.1	52.1	ug/kg dry	50	1040	ND	99	68-134%	---	---	
4-Isopropyltoluene	1020	26.1	52.1	ug/kg dry	50	1040	ND	98	73-127%	---	---	
Methylene chloride	1140	261	521	ug/kg dry	50	1040	ND	109	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	1780	261	521	ug/kg dry	50	2090	ND	85	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1160	26.1	52.1	ug/kg dry	50	1040	ND	111	73-125%	---	---	
Naphthalene	1020	52.1	104	ug/kg dry	50	1040	ND	97	62-129%	---	---	
n-Propylbenzene	1040	13.0	26.1	ug/kg dry	50	1040	ND	100	73-125%	---	---	
Styrene	1040	26.1	52.1	ug/kg dry	50	1040	ND	99	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1110	13.0	26.1	ug/kg dry	50	1040	ND	106	78-125%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090590 - EPA 5035A						Soil						
Matrix Spike (1090590-MS1)			Prepared: 09/08/21 14:50 Analyzed: 09/16/21 14:59									
QC Source Sample: Non-SDG (A110255-09)												
1,1,2,2-Tetrachloroethane	958	26.1	52.1	ug/kg dry	50	1040	ND	92	70-124%	---	---	
Tetrachloroethene (PCE)	1150	13.0	26.1	ug/kg dry	50	1040	ND	110	73-128%	---	---	
Toluene	1080	26.1	52.1	ug/kg dry	50	1040	ND	103	77-121%	---	---	
1,2,3-Trichlorobenzene	1060	130	261	ug/kg dry	50	1040	ND	101	66-130%	---	---	
1,2,4-Trichlorobenzene	1060	130	261	ug/kg dry	50	1040	ND	102	67-129%	---	---	
1,1,1-Trichloroethane	1270	13.0	26.1	ug/kg dry	50	1040	ND	121	73-130%	---	---	Q-54h
1,1,2-Trichloroethane	1120	13.0	26.1	ug/kg dry	50	1040	ND	107	78-121%	---	---	
Trichloroethene (TCE)	1270	13.0	26.1	ug/kg dry	50	1040	ND	122	77-123%	---	---	Q-54i
Trichlorofluoromethane	1120	52.1	104	ug/kg dry	50	1040	ND	107	62-140%	---	---	
1,2,3-Trichloropropane	1000	26.1	52.1	ug/kg dry	50	1040	ND	96	73-125%	---	---	
1,2,4-Trimethylbenzene	1060	26.1	52.1	ug/kg dry	50	1040	ND	101	75-123%	---	---	
1,3,5-Trimethylbenzene	1080	26.1	52.1	ug/kg dry	50	1040	ND	103	73-124%	---	---	
Vinyl chloride	1090	13.0	26.1	ug/kg dry	50	1040	ND	105	56-135%	---	---	
m,p-Xylene	2000	26.1	52.1	ug/kg dry	50	2090	ND	96	77-124%	---	---	
o-Xylene	1010	13.0	26.1	ug/kg dry	50	1040	ND	96	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090315 - EPA 3510C (Acid Extraction)						Water						
Blank (1090315-BLK1)			Prepared: 09/09/21 11:50 Analyzed: 09/09/21 17:07									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0364	0.0727	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 73 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>85 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS (1090315-BS1)			Prepared: 09/09/21 11:50 Analyzed: 09/09/21 17:32									
<u>EPA 8270E SIM</u>												
Acenaphthene	6.03	0.0200	0.0400	ug/L	1	8.00	---	75	47-122%	---	---	
Acenaphthylene	6.24	0.0200	0.0400	ug/L	1	8.00	---	78	41-130%	---	---	
Anthracene	6.79	0.0200	0.0400	ug/L	1	8.00	---	85	57-123%	---	---	
Benz(a)anthracene	6.96	0.0200	0.0400	ug/L	1	8.00	---	87	58-125%	---	---	
Benzo(a)pyrene	7.37	0.0200	0.0400	ug/L	1	8.00	---	92	54-128%	---	---	
Benzo(b)fluoranthene	7.29	0.0200	0.0400	ug/L	1	8.00	---	91	53-131%	---	---	
Benzo(k)fluoranthene	7.90	0.0200	0.0400	ug/L	1	8.00	---	99	57-129%	---	---	
Benzo(g,h,i)perylene	7.34	0.0200	0.0400	ug/L	1	8.00	---	92	50-134%	---	---	
Chrysene	7.18	0.0200	0.0400	ug/L	1	8.00	---	90	59-123%	---	---	
Dibenz(a,h)anthracene	7.84	0.0200	0.0400	ug/L	1	8.00	---	98	51-134%	---	---	
Fluoranthene	7.11	0.0200	0.0400	ug/L	1	8.00	---	89	57-128%	---	---	
Fluorene	6.18	0.0200	0.0400	ug/L	1	8.00	---	77	52-124%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090315 - EPA 3510C (Acid Extraction)						Water						
LCS (1090315-BS1)						Prepared: 09/09/21 11:50 Analyzed: 09/09/21 17:32						
Indeno(1,2,3-cd)pyrene	7.05	0.0200	0.0400	ug/L	1	8.00	---	88	52-134%	---	---	
Naphthalene	5.50	0.0400	0.0800	ug/L	1	8.00	---	69	40-121%	---	---	
Phenanthrene	6.86	0.0200	0.0400	ug/L	1	8.00	---	86	59-120%	---	---	
Pyrene	7.03	0.0200	0.0400	ug/L	1	8.00	---	88	57-126%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 71 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>78 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS Dup (1090315-BSD1)						Prepared: 09/09/21 11:50 Analyzed: 09/09/21 17:58							Q-19
EPA 8270E SIM													
Acenaphthene	5.96	0.0200	0.0400	ug/L	1	8.00	---	74	47-122%	1	30%		
Acenaphthylene	6.07	0.0200	0.0400	ug/L	1	8.00	---	76	41-130%	3	30%		
Anthracene	6.60	0.0200	0.0400	ug/L	1	8.00	---	82	57-123%	3	30%		
Benz(a)anthracene	6.79	0.0200	0.0400	ug/L	1	8.00	---	85	58-125%	3	30%		
Benzo(a)pyrene	7.06	0.0200	0.0400	ug/L	1	8.00	---	88	54-128%	4	30%		
Benzo(b)fluoranthene	6.90	0.0200	0.0400	ug/L	1	8.00	---	86	53-131%	6	30%		
Benzo(k)fluoranthene	7.55	0.0200	0.0400	ug/L	1	8.00	---	94	57-129%	5	30%		
Benzo(g,h,i)perylene	6.95	0.0200	0.0400	ug/L	1	8.00	---	87	50-134%	5	30%		
Chrysene	7.04	0.0200	0.0400	ug/L	1	8.00	---	88	59-123%	2	30%		
Dibenz(a,h)anthracene	7.50	0.0200	0.0400	ug/L	1	8.00	---	94	51-134%	4	30%		
Fluoranthene	6.88	0.0200	0.0400	ug/L	1	8.00	---	86	57-128%	3	30%		
Fluorene	6.16	0.0200	0.0400	ug/L	1	8.00	---	77	52-124%	0.4	30%		
Indeno(1,2,3-cd)pyrene	6.83	0.0200	0.0400	ug/L	1	8.00	---	85	52-134%	3	30%		
Naphthalene	4.91	0.0400	0.0800	ug/L	1	8.00	---	61	40-121%	11	30%		
Phenanthrene	6.65	0.0200	0.0400	ug/L	1	8.00	---	83	59-120%	3	30%		
Pyrene	6.81	0.0200	0.0400	ug/L	1	8.00	---	85	57-126%	3	30%		
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>							
<i>p-Terphenyl-d14 (Surr)</i>		<i>82 %</i>		<i>50-134 %</i>		<i>"</i>							

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546												
Soil												
Blank (1090326-BLK1)												
						Prepared: 09/09/21 14:51 Analyzed: 09/09/21 22:37						
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 72 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>76 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1090326-BS1)												
						Prepared: 09/09/21 14:51 Analyzed: 09/09/21 23:02						
<u>EPA 8270E SIM</u>												
Acenaphthene	466	1.33	2.67	ug/kg wet	1	533	---	87	40-123%	---	---	
Acenaphthylene	486	1.33	2.67	ug/kg wet	1	533	---	91	32-132%	---	---	
Anthracene	469	1.33	2.67	ug/kg wet	1	533	---	88	47-123%	---	---	
Benz(a)anthracene	455	1.33	2.67	ug/kg wet	1	533	---	85	49-126%	---	---	
Benzo(a)pyrene	471	1.33	2.67	ug/kg wet	1	533	---	88	45-129%	---	---	
Benzo(b)fluoranthene	474	1.33	2.67	ug/kg wet	1	533	---	89	45-132%	---	---	
Benzo(k)fluoranthene	493	1.33	2.67	ug/kg wet	1	533	---	92	47-132%	---	---	
Benzo(g,h,i)perylene	459	1.33	2.67	ug/kg wet	1	533	---	86	43-134%	---	---	
Chrysene	469	1.33	2.67	ug/kg wet	1	533	---	88	50-124%	---	---	
Dibenz(a,h)anthracene	504	1.33	2.67	ug/kg wet	1	533	---	94	45-134%	---	---	
Fluoranthene	468	1.33	2.67	ug/kg wet	1	533	---	88	50-127%	---	---	
Fluorene	453	1.33	2.67	ug/kg wet	1	533	---	85	43-125%	---	---	

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110192 - 10 06 21 1131

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546												
Soil												
LCS (1090326-BS1)												
						Prepared: 09/09/21 14:51 Analyzed: 09/09/21 23:02						
Indeno(1,2,3-cd)pyrene	444	1.33	2.67	ug/kg wet	1	533	---	83	45-133%	---	---	
Naphthalene	442	1.33	2.67	ug/kg wet	1	533	---	83	35-123%	---	---	
Phenanthrene	460	1.33	2.67	ug/kg wet	1	533	---	86	50-121%	---	---	
Pyrene	470	1.33	2.67	ug/kg wet	1	533	---	88	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>82 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1090326-DUP1)												
						Prepared: 09/09/21 14:51 Analyzed: 09/10/21 00:18						
QC Source Sample: Non-SDG (A110084-04)												
Acenaphthene	2550	425	851	ug/kg dry	100	---	1390	---	---	59	30%	Q-04
Acenaphthylene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Anthracene	ND	851	851	ug/kg dry	100	---	ND	---	---	---	30%	
Benz(a)anthracene	ND	851	851	ug/kg dry	100	---	ND	---	---	---	30%	
Benzo(a)pyrene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	851	851	ug/kg dry	100	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Chrysene	ND	3740	3740	ug/kg dry	100	---	ND	---	---	---	30%	R-02
Dibenz(a,h)anthracene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Fluoranthene	1340	425	851	ug/kg dry	100	---	766	---	---	55	30%	Q-04
Fluorene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Naphthalene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Phenanthrene	ND	425	851	ug/kg dry	100	---	ND	---	---	---	30%	
Pyrene	2090	425	851	ug/kg dry	100	---	1190	---	---	55	30%	Q-04
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 100x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (1090326-MS1)												
						Prepared: 09/09/21 14:51 Analyzed: 09/10/21 01:34						
QC Source Sample: Non-SDG (A110189-01)												
EPA 8270E SIM												
Acenaphthene	1150	174	348	ug/kg dry	10	557	ND	206	40-123%	---	---	Q-01
Acenaphthylene	1110	174	348	ug/kg dry	10	557	ND	198	32-132%	---	---	Q-01

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090326 - EPA 3546						Soil						
Matrix Spike (1090326-MS1)			Prepared: 09/09/21 14:51 Analyzed: 09/10/21 01:34									
QC Source Sample: Non-SDG (A110189-01)												
Anthracene	1030	174	348	ug/kg dry	10	557	ND	185	47-123%	---	---	Q-01
Benz(a)anthracene	1110	174	348	ug/kg dry	10	557	ND	198	49-126%	---	---	Q-01
Benzo(a)pyrene	1010	174	348	ug/kg dry	10	557	ND	182	45-129%	---	---	Q-01
Benzo(b)fluoranthene	1010	174	348	ug/kg dry	10	557	ND	182	45-132%	---	---	Q-01
Benzo(k)fluoranthene	1000	174	348	ug/kg dry	10	557	ND	180	47-132%	---	---	Q-01
Benzo(g,h,i)perylene	1080	174	348	ug/kg dry	10	557	ND	194	43-134%	---	---	Q-01
Chrysene	1050	174	348	ug/kg dry	10	557	ND	188	50-124%	---	---	Q-01
Dibenz(a,h)anthracene	976	174	348	ug/kg dry	10	557	ND	175	45-134%	---	---	Q-01
Fluoranthene	1050	174	348	ug/kg dry	10	557	ND	189	50-127%	---	---	Q-01
Fluorene	1060	174	348	ug/kg dry	10	557	ND	190	43-125%	---	---	Q-01
Indeno(1,2,3-cd)pyrene	1050	174	348	ug/kg dry	10	557	ND	189	45-133%	---	---	Q-01
Naphthalene	1080	174	348	ug/kg dry	10	557	ND	193	35-123%	---	---	Q-01
Phenanthrene	1200	174	348	ug/kg dry	10	557	ND	215	50-121%	---	---	Q-01
Pyrene	1100	174	348	ug/kg dry	10	557	ND	198	47-127%	---	---	Q-01
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 180 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 10x</i>					S-05	
<i>p-Terphenyl-d14 (Surr)</i>		<i>223 %</i>		<i>54-127 %</i>		<i>"</i>					S-05	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090601 - EPA 3051A						Soil						
Blank (1090601-BLK1)			Prepared: 09/16/21 10:57 Analyzed: 09/17/21 18:47									
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	

LCS (1090601-BS1)						Prepared: 09/16/21 10:57 Analyzed: 09/17/21 18:52						
<u>EPA 6020B</u>												
Antimony	25.5	0.500	1.00	mg/kg wet	10	25.0	---	102	80-120%	---	---	
Arsenic	50.6	0.500	1.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Barium	50.6	0.500	1.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Cadmium	50.2	0.100	0.200	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Chromium	50.1	0.500	1.00	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Copper	52.2	1.00	2.00	mg/kg wet	10	50.0	---	104	80-120%	---	---	
Lead	52.6	0.100	0.200	mg/kg wet	10	50.0	---	105	80-120%	---	---	
Mercury	1.00	0.0400	0.0800	mg/kg wet	10	1.00	---	100	80-120%	---	---	
Selenium	26.3	0.500	1.00	mg/kg wet	10	25.0	---	105	80-120%	---	---	
Silver	25.7	0.100	0.200	mg/kg wet	10	25.0	---	103	80-120%	---	---	
Zinc	50.3	2.00	4.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	

Duplicate (1090601-DUP1)						Prepared: 09/16/21 10:57 Analyzed: 09/17/21 19:07						
<u>QC Source Sample: Non-SDG (A110326-01RE2)</u>												
Antimony	ND	0.520	1.04	mg/kg wet	10	---	ND	---	---	---	20%	
Arsenic	3.88	0.520	1.04	mg/kg wet	10	---	3.81	---	---	2	20%	
Barium	105	0.520	1.04	mg/kg wet	10	---	115	---	---	9	20%	
Cadmium	0.112	0.104	0.208	mg/kg wet	10	---	0.115	---	---	2	20%	J
Chromium	16.8	0.520	1.04	mg/kg wet	10	---	16.8	---	---	0.2	20%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090601 - EPA 3051A						Soil						
Duplicate (1090601-DUP1)			Prepared: 09/16/21 10:57 Analyzed: 09/17/21 19:07									
<u>QC Source Sample: Non-SDG (A110326-01RE2)</u>												
Copper	21.7	1.04	2.08	mg/kg wet	10	---	21.8	---	---	0.9	20%	
Lead	7.42	0.104	0.208	mg/kg wet	10	---	7.95	---	---	7	20%	
Mercury	ND	0.0416	0.0832	mg/kg wet	10	---	ND	---	---	---	20%	
Selenium	0.741	0.520	1.04	mg/kg wet	10	---	0.914	---	---	21	20%	Q-05, J
Silver	ND	0.104	0.208	mg/kg wet	10	---	ND	---	---	---	20%	
Zinc	58.2	2.08	4.16	mg/kg wet	10	---	59.0	---	---	1	20%	

Matrix Spike (1090601-MS1)			Prepared: 09/16/21 10:57 Analyzed: 09/17/21 19:12									
<u>QC Source Sample: Non-SDG (A110326-01RE2)</u>												
<u>EPA 6020B</u>												
Antimony	25.4	0.503	1.01	mg/kg wet	10	25.2	ND	101	75-125%	---	---	
Arsenic	57.7	0.503	1.01	mg/kg wet	10	50.3	3.81	107	75-125%	---	---	
Barium	256	0.503	1.01	mg/kg wet	10	50.3	115	281	75-125%	---	---	Q-04
Cadmium	53.5	0.101	0.201	mg/kg wet	10	50.3	0.115	106	75-125%	---	---	
Chromium	71.6	0.503	1.01	mg/kg wet	10	50.3	16.8	109	75-125%	---	---	
Copper	78.2	1.01	2.01	mg/kg wet	10	50.3	21.8	112	75-125%	---	---	
Lead	62.6	0.101	0.201	mg/kg wet	10	50.3	7.95	109	75-125%	---	---	
Mercury	1.08	0.0402	0.0805	mg/kg wet	10	1.01	ND	107	75-125%	---	---	
Selenium	26.9	0.503	1.01	mg/kg wet	10	25.2	0.914	103	75-125%	---	---	
Silver	26.8	0.101	0.201	mg/kg wet	10	25.2	ND	107	75-125%	---	---	
Zinc	117	2.01	4.02	mg/kg wet	10	50.3	59.0	115	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090684 - Matrix Matched Direct Inject						Water						
Blank (1090684-BLK1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 01:31						
<u>EPA 6020B (Diss)</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
LCS (1090684-BS1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 01:35						
<u>EPA 6020B (Diss)</u>												
Arsenic	54.5	0.500	1.00	ug/L	1	55.6	---	98	80-120%	---	---	
Barium	55.9	0.500	1.00	ug/L	1	55.6	---	101	80-120%	---	---	
Cadmium	53.6	0.100	0.200	ug/L	1	55.6	---	97	80-120%	---	---	
Chromium	52.1	1.00	2.00	ug/L	1	55.6	---	94	80-120%	---	---	
Lead	54.7	0.100	0.200	ug/L	1	55.6	---	98	80-120%	---	---	
Mercury	1.06	0.0400	0.0800	ug/L	1	1.11	---	95	80-120%	---	---	
Selenium	27.8	0.500	1.00	ug/L	1	27.8	---	100	80-120%	---	---	
Silver	28.0	0.100	0.200	ug/L	1	27.8	---	101	80-120%	---	---	
Duplicate (1090684-DUP1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 02:02						
<u>QC Source Sample: Non-SDG (A110581-06)</u>												
Arsenic	0.639	0.500	1.00	ug/L	1	---	0.657	---	---	3	20%	J
Barium	57.6	0.500	1.00	ug/L	1	---	57.8	---	---	0.3	20%	
Cadmium	0.125	0.100	0.200	ug/L	1	---	0.108	---	---	15	20%	J
Chromium	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	20%	
Lead	0.142	0.100	0.200	ug/L	1	---	0.139	---	---	2	20%	J
Mercury	ND	0.0400	0.0800	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (1090684-MS1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 02:06						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090684 - Matrix Matched Direct Inject						Water						
Matrix Spike (1090684-MS1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 02:06						
QC Source Sample: Non-SDG (A110581-06)												
EPA 6020B (Diss)												
Arsenic	56.7	0.500	1.00	ug/L	1	55.6	0.657	101	75-125%	---	---	
Barium	109	0.500	1.00	ug/L	1	55.6	57.8	93	75-125%	---	---	
Cadmium	54.4	0.100	0.200	ug/L	1	55.6	0.108	98	75-125%	---	---	
Chromium	52.7	1.00	2.00	ug/L	1	55.6	ND	95	75-125%	---	---	
Lead	53.6	0.100	0.200	ug/L	1	55.6	0.139	96	75-125%	---	---	
Mercury	1.05	0.0400	0.0800	ug/L	1	1.11	ND	95	75-125%	---	---	
Selenium	29.1	0.500	1.00	ug/L	1	27.8	ND	105	75-125%	---	---	
Silver	27.4	0.100	0.200	ug/L	1	27.8	ND	99	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090304 - Total Solids (Dry Weight)							Soil					
Duplicate (1090304-DUP1)			Prepared: 09/09/21 09:31 Analyzed: 09/10/21 08:50									
<u>QC Source Sample: Non-SDG (A1H0931-07)</u>												
% Solids	75.0	1.00	1.00	%	1	---	72.5	---	---	3	10%	
Duplicate (1090304-DUP2)			Prepared: 09/09/21 09:31 Analyzed: 09/10/21 08:50									
<u>QC Source Sample: Non-SDG (A1H0931-39)</u>												
% Solids	71.0	1.00	1.00	%	1	---	70.9	---	---	0.1	10%	
Duplicate (1090304-DUP3)			Prepared: 09/09/21 09:31 Analyzed: 09/10/21 08:50									
<u>QC Source Sample: Non-SDG (A1H0131-14)</u>												
% Solids	70.7	1.00	1.00	%	1	---	70.8	---	---	0.05	10%	
Duplicate (1090304-DUP4)			Prepared: 09/09/21 09:31 Analyzed: 09/10/21 08:50									
<u>QC Source Sample: B19 10-25C (A1H0192-08)</u>												
<u>EPA 8000D</u>												
% Solids	92.2	1.00	1.00	%	1	---	91.8	---	---	0.4	10%	
Duplicate (1090304-DUP5)			Prepared: 09/09/21 09:31 Analyzed: 09/10/21 08:50									
<u>QC Source Sample: Non-SDG (A1H0237-01)</u>												
% Solids	89.5	1.00	1.00	%	1	---	90.2	---	---	0.8	10%	
Duplicate (1090304-DUP6)			Prepared: 09/09/21 09:31 Analyzed: 09/10/21 08:50									
<u>QC Source Sample: Non-SDG (A1H0257-04)</u>												
% Solids	93.8	1.00	1.00	%	1	---	93.8	---	---	0.03	10%	
Duplicate (1090304-DUP7)			Prepared: 09/09/21 16:01 Analyzed: 09/10/21 08:50									
<u>QC Source Sample: Non-SDG (A1H0262-01)</u>												
% Solids	87.5	1.00	1.00	%	1	---	87.8	---	---	0.4	10%	
Duplicate (1090304-DUP8)			Prepared: 09/09/21 16:01 Analyzed: 09/10/21 08:50									
<u>QC Source Sample: Non-SDG (A1H0262-04)</u>												
% Solids	91.0	1.00	1.00	%	1	---	91.6	---	---	0.6	10%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090304 - Total Solids (Dry Weight)							Soil					
Duplicate (1090304-DUP9)						Prepared: 09/09/21 18:51 Analyzed: 09/10/21 08:50						
<u>QC Source Sample: Non-SDG (A110284-01)</u>												
% Solids	87.6	1.00	1.00	%	1	---	88.7	---	---	1	10%	
Duplicate (1090304-DUPA)						Prepared: 09/09/21 18:51 Analyzed: 09/10/21 08:50						
<u>QC Source Sample: Non-SDG (A110284-02)</u>												
% Solids	89.2	1.00	1.00	%	1	---	88.2	---	---	1	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090442</u>							
A110192-07	Water	NWTPH-Dx LL	09/07/21 12:35	09/13/21 13:11	850mL/2mL	1000mL/2mL	1.18

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090436</u>							
A110192-08	Soil	NWTPH-Dx	09/07/21 11:47	09/13/21 12:48	10.7g/5mL	10g/5mL	0.94

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090289</u>							
A110192-07	Water	NWTPH-Gx (MS)	09/07/21 12:35	09/09/21 08:38	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090590</u>							
A110192-08	Soil	NWTPH-Gx (MS)	09/07/21 11:47	09/07/21 11:47	28.31g/25mL	5g/5mL	0.88

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090289</u>							
A110192-07	Water	EPA 8260D	09/07/21 12:35	09/09/21 08:38	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090590</u>							
A110192-08	Soil	5035A/8260D	09/07/21 11:47	09/07/21 11:47	28.31g/25mL	5g/5mL	0.88

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3510C (Acid Extraction)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3510C (Acid Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090315</u>							
A110192-07	Water	EPA 8270E SIM	09/07/21 12:35	09/09/21 11:50	1050mL/2mL	1000mL/2mL	0.95

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090326</u>							
A110192-08	Soil	EPA 8270E SIM	09/07/21 11:47	09/09/21 14:51	10.26g/5mL	10g/5mL	0.98

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090601</u>							
A110192-08	Soil	EPA 6020B	09/07/21 11:47	09/16/21 10:57	0.467g/50mL	0.5g/50mL	1.07

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090684</u>							
A110192-07	Water	EPA 6020B (Diss)	09/07/21 12:35	09/17/21 14:41	45mL/50mL	45mL/50mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090304</u>							
A110192-08	Soil	EPA 8000D	09/07/21 11:47	09/09/21 09:31			NA

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- COMP** Sample is a composite of discrete samples. See prep information for details.
- F-03** The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.
- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +1%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +12%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +13%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +14%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +21%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +22%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +3%. The results are reported as Estimated Values.
- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +30%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +4%. The results are reported as Estimated Values.
- Q-54i** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
- Q-54j** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -2%. The results are reported as Estimated Values.

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts</p>	<p style="text-align: right;"><u>Report ID:</u> A110192 - 10 06 21 1131</p>
--------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------

- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- S-06** Surrogate recovery is outside of established control limits.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A110192 - 10 06 21 1131).

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A110192 - 10 06 21 1131).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EORB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC
5741 NE Flanders St., Portland, OR 97213
office: 503-477-6150
mobile: 503-819-2835

Project Manager: Jill Betts
Project No.: 319
Project Name: EORB
Collected by: _____

Laboratory: Apex Labs
Lab Project No.: _____

CHAIN OF CUSTODY
Chain of Custody No.: _____

Samples Received at 4C (Y or N) _____
Appropriate Containers Used (Y or N) _____
Provide Verbal Results (Y or N) No
Provide Preliminary Results Yes

Liquid with Sediment Sample
Test Filtrate _____ Test Sediment _____
Test Both _____

Multi-Phase Sample
Test One (which) _____ Test Separately _____
Stew _____

Lab ID	Sample #	Date	Time	Sample Description	Matrix			Analytes to be Performed								Remarks		
					Soil	Water	Other	NW PH-GX	NW PH-DX	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Total RCRA 8 Metals plus Antimony, Copper and Zinc	Dissolved RCRA 8 metals					
B-19-10	9721	11:38			X													
B-19-125		11:47			X													
B-19-15		11:53			X													
B-19-175		11:59			X													
B-19-20		12:06			X													
B-19-28		12:15			X													
B-19		12:35			X													
B-19-10-25c					X													

Comments:
Metals analyzed by EPA Methods 200/6020A/7471B.
Please composite: B-19 10-25c =
B-19 12.5, B-19 15, B-19 17.5
B-19 20 and B-19 28

Relinquished by: _____ Date: 9/7/2021 Time: 2:23 Company: Apex Labs

Relinquished by: _____ Date: _____ Time: _____ Company: _____

Relinquished by: _____ Date: _____ Time: _____ Company: _____

Apex Laboratories

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110192 - 10 06 21 1131
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Environmental Consulting LLC Element WO#: A1 F0192

Project/Project #: EQRB #319

Delivery Info:
 Date/time received: 9/7/21 @ 1423 By: HAS
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 9/7/21 @ 1435 By: HAS
 Chain of Custody included? Yes No Custody seals? Yes No
 Signed/dated by client? Yes No
 Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>13.7</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>gel</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: recently sampled / little ice
 Green dots applied to out of temperature samples? Yes No
 Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 9/7/21 @ 18:30 By: WJ
 All samples intact? Yes No Comments: _____

 Bottle labels/COCs agree? Yes No Comments: _____

 COC/container discrepancies form initiated? Yes No
 Containers/volumes received appropriate for analysis? Yes No Comments: _____

 Do VOA vials have visible headspace? Yes No NA in 9/7
 Comments sediment in all VOAs
 Water samples: pH checked: Yes No NA pH appropriate? Yes No NA
 Comments: _____

Additional information:

Labeled by: WJ Witness: SVC Cooler Inspected by: HAS

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, October 6, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A110276 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A110276, which was received by the laboratory on 9/9/2021 at 2:08:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	4.8 degC
-----------	----------

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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ANALYTICAL REPORT

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-32 12.5	A110276-02	Soil	09/08/21 12:49	09/09/21 14:08
B-32 15	A110276-03	Soil	09/08/21 13:02	09/09/21 14:08
B-32 10-15	A110276-04	Soil	09/08/21 12:49	09/09/21 14:08
B-32	A110276-05	Water	09/08/21 13:10	09/09/21 14:08

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 503-718-2323
 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 10-15 (A110276-04)				Matrix: Soil		Batch: 1090495		
Diesel	ND	14.3	28.5	mg/kg dry	1	09/14/21 22:32	NWTPH-Dx	
Oil	ND	28.5	57.1	mg/kg dry	1	09/14/21 22:32	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 76 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/14/21 22:32</i>	<i>NWTPH-Dx</i>
B-32 (A110276-05RE1)				Matrix: Water		Batch: 1090533		
Diesel	0.0784	0.0385	0.0769	mg/L	1	09/16/21 07:22	NWTPH-Dx LL	F-11
Oil	ND	0.0769	0.154	mg/L	1	09/16/21 07:22	NWTPH-Dx LL	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 87 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/16/21 07:22</i>	<i>NWTPH-Dx LL</i>

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ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 10-15 (A110276-04)			Matrix: Soil			Batch: 1090655		
Gasoline Range Organics	ND	4.78	9.56	mg/kg dry	50	09/17/21 15:18	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 111 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/17/21 15:18</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>	<i>1</i>	<i>09/17/21 15:18</i>	<i>NWTPH-Gx (MS)</i>	
B-32 (A110276-05)			Matrix: Water			Batch: 1090343		
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	09/10/21 12:06	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 97 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/10/21 12:06</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>102 %</i>		<i>50-150 %</i>	<i>1</i>	<i>09/10/21 12:06</i>	<i>NWTPH-Gx (MS)</i>	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 10-15 (A110276-04)				Matrix: Soil		Batch: 1090655		
Acetone	ND	956	1910	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Acrylonitrile	ND	95.6	191	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Benzene	ND	9.56	19.1	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Bromobenzene	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Bromochloromethane	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Bromodichloromethane	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Bromoform	ND	95.6	191	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Bromomethane	ND	956	956	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
2-Butanone (MEK)	ND	478	956	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
n-Butylbenzene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
sec-Butylbenzene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
tert-Butylbenzene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Carbon disulfide	ND	478	956	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Carbon tetrachloride	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Chlorobenzene	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Chloroethane	ND	478	956	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Chloroform	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Chloromethane	ND	239	478	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
2-Chlorotoluene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
4-Chlorotoluene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Dibromochloromethane	ND	95.6	191	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	478	478	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Dibromomethane	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,2-Dichlorobenzene	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,3-Dichlorobenzene	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,4-Dichlorobenzene	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Dichlorodifluoromethane	ND	95.6	191	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,1-Dichloroethane	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,1-Dichloroethene	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
cis-1,2-Dichloroethene	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
trans-1,2-Dichloroethene	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 10-15 (A110276-04)				Matrix: Soil		Batch: 1090655		
1,2-Dichloropropane	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,3-Dichloropropane	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
2,2-Dichloropropane	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,1-Dichloropropene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
cis-1,3-Dichloropropene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
trans-1,3-Dichloropropene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Ethylbenzene	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Hexachlorobutadiene	ND	95.6	191	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
2-Hexanone	ND	956	956	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Isopropylbenzene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
4-Isopropyltoluene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Methylene chloride	ND	478	956	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	478	956	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Naphthalene	ND	95.6	191	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
n-Propylbenzene	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Styrene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Tetrachloroethene (PCE)	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Toluene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,2,3-Trichlorobenzene	ND	239	478	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,2,4-Trichlorobenzene	ND	239	478	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,1,1-Trichloroethane	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,1,2-Trichloroethane	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Trichloroethene (TCE)	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Trichlorofluoromethane	ND	95.6	191	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,2,3-Trichloropropane	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,2,4-Trimethylbenzene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
1,3,5-Trimethylbenzene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
Vinyl chloride	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
m,p-Xylene	ND	47.8	95.6	ug/kg dry	50	09/17/21 15:18	5035A/8260D	
o-Xylene	ND	23.9	47.8	ug/kg dry	50	09/17/21 15:18	5035A/8260D	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 10-15 (A110276-04)				Matrix: Soil		Batch: 1090655		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/17/21 15:18</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/17/21 15:18</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>1</i>	<i>09/17/21 15:18</i>	<i>5035A/8260D</i>
B-32 (A110276-05)				Matrix: Water		Batch: 1090343		
Acetone	ND	10.0	20.0	ug/L	1	09/10/21 12:06	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	09/10/21 12:06	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	09/10/21 12:06	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	09/10/21 12:06	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	09/10/21 12:06	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	09/10/21 12:06	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	09/10/21 12:06	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	09/10/21 12:06	EPA 8260D	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 (A110276-05)			Matrix: Water			Batch: 1090343		
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	09/10/21 12:06	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	09/10/21 12:06	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	09/10/21 12:06	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	09/10/21 12:06	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	09/10/21 12:06	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	09/10/21 12:06	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	09/10/21 12:06	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	5.00	10.0	ug/L	1	09/10/21 12:06	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Naphthalene	ND	1.00	2.00	ug/L	1	09/10/21 12:06	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	09/10/21 12:06	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	09/10/21 12:06	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	09/10/21 12:06	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	09/10/21 12:06	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	09/10/21 12:06	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	09/10/21 12:06	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	09/10/21 12:06	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	

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<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts</p>	<p style="text-align: right;">Report ID: A110276 - 10 06 21 1150</p>
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 (A110276-05)			Matrix: Water			Batch: 1090343		
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
Vinyl chloride	ND	0.500	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	R-02
m,p-Xylene	ND	0.500	1.00	ug/L	1	09/10/21 12:06	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	09/10/21 12:06	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/10/21 12:06</i>	<i>EPA 8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/10/21 12:06</i>	<i>EPA 8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/10/21 12:06</i>	<i>EPA 8260D</i>

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 10-15 (A110276-04)			Matrix: Soil			Batch: 1090448		
Acenaphthene	ND	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Acenaphthylene	ND	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Anthracene	ND	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Benz(a)anthracene	7.53	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	J
Benzo(a)pyrene	ND	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Benzo(b)fluoranthene	8.05	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	J
Benzo(k)fluoranthene	ND	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Chrysene	ND	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Fluoranthene	12.3	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	J
Fluorene	ND	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Naphthalene	44.7	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Phenanthrene	17.4	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	
Pyrene	12.5	7.40	14.8	ug/kg dry	1	09/13/21 19:24	EPA 8270E SIM	J
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>09/13/21 19:24</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>92 %</i>		<i>54-127 %</i>		<i>1</i>	<i>09/13/21 19:24</i>	<i>EPA 8270E SIM</i>

B-32 (A110276-05)			Matrix: Water			Batch: 1090427		
Acenaphthene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Acenaphthylene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Anthracene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Benz(a)anthracene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Benzo(a)pyrene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Chrysene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Fluoranthene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Fluorene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 (A110276-05)			Matrix: Water			Batch: 1090427		
Naphthalene	ND	0.0381	0.0762	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Phenanthrene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
Pyrene	ND	0.0190	0.0381	ug/L	1	09/13/21 17:43	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 46 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>09/13/21 17:43</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>85 %</i>		<i>50-134 %</i>		<i>1</i>	<i>09/13/21 17:43</i>	<i>EPA 8270E SIM</i>

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-32 10-15 (A110276-04)		Matrix: Soil							
Batch: 1090749									
Antimony	ND	0.783	1.57	mg/kg dry	10	09/21/21 12:37	EPA 6020B		
Arsenic	3.19	0.783	1.57	mg/kg dry	10	09/21/21 12:37	EPA 6020B		
Barium	201	0.783	1.57	mg/kg dry	10	09/21/21 12:37	EPA 6020B		
Cadmium	ND	0.157	0.313	mg/kg dry	10	09/21/21 12:37	EPA 6020B		
Chromium	24.8	0.783	1.57	mg/kg dry	10	09/21/21 12:37	EPA 6020B		
Copper	28.3	1.57	3.13	mg/kg dry	10	09/21/21 12:37	EPA 6020B		
Lead	4.92	0.157	0.313	mg/kg dry	10	09/21/21 12:37	EPA 6020B		
Mercury	ND	0.0626	0.125	mg/kg dry	10	09/21/21 12:37	EPA 6020B		
Selenium	ND	0.783	1.57	mg/kg dry	10	09/21/21 12:37	EPA 6020B		
Silver	ND	0.157	0.313	mg/kg dry	10	09/21/21 12:37	EPA 6020B		
Zinc	61.3	3.13	6.26	mg/kg dry	10	09/21/21 12:37	EPA 6020B		

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-32 (A110276-05)		Matrix: Water							
Batch: 1090684									
Arsenic	0.875	0.500	1.00	ug/L	1	09/19/21 01:44	EPA 6020B (Diss)	J	
Barium	117	0.500	1.00	ug/L	1	09/19/21 01:44	EPA 6020B (Diss)		
Cadmium	ND	0.100	0.200	ug/L	1	09/19/21 01:44	EPA 6020B (Diss)		
Chromium	ND	1.00	2.00	ug/L	1	09/19/21 01:44	EPA 6020B (Diss)		
Lead	1.10	0.100	0.200	ug/L	1	09/19/21 01:44	EPA 6020B (Diss)		
Mercury	ND	0.0400	0.0800	ug/L	1	09/19/21 01:44	EPA 6020B (Diss)		
Selenium	ND	0.500	1.00	ug/L	1	09/19/21 01:44	EPA 6020B (Diss)		
Silver	ND	0.100	0.200	ug/L	1	09/19/21 01:44	EPA 6020B (Diss)		

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 10-15 (A110276-04)				Matrix: Soil		Batch: 1090364		
% Solids	67.4	1.00	1.00	%	1	09/13/21 07:57	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090495 - EPA 3546 (Fuels)						Soil						
Blank (1090495-BLK1)						Prepared: 09/14/21 12:59 Analyzed: 09/14/21 20:15						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 87 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1090495-BS1)						Prepared: 09/14/21 12:59 Analyzed: 09/14/21 20:38						
<u>NWTPH-Dx</u>												
Diesel	104	10.0	20.0	mg/kg wet	1	125	---	83	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090495-DUP1)						Prepared: 09/14/21 12:59 Analyzed: 09/14/21 21:23						
<u>QC Source Sample: Non-SDG (A110255-04)</u>												
Diesel	ND	11.6	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	23.2	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090495-DUP2)						Prepared: 09/14/21 13:07 Analyzed: 09/15/21 01:01						
<u>QC Source Sample: Non-SDG (A110403-06)</u>												
Diesel	ND	239	478	mg/kg dry	20	---	ND	---	---	---	30%	
Oil	20400	478	955	mg/kg dry	20	---	19700	---	---	3	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 20x</i>						S-01
Batch 1090533 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (1090533-BLK1)						Prepared: 09/15/21 09:56 Analyzed: 09/15/21 23:28						
<u>NWTPH-Dx LL</u>												
Diesel	ND	0.0364	0.0727	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.0727	0.145	mg/L	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 83 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1090533-BS1)						Prepared: 09/15/21 09:56 Analyzed: 09/15/21 23:51						
<u>NWTPH-Dx LL</u>												
Diesel	0.234	0.0400	0.0800	mg/L	1	0.500	---	47	36-132%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090533 - EPA 3510C (Fuels/Acid Ext.)						Water						
LCS (1090533-BS1)						Prepared: 09/15/21 09:56 Analyzed: 09/15/21 23:51						
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS Dup (1090533-BSD2)						Prepared: 09/15/21 09:56 Analyzed: 09/16/21 06:59						
<u>NWTPH-Dx LL</u>												
Diesel	0.294	0.0400	0.0800	mg/L	1	0.500	---	59	36-132%	200	30%	Q-24
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B						Water						
Blank (1090343-BLK1)			Prepared: 09/10/21 08:00 Analyzed: 09/10/21 10:45									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090343-BS2)			Prepared: 09/10/21 08:00 Analyzed: 09/10/21 10:18									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	0.473	0.0500	0.100	mg/L	1	0.500	---	95	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>98 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090343-DUP1)			Prepared: 09/10/21 09:49 Analyzed: 09/10/21 13:00									
<u>QC Source Sample: Non-SDG (A110258-03)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 97 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A												
Soil												
Blank (1090655-BLK1)												
						Prepared: 09/17/21 09:00 Analyzed: 09/17/21 11:16						
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090655-BS2)												
						Prepared: 09/17/21 09:00 Analyzed: 09/17/21 10:49						
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	25.4	2.50	5.00	mg/kg wet	50	25.0	---	102	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 111 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090655-DUP1)												
						Prepared: 09/09/21 08:20 Analyzed: 09/17/21 16:12						
<u>QC Source Sample: Non-SDG (A110306-02)</u>												
Gasoline Range Organics	78.6	6.32	12.6	mg/kg dry	50	---	77.9	---	---	0.9	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 113 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090655-DUP2)												
						Prepared: 09/09/21 09:00 Analyzed: 09/17/21 17:05						
<u>QC Source Sample: Non-SDG (A110306-04)</u>												
Gasoline Range Organics	ND	3.08	6.16	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B						Water						
Blank (1090343-BLK1)			Prepared: 09/10/21 08:00 Analyzed: 09/10/21 10:45									
<u>EPA 8260D</u>												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110276 - 10 06 21 1150

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B						Water						
Blank (1090343-BLK1)			Prepared: 09/10/21 08:00 Analyzed: 09/10/21 10:45									
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 100 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B						Water						
Blank (1090343-BLK1)						Prepared: 09/10/21 08:00 Analyzed: 09/10/21 10:45						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>"</i>						
LCS (1090343-BS1)						Prepared: 09/10/21 08:00 Analyzed: 09/10/21 09:46						
EPA 8260D												
Acetone	41.9	10.0	20.0	ug/L	1	40.0	---	105	80-120%	---	---	
Acrylonitrile	22.4	1.00	2.00	ug/L	1	20.0	---	112	80-120%	---	---	
Benzene	21.1	0.100	0.200	ug/L	1	20.0	---	105	80-120%	---	---	
Bromobenzene	20.2	0.250	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
Bromochloromethane	21.6	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
Bromodichloromethane	23.2	0.500	1.00	ug/L	1	20.0	---	116	80-120%	---	---	
Bromoform	24.8	0.500	1.00	ug/L	1	20.0	---	124	80-120%	---	---	Q-56
Bromomethane	29.1	5.00	5.00	ug/L	1	20.0	---	145	80-120%	---	---	Q-56
2-Butanone (MEK)	45.3	5.00	10.0	ug/L	1	40.0	---	113	80-120%	---	---	
n-Butylbenzene	23.3	0.500	1.00	ug/L	1	20.0	---	117	80-120%	---	---	
sec-Butylbenzene	21.6	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
tert-Butylbenzene	20.9	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
Carbon disulfide	20.9	5.00	10.0	ug/L	1	20.0	---	105	80-120%	---	---	
Carbon tetrachloride	27.3	0.500	1.00	ug/L	1	20.0	---	136	80-120%	---	---	Q-56
Chlorobenzene	21.3	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Chloroethane	20.2	5.00	5.00	ug/L	1	20.0	---	101	80-120%	---	---	
Chloroform	21.9	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
Chloromethane	20.2	2.50	5.00	ug/L	1	20.0	---	101	80-120%	---	---	
2-Chlorotoluene	21.6	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
4-Chlorotoluene	21.7	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
Dibromochloromethane	24.9	0.500	1.00	ug/L	1	20.0	---	125	80-120%	---	---	Q-56
1,2-Dibromo-3-chloropropane	22.4	2.50	5.00	ug/L	1	20.0	---	112	80-120%	---	---	
1,2-Dibromoethane (EDB)	21.7	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
Dibromomethane	21.9	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
1,2-Dichlorobenzene	21.5	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
1,3-Dichlorobenzene	21.0	0.250	0.500	ug/L	1	20.0	---	105	80-120%	---	---	
1,4-Dichlorobenzene	20.9	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Dichlorodifluoromethane	21.9	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	ICV-01
1,1-Dichloroethane	22.0	0.200	0.400	ug/L	1	20.0	---	110	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B						Water						
LCS (1090343-BS1)			Prepared: 09/10/21 08:00 Analyzed: 09/10/21 09:46									
1,2-Dichloroethane (EDC)	21.9	0.200	0.400	ug/L	1	20.0	---	109	80-120%	---	---	
1,1-Dichloroethene	21.9	0.200	0.400	ug/L	1	20.0	---	110	80-120%	---	---	
cis-1,2-Dichloroethene	22.2	0.200	0.400	ug/L	1	20.0	---	111	80-120%	---	---	
trans-1,2-Dichloroethene	21.8	0.200	0.400	ug/L	1	20.0	---	109	80-120%	---	---	
1,2-Dichloropropane	21.6	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
1,3-Dichloropropane	21.7	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
2,2-Dichloropropane	30.3	0.500	1.00	ug/L	1	20.0	---	152	80-120%	---	---	Q-56
1,1-Dichloropropene	21.3	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
cis-1,3-Dichloropropene	23.8	0.500	1.00	ug/L	1	20.0	---	119	80-120%	---	---	
trans-1,3-Dichloropropene	25.0	1.00	2.00	ug/L	1	20.0	---	125	80-120%	---	---	Q-56
Ethylbenzene	21.2	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Hexachlorobutadiene	23.1	2.50	5.00	ug/L	1	20.0	---	115	80-120%	---	---	
2-Hexanone	45.5	5.00	10.0	ug/L	1	40.0	---	114	80-120%	---	---	
Isopropylbenzene	21.5	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
4-Isopropyltoluene	21.7	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
Methylene chloride	20.1	5.00	10.0	ug/L	1	20.0	---	101	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	46.0	5.00	10.0	ug/L	1	40.0	---	115	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	20.2	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Naphthalene	18.1	1.00	2.00	ug/L	1	20.0	---	91	80-120%	---	---	
n-Propylbenzene	21.1	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Styrene	22.5	0.500	1.00	ug/L	1	20.0	---	112	80-120%	---	---	
1,1,1,2-Tetrachloroethane	27.8	0.200	0.400	ug/L	1	20.0	---	139	80-120%	---	---	Q-56
1,1,2,2-Tetrachloroethane	22.0	0.250	0.500	ug/L	1	20.0	---	110	80-120%	---	---	
Tetrachloroethene (PCE)	21.5	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
Toluene	20.6	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
1,2,3-Trichlorobenzene	21.5	1.00	2.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,2,4-Trichlorobenzene	21.7	1.00	2.00	ug/L	1	20.0	---	109	80-120%	---	---	
1,1,1-Trichloroethane	22.8	0.200	0.400	ug/L	1	20.0	---	114	80-120%	---	---	
1,1,2-Trichloroethane	21.4	0.250	0.500	ug/L	1	20.0	---	107	80-120%	---	---	
Trichloroethene (TCE)	21.0	0.200	0.400	ug/L	1	20.0	---	105	80-120%	---	---	
Trichlorofluoromethane	23.6	1.00	2.00	ug/L	1	20.0	---	118	80-120%	---	---	
1,2,3-Trichloropropane	21.7	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
1,2,4-Trimethylbenzene	21.8	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
1,3,5-Trimethylbenzene	21.5	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B						Water						
LCS (1090343-BS1)			Prepared: 09/10/21 08:00 Analyzed: 09/10/21 09:46									
Vinyl chloride	21.5	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
m,p-Xylene	42.9	0.500	1.00	ug/L	1	40.0	---	107	80-120%	---	---	
o-Xylene	21.2	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>80-120 %</i>		<i>"</i>						

Duplicate (1090343-DUP1)			Prepared: 09/10/21 09:49 Analyzed: 09/10/21 13:00									
QC Source Sample: Non-SDG (A110258-03)												
Acetone	ND	10.0	20.0	ug/L	1	---	ND	---	---	---	30%	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromoform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromomethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Chloroethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
Chloroform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Chloromethane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B						Water						
Duplicate (1090343-DUP1)			Prepared: 09/10/21 09:49 Analyzed: 09/10/21 13:00									
QC Source Sample: Non-SDG (A110258-03)												
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B												
Water												
Duplicate (1090343-DUP1)												
Prepared: 09/10/21 09:49 Analyzed: 09/10/21 13:00												
QC Source Sample: Non-SDG (A110258-03)												
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>		<i>"</i>						

Matrix Spike (1090343-MS1)												
Prepared: 09/10/21 09:49 Analyzed: 09/10/21 14:20												
QC Source Sample: Non-SDG (A110258-07)												
EPA 8260D												
Acetone	48.2	10.0	20.0	ug/L	1	40.0	ND	121	39-160%	---	---	
Acrylonitrile	24.3	1.00	2.00	ug/L	1	20.0	ND	121	63-135%	---	---	
Benzene	23.5	0.100	0.200	ug/L	1	20.0	ND	118	79-120%	---	---	
Bromobenzene	21.0	0.250	0.500	ug/L	1	20.0	ND	105	80-120%	---	---	
Bromochloromethane	23.7	0.500	1.00	ug/L	1	20.0	ND	118	78-123%	---	---	
Bromodichloromethane	25.3	0.500	1.00	ug/L	1	20.0	ND	126	79-125%	---	---	Q-01
Bromoform	25.1	0.500	1.00	ug/L	1	20.0	ND	126	66-130%	---	---	Q-54i
Bromomethane	32.2	5.00	5.00	ug/L	1	20.0	ND	161	53-141%	---	---	Q-54e
2-Butanone (MEK)	49.0	5.00	10.0	ug/L	1	40.0	ND	122	56-143%	---	---	
n-Butylbenzene	23.9	0.500	1.00	ug/L	1	20.0	ND	120	75-128%	---	---	
sec-Butylbenzene	23.1	0.500	1.00	ug/L	1	20.0	ND	115	77-126%	---	---	
tert-Butylbenzene	22.2	0.500	1.00	ug/L	1	20.0	ND	111	78-124%	---	---	
Carbon disulfide	24.2	5.00	10.0	ug/L	1	20.0	ND	121	64-133%	---	---	
Carbon tetrachloride	31.4	0.500	1.00	ug/L	1	20.0	ND	157	72-136%	---	---	Q-54a
Chlorobenzene	22.6	0.250	0.500	ug/L	1	20.0	ND	113	80-120%	---	---	
Chloroethane	23.5	5.00	5.00	ug/L	1	20.0	ND	117	60-138%	---	---	
Chloroform	24.3	0.500	1.00	ug/L	1	20.0	ND	122	79-124%	---	---	
Chloromethane	22.7	2.50	5.00	ug/L	1	20.0	ND	113	50-139%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B												
Water												
Matrix Spike (1090343-MS1)												
Prepared: 09/10/21 09:49 Analyzed: 09/10/21 14:20												
QC Source Sample: Non-SDG (A110258-07)												
2-Chlorotoluene	22.8	0.500	1.00	ug/L	1	20.0	ND	114	79-122%	---	---	
4-Chlorotoluene	22.4	0.500	1.00	ug/L	1	20.0	ND	112	78-122%	---	---	
Dibromochloromethane	25.9	0.500	1.00	ug/L	1	20.0	ND	130	74-126%	---	---	Q-54j
1,2-Dibromo-3-chloropropane	22.8	2.50	5.00	ug/L	1	20.0	ND	114	62-128%	---	---	
1,2-Dibromoethane (EDB)	23.0	0.250	0.500	ug/L	1	20.0	ND	115	77-121%	---	---	
Dibromomethane	23.8	0.500	1.00	ug/L	1	20.0	ND	119	79-123%	---	---	
1,2-Dichlorobenzene	22.1	0.250	0.500	ug/L	1	20.0	ND	111	80-120%	---	---	
1,3-Dichlorobenzene	21.8	0.250	0.500	ug/L	1	20.0	ND	109	80-120%	---	---	
1,4-Dichlorobenzene	21.6	0.250	0.500	ug/L	1	20.0	ND	108	79-120%	---	---	
Dichlorodifluoromethane	25.6	0.500	1.00	ug/L	1	20.0	ND	128	32-152%	---	---	
1,1-Dichloroethane	24.4	0.200	0.400	ug/L	1	20.0	ND	122	77-125%	---	---	
1,2-Dichloroethane (EDC)	23.7	0.200	0.400	ug/L	1	20.0	ND	119	73-128%	---	---	
1,1-Dichloroethene	25.5	0.200	0.400	ug/L	1	20.0	ND	127	71-131%	---	---	
cis-1,2-Dichloroethene	24.3	0.200	0.400	ug/L	1	20.0	ND	122	78-123%	---	---	
trans-1,2-Dichloroethene	24.2	0.200	0.400	ug/L	1	20.0	ND	121	75-124%	---	---	
1,2-Dichloropropane	23.3	0.250	0.500	ug/L	1	20.0	ND	117	78-122%	---	---	
1,3-Dichloropropane	23.0	0.500	1.00	ug/L	1	20.0	ND	115	80-120%	---	---	
2,2-Dichloropropane	31.9	0.500	1.00	ug/L	1	20.0	ND	159	60-139%	---	---	Q-54h
1,1-Dichloropropene	24.3	0.500	1.00	ug/L	1	20.0	ND	122	79-125%	---	---	
cis-1,3-Dichloropropene	23.4	0.500	1.00	ug/L	1	20.0	ND	117	75-124%	---	---	
trans-1,3-Dichloropropene	25.3	1.00	2.00	ug/L	1	20.0	ND	127	73-127%	---	---	
Ethylbenzene	22.9	0.250	0.500	ug/L	1	20.0	ND	115	79-121%	---	---	
Hexachlorobutadiene	23.6	2.50	5.00	ug/L	1	20.0	ND	118	66-134%	---	---	
2-Hexanone	46.8	5.00	10.0	ug/L	1	40.0	ND	117	57-139%	---	---	
Isopropylbenzene	23.1	0.500	1.00	ug/L	1	20.0	ND	115	72-131%	---	---	
4-Isopropyltoluene	23.0	0.500	1.00	ug/L	1	20.0	ND	115	77-127%	---	---	
Methylene chloride	21.2	5.00	10.0	ug/L	1	20.0	ND	106	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	49.1	5.00	10.0	ug/L	1	40.0	ND	123	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	21.7	0.500	1.00	ug/L	1	20.0	ND	108	71-124%	---	---	
Naphthalene	18.8	1.00	2.00	ug/L	1	20.0	ND	94	61-128%	---	---	
n-Propylbenzene	22.6	0.250	0.500	ug/L	1	20.0	ND	113	76-126%	---	---	
Styrene	23.4	0.500	1.00	ug/L	1	20.0	ND	117	78-123%	---	---	
1,1,1,2-Tetrachloroethane	29.1	0.200	0.400	ug/L	1	20.0	ND	146	78-124%	---	---	Q-54b

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B												
Water												
Matrix Spike (1090343-MS1)												
Prepared: 09/10/21 09:49 Analyzed: 09/10/21 14:20												
QC Source Sample: Non-SDG (A110258-07)												
1,1,2,2-Tetrachloroethane	22.6	0.250	0.500	ug/L	1	20.0	ND	113	71-121%	---	---	
Tetrachloroethene (PCE)	24.0	0.200	0.400	ug/L	1	20.0	ND	120	74-129%	---	---	
Toluene	22.4	0.500	1.00	ug/L	1	20.0	ND	112	80-121%	---	---	
1,2,3-Trichlorobenzene	21.7	1.00	2.00	ug/L	1	20.0	ND	109	69-129%	---	---	
1,2,4-Trichlorobenzene	21.6	1.00	2.00	ug/L	1	20.0	ND	108	69-130%	---	---	
1,1,1-Trichloroethane	26.4	0.200	0.400	ug/L	1	20.0	ND	132	74-131%	---	---	Q-01
1,1,2-Trichloroethane	22.9	0.250	0.500	ug/L	1	20.0	ND	114	80-120%	---	---	
Trichloroethene (TCE)	24.2	0.200	0.400	ug/L	1	20.0	ND	121	79-123%	---	---	
Trichlorofluoromethane	28.4	1.00	2.00	ug/L	1	20.0	ND	142	65-141%	---	---	Q-01
1,2,3-Trichloropropane	22.7	0.500	1.00	ug/L	1	20.0	ND	113	73-122%	---	---	
1,2,4-Trimethylbenzene	22.9	0.500	1.00	ug/L	1	20.0	ND	115	76-124%	---	---	
1,3,5-Trimethylbenzene	22.9	0.500	1.00	ug/L	1	20.0	ND	115	75-124%	---	---	
Vinyl chloride	25.0	0.200	0.400	ug/L	1	20.0	ND	125	58-137%	---	---	
m,p-Xylene	45.6	0.500	1.00	ug/L	1	40.0	ND	114	80-121%	---	---	
o-Xylene	22.1	0.250	0.500	ug/L	1	20.0	ND	110	78-122%	---	---	
Surr: 1,4-Difluorobenzene (Surr) Recovery: 101 % Limits: 80-120 % Dilution: 1x												
Toluene-d8 (Surr) 100 % 80-120 % "												
4-Bromofluorobenzene (Surr) 95 % 80-120 % "												

Matrix Spike Dup (1090343-MSD1)												
Prepared: 09/10/21 09:49 Analyzed: 09/10/21 14:46												
QC Source Sample: Non-SDG (A110258-07)												
Acetone	47.6	10.0	20.0	ug/L	1	40.0	ND	119	39-160%	1	30%	
Acrylonitrile	24.9	1.00	2.00	ug/L	1	20.0	ND	124	63-135%	2	30%	
Benzene	23.2	0.100	0.200	ug/L	1	20.0	ND	116	79-120%	2	30%	
Bromobenzene	20.9	0.250	0.500	ug/L	1	20.0	ND	104	80-120%	0.5	30%	
Bromochloromethane	23.3	0.500	1.00	ug/L	1	20.0	ND	117	78-123%	1	30%	
Bromodichloromethane	25.1	0.500	1.00	ug/L	1	20.0	ND	126	79-125%	0.7	30%	Q-01
Bromoform	25.1	0.500	1.00	ug/L	1	20.0	ND	125	66-130%	0.4	30%	Q-54i
Bromomethane	30.4	5.00	5.00	ug/L	1	20.0	ND	152	53-141%	6	30%	Q-54e
2-Butanone (MEK)	49.7	5.00	10.0	ug/L	1	40.0	ND	124	56-143%	1	30%	
n-Butylbenzene	24.1	0.500	1.00	ug/L	1	20.0	ND	121	75-128%	1	30%	
sec-Butylbenzene	22.9	0.500	1.00	ug/L	1	20.0	ND	115	77-126%	0.6	30%	
tert-Butylbenzene	22.3	0.500	1.00	ug/L	1	20.0	ND	112	78-124%	0.4	30%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B						Water						
Matrix Spike Dup (1090343-MSD1)						Prepared: 09/10/21 09:49 Analyzed: 09/10/21 14:46						
QC Source Sample: Non-SDG (A110258-07)												
Carbon disulfide	23.7	5.00	10.0	ug/L	1	20.0	ND	118	64-133%	2	30%	
Carbon tetrachloride	31.0	0.500	1.00	ug/L	1	20.0	ND	155	72-136%	1	30%	Q-54a
Chlorobenzene	22.4	0.250	0.500	ug/L	1	20.0	ND	112	80-120%	1	30%	
Chloroethane	24.0	5.00	5.00	ug/L	1	20.0	ND	120	60-138%	2	30%	
Chloroform	24.0	0.500	1.00	ug/L	1	20.0	ND	120	79-124%	1	30%	
Chloromethane	22.6	2.50	5.00	ug/L	1	20.0	ND	113	50-139%	0.2	30%	
2-Chlorotoluene	22.3	0.500	1.00	ug/L	1	20.0	ND	112	79-122%	2	30%	
4-Chlorotoluene	22.1	0.500	1.00	ug/L	1	20.0	ND	111	78-122%	0.9	30%	
Dibromochloromethane	25.7	0.500	1.00	ug/L	1	20.0	ND	128	74-126%	0.9	30%	Q-54j
1,2-Dibromo-3-chloropropane	22.7	2.50	5.00	ug/L	1	20.0	ND	113	62-128%	0.5	30%	
1,2-Dibromoethane (EDB)	22.9	0.250	0.500	ug/L	1	20.0	ND	115	77-121%	0.5	30%	
Dibromomethane	23.8	0.500	1.00	ug/L	1	20.0	ND	119	79-123%	0.03	30%	
1,2-Dichlorobenzene	21.8	0.250	0.500	ug/L	1	20.0	ND	109	80-120%	1	30%	
1,3-Dichlorobenzene	21.5	0.250	0.500	ug/L	1	20.0	ND	108	80-120%	1	30%	
1,4-Dichlorobenzene	21.3	0.250	0.500	ug/L	1	20.0	ND	106	79-120%	2	30%	
Dichlorodifluoromethane	25.0	0.500	1.00	ug/L	1	20.0	ND	125	32-152%	2	30%	
1,1-Dichloroethane	24.3	0.200	0.400	ug/L	1	20.0	ND	121	77-125%	0.3	30%	
1,2-Dichloroethane (EDC)	23.4	0.200	0.400	ug/L	1	20.0	ND	117	73-128%	2	30%	
1,1-Dichloroethene	25.0	0.200	0.400	ug/L	1	20.0	ND	125	71-131%	2	30%	
cis-1,2-Dichloroethene	24.2	0.200	0.400	ug/L	1	20.0	ND	121	78-123%	0.6	30%	
trans-1,2-Dichloroethene	24.4	0.200	0.400	ug/L	1	20.0	ND	122	75-124%	0.9	30%	
1,2-Dichloropropane	23.3	0.250	0.500	ug/L	1	20.0	ND	116	78-122%	0.03	30%	
1,3-Dichloropropane	22.8	0.500	1.00	ug/L	1	20.0	ND	114	80-120%	1	30%	
2,2-Dichloropropane	31.9	0.500	1.00	ug/L	1	20.0	ND	159	60-139%	0.003	30%	Q-54h
1,1-Dichloropropene	24.1	0.500	1.00	ug/L	1	20.0	ND	121	79-125%	0.8	30%	
cis-1,3-Dichloropropene	23.6	0.500	1.00	ug/L	1	20.0	ND	118	75-124%	0.7	30%	
trans-1,3-Dichloropropene	25.3	1.00	2.00	ug/L	1	20.0	ND	126	73-127%	0.2	30%	
Ethylbenzene	22.6	0.250	0.500	ug/L	1	20.0	ND	113	79-121%	2	30%	
Hexachlorobutadiene	23.4	2.50	5.00	ug/L	1	20.0	ND	117	66-134%	1	30%	
2-Hexanone	48.6	5.00	10.0	ug/L	1	40.0	ND	121	57-139%	4	30%	
Isopropylbenzene	22.8	0.500	1.00	ug/L	1	20.0	ND	114	72-131%	1	30%	
4-Isopropyltoluene	22.5	0.500	1.00	ug/L	1	20.0	ND	112	77-127%	2	30%	
Methylene chloride	21.0	5.00	10.0	ug/L	1	20.0	ND	105	74-124%	1	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090343 - EPA 5030B												
Water												
Matrix Spike Dup (1090343-MSD1)												
Prepared: 09/10/21 09:49 Analyzed: 09/10/21 14:46												
QC Source Sample: Non-SDG (A110258-07)												
4-Methyl-2-pentanone (MiBK)	49.9	5.00	10.0	ug/L	1	40.0	ND	125	67-130%	2	30%	
Methyl tert-butyl ether (MTBE)	21.7	0.500	1.00	ug/L	1	20.0	ND	108	71-124%	0.08	30%	
Naphthalene	19.0	1.00	2.00	ug/L	1	20.0	ND	95	61-128%	1	30%	
n-Propylbenzene	22.4	0.250	0.500	ug/L	1	20.0	ND	112	76-126%	0.8	30%	
Styrene	22.9	0.500	1.00	ug/L	1	20.0	ND	115	78-123%	2	30%	
1,1,1,2-Tetrachloroethane	28.6	0.200	0.400	ug/L	1	20.0	ND	143	78-124%	2	30%	Q-54b
1,1,1,2,2-Tetrachloroethane	23.3	0.250	0.500	ug/L	1	20.0	ND	116	71-121%	3	30%	
Tetrachloroethene (PCE)	23.2	0.200	0.400	ug/L	1	20.0	ND	116	74-129%	4	30%	
Toluene	22.0	0.500	1.00	ug/L	1	20.0	ND	110	80-121%	2	30%	
1,2,3-Trichlorobenzene	21.8	1.00	2.00	ug/L	1	20.0	ND	109	69-129%	0.3	30%	
1,2,4-Trichlorobenzene	21.5	1.00	2.00	ug/L	1	20.0	ND	107	69-130%	0.8	30%	
1,1,1-Trichloroethane	25.8	0.200	0.400	ug/L	1	20.0	ND	129	74-131%	2	30%	
1,1,2-Trichloroethane	22.5	0.250	0.500	ug/L	1	20.0	ND	113	80-120%	1	30%	
Trichloroethene (TCE)	23.3	0.200	0.400	ug/L	1	20.0	ND	117	79-123%	4	30%	
Trichlorofluoromethane	27.5	1.00	2.00	ug/L	1	20.0	ND	138	65-141%	3	30%	
1,2,3-Trichloropropane	22.8	0.500	1.00	ug/L	1	20.0	ND	114	73-122%	0.7	30%	
1,2,4-Trimethylbenzene	22.8	0.500	1.00	ug/L	1	20.0	ND	114	76-124%	0.9	30%	
1,3,5-Trimethylbenzene	22.6	0.500	1.00	ug/L	1	20.0	ND	113	75-124%	1	30%	
Vinyl chloride	25.3	0.200	0.400	ug/L	1	20.0	ND	127	58-137%	1	30%	
m,p-Xylene	45.1	0.500	1.00	ug/L	1	40.0	ND	113	80-121%	1	30%	
o-Xylene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	78-122%	0.3	30%	
<i>Surr: 1,4-Difluorobenzene (Surr) Recovery: 99% Limits: 80-120% Dilution: 1x</i> <i>Toluene-d8 (Surr) 100% 80-120% "</i> <i>4-Bromofluorobenzene (Surr) 96% 80-120% "</i>												

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A						Soil						
Blank (1090655-BLK1)			Prepared: 09/17/21 09:00 Analyzed: 09/17/21 11:16									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	---
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	---
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	---
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	---
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	---
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	---
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	---
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	---
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	---
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	---
1,2-Dibromo-3-chloropropane	ND	167	167	ug/kg wet	50	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	---
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A						Soil						
Blank (1090655-BLK1)			Prepared: 09/17/21 09:00 Analyzed: 09/17/21 11:16									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 106 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A						Soil						
Blank (1090655-BLK1)						Prepared: 09/17/21 09:00 Analyzed: 09/17/21 11:16						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (1090655-BS1)						Prepared: 09/17/21 09:00 Analyzed: 09/17/21 10:22						
5035A/8260D												
Acetone	1890	500	1000	ug/kg wet	50	2000	---	95	80-120%	---	---	
Acrylonitrile	1030	50.0	100	ug/kg wet	50	1000	---	103	80-120%	---	---	
Benzene	1180	5.00	10.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
Bromobenzene	982	12.5	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
Bromochloromethane	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Bromodichloromethane	1190	25.0	50.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
Bromoform	874	50.0	100	ug/kg wet	50	1000	---	87	80-120%	---	---	
Bromomethane	1400	500	500	ug/kg wet	50	1000	---	140	80-120%	---	---	Q-56
2-Butanone (MEK)	1960	250	500	ug/kg wet	50	2000	---	98	80-120%	---	---	
n-Butylbenzene	958	25.0	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
sec-Butylbenzene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
tert-Butylbenzene	944	25.0	50.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
Carbon disulfide	1390	250	500	ug/kg wet	50	1000	---	139	80-120%	---	---	Q-56
Carbon tetrachloride	1240	25.0	50.0	ug/kg wet	50	1000	---	124	80-120%	---	---	Q-56
Chlorobenzene	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Chloroethane	1270	250	500	ug/kg wet	50	1000	---	127	80-120%	---	---	Q-56
Chloroform	1200	25.0	50.0	ug/kg wet	50	1000	---	120	80-120%	---	---	
Chloromethane	1030	125	250	ug/kg wet	50	1000	---	103	80-120%	---	---	
2-Chlorotoluene	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
4-Chlorotoluene	962	25.0	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
Dibromochloromethane	922	50.0	100	ug/kg wet	50	1000	---	92	80-120%	---	---	
1,2-Dibromo-3-chloropropane	720	250	250	ug/kg wet	50	1000	---	72	80-120%	---	---	Q-55
1,2-Dibromoethane (EDB)	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Dibromomethane	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,2-Dichlorobenzene	978	12.5	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,3-Dichlorobenzene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,4-Dichlorobenzene	990	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Dichlorodifluoromethane	1150	50.0	100	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,1-Dichloroethane	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	

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ANALYTICAL REPORT

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A						Soil						
LCS (1090655-BS1)						Prepared: 09/17/21 09:00 Analyzed: 09/17/21 10:22						
1,2-Dichloroethane (EDC)	1110	12.5	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
1,1-Dichloroethene	1500	12.5	25.0	ug/kg wet	50	1000	---	150	80-120%	---	---	Q-56
cis-1,2-Dichloroethene	1200	12.5	25.0	ug/kg wet	50	1000	---	120	80-120%	---	---	
trans-1,2-Dichloroethene	1220	12.5	25.0	ug/kg wet	50	1000	---	122	80-120%	---	---	Q-56
1,2-Dichloropropane	1180	12.5	25.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
1,3-Dichloropropane	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
2,2-Dichloropropane	1320	25.0	50.0	ug/kg wet	50	1000	---	132	80-120%	---	---	Q-56
1,1-Dichloropropene	1230	25.0	50.0	ug/kg wet	50	1000	---	123	80-120%	---	---	Q-56
cis-1,3-Dichloropropene	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
trans-1,3-Dichloropropene	986	25.0	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Ethylbenzene	996	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Hexachlorobutadiene	942	50.0	100	ug/kg wet	50	1000	---	94	80-120%	---	---	
2-Hexanone	1520	500	500	ug/kg wet	50	2000	---	76	80-120%	---	---	Q-55
Isopropylbenzene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
4-Isopropyltoluene	992	25.0	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Methylene chloride	1200	250	500	ug/kg wet	50	1000	---	120	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	1660	250	500	ug/kg wet	50	2000	---	83	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Naphthalene	911	50.0	100	ug/kg wet	50	1000	---	91	80-120%	---	---	
n-Propylbenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Styrene	984	25.0	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,1,2,2-Tetrachloroethane	886	25.0	50.0	ug/kg wet	50	1000	---	89	80-120%	---	---	
Tetrachloroethene (PCE)	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Toluene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,2,3-Trichlorobenzene	1010	125	250	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,2,4-Trichlorobenzene	1000	125	250	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,1,1-Trichloroethane	1270	12.5	25.0	ug/kg wet	50	1000	---	127	80-120%	---	---	Q-56
1,1,2-Trichloroethane	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Trichloroethene (TCE)	1250	12.5	25.0	ug/kg wet	50	1000	---	125	80-120%	---	---	Q-56
Trichlorofluoromethane	1230	50.0	100	ug/kg wet	50	1000	---	123	80-120%	---	---	Q-56
1,2,3-Trichloropropane	928	25.0	50.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
1,2,4-Trimethylbenzene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,3,5-Trimethylbenzene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A						Soil						
LCS (1090655-BS1)						Prepared: 09/17/21 09:00 Analyzed: 09/17/21 10:22						
Vinyl chloride	1110	12.5	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
m,p-Xylene	1930	25.0	50.0	ug/kg wet	50	2000	---	96	80-120%	---	---	
o-Xylene	964	12.5	25.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 109 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1090655-DUP1)						Prepared: 09/09/21 08:20 Analyzed: 09/17/21 16:12						
QC Source Sample: Non-SDG (A110306-02)												
Acetone	ND	1260	2530	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	126	253	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	98.7	12.6	25.3	ug/kg dry	50	---	117	---	---	17	30%	
Bromobenzene	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	126	253	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	1260	1260	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	632	1260	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	111	63.2	126	ug/kg dry	50	---	107	---	---	4	30%	
sec-Butylbenzene	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	632	1260	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	632	1260	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	316	632	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	620	63.2	126	ug/kg dry	50	---	673	---	---	8	30%	
4-Chlorotoluene	469	63.2	126	ug/kg dry	50	---	474	---	---	1	30%	
Dibromochloromethane	ND	126	253	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	632	632	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A							Soil					
Duplicate (1090655-DUP1)			Prepared: 09/09/21 08:20 Analyzed: 09/17/21 16:12									
QC Source Sample: Non-SDG (A110306-02)												
1,3-Dichlorobenzene	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	126	253	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	643	31.6	63.2	ug/kg dry	50	---	724	---	---	12	30%	
Hexachlorobutadiene	ND	126	253	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	1260	1260	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	124	63.2	126	ug/kg dry	50	---	138	---	---	11	30%	J
4-Isopropyltoluene	140	63.2	126	ug/kg dry	50	---	133	---	---	6	30%	
Methylene chloride	ND	632	1260	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	632	1260	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	1520	126	253	ug/kg dry	50	---	1270	---	---	18	30%	
n-Propylbenzene	192	31.6	63.2	ug/kg dry	50	---	187	---	---	3	30%	
Styrene	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	1680	63.2	126	ug/kg dry	50	---	2070	---	---	21	30%	
1,2,3-Trichlorobenzene	ND	316	632	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	316	632	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A						Soil						
Duplicate (1090655-DUP1)			Prepared: 09/09/21 08:20 Analyzed: 09/17/21 16:12									
QC Source Sample: Non-SDG (A110306-02)												
Trichloroethene (TCE)	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	126	253	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	63.2	126	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	1510	63.2	126	ug/kg dry	50	---	1470	---	---	3	30%	
1,3,5-Trimethylbenzene	422	63.2	126	ug/kg dry	50	---	406	---	---	4	30%	
Vinyl chloride	ND	31.6	63.2	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	1370	63.2	126	ug/kg dry	50	---	1550	---	---	12	30%	
o-Xylene	758	31.6	63.2	ug/kg dry	50	---	851	---	---	12	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1090655-DUP2)			Prepared: 09/09/21 09:00 Analyzed: 09/17/21 17:05									
QC Source Sample: Non-SDG (A110306-04)												
Acetone	ND	616	1230	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	61.6	123	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	16.0	6.16	12.3	ug/kg dry	50	---	29.9	---	---	60	30%	Q-05
Bromobenzene	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	61.6	123	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	616	616	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	308	616	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	308	616	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	308	616	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	154	308	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A						Soil						
Duplicate (1090655-DUP2)			Prepared: 09/09/21 09:00 Analyzed: 09/17/21 17:05									
QC Source Sample: Non-SDG (A110306-04)												
4-Chlorotoluene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	61.6	123	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	308	308	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	61.6	123	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	16.0	15.4	30.8	ug/kg dry	50	---	22.6	---	---	34	30%	Q-05, J
Hexachlorobutadiene	ND	61.6	123	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	61.6	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	308	616	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	308	616	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	61.6	123	ug/kg dry	50	---	214	---	---	***	30%	Q-05
n-Propylbenzene	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A						Soil						
Duplicate (1090655-DUP2)			Prepared: 09/09/21 09:00 Analyzed: 09/17/21 17:05									
QC Source Sample: Non-SDG (A110306-04)												
Tetrachloroethene (PCE)	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	125	30.8	61.6	ug/kg dry	50	---	196	---	---	44	30%	Q-05
1,2,3-Trichlorobenzene	ND	154	308	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	154	308	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	61.6	123	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	30.8	61.6	ug/kg dry	50	---	38.4	---	---	***	30%	Q-05
1,3,5-Trimethylbenzene	ND	30.8	61.6	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	15.4	30.8	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	145	30.8	61.6	ug/kg dry	50	---	192	---	---	27	30%	
o-Xylene	20.9	15.4	30.8	ug/kg dry	50	---	36.0	---	---	53	30%	Q-05, J
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (1090655-MS1)			Prepared: 09/09/21 11:45 Analyzed: 09/17/21 19:20									
QC Source Sample: Non-SDG (A110377-01)												
5035A/8260D												
Acetone	4140	1040	2070	ug/kg dry	50	4150	ND	100	36-164%	---	---	
Acrylonitrile	2230	104	207	ug/kg dry	50	2070	ND	108	65-134%	---	---	
Benzene	2410	10.4	20.7	ug/kg dry	50	2070	ND	116	77-121%	---	---	
Bromobenzene	2100	25.9	51.8	ug/kg dry	50	2070	ND	101	78-121%	---	---	
Bromochloromethane	2270	51.8	104	ug/kg dry	50	2070	ND	109	78-125%	---	---	
Bromodichloromethane	2430	51.8	104	ug/kg dry	50	2070	ND	117	75-127%	---	---	
Bromoform	1790	104	207	ug/kg dry	50	2070	ND	86	67-132%	---	---	
Bromomethane	2910	1040	1040	ug/kg dry	50	2070	ND	140	53-143%	---	---	Q-54d
2-Butanone (MEK)	4230	518	1040	ug/kg dry	50	4150	ND	102	51-148%	---	---	
n-Butylbenzene	2010	51.8	104	ug/kg dry	50	2070	ND	97	70-128%	---	---	
sec-Butylbenzene	2170	51.8	104	ug/kg dry	50	2070	ND	105	73-126%	---	---	
tert-Butylbenzene	2010	51.8	104	ug/kg dry	50	2070	ND	97	73-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A							Soil					
Matrix Spike (1090655-MS1)			Prepared: 09/09/21 11:45 Analyzed: 09/17/21 19:20									
QC Source Sample: Non-SDG (A110377-01)												
Carbon disulfide	2820	518	1040	ug/kg dry	50	2070	ND	136	63-132%	---	---	Q-54b
Carbon tetrachloride	2510	51.8	104	ug/kg dry	50	2070	ND	121	70-135%	---	---	Q-54i
Chlorobenzene	2160	25.9	51.8	ug/kg dry	50	2070	ND	104	79-120%	---	---	
Chloroethane	2490	518	1040	ug/kg dry	50	2070	ND	120	59-139%	---	---	Q-54k
Chloroform	2460	51.8	104	ug/kg dry	50	2070	ND	119	78-123%	---	---	
Chloromethane	1950	259	518	ug/kg dry	50	2070	ND	94	50-136%	---	---	
2-Chlorotoluene	2130	51.8	104	ug/kg dry	50	2070	ND	102	75-122%	---	---	
4-Chlorotoluene	2060	51.8	104	ug/kg dry	50	2070	ND	99	72-124%	---	---	
Dibromochloromethane	1900	104	207	ug/kg dry	50	2070	ND	91	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1680	518	518	ug/kg dry	50	2070	ND	81	61-132%	---	---	Q-54m
1,2-Dibromoethane (EDB)	2250	51.8	104	ug/kg dry	50	2070	ND	108	78-122%	---	---	
Dibromomethane	2320	51.8	104	ug/kg dry	50	2070	ND	112	78-125%	---	---	
1,2-Dichlorobenzene	2070	25.9	51.8	ug/kg dry	50	2070	ND	100	78-121%	---	---	
1,3-Dichlorobenzene	2120	25.9	51.8	ug/kg dry	50	2070	ND	102	77-121%	---	---	
1,4-Dichlorobenzene	2080	25.9	51.8	ug/kg dry	50	2070	ND	100	75-120%	---	---	
Dichlorodifluoromethane	2270	104	207	ug/kg dry	50	2070	ND	109	29-149%	---	---	
1,1-Dichloroethane	2460	25.9	51.8	ug/kg dry	50	2070	ND	119	76-125%	---	---	
1,2-Dichloroethane (EDC)	2310	25.9	51.8	ug/kg dry	50	2070	ND	111	73-128%	---	---	
1,1-Dichloroethene	3080	25.9	51.8	ug/kg dry	50	2070	ND	148	70-131%	---	---	Q-54g
cis-1,2-Dichloroethene	2450	25.9	51.8	ug/kg dry	50	2070	ND	118	77-123%	---	---	
trans-1,2-Dichloroethene	2480	25.9	51.8	ug/kg dry	50	2070	ND	119	74-125%	---	---	Q-54c
1,2-Dichloropropane	2420	25.9	51.8	ug/kg dry	50	2070	ND	117	76-123%	---	---	
1,3-Dichloropropane	2220	51.8	104	ug/kg dry	50	2070	ND	107	77-121%	---	---	
2,2-Dichloropropane	2560	51.8	104	ug/kg dry	50	2070	ND	124	67-133%	---	---	Q-54
1,1-Dichloropropene	2550	51.8	104	ug/kg dry	50	2070	ND	123	76-125%	---	---	Q-54f
cis-1,3-Dichloropropene	2440	51.8	104	ug/kg dry	50	2070	ND	117	74-126%	---	---	
trans-1,3-Dichloropropene	2090	51.8	104	ug/kg dry	50	2070	ND	101	71-130%	---	---	
Ethylbenzene	2070	25.9	51.8	ug/kg dry	50	2070	ND	100	76-122%	---	---	
Hexachlorobutadiene	1980	104	207	ug/kg dry	50	2070	ND	95	61-135%	---	---	
2-Hexanone	3430	1040	1040	ug/kg dry	50	4150	ND	83	53-145%	---	---	Q-54l
Isopropylbenzene	2130	51.8	104	ug/kg dry	50	2070	ND	103	68-134%	---	---	
4-Isopropyltoluene	2110	51.8	104	ug/kg dry	50	2070	ND	102	73-127%	---	---	
Methylene chloride	2410	518	1040	ug/kg dry	50	2070	ND	116	70-128%	---	---	

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090655 - EPA 5035A						Soil						
Matrix Spike (1090655-MS1)			Prepared: 09/09/21 11:45 Analyzed: 09/17/21 19:20									
QC Source Sample: Non-SDG (A110377-01)												
4-Methyl-2-pentanone (MiBK)	3550	518	1040	ug/kg dry	50	4150	ND	86	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	2400	51.8	104	ug/kg dry	50	2070	ND	116	73-125%	---	---	
Naphthalene	2000	104	207	ug/kg dry	50	2070	ND	97	62-129%	---	---	
n-Propylbenzene	2160	25.9	51.8	ug/kg dry	50	2070	ND	104	73-125%	---	---	
Styrene	2080	51.8	104	ug/kg dry	50	2070	ND	100	76-124%	---	---	
1,1,1,2-Tetrachloroethane	2230	25.9	51.8	ug/kg dry	50	2070	ND	107	78-125%	---	---	
1,1,2,2-Tetrachloroethane	1910	51.8	104	ug/kg dry	50	2070	ND	92	70-124%	---	---	
Tetrachloroethene (PCE)	2300	25.9	51.8	ug/kg dry	50	2070	ND	111	73-128%	---	---	
Toluene	2140	51.8	104	ug/kg dry	50	2070	ND	103	77-121%	---	---	
1,2,3-Trichlorobenzene	2080	259	518	ug/kg dry	50	2070	ND	100	66-130%	---	---	
1,2,4-Trichlorobenzene	2090	259	518	ug/kg dry	50	2070	ND	101	67-129%	---	---	
1,1,1-Trichloroethane	2630	25.9	51.8	ug/kg dry	50	2070	ND	127	73-130%	---	---	Q-54k
1,1,2-Trichloroethane	2230	25.9	51.8	ug/kg dry	50	2070	ND	108	78-121%	---	---	
Trichloroethene (TCE)	2580	25.9	51.8	ug/kg dry	50	2070	ND	124	77-123%	---	---	Q-54j
Trichlorofluoromethane	2240	104	207	ug/kg dry	50	2070	ND	108	62-140%	---	---	Q-54f
1,2,3-Trichloropropane	2080	51.8	104	ug/kg dry	50	2070	ND	100	73-125%	---	---	
1,2,4-Trimethylbenzene	2160	51.8	104	ug/kg dry	50	2070	ND	104	75-123%	---	---	
1,3,5-Trimethylbenzene	2220	51.8	104	ug/kg dry	50	2070	ND	107	73-124%	---	---	
Vinyl chloride	2210	25.9	51.8	ug/kg dry	50	2070	ND	106	56-135%	---	---	
m,p-Xylene	4090	51.8	104	ug/kg dry	50	4150	ND	99	77-124%	---	---	
o-Xylene	2040	25.9	51.8	ug/kg dry	50	2070	ND	98	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090427 - EPA 3510C (Acid Extraction)						Water						
Blank (1090427-BLK1)			Prepared: 09/13/21 10:07 Analyzed: 09/13/21 16:27									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>103 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS (1090427-BS1)			Prepared: 09/13/21 10:07 Analyzed: 09/13/21 16:52									
<u>EPA 8270E SIM</u>												
Acenaphthene	2.97	0.0100	0.0200	ug/L	1	4.00	---	74	47-122%	---	---	
Acenaphthylene	3.02	0.0100	0.0200	ug/L	1	4.00	---	76	41-130%	---	---	
Anthracene	3.23	0.0100	0.0200	ug/L	1	4.00	---	81	57-123%	---	---	
Benz(a)anthracene	3.50	0.0100	0.0200	ug/L	1	4.00	---	87	58-125%	---	---	
Benzo(a)pyrene	3.68	0.0100	0.0200	ug/L	1	4.00	---	92	54-128%	---	---	
Benzo(b)fluoranthene	3.72	0.0100	0.0200	ug/L	1	4.00	---	93	53-131%	---	---	
Benzo(k)fluoranthene	4.10	0.0100	0.0200	ug/L	1	4.00	---	103	57-129%	---	---	
Benzo(g,h,i)perylene	3.80	0.0100	0.0200	ug/L	1	4.00	---	95	50-134%	---	---	
Chrysene	3.65	0.0100	0.0200	ug/L	1	4.00	---	91	59-123%	---	---	
Dibenz(a,h)anthracene	3.74	0.0100	0.0200	ug/L	1	4.00	---	94	51-134%	---	---	
Fluoranthene	3.11	0.0100	0.0200	ug/L	1	4.00	---	78	57-128%	---	---	
Fluorene	3.02	0.0100	0.0200	ug/L	1	4.00	---	75	52-124%	---	---	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110276 - 10 06 21 1150

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090427 - EPA 3510C (Acid Extraction)						Water						
LCS (1090427-BS1)						Prepared: 09/13/21 10:07 Analyzed: 09/13/21 16:52						
Indeno(1,2,3-cd)pyrene	3.55	0.0100	0.0200	ug/L	1	4.00	---	89	52-134%	---	---	
Naphthalene	2.60	0.0200	0.0400	ug/L	1	4.00	---	65	40-121%	---	---	
Phenanthrene	3.27	0.0100	0.0200	ug/L	1	4.00	---	82	59-120%	---	---	
Pyrene	2.97	0.0100	0.0200	ug/L	1	4.00	---	74	57-126%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 73 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>98 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS Dup (1090427-BSD1)						Prepared: 09/13/21 10:07 Analyzed: 09/13/21 17:17						Q-19
EPA 8270E SIM												
Acenaphthene	3.38	0.0100	0.0200	ug/L	1	4.00	---	84	47-122%	13	30%	
Acenaphthylene	3.49	0.0100	0.0200	ug/L	1	4.00	---	87	41-130%	14	30%	
Anthracene	3.54	0.0100	0.0200	ug/L	1	4.00	---	88	57-123%	9	30%	
Benz(a)anthracene	3.65	0.0100	0.0200	ug/L	1	4.00	---	91	58-125%	4	30%	
Benzo(a)pyrene	3.89	0.0100	0.0200	ug/L	1	4.00	---	97	54-128%	5	30%	
Benzo(b)fluoranthene	3.92	0.0100	0.0200	ug/L	1	4.00	---	98	53-131%	5	30%	
Benzo(k)fluoranthene	4.30	0.0100	0.0200	ug/L	1	4.00	---	108	57-129%	5	30%	
Benzo(g,h,i)perylene	3.88	0.0100	0.0200	ug/L	1	4.00	---	97	50-134%	2	30%	
Chrysene	3.88	0.0100	0.0200	ug/L	1	4.00	---	97	59-123%	6	30%	
Dibenz(a,h)anthracene	3.91	0.0100	0.0200	ug/L	1	4.00	---	98	51-134%	4	30%	
Fluoranthene	3.38	0.0100	0.0200	ug/L	1	4.00	---	84	57-128%	8	30%	
Fluorene	3.36	0.0100	0.0200	ug/L	1	4.00	---	84	52-124%	11	30%	
Indeno(1,2,3-cd)pyrene	3.78	0.0100	0.0200	ug/L	1	4.00	---	95	52-134%	6	30%	
Naphthalene	3.11	0.0200	0.0400	ug/L	1	4.00	---	78	40-121%	18	30%	
Phenanthrene	3.58	0.0100	0.0200	ug/L	1	4.00	---	89	59-120%	9	30%	
Pyrene	3.28	0.0100	0.0200	ug/L	1	4.00	---	82	57-126%	10	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>98 %</i>		<i>50-134 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090448 - EPA 3546						Soil						
Blank (1090448-BLK1)			Prepared: 09/13/21 14:54 Analyzed: 09/13/21 18:34									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>115 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1090448-BS1)			Prepared: 09/13/21 14:54 Analyzed: 09/13/21 18:59									
<u>EPA 8270E SIM</u>												
Acenaphthene	497	1.33	2.67	ug/kg wet	1	533	---	93	40-123%	---	---	
Acenaphthylene	520	1.33	2.67	ug/kg wet	1	533	---	97	32-132%	---	---	
Anthracene	507	1.33	2.67	ug/kg wet	1	533	---	95	47-123%	---	---	
Benz(a)anthracene	503	1.33	2.67	ug/kg wet	1	533	---	94	49-126%	---	---	
Benzo(a)pyrene	530	1.33	2.67	ug/kg wet	1	533	---	99	45-129%	---	---	
Benzo(b)fluoranthene	558	1.33	2.67	ug/kg wet	1	533	---	105	45-132%	---	---	
Benzo(k)fluoranthene	569	1.33	2.67	ug/kg wet	1	533	---	107	47-132%	---	---	
Benzo(g,h,i)perylene	514	1.33	2.67	ug/kg wet	1	533	---	96	43-134%	---	---	
Chrysene	513	1.33	2.67	ug/kg wet	1	533	---	96	50-124%	---	---	
Dibenz(a,h)anthracene	528	1.33	2.67	ug/kg wet	1	533	---	99	45-134%	---	---	
Fluoranthene	471	1.33	2.67	ug/kg wet	1	533	---	88	50-127%	---	---	
Fluorene	482	1.33	2.67	ug/kg wet	1	533	---	90	43-125%	---	---	

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090448 - EPA 3546												
Soil												
LCS (1090448-BS1)												
Prepared: 09/13/21 14:54						Analyzed: 09/13/21 18:59						
Indeno(1,2,3-cd)pyrene	496	1.33	2.67	ug/kg wet	1	533	---	93	45-133%	---	---	
Naphthalene	473	1.33	2.67	ug/kg wet	1	533	---	89	35-123%	---	---	
Phenanthrene	513	1.33	2.67	ug/kg wet	1	533	---	96	50-121%	---	---	
Pyrene	458	1.33	2.67	ug/kg wet	1	533	---	86	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 88 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>99 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1090448-DUP1)												
Prepared: 09/13/21 14:54						Analyzed: 09/13/21 20:15						
QC Source Sample: Non-SDG (A110306-02)												
Acenaphthene	619	475	951	ug/kg dry	100	---	841	---	---	30	30%	J
Acenaphthylene	ND	475	951	ug/kg dry	100	---	ND	---	---	---	30%	
Anthracene	1150	475	951	ug/kg dry	100	---	1600	---	---	33	30%	Q-17
Benz(a)anthracene	2040	475	951	ug/kg dry	100	---	2530	---	---	21	30%	
Benzo(a)pyrene	1530	475	951	ug/kg dry	100	---	1790	---	---	16	30%	
Benzo(b)fluoranthene	2850	475	951	ug/kg dry	100	---	3330	---	---	16	30%	
Benzo(k)fluoranthene	960	475	951	ug/kg dry	100	---	1250	---	---	26	30%	M-05
Benzo(g,h,i)perylene	1810	475	951	ug/kg dry	100	---	2280	---	---	23	30%	
Chrysene	3560	475	951	ug/kg dry	100	---	4100	---	---	14	30%	
Dibenz(a,h)anthracene	ND	475	951	ug/kg dry	100	---	ND	---	---	---	30%	
Fluoranthene	4700	475	951	ug/kg dry	100	---	5630	---	---	18	30%	
Fluorene	983	475	951	ug/kg dry	100	---	1360	---	---	32	30%	Q-17
Indeno(1,2,3-cd)pyrene	1180	475	951	ug/kg dry	100	---	1380	---	---	16	30%	
Naphthalene	1440	475	951	ug/kg dry	100	---	1870	---	---	26	30%	
Phenanthrene	5650	475	951	ug/kg dry	100	---	7820	---	---	32	30%	Q-17
Pyrene	5120	475	951	ug/kg dry	100	---	5960	---	---	15	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 47 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 100x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>65 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (1090448-MS1)												
Prepared: 09/13/21 14:54						Analyzed: 09/13/21 21:05						
QC Source Sample: Non-SDG (A110401-03)												
EPA 8270E SIM												
Acenaphthene	540	62.3	125	ug/kg dry	40	623	91.9	72	40-123%	---	---	
Acenaphthylene	566	62.3	125	ug/kg dry	40	623	ND	91	32-132%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090448 - EPA 3546						Soil						
Matrix Spike (1090448-MS1)						Prepared: 09/13/21 14:54 Analyzed: 09/13/21 21:05						
QC Source Sample: Non-SDG (A110401-03)												
Anthracene	582	62.3	125	ug/kg dry	40	623	ND	93	47-123%	---	---	
Benz(a)anthracene	623	62.3	125	ug/kg dry	40	623	89.9	86	49-126%	---	---	
Benzo(a)pyrene	589	62.3	125	ug/kg dry	40	623	83.1	81	45-129%	---	---	
Benzo(b)fluoranthene	641	62.3	125	ug/kg dry	40	623	115	85	45-132%	---	---	
Benzo(k)fluoranthene	650	62.3	125	ug/kg dry	40	623	ND	104	47-132%	---	---	
Benzo(g,h,i)perylene	665	62.3	125	ug/kg dry	40	623	96.7	91	43-134%	---	---	
Chrysene	665	62.3	125	ug/kg dry	40	623	97.9	91	50-124%	---	---	
Dibenz(a,h)anthracene	521	62.3	125	ug/kg dry	40	623	ND	84	45-134%	---	---	
Fluoranthene	632	62.3	125	ug/kg dry	40	623	185	72	50-127%	---	---	
Fluorene	528	62.3	125	ug/kg dry	40	623	ND	85	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	603	62.3	125	ug/kg dry	40	623	79.0	84	45-133%	---	---	
Naphthalene	533	62.3	125	ug/kg dry	40	623	591	-9	35-123%	---	---	Q-03
Phenanthrene	661	62.3	125	ug/kg dry	40	623	213	72	50-121%	---	---	
Pyrene	644	62.3	125	ug/kg dry	40	623	223	68	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 40x</i>					S-05	
<i>p-Terphenyl-d14 (Surr)</i>		<i>101 %</i>		<i>54-127 %</i>		<i>"</i>					S-05	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090749 - EPA 3051A												
Soil												
Blank (1090749-BLK1)												
						Prepared: 09/20/21 15:18 Analyzed: 09/21/21 10:54						
EPA 6020B												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	

LCS (1090749-BS1)												
						Prepared: 09/20/21 15:18 Analyzed: 09/21/21 11:02						
EPA 6020B												
Antimony	24.5	0.500	1.00	mg/kg wet	10	25.0	---	98	80-120%	---	---	Q-29
Arsenic	47.3	0.500	1.00	mg/kg wet	10	50.0	---	95	80-120%	---	---	
Barium	48.0	0.500	1.00	mg/kg wet	10	50.0	---	96	80-120%	---	---	
Cadmium	47.2	0.100	0.200	mg/kg wet	10	50.0	---	94	80-120%	---	---	
Chromium	49.1	0.500	1.00	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Copper	51.4	1.00	2.00	mg/kg wet	10	50.0	---	103	80-120%	---	---	
Lead	49.8	0.100	0.200	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Mercury	1.01	0.0400	0.0800	mg/kg wet	10	1.00	---	101	80-120%	---	---	
Selenium	26.3	0.500	1.00	mg/kg wet	10	25.0	---	105	80-120%	---	---	
Silver	24.5	0.100	0.200	mg/kg wet	10	25.0	---	98	80-120%	---	---	
Zinc	50.3	2.00	4.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	

Duplicate (1090749-DUP1)												
						Prepared: 09/20/21 15:18 Analyzed: 09/21/21 11:25						
QC Source Sample: Non-SDG (A110222-03)												
Antimony	ND	0.512	1.02	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	5.41	0.512	1.02	mg/kg dry	10	---	5.92	---	---	9	20%	
Barium	187	0.512	1.02	mg/kg dry	10	---	190	---	---	1	20%	
Cadmium	0.164	0.102	0.205	mg/kg dry	10	---	0.215	---	---	27	20%	J
Chromium	22.5	0.512	1.02	mg/kg dry	10	---	22.9	---	---	1	20%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090749 - EPA 3051A												
Soil												
Duplicate (1090749-DUP1)												
						Prepared: 09/20/21 15:18 Analyzed: 09/21/21 11:25						
QC Source Sample: Non-SDG (A110222-03)												
Copper	20.8	1.02	2.05	mg/kg dry	10	---	21.5	---	---	4	20%	
Lead	16.1	0.102	0.205	mg/kg dry	10	---	15.7	---	---	2	20%	
Mercury	0.0487	0.0410	0.0820	mg/kg dry	10	---	ND	---	---		20%	J
Selenium	ND	0.512	1.02	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	0.102	0.205	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	93.4	2.05	4.10	mg/kg dry	10	---	90.4	---	---	3	20%	

Duplicate (1090749-DUP2)												
						Prepared: 09/20/21 15:18 Analyzed: 09/21/21 11:29						
QC Source Sample: Non-SDG (A110222-03)												
Antimony	ND	0.520	1.04	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	5.87	0.520	1.04	mg/kg dry	10	---	5.92	---	---	0.9	20%	
Barium	191	0.520	1.04	mg/kg dry	10	---	190	---	---	0.5	20%	
Cadmium	0.238	0.104	0.208	mg/kg dry	10	---	0.215	---	---	10	20%	
Chromium	22.7	0.520	1.04	mg/kg dry	10	---	22.9	---	---	0.7	20%	
Copper	20.7	1.04	2.08	mg/kg dry	10	---	21.5	---	---	4	20%	
Lead	15.7	0.104	0.208	mg/kg dry	10	---	15.7	---	---	0.1	20%	
Mercury	0.0451	0.0416	0.0831	mg/kg dry	10	---	ND	---	---		20%	J
Selenium	ND	0.520	1.04	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	0.104	0.208	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	98.2	2.08	4.16	mg/kg dry	10	---	90.4	---	---	8	20%	

Matrix Spike (1090749-MS1)												
						Prepared: 09/20/21 15:18 Analyzed: 09/21/21 11:42						
QC Source Sample: Non-SDG (A110222-03)												
EPA 6020B												
Antimony	20.9	0.500	0.999	mg/kg dry	10	25.0	ND	84	75-125%	---	---	Q-29
Arsenic	52.3	0.500	0.999	mg/kg dry	10	50.0	5.92	93	75-125%	---	---	
Barium	246	0.500	0.999	mg/kg dry	10	50.0	190	113	75-125%	---	---	
Cadmium	47.9	0.0999	0.200	mg/kg dry	10	50.0	0.215	95	75-125%	---	---	
Chromium	72.8	0.500	0.999	mg/kg dry	10	50.0	22.9	100	75-125%	---	---	
Copper	72.4	0.999	2.00	mg/kg dry	10	50.0	21.5	102	75-125%	---	---	
Lead	64.1	0.0999	0.200	mg/kg dry	10	50.0	15.7	97	75-125%	---	---	
Mercury	0.980	0.0400	0.0799	mg/kg dry	10	0.999	ND	98	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090749 - EPA 3051A						Soil						
Matrix Spike (1090749-MS1)						Prepared: 09/20/21 15:18 Analyzed: 09/21/21 11:42						
<u>QC Source Sample: Non-SDG (A110222-03)</u>												
Selenium	25.4	0.500	0.999	mg/kg dry	10	25.0	ND	102	75-125%	---	---	
Silver	24.4	0.0999	0.200	mg/kg dry	10	25.0	ND	98	75-125%	---	---	
Zinc	146	2.00	4.00	mg/kg dry	10	50.0	90.4	112	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090684 - Matrix Matched Direct Inject						Water						
Blank (1090684-BLK1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 01:31						
<u>EPA 6020B (Diss)</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
LCS (1090684-BS1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 01:35						
<u>EPA 6020B (Diss)</u>												
Arsenic	54.5	0.500	1.00	ug/L	1	55.6	---	98	80-120%	---	---	
Barium	55.9	0.500	1.00	ug/L	1	55.6	---	101	80-120%	---	---	
Cadmium	53.6	0.100	0.200	ug/L	1	55.6	---	97	80-120%	---	---	
Chromium	52.1	1.00	2.00	ug/L	1	55.6	---	94	80-120%	---	---	
Lead	54.7	0.100	0.200	ug/L	1	55.6	---	98	80-120%	---	---	
Mercury	1.06	0.0400	0.0800	ug/L	1	1.11	---	95	80-120%	---	---	
Selenium	27.8	0.500	1.00	ug/L	1	27.8	---	100	80-120%	---	---	
Silver	28.0	0.100	0.200	ug/L	1	27.8	---	101	80-120%	---	---	
Duplicate (1090684-DUP1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 02:02						
<u>QC Source Sample: Non-SDG (A110581-06)</u>												
Arsenic	0.639	0.500	1.00	ug/L	1	---	0.657	---	---	3	20%	J
Barium	57.6	0.500	1.00	ug/L	1	---	57.8	---	---	0.3	20%	
Cadmium	0.125	0.100	0.200	ug/L	1	---	0.108	---	---	15	20%	J
Chromium	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	20%	
Lead	0.142	0.100	0.200	ug/L	1	---	0.139	---	---	2	20%	J
Mercury	ND	0.0400	0.0800	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (1090684-MS1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 02:06						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090684 - Matrix Matched Direct Inject						Water						
Matrix Spike (1090684-MS1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 02:06						
<u>QC Source Sample: Non-SDG (A110581-06)</u>												
<u>EPA 6020B (Diss)</u>												
Arsenic	56.7	0.500	1.00	ug/L	1	55.6	0.657	101	75-125%	---	---	
Barium	109	0.500	1.00	ug/L	1	55.6	57.8	93	75-125%	---	---	
Cadmium	54.4	0.100	0.200	ug/L	1	55.6	0.108	98	75-125%	---	---	
Chromium	52.7	1.00	2.00	ug/L	1	55.6	ND	95	75-125%	---	---	
Lead	53.6	0.100	0.200	ug/L	1	55.6	0.139	96	75-125%	---	---	
Mercury	1.05	0.0400	0.0800	ug/L	1	1.11	ND	95	75-125%	---	---	
Selenium	29.1	0.500	1.00	ug/L	1	27.8	ND	105	75-125%	---	---	
Silver	27.4	0.100	0.200	ug/L	1	27.8	ND	99	75-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090364 - Total Solids (Dry Weight)						Soil						
Duplicate (1090364-DUP1)			Prepared: 09/10/21 09:59 Analyzed: 09/13/21 07:57									
<u>QC Source Sample: Non-SDG (A110189-01)</u>												
% Solids	93.1	1.00	1.00	%	1	---	94.1	---	---	1	10%	
Duplicate (1090364-DUP2)			Prepared: 09/10/21 09:59 Analyzed: 09/13/21 07:57									
<u>QC Source Sample: Non-SDG (A110233-06)</u>												
% Solids	96.4	1.00	1.00	%	1	---	95.1	---	---	1	10%	
Duplicate (1090364-DUP3)			Prepared: 09/10/21 09:59 Analyzed: 09/13/21 07:57									
<u>QC Source Sample: Non-SDG (A110277-07)</u>												
% Solids	74.9	1.00	1.00	%	1	---	75.0	---	---	0.07	10%	
Duplicate (1090364-DUP4)			Prepared: 09/10/21 09:59 Analyzed: 09/13/21 07:57									
<u>QC Source Sample: Non-SDG (A110293-01)</u>												
% Solids	92.8	1.00	1.00	%	1	---	92.9	---	---	0.1	10%	
Duplicate (1090364-DUP5)			Prepared: 09/10/21 09:59 Analyzed: 09/13/21 07:57									
<u>QC Source Sample: Non-SDG (A110306-14)</u>												
% Solids	92.4	1.00	1.00	%	1	---	92.6	---	---	0.1	10%	
Duplicate (1090364-DUP6)			Prepared: 09/10/21 19:22 Analyzed: 09/13/21 07:57									
<u>QC Source Sample: Non-SDG (A110337-01)</u>												
% Solids	80.9	1.00	1.00	%	1	---	80.7	---	---	0.2	10%	
Duplicate (1090364-DUP7)			Prepared: 09/10/21 19:22 Analyzed: 09/13/21 07:57									
<u>QC Source Sample: Non-SDG (A110337-02)</u>												
% Solids	75.9	1.00	1.00	%	1	---	76.4	---	---	0.7	10%	
Duplicate (1090364-DUP8)			Prepared: 09/10/21 19:22 Analyzed: 09/13/21 07:57									
<u>QC Source Sample: Non-SDG (A110338-01)</u>												
% Solids	81.6	1.00	1.00	%	1	---	80.3	---	---	1	10%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090364 - Total Solids (Dry Weight)							Soil					
Duplicate (1090364-DUP9)					Prepared: 09/10/21 19:22 Analyzed: 09/13/21 07:57							
<u>QC Source Sample: Non-SDG (A110338-02)</u>												
% Solids	74.1	1.00	1.00	%	1	---	74.4	---	---	0.4	10%	
Duplicate (1090364-DUPA)					Prepared: 09/10/21 19:22 Analyzed: 09/13/21 07:57							
<u>QC Source Sample: Non-SDG (A110339-01)</u>												
% Solids	68.6	1.00	1.00	%	1	---	69.1	---	---	0.7	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 1090533							
A110276-05RE1	Water	NWTPH-Dx LL	09/08/21 13:10	09/15/21 09:57	1040mL/2mL	1000mL/2mL	0.96

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 1090495							
A110276-04	Soil	NWTPH-Dx	09/08/21 12:49	09/14/21 13:07	10.4g/5mL	10g/5mL	0.96

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 1090343							
A110276-05	Water	NWTPH-Gx (MS)	09/08/21 13:10	09/10/21 09:49	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 1090655							
A110276-04	Soil	NWTPH-Gx (MS)	09/08/21 12:49	09/08/21 12:49	10.39g/10mL	5g/5mL	0.96

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 1090343							
A110276-05	Water	EPA 8260D	09/08/21 13:10	09/10/21 09:49	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
Batch: 1090655							
A110276-04	Soil	5035A/8260D	09/08/21 12:49	09/08/21 12:49	10.39g/10mL	5g/5mL	0.96

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3510C (Acid Extraction)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

<u>Prep: EPA 3510C (Acid Extraction)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090427</u>							
A110276-05	Water	EPA 8270E SIM	09/08/21 13:10	09/13/21 10:07	1050mL/2mL	1000mL/2mL	0.95

<u>Prep: EPA 3546</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090448</u>							
A110276-04	Soil	EPA 8270E SIM	09/08/21 12:49	09/13/21 14:54	10.02g/5mL	10g/5mL	1.00

Total Metals by EPA 6020B (ICPMS)

<u>Prep: EPA 3051A</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090749</u>							
A110276-04	Soil	EPA 6020B	09/08/21 12:49	09/20/21 15:18	0.474g/50mL	0.5g/50mL	1.05

Dissolved Metals by EPA 6020B (ICPMS)

<u>Prep: Matrix Matched Direct Inject</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090684</u>							
A110276-05	Water	EPA 6020B (Diss)	09/08/21 13:10	09/17/21 14:41	45mL/50mL	45mL/50mL	1.00

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090364</u>							
A110276-04	Soil	EPA 8000D	09/08/21 12:49	09/10/21 09:59			NA

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- F-11** The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-17** RPD between original and duplicate sample is outside of established control limits.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-24** The RPD for this spike and spike duplicate is above established control limits. Recoveries for both the spike and spike duplicate are within control limits.
- Q-29** Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +12%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +16%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +19%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +2%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +20%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +25%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +3%. The results are reported as Estimated Values.
- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +30%%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +32%. The results are reported as Estimated Values.

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----------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

- Q-54i** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +4%. The results are reported as Estimated Values.
- Q-54j** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
- Q-54k** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +7%. The results are reported as Estimated Values.
- Q-54l** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -4%. The results are reported as Estimated Values.
- Q-54m** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -8%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-01** Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.
- "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A110276 - 10 06 21 1150).

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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Darrell Auvil, Client Services Manager



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ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A110276 - 10 06 21 1150).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Darrell Auvil, Client Services Manager



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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110276 - 10 06 21 1150
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

APEX LABS COOLER RECEIPT FORM

Client: Coles & Betts Environmental Consulting LLC Element WO#: A1 10 276

Project/Project #: EQRB #319

Delivery Info:
 Date/time received: 9/19/17 @ 1408 By: AKK
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 9/19/17 @ 1408 By: AKK
 Chain of Custody included? Yes No Custody seals? Yes No
 Signed/dated by client? Yes No
 Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>4.8</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Gel</u>						
Condition:	<u>Good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
 Green dots applied to out of temperature samples? Yes No
 Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 9/19/17 @ 1500 By: AKK
 All samples intact? Yes No Comments: _____

 Bottle labels/COCs agree? Yes No Comments: _____

 COC/container discrepancies form initiated? Yes No
 Containers/volumes received appropriate for analysis? Yes No Comments: _____

 Do VOA vials have visible headspace? Yes No NA
 Comments: _____
 Water samples: pH checked: Yes No NA pH appropriate? Yes No NA
 Comments: _____

Additional information:

Labeled by: AKK Witness: W Cooler Inspected by: AKK

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503-718-2323
ORELAP ID: OR100062

Wednesday, October 6, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A110449 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A110449, which was received by the laboratory on 9/14/2021 at 1:28:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 4.7 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-15 2.5-4.0	A110449-01	Soil	09/13/21 12:02	09/14/21 13:28
B-15 5-6.5	A110449-02	Soil	09/13/21 12:08	09/14/21 13:28
B-15 7.5-9	A110449-03	Soil	09/13/21 12:14	09/14/21 13:28
B-15 10-11.5	A110449-04	Soil	09/13/21 12:19	09/14/21 13:28
B-15 12.5-19	A110449-05	Soil	09/13/21 12:27	09/14/21 13:28
B-15 15-16.5	A110449-06	Soil	09/13/21 12:30	09/14/21 13:28
B-15 17.5-19	A110449-07	Soil	09/13/21 12:38	09/14/21 13:28
B-15 20-21.5	A110449-08	Soil	09/13/21 12:43	09/14/21 13:28
B-15 25-26.5	A110449-09	Soil	09/13/21 12:52	09/14/21 13:28
B-15 0-10C	A110449-10	Soil	09/13/21 12:02	09/14/21 13:28
B-15 10-25C	A110449-11	Soil	09/13/21 12:27	09/14/21 13:28

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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-15 0-10C (A110449-10)				Matrix: Soil		Batch: 1090555		
Diesel	ND	10.9	25.0	mg/kg dry	1	09/15/21 21:25	NWTPH-Dx	
Oil	ND	21.7	50.0	mg/kg dry	1	09/15/21 21:25	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/15/21 21:25</i>	<i>NWTPH-Dx</i>
B-15 10-25C (A110449-11)				Matrix: Soil		Batch: 1090555		
Diesel	ND	10.3	25.0	mg/kg dry	1	09/15/21 21:46	NWTPH-Dx	
Oil	74.7	20.5	50.0	mg/kg dry	1	09/15/21 21:46	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/15/21 21:46</i>	<i>NWTPH-Dx</i>

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
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ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-15 0-10C (A110449-10)				Matrix: Soil		Batch: 1090975		COMP, V-15
Gasoline Range Organics	ND	3.21	6.41	mg/kg dry	50	09/25/21 03:06	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/25/21 03:06</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>	<i>1</i>	<i>09/25/21 03:06</i>	<i>NWTPH-Gx (MS)</i>	
B-15 10-25C (A110449-11)				Matrix: Soil		Batch: 1090975		COMP, V-15
Gasoline Range Organics	ND	2.91	5.82	mg/kg dry	50	09/25/21 03:33	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 110 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/25/21 03:33</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>	<i>1</i>	<i>09/25/21 03:33</i>	<i>NWTPH-Gx (MS)</i>	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-15 0-10C (A110449-10)				Matrix: Soil		Batch: 1090975		COMP, V-15
Acetone	ND	641	1280	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Acrylonitrile	ND	64.1	128	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Benzene	ND	6.41	12.8	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Bromobenzene	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Bromochloromethane	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Bromodichloromethane	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Bromoform	ND	64.1	128	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Bromomethane	ND	641	641	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
2-Butanone (MEK)	ND	321	641	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
n-Butylbenzene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
sec-Butylbenzene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
tert-Butylbenzene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Carbon disulfide	ND	321	641	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Carbon tetrachloride	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Chlorobenzene	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Chloroethane	ND	321	641	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Chloroform	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Chloromethane	ND	160	321	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
2-Chlorotoluene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
4-Chlorotoluene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Dibromochloromethane	ND	64.1	128	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	160	321	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Dibromomethane	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,2-Dichlorobenzene	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,3-Dichlorobenzene	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,4-Dichlorobenzene	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Dichlorodifluoromethane	ND	64.1	128	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,1-Dichloroethane	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,1-Dichloroethene	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
cis-1,2-Dichloroethene	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
trans-1,2-Dichloroethene	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-15 0-10C (A110449-10)				Matrix: Soil		Batch: 1090975		COMP, V-15
1,2-Dichloropropane	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,3-Dichloropropane	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
2,2-Dichloropropane	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,1-Dichloropropene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
cis-1,3-Dichloropropene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
trans-1,3-Dichloropropene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Ethylbenzene	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Hexachlorobutadiene	ND	64.1	128	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
2-Hexanone	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Isopropylbenzene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
4-Isopropyltoluene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Methylene chloride	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Naphthalene	ND	64.1	128	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
n-Propylbenzene	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Styrene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Tetrachloroethene (PCE)	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Toluene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,2,3-Trichlorobenzene	ND	160	321	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,2,4-Trichlorobenzene	ND	160	321	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,1,1-Trichloroethane	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,1,2-Trichloroethane	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Trichloroethene (TCE)	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Trichlorofluoromethane	ND	64.1	128	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,2,3-Trichloropropane	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,2,4-Trimethylbenzene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
1,3,5-Trimethylbenzene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
Vinyl chloride	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
m,p-Xylene	ND	32.1	64.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	
o-Xylene	ND	16.0	32.1	ug/kg dry	50	09/25/21 03:06	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-15 0-10C (A110449-10)				Matrix: Soil		Batch: 1090975		COMP, V-15
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 108 %</i>		<i>Limits: 80-120 %</i>		09/25/21 03:06	5035A/8260D	
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		09/25/21 03:06	5035A/8260D	
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		09/25/21 03:06	5035A/8260D	
B-15 10-25C (A110449-11)				Matrix: Soil		Batch: 1090975		COMP, V-15
Acetone	ND	582	1160	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Acrylonitrile	ND	58.2	116	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Benzene	ND	5.82	11.6	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Bromobenzene	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Bromochloromethane	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Bromodichloromethane	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Bromoform	ND	58.2	116	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Bromomethane	ND	582	582	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
2-Butanone (MEK)	ND	291	582	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
n-Butylbenzene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
sec-Butylbenzene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
tert-Butylbenzene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Carbon disulfide	ND	291	582	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Carbon tetrachloride	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Chlorobenzene	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Chloroethane	ND	291	582	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Chloroform	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Chloromethane	ND	146	291	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
2-Chlorotoluene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
4-Chlorotoluene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Dibromochloromethane	ND	58.2	116	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	146	291	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Dibromomethane	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,2-Dichlorobenzene	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,3-Dichlorobenzene	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,4-Dichlorobenzene	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Dichlorodifluoromethane	ND	58.2	116	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,1-Dichloroethane	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-15 10-25C (A110449-11)				Matrix: Soil		Batch: 1090975		COMP, V-15
1,2-Dichloroethane (EDC)	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,1-Dichloroethene	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
cis-1,2-Dichloroethene	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
trans-1,2-Dichloroethene	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,2-Dichloropropane	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,3-Dichloropropane	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
2,2-Dichloropropane	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,1-Dichloropropene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
cis-1,3-Dichloropropene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
trans-1,3-Dichloropropene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Ethylbenzene	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Hexachlorobutadiene	ND	58.2	116	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
2-Hexanone	ND	291	582	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Isopropylbenzene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
4-Isopropyltoluene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Methylene chloride	ND	291	582	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	291	582	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Naphthalene	ND	58.2	116	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
n-Propylbenzene	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Styrene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Tetrachloroethene (PCE)	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Toluene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,2,3-Trichlorobenzene	ND	146	291	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,2,4-Trichlorobenzene	ND	146	291	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,1,1-Trichloroethane	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,1,2-Trichloroethane	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Trichloroethene (TCE)	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Trichlorofluoromethane	ND	58.2	116	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,2,3-Trichloropropane	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
1,2,4-Trimethylbenzene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-15 10-25C (A110449-11)				Matrix: Soil		Batch: 1090975		COMP, V-15
1,3,5-Trimethylbenzene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
Vinyl chloride	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
m,p-Xylene	ND	29.1	58.2	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
o-Xylene	ND	14.6	29.1	ug/kg dry	50	09/25/21 03:33	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/25/21 03:33</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/25/21 03:33</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>1</i>	<i>09/25/21 03:33</i>	<i>5035A/8260D</i>

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-15 0-10C (A110449-10)				Matrix: Soil		Batch: 1090595		
Acenaphthene	ND	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	
Acenaphthylene	ND	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	
Anthracene	ND	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	
Benz(a)anthracene	6.39	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	J
Benzo(a)pyrene	ND	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	
Benzo(b)fluoranthene	7.47	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	J
Benzo(k)fluoranthene	ND	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	
Chrysene	6.63	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	J
Dibenz(a,h)anthracene	ND	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	
Fluoranthene	6.49	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	J
Fluorene	ND	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	
Naphthalene	ND	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	
Phenanthrene	ND	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	
Pyrene	9.23	5.82	11.6	ug/kg dry	1	09/16/21 20:06	EPA 8270E SIM	J
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>09/16/21 20:06</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>82 %</i>		<i>54-127 %</i>		<i>1</i>	<i>09/16/21 20:06</i>	<i>EPA 8270E SIM</i>

B-15 10-25C (A110449-11)				Matrix: Soil		Batch: 1090595		
Acenaphthene	ND	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	
Acenaphthylene	ND	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	
Anthracene	6.50	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	J
Benz(a)anthracene	21.4	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	
Benzo(a)pyrene	28.6	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	
Benzo(b)fluoranthene	34.6	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	M-05
Benzo(k)fluoranthene	11.9	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	34.2	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	
Chrysene	28.0	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	
Fluoranthene	38.4	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	
Fluorene	5.61	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	J
Indeno(1,2,3-cd)pyrene	27.9	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-15 10-25C (A110449-11)				Matrix: Soil		Batch: 1090595		
Naphthalene	13.9	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	
Phenanthrene	34.2	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	
Pyrene	43.9	5.26	10.5	ug/kg dry	1	09/16/21 20:31	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 78 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>09/16/21 20:31</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>85 %</i>		<i>54-127 %</i>		<i>1</i>	<i>09/16/21 20:31</i>	<i>EPA 8270E SIM</i>

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-15 0-10C (A110449-10)		Matrix: Soil							
Batch: 1090860									
Antimony	ND	0.618	1.24	mg/kg dry	10	09/24/21 23:44	EPA 6020B		
Arsenic	6.34	0.618	1.24	mg/kg dry	10	09/24/21 23:44	EPA 6020B		
Barium	130	0.618	1.24	mg/kg dry	10	09/24/21 23:44	EPA 6020B		
Cadmium	0.140	0.124	0.247	mg/kg dry	10	09/24/21 23:44	EPA 6020B	J	
Chromium	15.4	0.618	1.24	mg/kg dry	10	09/24/21 23:44	EPA 6020B		
Copper	20.4	1.24	2.47	mg/kg dry	10	09/24/21 23:44	EPA 6020B		
Lead	13.0	0.124	0.247	mg/kg dry	10	09/24/21 23:44	EPA 6020B		
Mercury	ND	0.0494	0.0989	mg/kg dry	10	09/24/21 23:44	EPA 6020B		
Selenium	ND	0.618	1.24	mg/kg dry	10	09/24/21 23:44	EPA 6020B		
Silver	ND	0.124	0.247	mg/kg dry	10	09/24/21 23:44	EPA 6020B		
Zinc	58.8	2.47	4.94	mg/kg dry	10	09/24/21 23:44	EPA 6020B		

B-15 10-25C (A110449-11)		Matrix: Soil							
Batch: 1090860									
Antimony	ND	0.585	1.17	mg/kg dry	10	09/24/21 23:49	EPA 6020B		
Arsenic	4.20	0.585	1.17	mg/kg dry	10	09/24/21 23:49	EPA 6020B		
Barium	93.2	0.585	1.17	mg/kg dry	10	09/24/21 23:49	EPA 6020B	Q-39, Q-42	
Cadmium	ND	0.117	0.234	mg/kg dry	10	09/24/21 23:49	EPA 6020B		
Chromium	14.7	0.585	1.17	mg/kg dry	10	09/24/21 23:49	EPA 6020B	Q-39, Q-42	
Copper	18.4	1.17	2.34	mg/kg dry	10	09/24/21 23:49	EPA 6020B		
Lead	21.1	0.117	0.234	mg/kg dry	10	09/24/21 23:49	EPA 6020B	Q-39, Q-42	
Mercury	ND	0.0468	0.0936	mg/kg dry	10	09/24/21 23:49	EPA 6020B		
Selenium	ND	0.585	1.17	mg/kg dry	10	09/24/21 23:49	EPA 6020B		
Silver	ND	0.117	0.234	mg/kg dry	10	09/24/21 23:49	EPA 6020B		
Zinc	58.7	2.34	4.68	mg/kg dry	10	09/24/21 23:49	EPA 6020B		

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-15 0-10C (A110449-10)				Matrix: Soil		Batch: 1090585		
% Solids	85.0	1.00	1.00	%	1	09/17/21 07:49	EPA 8000D	
B-15 10-25C (A110449-11)				Matrix: Soil		Batch: 1090585		
% Solids	89.4	1.00	1.00	%	1	09/17/21 07:49	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090555 - EPA 3546 (Fuels)						Soil						
Blank (1090555-BLK1)						Prepared: 09/15/21 13:17 Analyzed: 09/15/21 21:13						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
Mineral Oil	ND	18.2	36.4	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 87 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1090555-BS1)						Prepared: 09/15/21 13:17 Analyzed: 09/15/21 21:35						
<u>NWTPH-Dx</u>												
Diesel	113	10.0	25.0	mg/kg wet	1	125	---	90	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090555-DUP1)						Prepared: 09/15/21 13:17 Analyzed: 09/15/21 22:21						
<u>QC Source Sample: Non-SDG (A110381-04)</u>												
Diesel	ND	11.1	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	107	22.2	50.0	mg/kg dry	1	---	86.2	---	---	22	30%	
Mineral Oil	ND	22.2	44.3	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1090555-DUP2)						Prepared: 09/15/21 13:17 Analyzed: 09/15/21 23:49						
<u>QC Source Sample: Non-SDG (A110505-04)</u>												
Diesel	ND	13.3	26.7	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	26.7	53.4	mg/kg dry	1	---	ND	---	---	---	30%	
Mineral Oil	ND	26.7	53.4	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 78 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A						Soil						
Blank (1090975-BLK1)			Prepared: 09/24/21 09:00 Analyzed: 09/24/21 22:10									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>103 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090975-BS2)			Prepared: 09/24/21 09:00 Analyzed: 09/24/21 21:43									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	23.7	2.50	5.00	mg/kg wet	50	25.0	---	95	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 110 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>102 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090975-DUP1)			Prepared: 09/21/21 09:06 Analyzed: 09/24/21 23:04									
<u>QC Source Sample: Non-SDG (A110875-01)</u>												
Gasoline Range Organics	ND	2.86	5.71	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 110 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090975-DUP2)			Prepared: 09/21/21 15:24 Analyzed: 09/24/21 23:58									
<u>QC Source Sample: Non-SDG (A110875-02)</u>												
Gasoline Range Organics	ND	3.09	6.18	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 110 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A						Soil						
Blank (1090975-BLK1)			Prepared: 09/24/21 09:00 Analyzed: 09/24/21 22:10									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A						Soil						
Blank (1090975-BLK1)			Prepared: 09/24/21 09:00 Analyzed: 09/24/21 22:10									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 105 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A						Soil						
Blank (1090975-BLK1)						Prepared: 09/24/21 09:00 Analyzed: 09/24/21 22:10						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (1090975-BS1)						Prepared: 09/24/21 09:00 Analyzed: 09/24/21 21:16						
5035A/8260D												
Acetone	1910	500	1000	ug/kg wet	50	2000	---	95	80-120%	---	---	
Acrylonitrile	974	50.0	100	ug/kg wet	50	1000	---	97	80-120%	---	---	
Benzene	1110	5.00	10.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Bromobenzene	995	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Bromochloromethane	996	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Bromodichloromethane	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Bromoform	849	50.0	100	ug/kg wet	50	1000	---	85	80-120%	---	---	
Bromomethane	1360	500	500	ug/kg wet	50	1000	---	136	80-120%	---	---	Q-56
2-Butanone (MEK)	1880	250	500	ug/kg wet	50	2000	---	94	80-120%	---	---	
n-Butylbenzene	934	25.0	50.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
sec-Butylbenzene	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
tert-Butylbenzene	950	25.0	50.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
Carbon disulfide	1290	250	500	ug/kg wet	50	1000	---	129	80-120%	---	---	Q-56
Carbon tetrachloride	1210	25.0	50.0	ug/kg wet	50	1000	---	121	80-120%	---	---	Q-56
Chlorobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Chloroethane	844	250	500	ug/kg wet	50	1000	---	84	80-120%	---	---	
Chloroform	1140	25.0	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
Chloromethane	923	125	250	ug/kg wet	50	1000	---	92	80-120%	---	---	
2-Chlorotoluene	996	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
4-Chlorotoluene	954	25.0	50.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
Dibromochloromethane	893	50.0	100	ug/kg wet	50	1000	---	89	80-120%	---	---	
1,2-Dibromo-3-chloropropane	876	125	250	ug/kg wet	50	1000	---	88	80-120%	---	---	
1,2-Dibromoethane (EDB)	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Dibromomethane	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,2-Dichlorobenzene	978	12.5	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,3-Dichlorobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,4-Dichlorobenzene	996	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Dichlorodifluoromethane	884	50.0	100	ug/kg wet	50	1000	---	88	80-120%	---	---	
1,1-Dichloroethane	996	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A						Soil						
LCS (1090975-BS1)			Prepared: 09/24/21 09:00 Analyzed: 09/24/21 21:16									
1,2-Dichloroethane (EDC)	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,1-Dichloroethene	1380	12.5	25.0	ug/kg wet	50	1000	---	138	80-120%	---	---	Q-56
cis-1,2-Dichloroethene	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
trans-1,2-Dichloroethene	1150	12.5	25.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,2-Dichloropropane	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
1,3-Dichloropropane	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
2,2-Dichloropropane	1220	25.0	50.0	ug/kg wet	50	1000	---	122	80-120%	---	---	Q-56
1,1-Dichloropropene	1170	25.0	50.0	ug/kg wet	50	1000	---	117	80-120%	---	---	
cis-1,3-Dichloropropene	1140	25.0	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
trans-1,3-Dichloropropene	974	25.0	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Ethylbenzene	986	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Hexachlorobutadiene	982	50.0	100	ug/kg wet	50	1000	---	98	80-120%	---	---	
2-Hexanone	1680	250	500	ug/kg wet	50	2000	---	84	80-120%	---	---	
Isopropylbenzene	999	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
4-Isopropyltoluene	980	25.0	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
Methylene chloride	1050	250	500	ug/kg wet	50	1000	---	105	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	1650	250	500	ug/kg wet	50	2000	---	82	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Naphthalene	981	50.0	100	ug/kg wet	50	1000	---	98	80-120%	---	---	
n-Propylbenzene	998	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Styrene	946	25.0	50.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,1,2,2-Tetrachloroethane	912	25.0	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
Tetrachloroethene (PCE)	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Toluene	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,2,3-Trichlorobenzene	1040	125	250	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,2,4-Trichlorobenzene	1020	125	250	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,1,1-Trichloroethane	1220	12.5	25.0	ug/kg wet	50	1000	---	122	80-120%	---	---	Q-56
1,1,2-Trichloroethane	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Trichloroethene (TCE)	1210	12.5	25.0	ug/kg wet	50	1000	---	121	80-120%	---	---	Q-56
Trichlorofluoromethane	873	50.0	100	ug/kg wet	50	1000	---	87	80-120%	---	---	
1,2,3-Trichloropropane	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,2,4-Trimethylbenzene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,3,5-Trimethylbenzene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A						Soil						
LCS (1090975-BS1)						Prepared: 09/24/21 09:00 Analyzed: 09/24/21 21:16						
Vinyl chloride	976	12.5	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
m,p-Xylene	1890	25.0	50.0	ug/kg wet	50	2000	---	95	80-120%	---	---	
o-Xylene	938	12.5	25.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1090975-DUP1)						Prepared: 09/21/21 09:06 Analyzed: 09/24/21 23:04						
QC Source Sample: Non-SDG (A110875-01)												
Acetone	ND	571	1140	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	57.1	114	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	5.71	11.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	57.1	114	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	571	571	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	286	571	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	286	571	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	286	571	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	143	286	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	57.1	114	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	143	286	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110449 - 10 06 21 1200

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A							Soil					
Duplicate (1090975-DUP1)			Prepared: 09/21/21 09:06 Analyzed: 09/24/21 23:04									
QC Source Sample: Non-SDG (A110875-01)												
1,3-Dichlorobenzene	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	57.1	114	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	57.1	114	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	286	571	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	286	571	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	286	571	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	57.1	114	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	143	286	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	143	286	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A												
Soil												
Duplicate (1090975-DUP1)												
Prepared: 09/21/21 09:06 Analyzed: 09/24/21 23:04												
QC Source Sample: Non-SDG (A110875-01)												
Trichloroethene (TCE)	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	57.1	114	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	28.6	57.1	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	14.3	28.6	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1090975-DUP2)												
Prepared: 09/21/21 15:24 Analyzed: 09/24/21 23:58												
QC Source Sample: Non-SDG (A110875-02)												
Acetone	ND	618	1240	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	61.8	124	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	6.18	12.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	61.8	124	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	618	618	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	309	618	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	309	618	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	309	618	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	155	309	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A						Soil						
Duplicate (1090975-DUP2)			Prepared: 09/21/21 15:24 Analyzed: 09/24/21 23:58									
<u>QC Source Sample: Non-SDG (A110875-02)</u>												
4-Chlorotoluene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	61.8	124	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	155	309	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	61.8	124	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	61.8	124	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	309	618	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	309	618	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	309	618	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	61.8	124	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A						Soil						
Duplicate (1090975-DUP2)			Prepared: 09/21/21 15:24 Analyzed: 09/24/21 23:58									
<u>QC Source Sample: Non-SDG (A110875-02)</u>												
Tetrachloroethene (PCE)	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	155	309	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	155	309	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	61.8	124	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	30.9	61.8	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	15.5	30.9	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (1090975-MS1)			Prepared: 09/22/21 11:44 Analyzed: 09/25/21 02:12									
<u>QC Source Sample: Non-SDG (A110875-06)</u>												
<u>5035A/8260D</u>												
Acetone	2100	547	1090	ug/kg dry	50	2190	ND	96	36-164%	---	---	
Acrylonitrile	1130	54.7	109	ug/kg dry	50	1090	ND	103	65-134%	---	---	
Benzene	1230	5.47	10.9	ug/kg dry	50	1090	ND	113	77-121%	---	---	
Bromobenzene	1100	13.7	27.4	ug/kg dry	50	1090	ND	100	78-121%	---	---	
Bromochloromethane	1150	27.4	54.7	ug/kg dry	50	1090	ND	105	78-125%	---	---	
Bromodichloromethane	1240	27.4	54.7	ug/kg dry	50	1090	ND	113	75-127%	---	---	
Bromoform	904	54.7	109	ug/kg dry	50	1090	ND	83	67-132%	---	---	
Bromomethane	1570	547	547	ug/kg dry	50	1090	ND	143	53-143%	---	---	Q-54a
2-Butanone (MEK)	2100	274	547	ug/kg dry	50	2190	ND	96	51-148%	---	---	
n-Butylbenzene	931	27.4	54.7	ug/kg dry	50	1090	ND	85	70-128%	---	---	
sec-Butylbenzene	1050	27.4	54.7	ug/kg dry	50	1090	ND	96	73-126%	---	---	
tert-Butylbenzene	983	27.4	54.7	ug/kg dry	50	1090	ND	90	73-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A							Soil					
Matrix Spike (1090975-MS1)			Prepared: 09/22/21 11:44 Analyzed: 09/25/21 02:12									
QC Source Sample: Non-SDG (A110875-06)												
Carbon disulfide	1410	274	547	ug/kg dry	50	1090	ND	129	63-132%	---	---	Q-54d
Carbon tetrachloride	1270	27.4	54.7	ug/kg dry	50	1090	ND	117	70-135%	---	---	Q-54
Chlorobenzene	1110	13.7	27.4	ug/kg dry	50	1090	ND	102	79-120%	---	---	
Chloroethane	1570	274	547	ug/kg dry	50	1090	ND	144	59-139%	---	---	Q-01
Chloroform	1250	27.4	54.7	ug/kg dry	50	1090	ND	115	78-123%	---	---	
Chloromethane	1040	137	274	ug/kg dry	50	1090	ND	95	50-136%	---	---	
2-Chlorotoluene	1070	27.4	54.7	ug/kg dry	50	1090	ND	98	75-122%	---	---	
4-Chlorotoluene	1030	27.4	54.7	ug/kg dry	50	1090	ND	95	72-124%	---	---	
Dibromochloromethane	968	54.7	109	ug/kg dry	50	1090	ND	89	74-126%	---	---	
1,2-Dibromo-3-chloropropane	828	137	274	ug/kg dry	50	1090	ND	76	61-132%	---	---	
1,2-Dibromoethane (EDB)	1120	27.4	54.7	ug/kg dry	50	1090	ND	102	78-122%	---	---	
Dibromomethane	1190	27.4	54.7	ug/kg dry	50	1090	ND	109	78-125%	---	---	
1,2-Dichlorobenzene	1030	13.7	27.4	ug/kg dry	50	1090	ND	94	78-121%	---	---	
1,3-Dichlorobenzene	1080	13.7	27.4	ug/kg dry	50	1090	ND	98	77-121%	---	---	
1,4-Dichlorobenzene	1070	13.7	27.4	ug/kg dry	50	1090	ND	98	75-120%	---	---	
Dichlorodifluoromethane	988	54.7	109	ug/kg dry	50	1090	ND	90	29-149%	---	---	
1,1-Dichloroethane	1220	13.7	27.4	ug/kg dry	50	1090	ND	111	76-125%	---	---	
1,2-Dichloroethane (EDC)	1200	13.7	27.4	ug/kg dry	50	1090	ND	109	73-128%	---	---	
1,1-Dichloroethene	1560	13.7	27.4	ug/kg dry	50	1090	ND	143	70-131%	---	---	Q-54b
cis-1,2-Dichloroethene	1240	13.7	27.4	ug/kg dry	50	1090	ND	114	77-123%	---	---	
trans-1,2-Dichloroethene	1240	13.7	27.4	ug/kg dry	50	1090	ND	113	74-125%	---	---	
1,2-Dichloropropane	1220	13.7	27.4	ug/kg dry	50	1090	ND	112	76-123%	---	---	
1,3-Dichloropropane	1100	27.4	54.7	ug/kg dry	50	1090	ND	101	77-121%	---	---	
2,2-Dichloropropane	1170	27.4	54.7	ug/kg dry	50	1090	ND	107	67-133%	---	---	Q-54c
1,1-Dichloropropene	1230	27.4	54.7	ug/kg dry	50	1090	ND	113	76-125%	---	---	
cis-1,3-Dichloropropene	1170	27.4	54.7	ug/kg dry	50	1090	ND	107	74-126%	---	---	
trans-1,3-Dichloropropene	1020	27.4	54.7	ug/kg dry	50	1090	ND	93	71-130%	---	---	
Ethylbenzene	1050	13.7	27.4	ug/kg dry	50	1090	ND	96	76-122%	---	---	
Hexachlorobutadiene	933	54.7	109	ug/kg dry	50	1090	ND	85	61-135%	---	---	
2-Hexanone	1690	274	547	ug/kg dry	50	2190	ND	77	53-145%	---	---	
Isopropylbenzene	1050	27.4	54.7	ug/kg dry	50	1090	ND	96	68-134%	---	---	
4-Isopropyltoluene	1010	27.4	54.7	ug/kg dry	50	1090	ND	92	73-127%	---	---	
Methylene chloride	1240	274	547	ug/kg dry	50	1090	ND	114	70-128%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090975 - EPA 5035A						Soil						
Matrix Spike (1090975-MS1)			Prepared: 09/22/21 11:44 Analyzed: 09/25/21 02:12									
QC Source Sample: Non-SDG (A110875-06)												
4-Methyl-2-pentanone (MiBK)	1720	274	547	ug/kg dry	50	2190	ND	79	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1210	27.4	54.7	ug/kg dry	50	1090	ND	110	73-125%	---	---	
Naphthalene	937	54.7	109	ug/kg dry	50	1090	ND	86	62-129%	---	---	
n-Propylbenzene	1060	13.7	27.4	ug/kg dry	50	1090	ND	97	73-125%	---	---	
Styrene	1040	27.4	54.7	ug/kg dry	50	1090	ND	95	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1160	13.7	27.4	ug/kg dry	50	1090	ND	106	78-125%	---	---	
1,1,2,2-Tetrachloroethane	996	27.4	54.7	ug/kg dry	50	1090	ND	91	70-124%	---	---	
Tetrachloroethene (PCE)	1130	13.7	27.4	ug/kg dry	50	1090	ND	103	73-128%	---	---	
Toluene	1080	27.4	54.7	ug/kg dry	50	1090	ND	99	77-121%	---	---	
1,2,3-Trichlorobenzene	1010	137	274	ug/kg dry	50	1090	ND	93	66-130%	---	---	
1,2,4-Trichlorobenzene	978	137	274	ug/kg dry	50	1090	ND	89	67-129%	---	---	
1,1,1-Trichloroethane	1310	13.7	27.4	ug/kg dry	50	1090	ND	120	73-130%	---	---	Q-54c
1,1,2-Trichloroethane	1110	13.7	27.4	ug/kg dry	50	1090	ND	102	78-121%	---	---	
Trichloroethene (TCE)	1310	13.7	27.4	ug/kg dry	50	1090	ND	120	77-123%	---	---	Q-54
Trichlorofluoromethane	1270	54.7	109	ug/kg dry	50	1090	ND	116	62-140%	---	---	
1,2,3-Trichloropropane	1030	27.4	54.7	ug/kg dry	50	1090	ND	94	73-125%	---	---	
1,2,4-Trimethylbenzene	1080	27.4	54.7	ug/kg dry	50	1090	ND	99	75-123%	---	---	
1,3,5-Trimethylbenzene	1080	27.4	54.7	ug/kg dry	50	1090	ND	99	73-124%	---	---	
Vinyl chloride	1090	13.7	27.4	ug/kg dry	50	1090	ND	100	56-135%	---	---	
m,p-Xylene	2060	27.4	54.7	ug/kg dry	50	2190	ND	94	77-124%	---	---	
o-Xylene	1010	13.7	27.4	ug/kg dry	50	1090	ND	92	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090595 - EPA 3546						Soil						
Blank (1090595-BLK1)			Prepared: 09/16/21 10:28 Analyzed: 09/16/21 15:49									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 87 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>96 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1090595-BS1)			Prepared: 09/16/21 10:28 Analyzed: 09/16/21 16:14									
<u>EPA 8270E SIM</u>												
Acenaphthene	460	1.33	2.67	ug/kg wet	1	533	---	86	40-123%	---	---	
Acenaphthylene	475	1.33	2.67	ug/kg wet	1	533	---	89	32-132%	---	---	
Anthracene	465	1.33	2.67	ug/kg wet	1	533	---	87	47-123%	---	---	
Benz(a)anthracene	459	1.33	2.67	ug/kg wet	1	533	---	86	49-126%	---	---	
Benzo(a)pyrene	501	1.33	2.67	ug/kg wet	1	533	---	94	45-129%	---	---	
Benzo(b)fluoranthene	492	1.33	2.67	ug/kg wet	1	533	---	92	45-132%	---	---	
Benzo(k)fluoranthene	536	1.33	2.67	ug/kg wet	1	533	---	101	47-132%	---	---	
Benzo(g,h,i)perylene	484	1.33	2.67	ug/kg wet	1	533	---	91	43-134%	---	---	
Chrysene	481	1.33	2.67	ug/kg wet	1	533	---	90	50-124%	---	---	
Dibenz(a,h)anthracene	525	1.33	2.67	ug/kg wet	1	533	---	98	45-134%	---	---	
Fluoranthene	452	1.33	2.67	ug/kg wet	1	533	---	85	50-127%	---	---	
Fluorene	449	1.33	2.67	ug/kg wet	1	533	---	84	43-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090595 - EPA 3546												
Soil												
LCS (1090595-BS1)												
Prepared: 09/16/21 10:28						Analyzed: 09/16/21 16:14						
Indeno(1,2,3-cd)pyrene	466	1.33	2.67	ug/kg wet	1	533	---	87	45-133%	---	---	
Naphthalene	430	1.33	2.67	ug/kg wet	1	533	---	81	35-123%	---	---	
Phenanthrene	469	1.33	2.67	ug/kg wet	1	533	---	88	50-121%	---	---	
Pyrene	446	1.33	2.67	ug/kg wet	1	533	---	84	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>88 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1090595-DUP1)												
Prepared: 09/16/21 10:28						Analyzed: 09/16/21 17:05						H-02
QC Source Sample: Non-SDG (A1H0674-36)												
Acenaphthene	ND	1.35	2.69	ug/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	ND	1.35	2.69	ug/kg dry	1	---	ND	---	---	---	30%	
Anthracene	ND	1.35	2.69	ug/kg dry	1	---	ND	---	---	---	30%	
Benz(a)anthracene	2.31	1.35	2.69	ug/kg dry	1	---	2.28	---	---	1	30%	J
Benzo(a)pyrene	2.69	1.35	2.69	ug/kg dry	1	---	2.85	---	---	6	30%	
Benzo(b)fluoranthene	7.80	1.35	2.69	ug/kg dry	1	---	7.65	---	---	2	30%	M-05
Benzo(k)fluoranthene	1.92	1.35	2.69	ug/kg dry	1	---	2.09	---	---	9	30%	J
Benzo(g,h,i)perylene	12.1	1.35	2.69	ug/kg dry	1	---	11.9	---	---	1	30%	
Chrysene	14.3	1.35	2.69	ug/kg dry	1	---	13.8	---	---	3	30%	M-05
Dibenz(a,h)anthracene	ND	1.35	2.69	ug/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	5.37	1.35	2.69	ug/kg dry	1	---	4.98	---	---	8	30%	
Fluorene	ND	1.35	2.69	ug/kg dry	1	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	5.99	1.35	2.69	ug/kg dry	1	---	5.15	---	---	15	30%	
Naphthalene	6.11	1.35	2.69	ug/kg dry	1	---	6.11	---	---	0.06	30%	M-04
Phenanthrene	7.15	1.35	2.69	ug/kg dry	1	---	7.19	---	---	0.6	30%	
Pyrene	16.4	1.35	2.69	ug/kg dry	1	---	15.8	---	---	4	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 84 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>96 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (1090595-MS1)												
Prepared: 09/16/21 10:28						Analyzed: 09/16/21 17:59						
QC Source Sample: Non-SDG (A1H0674-38)												
EPA 8270E SIM												
Acenaphthene	403	54.7	109	ug/kg dry	40	547	ND	74	40-123%	---	---	
Acenaphthylene	422	54.7	109	ug/kg dry	40	547	ND	77	32-132%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090595 - EPA 3546						Soil						
Matrix Spike (1090595-MS1)						Prepared: 09/16/21 10:28 Analyzed: 09/16/21 17:59						
QC Source Sample: Non-SDG (A1H0674-38)												
Anthracene	434	54.7	109	ug/kg dry	40	547	ND	79	47-123%	---	---	
Benz(a)anthracene	450	54.7	109	ug/kg dry	40	547	ND	82	49-126%	---	---	
Benzo(a)pyrene	396	54.7	109	ug/kg dry	40	547	ND	72	45-129%	---	---	
Benzo(b)fluoranthene	424	54.7	109	ug/kg dry	40	547	ND	78	45-132%	---	---	
Benzo(k)fluoranthene	453	54.7	109	ug/kg dry	40	547	ND	83	47-132%	---	---	
Benzo(g,h,i)perylene	418	54.7	109	ug/kg dry	40	547	ND	76	43-134%	---	---	
Chrysene	467	54.7	109	ug/kg dry	40	547	ND	85	50-124%	---	---	
Dibenz(a,h)anthracene	381	54.7	109	ug/kg dry	40	547	ND	70	45-134%	---	---	
Fluoranthene	414	54.7	109	ug/kg dry	40	547	ND	76	50-127%	---	---	
Fluorene	409	54.7	109	ug/kg dry	40	547	ND	75	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	404	54.7	109	ug/kg dry	40	547	ND	74	45-133%	---	---	
Naphthalene	383	54.7	109	ug/kg dry	40	547	ND	70	35-123%	---	---	
Phenanthrene	455	54.7	109	ug/kg dry	40	547	ND	83	50-121%	---	---	
Pyrene	426	54.7	109	ug/kg dry	40	547	ND	78	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 69 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 40x</i>					S-05	
<i>p-Terphenyl-d14 (Surr)</i>		<i>87 %</i>		<i>54-127 %</i>		<i>"</i>					S-05	

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090860 - EPA 3051A						Soil						
Blank (1090860-BLK1)			Prepared: 09/22/21 14:39 Analyzed: 09/24/21 23:24									
<u>EPA 6020B</u>												
Antimony	ND	0.240	0.481	mg/kg wet	5	---	---	---	---	---	---	
Arsenic	0.312	0.240	0.481	mg/kg wet	5	---	---	---	---	---	---	A-01, J
Barium	ND	0.240	0.481	mg/kg wet	5	---	---	---	---	---	---	
Cadmium	ND	0.0481	0.0962	mg/kg wet	5	---	---	---	---	---	---	
Chromium	ND	0.240	0.481	mg/kg wet	5	---	---	---	---	---	---	
Copper	ND	0.481	0.962	mg/kg wet	5	---	---	---	---	---	---	
Lead	ND	0.0481	0.0962	mg/kg wet	5	---	---	---	---	---	---	
Mercury	ND	0.0192	0.0385	mg/kg wet	5	---	---	---	---	---	---	
Selenium	ND	0.240	0.481	mg/kg wet	5	---	---	---	---	---	---	
Silver	ND	0.0481	0.0962	mg/kg wet	5	---	---	---	---	---	---	
Zinc	ND	0.962	1.92	mg/kg wet	5	---	---	---	---	---	---	

LCS (1090860-BS1)						Prepared: 09/22/21 14:39 Analyzed: 09/24/21 23:29						
<u>EPA 6020B</u>												
Antimony	26.0	0.500	1.00	mg/kg wet	10	25.0	---	104	80-120%	---	---	
Arsenic	51.0	0.500	1.00	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Barium	47.6	0.500	1.00	mg/kg wet	10	50.0	---	95	80-120%	---	---	
Cadmium	47.6	0.100	0.200	mg/kg wet	10	50.0	---	95	80-120%	---	---	
Chromium	47.6	0.500	1.00	mg/kg wet	10	50.0	---	95	80-120%	---	---	
Copper	49.0	1.00	2.00	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Lead	50.8	0.100	0.200	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Mercury	0.997	0.0400	0.0800	mg/kg wet	10	1.00	---	100	80-120%	---	---	
Selenium	25.3	0.500	1.00	mg/kg wet	10	25.0	---	101	80-120%	---	---	
Silver	25.5	0.100	0.200	mg/kg wet	10	25.0	---	102	80-120%	---	---	
Zinc	48.2	2.00	4.00	mg/kg wet	10	50.0	---	96	80-120%	---	---	

Duplicate (1090860-DUP1)						Prepared: 09/22/21 14:39 Analyzed: 09/24/21 23:55						
<u>QC Source Sample: B-15 10-25C (A110449-11)</u>												
<u>EPA 6020B</u>												
Antimony	0.898	0.554	1.11	mg/kg dry	10	---	ND	---	---	---	20%	J
Arsenic	5.23	0.554	1.11	mg/kg dry	10	---	4.20	---	---	22	20%	Q-05
Barium	123	0.554	1.11	mg/kg dry	10	---	93.2	---	---	28	20%	Q-04
Cadmium	ND	0.111	0.221	mg/kg dry	10	---	ND	---	---	---	20%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090860 - EPA 3051A						Soil						
Duplicate (1090860-DUP1)						Prepared: 09/22/21 14:39 Analyzed: 09/24/21 23:55						
QC Source Sample: B-15 10-25C (A110449-11)												
Chromium	18.1	0.554	1.11	mg/kg dry	10	---	14.7	---	---	21	20%	Q-04
Copper	21.0	1.11	2.21	mg/kg dry	10	---	18.4	---	---	13	20%	
Lead	35.8	0.111	0.221	mg/kg dry	10	---	21.1	---	---	52	20%	Q-04
Mercury	ND	0.0443	0.0886	mg/kg dry	10	---	ND	---	---	---	20%	
Selenium	ND	0.554	1.11	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	0.111	0.221	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	66.6	2.21	4.43	mg/kg dry	10	---	58.7	---	---	13	20%	

Matrix Spike (1090860-MS1)						Prepared: 09/22/21 14:39 Analyzed: 09/25/21 00:00						
QC Source Sample: B-15 10-25C (A110449-11)												
EPA 6020B												
Antimony	25.2	0.550	1.10	mg/kg dry	10	27.5	ND	92	75-125%	---	---	
Arsenic	58.7	0.550	1.10	mg/kg dry	10	55.0	4.20	99	75-125%	---	---	
Barium	162	0.550	1.10	mg/kg dry	10	55.0	93.2	125	75-125%	---	---	
Cadmium	52.3	0.110	0.220	mg/kg dry	10	55.0	ND	95	75-125%	---	---	
Chromium	66.7	0.550	1.10	mg/kg dry	10	55.0	14.7	95	75-125%	---	---	
Copper	71.3	1.10	2.20	mg/kg dry	10	55.0	18.4	96	75-125%	---	---	
Lead	75.0	0.110	0.220	mg/kg dry	10	55.0	21.1	98	75-125%	---	---	
Mercury	1.12	0.0440	0.0880	mg/kg dry	10	1.10	ND	102	75-125%	---	---	
Selenium	27.6	0.550	1.10	mg/kg dry	10	27.5	ND	100	75-125%	---	---	
Silver	28.2	0.110	0.220	mg/kg dry	10	27.5	ND	103	75-125%	---	---	
Zinc	113	2.20	4.40	mg/kg dry	10	55.0	58.7	99	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090585 - Total Solids (Dry Weight)							Soil					
Duplicate (1090585-DUP1)			Prepared: 09/16/21 09:19 Analyzed: 09/17/21 07:49									
<u>QC Source Sample: Non-SDG (A110435-02)</u>												
% Solids	82.8	1.00	1.00	%	1	---	82.5	---	---	0.4	10%	
Duplicate (1090585-DUP2)			Prepared: 09/16/21 09:19 Analyzed: 09/17/21 07:49									
<u>QC Source Sample: B-15 0-10C (A110449-10)</u>												
<u>EPA 8000D</u>												
% Solids	84.0	1.00	1.00	%	1	---	85.0	---	---	1	10%	
Duplicate (1090585-DUP3)			Prepared: 09/16/21 09:19 Analyzed: 09/17/21 07:49									
<u>QC Source Sample: Non-SDG (A110537-01)</u>												
% Solids	79.1	1.00	1.00	%	1	---	79.9	---	---	0.9	10%	
Duplicate (1090585-DUP4)			Prepared: 09/16/21 19:29 Analyzed: 09/17/21 07:49									
<u>QC Source Sample: Non-SDG (A110345-01)</u>												
% Solids	59.5	1.00	1.00	%	1	---	61.9	---	---	4	10%	
Duplicate (1090585-DUP5)			Prepared: 09/16/21 19:29 Analyzed: 09/17/21 07:49									
<u>QC Source Sample: Non-SDG (A110345-03)</u>												
% Solids	95.5	1.00	1.00	%	1	---	95.5	---	---	0.04	10%	
Duplicate (1090585-DUP6)			Prepared: 09/16/21 19:29 Analyzed: 09/17/21 07:49									
<u>QC Source Sample: Non-SDG (A110564-01)</u>												
% Solids	94.6	1.00	1.00	%	1	---	94.4	---	---	0.2	10%	
Duplicate (1090585-DUP7)			Prepared: 09/16/21 19:29 Analyzed: 09/17/21 07:49									
<u>QC Source Sample: Non-SDG (A110564-02)</u>												
% Solids	90.8	1.00	1.00	%	1	---	90.6	---	---	0.2	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110449 - 10 06 21 1200
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090555</u>							
A110449-10	Soil	NWTPH-Dx	09/13/21 12:02	09/15/21 13:17	10.82g/5mL	10g/5mL	0.92
A110449-11	Soil	NWTPH-Dx	09/13/21 12:27	09/15/21 13:17	10.9g/5mL	10g/5mL	0.92

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090975</u>							
A110449-10	Soil	NWTPH-Gx (MS)	09/13/21 12:02	09/13/21 12:02	21.27g/20mL	5g/5mL	0.94
A110449-11	Soil	NWTPH-Gx (MS)	09/13/21 12:27	09/13/21 12:27	26.72g/25mL	5g/5mL	0.94

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090975</u>							
A110449-10	Soil	5035A/8260D	09/13/21 12:02	09/13/21 12:02	21.27g/20mL	5g/5mL	0.94
A110449-11	Soil	5035A/8260D	09/13/21 12:27	09/13/21 12:27	26.72g/25mL	5g/5mL	0.94

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090595</u>							
A110449-10	Soil	EPA 8270E SIM	09/13/21 12:02	09/16/21 10:33	10.11g/5mL	10g/5mL	0.99
A110449-11	Soil	EPA 8270E SIM	09/13/21 12:27	09/16/21 10:33	10.62g/5mL	10g/5mL	0.94

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090860</u>							
A110449-10	Soil	EPA 6020B	09/13/21 12:02	09/22/21 14:39	0.476g/50mL	0.5g/50mL	1.05
A110449-11	Soil	EPA 6020B	09/13/21 12:27	09/22/21 14:39	0.478g/50mL	0.5g/50mL	1.05

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	<u>Report ID:</u> A110449 - 10 06 21 1200
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	------------------------------------------------------------

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090585</u>							
A110449-10	Soil	EPA 8000D	09/13/21 12:02	09/16/21 09:19			NA
A110449-11	Soil	EPA 8000D	09/13/21 12:27	09/16/21 09:19			NA

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- A-01** 5x dilution prepared for reduced MRL. Arsenic that appear here between the MDL and MRL is less than the MDL of any associated samples.
- COMP** Sample is a composite of discrete samples. See prep information for details.
- H-02** This sample was extracted outside of the recommended holding time.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-04** Due to matrix interference, this analyte cannot be accurately quantified. The reported result may contain a high bias.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-39** Results for sample duplicate are significantly higher than the sample results. See duplicate results in QC section of the report.
- Q-42** Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +1%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +16%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +18%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +2%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +9%. The results are reported as Estimated Values.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
--------	----------	--------	---------	--------	---------------

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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<p>Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: EORB Project Number: 319 Project Manager: Jill Betts</p>	<p>Report ID: A110449 - 10 06 21 1200</p>
-------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	------------------------------------------------------

COLES & BETTS ENVIRONMENTAL CONSULTING, LLC
5741 NE Flanders St., Portland, OR 97213
office: 503-477-8150
mobile: 503-819-2835

Project Manager: Jill Betts
Project No.: 319
Project Name: EORB
Collected by: Jill Betts

Laboratory: Apex Labs
Lab Project No.: **AT10449**

Chain of Custody No.: **151**

CHAIN OF CUSTODY

Samples Received at 4C (Y or N) _____
Appropriate Containers Used (Y or N) _____
Provide Verbal Results (Y or N) _____ No
Provide Preliminary Results _____ Yes

Lab ID	Sample #	Date	Time	Sample Description	Matrix	Number of Containers	Liquid with Sediment Sample		Multi-Phase Sample		Analyses to be Performed		Remarks
							Test Filtrate	Test Sediment	Test Both	Test One (which)	Test Separately	Shake	
<p>Comments: Metals analyzed by EPA Methods 200.8020A/7471B. Please provide EDD & EPOA to Jill & Kelly @ Apex Co. B-15 0-10C = B15 25-40 + B15 65 + B15 75-94 B-15 10-115 B-15 10-25 C = B15 12.5-14 + B15 15-16.5 + B15 17.5-19 B-15 20-21.5 + B15 25-26.5</p>													
					Soil	1							
	B-15 25-40	9/3/21	12:02		X								
	B-15 5-6.5		12:08										
	B-15 7.5-9		12:14										
	B-15 10-11.5		12:19										
	B-15 12.5-14		12:27										
	B-15 15-16.5		12:30										
	B-15 17.5-19		12:38										
	B-15 20-21.5		12:46										
	B-15 25-26.5		12:52										
	B-15 0-10C												
	B-15 10-25C												
<p>Retinquished by: <i>[Signature]</i> Date: 9/14/21 Time: 13:20 Retinquished by: <i>[Signature]</i> Date: 9/14/21 Time: 13:20 Retinquished by: <i>[Signature]</i> Date: 9/14/21 Time: 13:20</p>													

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Environmental Consulting, LLC Element WO#: A1 10449

Project/Project #: EQRB 1319

Delivery Info:
 Date/time received: 9/14/21 @ 1328 By: (Signature)
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 9/14/21 @ 1328 By: (Signature)

Chain of Custody included? Yes No Custody seals? Yes No

Signed/dated by client? Yes No

Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>4.7</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>gel</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
 Green dots applied to out of temperature samples? Yes/No
 Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 9/14/21 @ 15:00 By: (Signature)

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: _____

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: _____

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA

Comments: _____

Additional information:

Labeled by: (Signature) Witness: (Signature) Cooler Inspected by: (Signature)

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Wednesday, November 3, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A110581 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A110581, which was received by the laboratory on 9/16/2021 at 5:00:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler#1 1.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	------------------------------------------------------------

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-7 11-12.5	A110581-02	Soil	09/16/21 13:53	09/16/21 17:00
B-7 15-16.5	A110581-03	Soil	09/16/21 14:10	09/16/21 17:00
B-7 20-21.5	A110581-04	Soil	09/16/21 14:15	09/16/21 17:00
B-7 25-26.5	A110581-05	Soil	09/16/21 14:20	09/16/21 17:00
B7	A110581-06	Water	09/16/21 14:45	09/16/21 17:00
B7(10-26.5)C	A110581-07	Soil	09/16/21 13:53	09/16/21 17:00

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----------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	----------------------------------------------

ANALYTICAL CASE NARRATIVE

Work Order: A110581

NWTPH-Dx Data Note-

Sample B7 (Apex ID: A110581-06) was re-extracted due to failing surrogate. The re-extract passed surrogate recovery limits but the original extraction is being reported with qualification due to the presence of an Oil hit not detected in the re-extraction.

Josh King
Semivolatiles Manager
September 27, 2021

Apex Laboratories

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B7 (A110581-06)				Matrix: Water		Batch: 1090838		X	
Diesel	ND	0.0381	0.0762	mg/L	1	09/23/21 00:46	NWTPH-Dx LL		
Oil	0.432	0.0762	0.152	mg/L	1	09/23/21 00:46	NWTPH-Dx LL		
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 30 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/23/21 00:46</i>	<i>NWTPH-Dx LL</i>	<i>S-06</i>
B7(10-26.5)C (A110581-07)				Matrix: Soil		Batch: 1090785			
Diesel	ND	12.9	25.8	mg/kg dry	1	09/21/21 22:19	NWTPH-Dx		
Oil	ND	25.8	51.5	mg/kg dry	1	09/21/21 22:19	NWTPH-Dx		
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/21/21 22:19</i>	<i>NWTPH-Dx</i>	

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B7 (A110581-06)			Matrix: Water			Batch: 1090877		
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	09/23/21 17:51	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/23/21 17:51</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>108 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/23/21 17:51</i>	<i>NWTPH-Gx (MS)</i>
B7(10-26.5)C (A110581-07)			Matrix: Soil			Batch: 1091056		COMP, V-15
Gasoline Range Organics	ND	4.02	8.03	mg/kg dry	50	09/28/21 22:47	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 112 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/28/21 22:47</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/28/21 22:47</i>	<i>NWTPH-Gx (MS)</i>

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B7 (A110581-06)			Matrix: Water			Batch: 1090877		
Acetone	ND	10.0	20.0	ug/L	1	09/23/21 17:51	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	09/23/21 17:51	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	09/23/21 17:51	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	09/23/21 17:51	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	09/23/21 17:51	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	
Chloroethane	ND	5.00	10.0	ug/L	1	09/23/21 17:51	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	09/23/21 17:51	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	09/23/21 17:51	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	09/23/21 17:51	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	09/23/21 17:51	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	09/23/21 17:51	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	09/23/21 17:51	EPA 8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B7 (A110581-06)			Matrix: Water			Batch: 1090877		
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	09/23/21 17:51	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	09/23/21 17:51	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	09/23/21 17:51	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	5.00	10.0	ug/L	1	09/23/21 17:51	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Naphthalene	ND	2.00	4.00	ug/L	1	09/23/21 17:51	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	09/23/21 17:51	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	
Tetrachloroethene (PCE)	0.450	0.200	0.400	ug/L	1	09/23/21 17:51	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	09/23/21 17:51	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	09/23/21 17:51	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	09/23/21 17:51	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	09/23/21 17:51	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	09/23/21 17:51	EPA 8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B7 (A110581-06)			Matrix: Water			Batch: 1090877		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/23/21 17:51</i>	<i>EPA 8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>103 %</i>	<i>80-120 %</i>	<i>1</i>	<i>09/23/21 17:51</i>	<i>EPA 8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>80-120 %</i>	<i>1</i>	<i>09/23/21 17:51</i>	<i>EPA 8260D</i>	
B7(10-26.5)C (A110581-07)			Matrix: Soil			Batch: 1091056		COMP, V-15
Acetone	ND	803	1610	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Acrylonitrile	ND	80.3	161	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Benzene	ND	8.03	16.1	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Bromobenzene	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Bromochloromethane	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Bromodichloromethane	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Bromoform	ND	80.3	161	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Bromomethane	ND	803	803	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
2-Butanone (MEK)	ND	402	803	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
n-Butylbenzene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
sec-Butylbenzene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
tert-Butylbenzene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Carbon disulfide	ND	402	803	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Carbon tetrachloride	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Chlorobenzene	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Chloroethane	ND	402	803	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Chloroform	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Chloromethane	ND	201	402	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
2-Chlorotoluene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
4-Chlorotoluene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Dibromochloromethane	ND	80.3	161	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	201	402	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Dibromomethane	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,2-Dichlorobenzene	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,3-Dichlorobenzene	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,4-Dichlorobenzene	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Dichlorodifluoromethane	ND	161	161	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,1-Dichloroethane	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B7(10-26.5)C (A110581-07)				Matrix: Soil		Batch: 1091056		COMP, V-15
1,2-Dichloroethane (EDC)	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,1-Dichloroethene	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
cis-1,2-Dichloroethene	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
trans-1,2-Dichloroethene	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,2-Dichloropropane	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,3-Dichloropropane	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
2,2-Dichloropropane	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,1-Dichloropropene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
cis-1,3-Dichloropropene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
trans-1,3-Dichloropropene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Ethylbenzene	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Hexachlorobutadiene	ND	80.3	161	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
2-Hexanone	ND	402	803	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Isopropylbenzene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
4-Isopropyltoluene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Methylene chloride	ND	402	803	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	402	803	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Naphthalene	ND	80.3	161	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
n-Propylbenzene	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Styrene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Tetrachloroethene (PCE)	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Toluene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,2,3-Trichlorobenzene	ND	201	402	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,2,4-Trichlorobenzene	ND	201	402	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,1,1-Trichloroethane	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,1,2-Trichloroethane	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Trichloroethene (TCE)	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Trichlorofluoromethane	ND	80.3	161	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,2,3-Trichloropropane	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
1,2,4-Trimethylbenzene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B7(10-26.5)C (A110581-07)				Matrix: Soil		Batch: 1091056		COMP, V-15
1,3,5-Trimethylbenzene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
Vinyl chloride	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
m,p-Xylene	ND	40.2	80.3	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
o-Xylene	ND	20.1	40.2	ug/kg dry	50	09/28/21 22:47	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 108 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/28/21 22:47</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/28/21 22:47</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>1</i>	<i>09/28/21 22:47</i>	<i>5035A/8260D</i>

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
				Matrix: Water		Batch: 1090901		
B7 (A110581-06RE1)								
Acenaphthene	ND	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	
Acenaphthylene	0.0261	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	J
Anthracene	0.0243	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	J
Benz(a)anthracene	0.151	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	
Benzo(a)pyrene	0.150	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	
Benzo(b)fluoranthene	0.172	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	M-05
Benzo(k)fluoranthene	0.0654	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	0.0989	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	
Chrysene	0.183	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	
Dibenz(a,h)anthracene	0.0203	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	J
Fluoranthene	0.228	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	
Fluorene	ND	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	0.109	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	
Naphthalene	ND	0.0377	0.0755	ug/L	1	09/23/21 15:23	EPA 8270E SIM	
Phenanthrene	0.123	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	
Pyrene	0.262	0.0189	0.0377	ug/L	1	09/23/21 15:23	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 52 %</i>		<i>Limits: 44-120 %</i>	<i>1</i>	<i>09/23/21 15:23</i>	<i>EPA 8270E SIM</i>	
<i>p-Terphenyl-d14 (Surr)</i>		<i>38 %</i>		<i>50-134 %</i>	<i>1</i>	<i>09/23/21 15:23</i>	<i>EPA 8270E SIM</i>	<i>S-03</i>

				Matrix: Soil		Batch: 1090650		
B7(10-26.5)C (A110581-07)								
Acenaphthene	ND	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	
Acenaphthylene	ND	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	
Anthracene	ND	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	
Benz(a)anthracene	9.56	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	J
Benzo(a)pyrene	7.92	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	J
Benzo(b)fluoranthene	9.99	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	J
Benzo(k)fluoranthene	ND	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	
Chrysene	8.66	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	J
Dibenz(a,h)anthracene	ND	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	
Fluoranthene	8.09	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	J
Fluorene	ND	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	7.05	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	J

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ANALYTICAL REPORT

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ORELAP ID: OR100062

<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts</p>	<p style="text-align: right;">Report ID: A110581 - 11 03 21 1516</p>
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B7(10-26.5)C (A110581-07)				Matrix: Soil		Batch: 1090650		
Naphthalene	27.9	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	
Phenanthrene	6.98	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	J
Pyrene	10.7	6.77	13.5	ug/kg dry	1	09/17/21 18:14	EPA 8270E SIM	J
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>09/17/21 18:14</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>94 %</i>		<i>54-127 %</i>		<i>1</i>	<i>09/17/21 18:14</i>	<i>EPA 8270E SIM</i>

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B7(10-26.5)C (A110581-07)				Matrix: Soil				
Batch: 1091171								
Antimony	ND	0.693	1.39	mg/kg dry	10	10/01/21 04:35	EPA 6020B	
Arsenic	7.08	0.693	1.39	mg/kg dry	10	10/01/21 04:35	EPA 6020B	
Barium	138	0.693	1.39	mg/kg dry	10	10/01/21 04:35	EPA 6020B	
Cadmium	0.140	0.139	0.277	mg/kg dry	10	10/01/21 04:35	EPA 6020B	J
Chromium	15.0	0.693	1.39	mg/kg dry	10	10/01/21 04:35	EPA 6020B	
Copper	21.6	1.39	2.77	mg/kg dry	10	10/01/21 04:35	EPA 6020B	
Lead	10.0	0.139	0.277	mg/kg dry	10	10/01/21 04:35	EPA 6020B	
Mercury	ND	0.0555	0.111	mg/kg dry	10	10/01/21 04:35	EPA 6020B	
Selenium	ND	0.693	1.39	mg/kg dry	10	10/01/21 04:35	EPA 6020B	
Silver	ND	0.139	0.277	mg/kg dry	10	10/01/21 04:35	EPA 6020B	
Zinc	57.9	2.77	5.55	mg/kg dry	10	10/01/21 04:35	EPA 6020B	

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ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B7 (A110581-06)		Matrix: Water							
Batch: 1090684									
Arsenic	0.657	0.500	1.00	ug/L	1	09/19/21 01:48	EPA 6020B (Diss)	J	
Barium	57.8	0.500	1.00	ug/L	1	09/19/21 01:48	EPA 6020B (Diss)		
Cadmium	0.108	0.100	0.200	ug/L	1	09/19/21 01:48	EPA 6020B (Diss)	J	
Chromium	ND	1.00	2.00	ug/L	1	09/19/21 01:48	EPA 6020B (Diss)		
Lead	0.139	0.100	0.200	ug/L	1	09/19/21 01:48	EPA 6020B (Diss)	J	
Mercury	ND	0.0400	0.0800	ug/L	1	09/19/21 01:48	EPA 6020B (Diss)		
Selenium	ND	0.500	1.00	ug/L	1	09/19/21 01:48	EPA 6020B (Diss)		
Silver	ND	0.100	0.200	ug/L	1	09/19/21 01:48	EPA 6020B (Diss)		

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B7(10-26.5)C (A110581-07)				Matrix: Soil		Batch: 1090720		
% Solids	72.9	1.00	1.00	%	1	09/21/21 07:48	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090785 - EPA 3546 (Fuels)						Soil						
Blank (1090785-BLK1)						Prepared: 09/21/21 10:24 Analyzed: 09/21/21 12:26						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	18.2	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	36.4	mg/kg wet	1	---	---	---	---	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 79 %		Limits: 50-150 %		Dilution: 1x						
LCS (1090785-BS1)						Prepared: 09/21/21 10:24 Analyzed: 09/21/21 12:47						
<u>NWTPH-Dx</u>												
Diesel	95.3	10.0	20.0	mg/kg wet	1	125	---	76	38-132%	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 74 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (1090785-DUP1)						Prepared: 09/21/21 10:24 Analyzed: 09/21/21 13:27						
<u>QC Source Sample: Non-SDG (A110706-01)</u>												
Diesel	58.5	11.3	22.7	mg/kg dry	1	---	57.8	---	---	1	30%	F-11
Oil	ND	22.7	45.3	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 65 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (1090785-DUP2)						Prepared: 09/21/21 13:04 Analyzed: 09/21/21 22:34						
<u>QC Source Sample: Non-SDG (A110365-03)</u>												
Diesel	ND	23.9	47.8	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	100	47.8	95.6	mg/kg dry	1	---	113	---	---	12	30%	F-03
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 77 %		Limits: 50-150 %		Dilution: 1x						
Batch 1090838 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (1090838-BLK1)						Prepared: 09/22/21 10:18 Analyzed: 09/22/21 23:44						
<u>NWTPH-Dx LL</u>												
Diesel	ND	0.0364	0.0727	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.0727	0.145	mg/L	1	---	---	---	---	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 65 %		Limits: 50-150 %		Dilution: 1x						
LCS (1090838-BS1)						Prepared: 09/22/21 10:18 Analyzed: 09/23/21 00:05						
<u>NWTPH-Dx LL</u>												
Diesel	0.416	0.0400	0.0800	mg/L	1	0.500	---	83	36-132%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090838 - EPA 3510C (Fuels/Acid Ext.)						Water						
LCS (1090838-BS1)						Prepared: 09/22/21 10:18 Analyzed: 09/23/21 00:05						
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 89 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS Dup (1090838-BSD1)						Prepared: 09/22/21 10:18 Analyzed: 09/23/21 00:25						
Q-19												
<u>NWTPH-Dx LL</u>												
Diesel	0.401	0.0400	0.0800	mg/L	1	0.500	---	80	36-132%	4	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090898 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (1090898-BLK1)			Prepared: 09/23/21 10:19 Analyzed: 09/23/21 20:25									
<u>NWTPH-Dx LL</u>												
Diesel	ND	0.0364	0.0727	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.0727	0.145	mg/L	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 94 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1090898-BS1)			Prepared: 09/23/21 10:19 Analyzed: 09/23/21 20:45									
<u>NWTPH-Dx LL</u>												
Diesel	0.455	0.0400	0.0800	mg/L	1	0.500	---	91	36-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS Dup (1090898-BSD1)			Prepared: 09/23/21 10:19 Analyzed: 09/23/21 21:06									
<u>NWTPH-Dx LL</u>												
Diesel	0.431	0.0400	0.0800	mg/L	1	0.500	---	86	36-132%	6	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090877 - EPA 5030B						Water						
Blank (1090877-BLK1)			Prepared: 09/23/21 08:00 Analyzed: 09/23/21 09:43									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090877-BS2)			Prepared: 09/23/21 08:00 Analyzed: 09/23/21 09:15									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	0.497	0.0500	0.100	mg/L	1	0.500	---	99	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>102 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090877-DUP1)			Prepared: 09/23/21 09:03 Analyzed: 09/23/21 11:58									
<u>QC Source Sample: Non-SDG (A110825-01)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091056 - EPA 5035A						Soil						
Blank (1091056-BLK1)			Prepared: 09/28/21 09:00 Analyzed: 09/28/21 13:23									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 108 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1091056-BS2)			Prepared: 09/28/21 09:00 Analyzed: 09/28/21 12:56									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	23.3	2.50	5.00	mg/kg wet	50	25.0	---	93	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 109 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1091056-DUP1)			Prepared: 09/27/21 11:30 Analyzed: 09/28/21 16:04									
<u>QC Source Sample: Non-SDG (A111007-01)</u>												
Gasoline Range Organics	39.5	4.18	8.35	mg/kg dry	50	---	11.0	---	---	113	30%	Q-05
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 124 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>108 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090877 - EPA 5030B						Water						
Blank (1090877-BLK1)			Prepared: 09/23/21 08:00 Analyzed: 09/23/21 09:43									
<u>EPA 8260D</u>												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090877 - EPA 5030B						Water						
Blank (1090877-BLK1)			Prepared: 09/23/21 08:00 Analyzed: 09/23/21 09:43									
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	---
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	---
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	---
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	---
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	---
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
Naphthalene	ND	2.00	4.00	ug/L	1	---	---	---	---	---	---	---
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	---
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	---
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	---
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	---
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	---
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	---
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	---
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	---
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	---
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	---
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	---
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	---
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	---

Surr: 1,4-Difluorobenzene (Surr) Recovery: 101 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090877 - EPA 5030B						Water						
Blank (1090877-BLK1)						Prepared: 09/23/21 08:00 Analyzed: 09/23/21 09:43						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>		<i>"</i>						
LCS (1090877-BS1)						Prepared: 09/23/21 08:00 Analyzed: 09/23/21 08:36						
<u>EPA 8260D</u>												
Acetone	38.4	10.0	20.0	ug/L	1	40.0	---	96	80-120%	---	---	
Acrylonitrile	22.2	1.00	2.00	ug/L	1	20.0	---	111	80-120%	---	---	
Benzene	19.6	0.100	0.200	ug/L	1	20.0	---	98	80-120%	---	---	
Bromobenzene	18.7	0.250	0.500	ug/L	1	20.0	---	94	80-120%	---	---	
Bromochloromethane	21.2	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
Bromodichloromethane	21.4	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Bromoform	18.3	0.500	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
Bromomethane	19.1	5.00	5.00	ug/L	1	20.0	---	95	80-120%	---	---	
2-Butanone (MEK)	44.7	5.00	10.0	ug/L	1	40.0	---	112	80-120%	---	---	
n-Butylbenzene	23.7	0.500	1.00	ug/L	1	20.0	---	119	80-120%	---	---	
sec-Butylbenzene	22.2	0.500	1.00	ug/L	1	20.0	---	111	80-120%	---	---	
tert-Butylbenzene	20.4	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Carbon disulfide	19.9	5.00	10.0	ug/L	1	20.0	---	99	80-120%	---	---	
Carbon tetrachloride	20.3	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Chlorobenzene	19.7	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Chloroethane	22.6	5.00	10.0	ug/L	1	20.0	---	113	80-120%	---	---	ICV-01
Chloroform	20.5	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Chloromethane	34.1	2.50	5.00	ug/L	1	20.0	---	171	80-120%	---	---	Q-56
2-Chlorotoluene	19.4	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
4-Chlorotoluene	20.1	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Dibromochloromethane	19.0	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
1,2-Dibromo-3-chloropropane	20.6	2.50	5.00	ug/L	1	20.0	---	103	80-120%	---	---	
1,2-Dibromoethane (EDB)	21.3	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Dibromomethane	20.6	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
1,2-Dichlorobenzene	22.2	0.250	0.500	ug/L	1	20.0	---	111	80-120%	---	---	
1,3-Dichlorobenzene	20.8	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
1,4-Dichlorobenzene	19.7	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Dichlorodifluoromethane	18.3	0.500	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
1,1-Dichloroethane	20.2	0.200	0.400	ug/L	1	20.0	---	101	80-120%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090877 - EPA 5030B						Water						
LCS (1090877-BS1)			Prepared: 09/23/21 08:00 Analyzed: 09/23/21 08:36									
1,2-Dichloroethane (EDC)	20.6	0.200	0.400	ug/L	1	20.0	---	103	80-120%	---	---	
1,1-Dichloroethene	19.6	0.200	0.400	ug/L	1	20.0	---	98	80-120%	---	---	
cis-1,2-Dichloroethene	20.4	0.200	0.400	ug/L	1	20.0	---	102	80-120%	---	---	
trans-1,2-Dichloroethene	19.8	0.200	0.400	ug/L	1	20.0	---	99	80-120%	---	---	
1,2-Dichloropropane	20.2	0.250	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
1,3-Dichloropropane	20.9	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
2,2-Dichloropropane	25.0	0.500	1.00	ug/L	1	20.0	---	125	80-120%	---	---	Q-56
1,1-Dichloropropene	20.7	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
cis-1,3-Dichloropropene	19.4	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
trans-1,3-Dichloropropene	19.4	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
Ethylbenzene	20.0	0.250	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Hexachlorobutadiene	25.2	2.50	5.00	ug/L	1	20.0	---	126	80-120%	---	---	Q-56
2-Hexanone	41.7	5.00	10.0	ug/L	1	40.0	---	104	80-120%	---	---	
Isopropylbenzene	21.9	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
4-Isopropyltoluene	22.8	0.500	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
Methylene chloride	21.0	5.00	10.0	ug/L	1	20.0	---	105	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	45.3	5.00	10.0	ug/L	1	40.0	---	113	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	20.3	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Naphthalene	23.5	2.00	4.00	ug/L	1	20.0	---	118	80-120%	---	---	
n-Propylbenzene	20.1	0.250	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Styrene	21.4	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,1,1,2-Tetrachloroethane	20.3	0.200	0.400	ug/L	1	20.0	---	101	80-120%	---	---	
1,1,2,2-Tetrachloroethane	20.7	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Tetrachloroethene (PCE)	18.8	0.200	0.400	ug/L	1	20.0	---	94	80-120%	---	---	
Toluene	18.7	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,2,3-Trichlorobenzene	29.5	1.00	2.00	ug/L	1	20.0	---	148	80-120%	---	---	Q-56
1,2,4-Trichlorobenzene	24.9	1.00	2.00	ug/L	1	20.0	---	125	80-120%	---	---	Q-56
1,1,1-Trichloroethane	21.2	0.200	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
1,1,2-Trichloroethane	20.5	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Trichloroethene (TCE)	19.2	0.200	0.400	ug/L	1	20.0	---	96	80-120%	---	---	
Trichlorofluoromethane	21.8	1.00	2.00	ug/L	1	20.0	---	109	80-120%	---	---	
1,2,3-Trichloropropane	21.2	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,2,4-Trimethylbenzene	23.5	0.500	1.00	ug/L	1	20.0	---	117	80-120%	---	---	
1,3,5-Trimethylbenzene	22.2	0.500	1.00	ug/L	1	20.0	---	111	80-120%	---	---	

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ANALYTICAL REPORT

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090877 - EPA 5030B						Water						
LCS (1090877-BS1)			Prepared: 09/23/21 08:00 Analyzed: 09/23/21 08:36									
Vinyl chloride	19.6	0.200	0.400	ug/L	1	20.0	---	98	80-120%	---	---	
m,p-Xylene	41.1	0.500	1.00	ug/L	1	40.0	---	103	80-120%	---	---	
o-Xylene	20.8	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99%</i>		<i>Limits: 80-120%</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99%</i>		<i>80-120%</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>91%</i>		<i>80-120%</i>		<i>"</i>						

Duplicate (1090877-DUP1)						Prepared: 09/23/21 09:03 Analyzed: 09/23/21 11:58						
QC Source Sample: Non-SDG (A110825-01)												
Acetone	16.2	10.0	20.0	ug/L	1	---	147	---	---	160	30%	Q-17, J
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromodichloromethane	12.8	0.500	1.00	ug/L	1	---	12.3	---	---	4	30%	
Bromoform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromomethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Chloroethane	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Chloroform	49.3	0.500	1.00	ug/L	1	---	47.2	---	---	4	30%	
Chloromethane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Dibromochloromethane	1.62	0.500	1.00	ug/L	1	---	1.61	---	---	0.6	30%	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090877 - EPA 5030B							Water					
Duplicate (1090877-DUP1)			Prepared: 09/23/21 09:03 Analyzed: 09/23/21 11:58									
QC Source Sample: Non-SDG (A110825-01)												
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	2.00	4.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090877 - EPA 5030B												
Water												
Duplicate (1090877-DUP1)			Prepared: 09/23/21 09:03 Analyzed: 09/23/21 11:58									
QC Source Sample: Non-SDG (A110825-01)												
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>		<i>"</i>						

Matrix Spike (1090877-MS1)			Prepared: 09/23/21 09:03 Analyzed: 09/23/21 12:52									
QC Source Sample: Non-SDG (A110826-01)												
EPA 8260D												
Acetone	49.2	10.0	20.0	ug/L	1	40.0	ND	123	39-160%	---	---	
Acrylonitrile	22.9	1.00	2.00	ug/L	1	20.0	ND	114	63-135%	---	---	
Benzene	20.0	0.100	0.200	ug/L	1	20.0	ND	100	79-120%	---	---	
Bromobenzene	14.4	0.250	0.500	ug/L	1	20.0	ND	72	80-120%	---	---	Q-01
Bromochloromethane	22.7	0.500	1.00	ug/L	1	20.0	ND	114	78-123%	---	---	
Bromodichloromethane	22.4	0.500	1.00	ug/L	1	20.0	ND	112	79-125%	---	---	
Bromoform	17.4	0.500	1.00	ug/L	1	20.0	ND	87	66-130%	---	---	
Bromomethane	20.6	5.00	5.00	ug/L	1	20.0	ND	103	53-141%	---	---	
2-Butanone (MEK)	48.5	5.00	10.0	ug/L	1	40.0	ND	121	56-143%	---	---	
n-Butylbenzene	7.62	0.500	1.00	ug/L	1	20.0	ND	38	75-128%	---	---	Q-01
sec-Butylbenzene	10.1	0.500	1.00	ug/L	1	20.0	ND	51	77-126%	---	---	Q-01
tert-Butylbenzene	11.2	0.500	1.00	ug/L	1	20.0	ND	56	78-124%	---	---	Q-01
Carbon disulfide	21.6	5.00	10.0	ug/L	1	20.0	ND	108	64-133%	---	---	
Carbon tetrachloride	20.5	0.500	1.00	ug/L	1	20.0	ND	103	72-136%	---	---	
Chlorobenzene	16.4	0.250	0.500	ug/L	1	20.0	ND	82	80-120%	---	---	
Chloroethane	25.3	5.00	10.0	ug/L	1	20.0	ND	127	60-138%	---	---	ICV-01
Chloroform	21.7	0.500	1.00	ug/L	1	20.0	ND	108	79-124%	---	---	
Chloromethane	37.8	2.50	5.00	ug/L	1	20.0	ND	189	50-139%	---	---	Q-54i

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110581 - 11 03 21 1516

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090877 - EPA 5030B						Water						
Matrix Spike (1090877-MS1)						Prepared: 09/23/21 09:03 Analyzed: 09/23/21 12:52						
QC Source Sample: Non-SDG (A110826-01)												
2-Chlorotoluene	12.9	0.500	1.00	ug/L	1	20.0	ND	65	79-122%	---	---	Q-01
4-Chlorotoluene	13.1	0.500	1.00	ug/L	1	20.0	ND	65	78-122%	---	---	Q-01
Dibromochloromethane	18.8	0.500	1.00	ug/L	1	20.0	ND	94	74-126%	---	---	
1,2-Dibromo-3-chloropropane	16.7	2.50	5.00	ug/L	1	20.0	ND	84	62-128%	---	---	
1,2-Dibromoethane (EDB)	20.8	0.250	0.500	ug/L	1	20.0	ND	104	77-121%	---	---	
Dibromomethane	21.0	0.500	1.00	ug/L	1	20.0	ND	105	79-123%	---	---	
1,2-Dichlorobenzene	13.4	0.250	0.500	ug/L	1	20.0	ND	67	80-120%	---	---	Q-01
1,3-Dichlorobenzene	12.7	0.250	0.500	ug/L	1	20.0	ND	63	80-120%	---	---	Q-01
1,4-Dichlorobenzene	12.1	0.250	0.500	ug/L	1	20.0	ND	60	79-120%	---	---	Q-01
Dichlorodifluoromethane	19.0	0.500	1.00	ug/L	1	20.0	ND	95	32-152%	---	---	
1,1-Dichloroethane	21.6	0.200	0.400	ug/L	1	20.0	ND	108	77-125%	---	---	
1,2-Dichloroethane (EDC)	21.7	0.200	0.400	ug/L	1	20.0	ND	109	73-128%	---	---	
1,1-Dichloroethene	20.8	0.200	0.400	ug/L	1	20.0	ND	104	71-131%	---	---	
cis-1,2-Dichloroethene	21.6	0.200	0.400	ug/L	1	20.0	ND	108	78-123%	---	---	
trans-1,2-Dichloroethene	21.1	0.200	0.400	ug/L	1	20.0	ND	106	75-124%	---	---	
1,2-Dichloropropane	20.8	0.250	0.500	ug/L	1	20.0	ND	104	78-122%	---	---	
1,3-Dichloropropane	21.2	0.500	1.00	ug/L	1	20.0	ND	106	80-120%	---	---	
2,2-Dichloropropane	23.7	0.500	1.00	ug/L	1	20.0	ND	119	60-139%	---	---	Q-54h
1,1-Dichloropropene	20.3	0.500	1.00	ug/L	1	20.0	ND	102	79-125%	---	---	
cis-1,3-Dichloropropene	19.0	0.500	1.00	ug/L	1	20.0	ND	95	75-124%	---	---	
trans-1,3-Dichloropropene	19.0	0.500	1.00	ug/L	1	20.0	ND	95	73-127%	---	---	
Ethylbenzene	15.7	0.250	0.500	ug/L	1	20.0	ND	79	79-121%	---	---	
Hexachlorobutadiene	5.40	2.50	5.00	ug/L	1	20.0	ND	27	66-134%	---	---	Q-54j
2-Hexanone	41.4	5.00	10.0	ug/L	1	40.0	ND	103	57-139%	---	---	
Isopropylbenzene	14.4	0.500	1.00	ug/L	1	20.0	ND	72	72-131%	---	---	
4-Isopropyltoluene	9.85	0.500	1.00	ug/L	1	20.0	ND	49	77-127%	---	---	Q-01
Methylene chloride	22.0	5.00	10.0	ug/L	1	20.0	ND	110	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	46.2	5.00	10.0	ug/L	1	40.0	ND	115	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	20.8	0.500	1.00	ug/L	1	20.0	ND	104	71-124%	---	---	
Naphthalene	7.04	2.00	4.00	ug/L	1	20.0	ND	35	61-128%	---	---	Q-01
n-Propylbenzene	12.2	0.250	0.500	ug/L	1	20.0	ND	61	76-126%	---	---	Q-01
Styrene	16.3	0.500	1.00	ug/L	1	20.0	ND	82	78-123%	---	---	
1,1,1,2-Tetrachloroethane	18.3	0.200	0.400	ug/L	1	20.0	ND	91	78-124%	---	---	

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090877 - EPA 5030B						Water						
Matrix Spike (1090877-MS1)			Prepared: 09/23/21 09:03 Analyzed: 09/23/21 12:52									
QC Source Sample: Non-SDG (A110826-01)												
1,1,2,2-Tetrachloroethane	19.6	0.250	0.500	ug/L	1	20.0	ND	98	71-121%	---	---	
Tetrachloroethene (PCE)	15.7	0.200	0.400	ug/L	1	20.0	ND	79	74-129%	---	---	
Toluene	17.5	0.500	1.00	ug/L	1	20.0	ND	87	80-121%	---	---	
1,2,3-Trichlorobenzene	8.10	1.00	2.00	ug/L	1	20.0	ND	40	69-129%	---	---	Q-54f
1,2,4-Trichlorobenzene	7.25	1.00	2.00	ug/L	1	20.0	ND	36	69-130%	---	---	Q-54h
1,1,1-Trichloroethane	21.8	0.200	0.400	ug/L	1	20.0	ND	109	74-131%	---	---	
1,1,2-Trichloroethane	20.7	0.250	0.500	ug/L	1	20.0	ND	103	80-120%	---	---	
Trichloroethene (TCE)	19.2	0.200	0.400	ug/L	1	20.0	ND	96	79-123%	---	---	
Trichlorofluoromethane	22.8	1.00	2.00	ug/L	1	20.0	ND	114	65-141%	---	---	
1,2,3-Trichloropropane	20.0	0.500	1.00	ug/L	1	20.0	ND	100	73-122%	---	---	
1,2,4-Trimethylbenzene	12.2	0.500	1.00	ug/L	1	20.0	ND	61	76-124%	---	---	Q-01
1,3,5-Trimethylbenzene	12.2	0.500	1.00	ug/L	1	20.0	ND	61	75-124%	---	---	Q-01
Vinyl chloride	21.0	0.200	0.400	ug/L	1	20.0	ND	105	58-137%	---	---	
m,p-Xylene	30.0	0.500	1.00	ug/L	1	40.0	ND	75	80-121%	---	---	Q-01
o-Xylene	15.0	0.250	0.500	ug/L	1	20.0	ND	75	78-122%	---	---	Q-01
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>92 %</i>		<i>80-120 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091056 - EPA 5035A						Soil						
Blank (1091056-BLK1)			Prepared: 09/28/21 09:00 Analyzed: 09/28/21 13:23									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	66.7	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
 Tigard, OR 97223
 503-718-2323
 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091056 - EPA 5035A						Soil						
Blank (1091056-BLK1)			Prepared: 09/28/21 09:00 Analyzed: 09/28/21 13:23									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 106 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091056 - EPA 5035A						Soil						
Blank (1091056-BLK1)						Prepared: 09/28/21 09:00 Analyzed: 09/28/21 13:23						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (1091056-BS1)						Prepared: 09/28/21 09:00 Analyzed: 09/28/21 12:29						
5035A/8260D												
Acetone	1920	500	1000	ug/kg wet	50	2000	---	96	80-120%	---	---	
Acrylonitrile	1050	50.0	100	ug/kg wet	50	1000	---	105	80-120%	---	---	
Benzene	1160	5.00	10.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
Bromobenzene	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Bromochloromethane	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Bromodichloromethane	1210	25.0	50.0	ug/kg wet	50	1000	---	121	80-120%	---	---	Q-56
Bromoform	916	50.0	100	ug/kg wet	50	1000	---	92	80-120%	---	---	
Bromomethane	1550	500	500	ug/kg wet	50	1000	---	155	80-120%	---	---	Q-56
2-Butanone (MEK)	2000	250	500	ug/kg wet	50	2000	---	100	80-120%	---	---	
n-Butylbenzene	952	25.0	50.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
sec-Butylbenzene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
tert-Butylbenzene	933	25.0	50.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
Carbon disulfide	1330	250	500	ug/kg wet	50	1000	---	133	80-120%	---	---	Q-56
Carbon tetrachloride	1220	25.0	50.0	ug/kg wet	50	1000	---	122	80-120%	---	---	Q-56
Chlorobenzene	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Chloroethane	1320	250	500	ug/kg wet	50	1000	---	132	80-120%	---	---	Q-56
Chloroform	1190	25.0	50.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
Chloromethane	843	125	250	ug/kg wet	50	1000	---	84	80-120%	---	---	
2-Chlorotoluene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
4-Chlorotoluene	980	25.0	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
Dibromochloromethane	948	50.0	100	ug/kg wet	50	1000	---	95	80-120%	---	---	
1,2-Dibromo-3-chloropropane	806	125	250	ug/kg wet	50	1000	---	81	80-120%	---	---	
1,2-Dibromoethane (EDB)	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Dibromomethane	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,2-Dichlorobenzene	982	12.5	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,3-Dichlorobenzene	1050	12.5	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,4-Dichlorobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Dichlorodifluoromethane	718	100	100	ug/kg wet	50	1000	---	72	80-120%	---	---	Q-55
1,1-Dichloroethane	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091056 - EPA 5035A						Soil						
LCS (1091056-BS1)			Prepared: 09/28/21 09:00 Analyzed: 09/28/21 12:29									
1,2-Dichloroethane (EDC)	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,1-Dichloroethene	1450	12.5	25.0	ug/kg wet	50	1000	---	145	80-120%	---	---	Q-56
cis-1,2-Dichloroethene	1160	12.5	25.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
trans-1,2-Dichloroethene	1210	12.5	25.0	ug/kg wet	50	1000	---	121	80-120%	---	---	Q-56
1,2-Dichloropropane	1150	12.5	25.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,3-Dichloropropane	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
2,2-Dichloropropane	1360	25.0	50.0	ug/kg wet	50	1000	---	136	80-120%	---	---	Q-56
1,1-Dichloropropene	1200	25.0	50.0	ug/kg wet	50	1000	---	120	80-120%	---	---	
cis-1,3-Dichloropropene	1180	25.0	50.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
trans-1,3-Dichloropropene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Ethylbenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Hexachlorobutadiene	940	50.0	100	ug/kg wet	50	1000	---	94	80-120%	---	---	
2-Hexanone	1610	250	500	ug/kg wet	50	2000	---	80	80-120%	---	---	
Isopropylbenzene	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
4-Isopropyltoluene	998	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Methylene chloride	1150	250	500	ug/kg wet	50	1000	---	115	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	1650	250	500	ug/kg wet	50	2000	---	83	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1140	25.0	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
Naphthalene	878	50.0	100	ug/kg wet	50	1000	---	88	80-120%	---	---	
n-Propylbenzene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Styrene	992	25.0	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1140	12.5	25.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
1,1,2,2-Tetrachloroethane	947	25.0	50.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
Tetrachloroethene (PCE)	1110	12.5	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Toluene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,2,3-Trichlorobenzene	995	125	250	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,2,4-Trichlorobenzene	938	125	250	ug/kg wet	50	1000	---	94	80-120%	---	---	
1,1,1-Trichloroethane	1270	12.5	25.0	ug/kg wet	50	1000	---	127	80-120%	---	---	Q-56
1,1,2-Trichloroethane	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Trichloroethene (TCE)	1250	12.5	25.0	ug/kg wet	50	1000	---	125	80-120%	---	---	Q-56
Trichlorofluoromethane	1270	50.0	100	ug/kg wet	50	1000	---	127	80-120%	---	---	Q-56
1,2,3-Trichloropropane	999	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,2,4-Trimethylbenzene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,3,5-Trimethylbenzene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091056 - EPA 5035A						Soil						
LCS (1091056-BS1)						Prepared: 09/28/21 09:00 Analyzed: 09/28/21 12:29						
Vinyl chloride	950	12.5	25.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
m,p-Xylene	1960	25.0	50.0	ug/kg wet	50	2000	---	98	80-120%	---	---	
o-Xylene	939	12.5	25.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1091056-DUP1)						Prepared: 09/27/21 11:30 Analyzed: 09/28/21 16:04						
QC Source Sample: Non-SDG (A111007-01)												
Acetone	ND	835	1670	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	83.5	167	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	77.7	8.35	16.7	ug/kg dry	50	---	61.2	---	---	24	30%	
Bromobenzene	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	83.5	167	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	835	835	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	418	835	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	109	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	Q-05
sec-Butylbenzene	56.8	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	Q-05, J
tert-Butylbenzene	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	418	835	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	418	835	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	209	418	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	83.5	167	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	209	418	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	

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Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091056 - EPA 5035A						Soil						
Duplicate (1091056-DUP1)			Prepared: 09/27/21 11:30 Analyzed: 09/28/21 16:04									
QC Source Sample: Non-SDG (A111007-01)												
1,3-Dichlorobenzene	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	167	167	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	180	20.9	41.8	ug/kg dry	50	---	66.3	---	---	92	30%	Q-05
Hexachlorobutadiene	ND	83.5	167	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	418	835	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	418	835	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	418	835	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	83.5	167	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	122	20.9	41.8	ug/kg dry	50	---	27.6	---	---	126	30%	Q-05
Styrene	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	543	41.8	83.5	ug/kg dry	50	---	314	---	---	53	30%	Q-04
1,2,3-Trichlorobenzene	ND	209	418	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	209	418	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091056 - EPA 5035A												
Soil												
Duplicate (1091056-DUP1)												
						Prepared: 09/27/21 11:30 Analyzed: 09/28/21 16:04						
QC Source Sample: Non-SDG (A111007-01)												
Trichloroethene (TCE)	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	83.5	167	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	41.8	83.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	543	41.8	83.5	ug/kg dry	50	---	111	---	---	132	30%	Q-04
1,3,5-Trimethylbenzene	144	41.8	83.5	ug/kg dry	50	---	ND	---	---		30%	Q-05
Vinyl chloride	ND	20.9	41.8	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	601	41.8	83.5	ug/kg dry	50	---	183	---	---	107	30%	Q-04
o-Xylene	250	20.9	41.8	ug/kg dry	50	---	77.6	---	---	105	30%	Q-04
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 110 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (1091056-MS1)												
						Prepared: 09/27/21 11:55 Analyzed: 09/28/21 18:45						
QC Source Sample: Non-SDG (A111007-06)												
5035A/8260D												
Acetone	3420	923	1850	ug/kg dry	50	3700	ND	92	36-164%	---	---	
Acrylonitrile	1880	92.3	185	ug/kg dry	50	1850	ND	102	65-134%	---	---	
Benzene	2010	9.23	18.5	ug/kg dry	50	1850	ND	109	77-121%	---	---	
Bromobenzene	1760	23.1	46.2	ug/kg dry	50	1850	ND	95	78-121%	---	---	
Bromochloromethane	1910	46.2	92.3	ug/kg dry	50	1850	ND	103	78-125%	---	---	
Bromodichloromethane	2120	46.2	92.3	ug/kg dry	50	1850	ND	115	75-127%	---	---	Q-54
Bromoform	1680	92.3	185	ug/kg dry	50	1850	ND	91	67-132%	---	---	
Bromomethane	2930	923	923	ug/kg dry	50	1850	ND	159	53-143%	---	---	Q-54g
2-Butanone (MEK)	3600	462	923	ug/kg dry	50	3700	ND	98	51-148%	---	---	
n-Butylbenzene	1630	46.2	92.3	ug/kg dry	50	1850	ND	88	70-128%	---	---	
sec-Butylbenzene	1740	46.2	92.3	ug/kg dry	50	1850	ND	94	73-126%	---	---	
tert-Butylbenzene	1590	46.2	92.3	ug/kg dry	50	1850	ND	86	73-125%	---	---	
Carbon disulfide	2330	462	923	ug/kg dry	50	1850	ND	126	63-132%	---	---	Q-54b
Carbon tetrachloride	2140	46.2	92.3	ug/kg dry	50	1850	ND	116	70-135%	---	---	Q-54d
Chlorobenzene	1820	23.1	46.2	ug/kg dry	50	1850	ND	99	79-120%	---	---	
Chloroethane	2500	462	923	ug/kg dry	50	1850	ND	135	59-139%	---	---	Q-54a
Chloroform	2080	46.2	92.3	ug/kg dry	50	1850	ND	113	78-123%	---	---	
Chloromethane	1520	231	462	ug/kg dry	50	1850	ND	82	50-136%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110581 - 11 03 21 1516

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091056 - EPA 5035A						Soil						
Matrix Spike (1091056-MS1)						Prepared: 09/27/21 11:55 Analyzed: 09/28/21 18:45						
QC Source Sample: Non-SDG (A111007-06)												
2-Chlorotoluene	1690	46.2	92.3	ug/kg dry	50	1850	ND	92	75-122%	---	---	
4-Chlorotoluene	1690	46.2	92.3	ug/kg dry	50	1850	ND	92	72-124%	---	---	
Dibromochloromethane	1670	92.3	185	ug/kg dry	50	1850	ND	90	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1470	231	462	ug/kg dry	50	1850	ND	80	61-132%	---	---	
1,2-Dibromoethane (EDB)	1870	46.2	92.3	ug/kg dry	50	1850	ND	101	78-122%	---	---	
Dibromomethane	1970	46.2	92.3	ug/kg dry	50	1850	ND	107	78-125%	---	---	
1,2-Dichlorobenzene	1720	23.1	46.2	ug/kg dry	50	1850	ND	93	78-121%	---	---	
1,3-Dichlorobenzene	1800	23.1	46.2	ug/kg dry	50	1850	ND	97	77-121%	---	---	
1,4-Dichlorobenzene	1770	23.1	46.2	ug/kg dry	50	1850	ND	96	75-120%	---	---	
Dichlorodifluoromethane	1240	185	185	ug/kg dry	50	1850	ND	67	29-149%	---	---	Q-54l
1,1-Dichloroethane	2110	23.1	46.2	ug/kg dry	50	1850	ND	114	76-125%	---	---	
1,2-Dichloroethane (EDC)	1950	23.1	46.2	ug/kg dry	50	1850	ND	105	73-128%	---	---	
1,1-Dichloroethene	2540	23.1	46.2	ug/kg dry	50	1850	ND	138	70-131%	---	---	Q-54e
cis-1,2-Dichloroethene	2050	23.1	46.2	ug/kg dry	50	1850	ND	111	77-123%	---	---	
trans-1,2-Dichloroethene	2030	23.1	46.2	ug/kg dry	50	1850	ND	110	74-125%	---	---	Q-54
1,2-Dichloropropane	2010	23.1	46.2	ug/kg dry	50	1850	ND	109	76-123%	---	---	
1,3-Dichloropropane	1820	46.2	92.3	ug/kg dry	50	1850	ND	98	77-121%	---	---	
2,2-Dichloropropane	2190	46.2	92.3	ug/kg dry	50	1850	ND	119	67-133%	---	---	Q-54c
1,1-Dichloropropene	2040	46.2	92.3	ug/kg dry	50	1850	ND	110	76-125%	---	---	
cis-1,3-Dichloropropene	2010	46.2	92.3	ug/kg dry	50	1850	ND	109	74-126%	---	---	
trans-1,3-Dichloropropene	1740	46.2	92.3	ug/kg dry	50	1850	ND	94	71-130%	---	---	
Ethylbenzene	1710	23.1	46.2	ug/kg dry	50	1850	ND	93	76-122%	---	---	
Hexachlorobutadiene	1590	92.3	185	ug/kg dry	50	1850	ND	86	61-135%	---	---	
2-Hexanone	2850	462	923	ug/kg dry	50	3700	ND	77	53-145%	---	---	
Isopropylbenzene	1730	46.2	92.3	ug/kg dry	50	1850	ND	94	68-134%	---	---	
4-Isopropyltoluene	1680	46.2	92.3	ug/kg dry	50	1850	ND	91	73-127%	---	---	
Methylene chloride	1960	462	923	ug/kg dry	50	1850	ND	106	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	2980	462	923	ug/kg dry	50	3700	ND	81	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1990	46.2	92.3	ug/kg dry	50	1850	ND	107	73-125%	---	---	
Naphthalene	1550	92.3	185	ug/kg dry	50	1850	ND	84	62-129%	---	---	
n-Propylbenzene	1720	23.1	46.2	ug/kg dry	50	1850	ND	93	73-125%	---	---	
Styrene	1750	46.2	92.3	ug/kg dry	50	1850	ND	95	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1950	23.1	46.2	ug/kg dry	50	1850	ND	105	78-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091056 - EPA 5035A						Soil						
Matrix Spike (1091056-MS1)						Prepared: 09/27/21 11:55 Analyzed: 09/28/21 18:45						
QC Source Sample: Non-SDG (A111007-06)												
1,1,2,2-Tetrachloroethane	1650	46.2	92.3	ug/kg dry	50	1850	ND	89	70-124%	---	---	
Tetrachloroethene (PCE)	1880	23.1	46.2	ug/kg dry	50	1850	ND	102	73-128%	---	---	
Toluene	1760	46.2	92.3	ug/kg dry	50	1850	ND	95	77-121%	---	---	
1,2,3-Trichlorobenzene	1710	231	462	ug/kg dry	50	1850	ND	92	66-130%	---	---	
1,2,4-Trichlorobenzene	1640	231	462	ug/kg dry	50	1850	ND	89	67-129%	---	---	
1,1,1-Trichloroethane	2170	23.1	46.2	ug/kg dry	50	1850	ND	118	73-130%	---	---	Q-54k
1,1,2-Trichloroethane	1860	23.1	46.2	ug/kg dry	50	1850	ND	101	78-121%	---	---	
Trichloroethene (TCE)	2140	23.1	46.2	ug/kg dry	50	1850	ND	116	77-123%	---	---	Q-54h
Trichlorofluoromethane	2090	92.3	185	ug/kg dry	50	1850	ND	113	62-140%	---	---	Q-54k
1,2,3-Trichloropropane	1750	46.2	92.3	ug/kg dry	50	1850	ND	94	73-125%	---	---	
1,2,4-Trimethylbenzene	1780	46.2	92.3	ug/kg dry	50	1850	ND	96	75-123%	---	---	
1,3,5-Trimethylbenzene	1780	46.2	92.3	ug/kg dry	50	1850	ND	96	73-124%	---	---	
Vinyl chloride	1690	23.1	46.2	ug/kg dry	50	1850	ND	91	56-135%	---	---	
m,p-Xylene	3380	46.2	92.3	ug/kg dry	50	3700	ND	91	77-124%	---	---	
o-Xylene	1670	23.1	46.2	ug/kg dry	50	1850	ND	90	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>95 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090650 - EPA 3546												
Soil												
Blank (1090650-BLK1)												
Prepared: 09/17/21 08:22 Analyzed: 09/17/21 15:15												
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	3.12	6.25	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>102 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1090650-BS1)												
Prepared: 09/17/21 08:22 Analyzed: 09/17/21 15:40												
<u>EPA 8270E SIM</u>												
Acenaphthene	486	3.33	6.67	ug/kg wet	1	533	---	91	40-123%	---	---	
Acenaphthylene	492	3.33	6.67	ug/kg wet	1	533	---	92	32-132%	---	---	
Anthracene	474	3.33	6.67	ug/kg wet	1	533	---	89	47-123%	---	---	
Benz(a)anthracene	466	3.33	6.67	ug/kg wet	1	533	---	87	49-126%	---	---	
Benzo(a)pyrene	474	3.33	6.67	ug/kg wet	1	533	---	89	45-129%	---	---	
Benzo(b)fluoranthene	484	3.33	6.67	ug/kg wet	1	533	---	91	45-132%	---	---	
Benzo(k)fluoranthene	531	3.33	6.67	ug/kg wet	1	533	---	99	47-132%	---	---	
Benzo(g,h,i)perylene	517	3.33	6.67	ug/kg wet	1	533	---	97	43-134%	---	---	
Chrysene	494	3.33	6.67	ug/kg wet	1	533	---	93	50-124%	---	---	
Dibenz(a,h)anthracene	529	3.33	6.67	ug/kg wet	1	533	---	99	45-134%	---	---	
Fluoranthene	474	3.33	6.67	ug/kg wet	1	533	---	89	50-127%	---	---	
Fluorene	469	3.33	6.67	ug/kg wet	1	533	---	88	43-125%	---	---	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090650 - EPA 3546												
Soil												
LCS (1090650-BS1)												
Prepared: 09/17/21 08:22 Analyzed: 09/17/21 15:40												
Indeno(1,2,3-cd)pyrene	491	3.33	6.67	ug/kg wet	1	533	---	92	45-133%	---	---	
Naphthalene	461	3.33	6.67	ug/kg wet	1	533	---	86	35-123%	---	---	
Phenanthrene	484	3.33	6.67	ug/kg wet	1	533	---	91	50-121%	---	---	
Pyrene	471	3.33	6.67	ug/kg wet	1	533	---	88	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>95 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1090650-DUP1)												
Prepared: 09/17/21 08:22 Analyzed: 09/17/21 16:31												
QC Source Sample: Non-SDG (A110544-04)												
Acenaphthene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Anthracene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Benz(a)anthracene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(a)pyrene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Chrysene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Dibenz(a,h)anthracene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Fluorene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Naphthalene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Phenanthrene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
Pyrene	ND	5.89	11.8	ug/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 77 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>96 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (1090650-MS1)												
Prepared: 09/17/21 08:22 Analyzed: 09/17/21 17:23												
QC Source Sample: Non-SDG (A110557-01)												
EPA 8270E SIM												
Acenaphthene	3070	2140	2140	ug/kg dry	5	890	ND	103	40-123%	---	---	
Acenaphthylene	1360	523	523	ug/kg dry	5	890	ND	153	32-132%	---	---	Q-02

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090650 - EPA 3546						Soil						
Matrix Spike (1090650-MS1)						Prepared: 09/17/21 08:22 Analyzed: 09/17/21 17:23						
QC Source Sample: Non-SDG (A110557-01)												
Anthracene	1640	400	400	ug/kg dry	5	890	ND	184	47-123%	---	---	Q-02
Benz(a)anthracene	1000	27.8	55.6	ug/kg dry	5	890	134	97	49-126%	---	---	
Benzo(a)pyrene	885	27.8	55.6	ug/kg dry	5	890	91.9	89	45-129%	---	---	
Benzo(b)fluoranthene	848	27.8	55.6	ug/kg dry	5	890	53.9	89	45-132%	---	---	
Benzo(k)fluoranthene	900	27.8	55.6	ug/kg dry	5	890	ND	101	47-132%	---	---	
Benzo(g,h,i)perylene	853	27.8	55.6	ug/kg dry	5	890	50.8	90	43-134%	---	---	
Chrysene	1180	27.8	55.6	ug/kg dry	5	890	355	93	50-124%	---	---	
Dibenz(a,h)anthracene	827	27.8	55.6	ug/kg dry	5	890	ND	93	45-134%	---	---	
Fluoranthene	1080	27.8	55.6	ug/kg dry	5	890	210	98	50-127%	---	---	
Fluorene	5410	27.8	55.6	ug/kg dry	5	890	4360	118	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	802	27.8	55.6	ug/kg dry	5	890	ND	90	45-133%	---	---	
Naphthalene	5620	27.8	55.6	ug/kg dry	5	890	4850	87	35-123%	---	---	
Phenanthrene	9500	27.8	55.6	ug/kg dry	5	890	7970	172	50-121%	---	---	Q-03
Pyrene	2310	27.8	55.6	ug/kg dry	5	890	1280	116	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 5x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>54-127 %</i>		<i>"</i>						

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ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090841 - EPA 3510C (Acid Extraction)						Water						
Blank (1090841-BLK1)			Prepared: 09/22/21 10:43 Analyzed: 09/22/21 14:29									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Acenaphthylene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Benz(a)anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Benzo(a)pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Benzo(b)fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Benzo(k)fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Benzo(g,h,i)perylene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Chrysene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Dibenz(a,h)anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Fluorene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Indeno(1,2,3-cd)pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Naphthalene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	---
Phenanthrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
Pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	---
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 68 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>94 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS (1090841-BS1)			Prepared: 09/22/21 10:43 Analyzed: 09/22/21 14:54									
<u>EPA 8270E SIM</u>												
Acenaphthene	2.79	0.0100	0.0200	ug/L	1	4.00	---	70	47-122%	---	---	---
Acenaphthylene	2.89	0.0100	0.0200	ug/L	1	4.00	---	72	41-130%	---	---	---
Anthracene	3.01	0.0100	0.0200	ug/L	1	4.00	---	75	57-123%	---	---	---
Benz(a)anthracene	3.13	0.0100	0.0200	ug/L	1	4.00	---	78	58-125%	---	---	---
Benzo(a)pyrene	3.32	0.0100	0.0200	ug/L	1	4.00	---	83	54-128%	---	---	---
Benzo(b)fluoranthene	3.26	0.0100	0.0200	ug/L	1	4.00	---	82	53-131%	---	---	---
Benzo(k)fluoranthene	3.62	0.0100	0.0200	ug/L	1	4.00	---	90	57-129%	---	---	---
Benzo(g,h,i)perylene	3.50	0.0100	0.0200	ug/L	1	4.00	---	88	50-134%	---	---	---
Chrysene	3.37	0.0100	0.0200	ug/L	1	4.00	---	84	59-123%	---	---	---
Dibenz(a,h)anthracene	3.42	0.0100	0.0200	ug/L	1	4.00	---	86	51-134%	---	---	---
Fluoranthene	3.02	0.0100	0.0200	ug/L	1	4.00	---	76	57-128%	---	---	---
Fluorene	2.81	0.0100	0.0200	ug/L	1	4.00	---	70	52-124%	---	---	---

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090841 - EPA 3510C (Acid Extraction)						Water						
LCS (1090841-BS1)						Prepared: 09/22/21 10:43 Analyzed: 09/22/21 14:54						
Indeno(1,2,3-cd)pyrene	3.25	0.0100	0.0200	ug/L	1	4.00	---	81	52-134%	---	---	
Naphthalene	2.51	0.0200	0.0400	ug/L	1	4.00	---	63	40-121%	---	---	
Phenanthrene	3.03	0.0100	0.0200	ug/L	1	4.00	---	76	59-120%	---	---	
Pyrene	3.05	0.0100	0.0200	ug/L	1	4.00	---	76	57-126%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>85 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS Dup (1090841-BSD1)						Prepared: 09/22/21 10:43 Analyzed: 09/22/21 15:20							Q-19
EPA 8270E SIM													
Acenaphthene	2.77	0.0100	0.0200	ug/L	1	4.00	---	69	47-122%	0.8	30%		
Acenaphthylene	2.93	0.0100	0.0200	ug/L	1	4.00	---	73	41-130%	1	30%		
Anthracene	3.05	0.0100	0.0200	ug/L	1	4.00	---	76	57-123%	2	30%		
Benz(a)anthracene	3.18	0.0100	0.0200	ug/L	1	4.00	---	79	58-125%	1	30%		
Benzo(a)pyrene	3.34	0.0100	0.0200	ug/L	1	4.00	---	84	54-128%	0.9	30%		
Benzo(b)fluoranthene	3.39	0.0100	0.0200	ug/L	1	4.00	---	85	53-131%	4	30%		
Benzo(k)fluoranthene	3.67	0.0100	0.0200	ug/L	1	4.00	---	92	57-129%	1	30%		
Benzo(g,h,i)perylene	3.51	0.0100	0.0200	ug/L	1	4.00	---	88	50-134%	0.3	30%		
Chrysene	3.41	0.0100	0.0200	ug/L	1	4.00	---	85	59-123%	1	30%		
Dibenz(a,h)anthracene	3.50	0.0100	0.0200	ug/L	1	4.00	---	87	51-134%	2	30%		
Fluoranthene	3.04	0.0100	0.0200	ug/L	1	4.00	---	76	57-128%	0.6	30%		
Fluorene	2.82	0.0100	0.0200	ug/L	1	4.00	---	71	52-124%	0.3	30%		
Indeno(1,2,3-cd)pyrene	3.29	0.0100	0.0200	ug/L	1	4.00	---	82	52-134%	1	30%		
Naphthalene	2.51	0.0200	0.0400	ug/L	1	4.00	---	63	40-121%	0.2	30%		
Phenanthrene	3.09	0.0100	0.0200	ug/L	1	4.00	---	77	59-120%	2	30%		
Pyrene	3.00	0.0100	0.0200	ug/L	1	4.00	---	75	57-126%	2	30%		
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 70 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>							
<i>p-Terphenyl-d14 (Surr)</i>		<i>85 %</i>		<i>50-134 %</i>		<i>"</i>							

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090901 - EPA 3510C (Acid Extraction)						Water						
Blank (1090901-BLK1)			Prepared: 09/23/21 10:26 Analyzed: 09/23/21 14:07									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0364	0.0727	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS (1090901-BS1)			Prepared: 09/23/21 10:26 Analyzed: 09/23/21 14:32									
<u>EPA 8270E SIM</u>												
Acenaphthene	6.18	0.0200	0.0400	ug/L	1	8.00	---	77	47-122%	---	---	
Acenaphthylene	6.29	0.0200	0.0400	ug/L	1	8.00	---	79	41-130%	---	---	
Anthracene	6.81	0.0200	0.0400	ug/L	1	8.00	---	85	57-123%	---	---	
Benz(a)anthracene	6.92	0.0200	0.0400	ug/L	1	8.00	---	87	58-125%	---	---	
Benzo(a)pyrene	7.39	0.0200	0.0400	ug/L	1	8.00	---	92	54-128%	---	---	
Benzo(b)fluoranthene	7.22	0.0200	0.0400	ug/L	1	8.00	---	90	53-131%	---	---	
Benzo(k)fluoranthene	7.94	0.0200	0.0400	ug/L	1	8.00	---	99	57-129%	---	---	
Benzo(g,h,i)perylene	8.18	0.0200	0.0400	ug/L	1	8.00	---	102	50-134%	---	---	
Chrysene	7.32	0.0200	0.0400	ug/L	1	8.00	---	92	59-123%	---	---	
Dibenz(a,h)anthracene	8.18	0.0200	0.0400	ug/L	1	8.00	---	102	51-134%	---	---	
Fluoranthene	6.55	0.0200	0.0400	ug/L	1	8.00	---	82	57-128%	---	---	
Fluorene	6.09	0.0200	0.0400	ug/L	1	8.00	---	76	52-124%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090901 - EPA 3510C (Acid Extraction)						Water						
LCS (1090901-BS1)						Prepared: 09/23/21 10:26 Analyzed: 09/23/21 14:32						
Indeno(1,2,3-cd)pyrene	7.47	0.0200	0.0400	ug/L	1	8.00	---	93	52-134%	---	---	
Naphthalene	5.41	0.0400	0.0800	ug/L	1	8.00	---	68	40-121%	---	---	
Phenanthrene	6.97	0.0200	0.0400	ug/L	1	8.00	---	87	59-120%	---	---	
Pyrene	6.46	0.0200	0.0400	ug/L	1	8.00	---	81	57-126%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 83 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>92 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS Dup (1090901-BSD1)						Prepared: 09/23/21 10:26 Analyzed: 09/23/21 14:57							Q-19
EPA 8270E SIM													
Acenaphthene	6.63	0.0200	0.0400	ug/L	1	8.00	---	83	47-122%	7	30%		
Acenaphthylene	6.78	0.0200	0.0400	ug/L	1	8.00	---	85	41-130%	8	30%		
Anthracene	6.84	0.0200	0.0400	ug/L	1	8.00	---	86	57-123%	0.4	30%		
Benz(a)anthracene	6.92	0.0200	0.0400	ug/L	1	8.00	---	86	58-125%	0.1	30%		
Benzo(a)pyrene	7.09	0.0200	0.0400	ug/L	1	8.00	---	89	54-128%	4	30%		
Benzo(b)fluoranthene	7.29	0.0200	0.0400	ug/L	1	8.00	---	91	53-131%	0.9	30%		
Benzo(k)fluoranthene	7.73	0.0200	0.0400	ug/L	1	8.00	---	97	57-129%	3	30%		
Benzo(g,h,i)perylene	8.06	0.0200	0.0400	ug/L	1	8.00	---	101	50-134%	1	30%		
Chrysene	7.21	0.0200	0.0400	ug/L	1	8.00	---	90	59-123%	2	30%		
Dibenz(a,h)anthracene	7.54	0.0200	0.0400	ug/L	1	8.00	---	94	51-134%	8	30%		
Fluoranthene	6.30	0.0200	0.0400	ug/L	1	8.00	---	79	57-128%	4	30%		
Fluorene	6.39	0.0200	0.0400	ug/L	1	8.00	---	80	52-124%	5	30%		
Indeno(1,2,3-cd)pyrene	7.36	0.0200	0.0400	ug/L	1	8.00	---	92	52-134%	1	30%		
Naphthalene	6.17	0.0400	0.0800	ug/L	1	8.00	---	77	40-121%	13	30%		
Phenanthrene	6.92	0.0200	0.0400	ug/L	1	8.00	---	86	59-120%	0.8	30%		
Pyrene	6.21	0.0200	0.0400	ug/L	1	8.00	---	78	57-126%	4	30%		
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>							
<i>p-Terphenyl-d14 (Surr)</i>		<i>91 %</i>		<i>50-134 %</i>		<i>"</i>							

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091171 - EPA 3051A						Soil						
Blank (1091171-BLK1)			Prepared: 09/30/21 12:03 Analyzed: 10/01/21 03:37									
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	

LCS (1091171-BS1)						Prepared: 09/30/21 12:03 Analyzed: 10/01/21 03:41						
<u>EPA 6020B</u>												
Antimony	24.5	0.500	1.00	mg/kg wet	10	25.0	---	98	80-120%	---	---	Q-41
Arsenic	48.8	0.500	1.00	mg/kg wet	10	50.0	---	98	80-120%	---	---	
Barium	46.8	0.500	1.00	mg/kg wet	10	50.0	---	94	80-120%	---	---	
Cadmium	45.9	0.100	0.200	mg/kg wet	10	50.0	---	92	80-120%	---	---	
Chromium	47.5	0.500	1.00	mg/kg wet	10	50.0	---	95	80-120%	---	---	
Copper	48.6	1.00	2.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Lead	47.9	0.100	0.200	mg/kg wet	10	50.0	---	96	80-120%	---	---	
Mercury	0.961	0.0400	0.0800	mg/kg wet	10	1.00	---	96	80-120%	---	---	
Selenium	25.1	0.500	1.00	mg/kg wet	10	25.0	---	100	80-120%	---	---	
Silver	23.7	0.100	0.200	mg/kg wet	10	25.0	---	95	80-120%	---	---	
Zinc	47.3	2.00	4.00	mg/kg wet	10	50.0	---	95	80-120%	---	---	

Duplicate (1091171-DUP1)						Prepared: 09/30/21 12:03 Analyzed: 10/01/21 04:17						
<u>QC Source Sample: Non-SDG (A110365-12)</u>												
Antimony	ND	1.17	2.34	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	10.5	1.17	2.34	mg/kg dry	10	---	9.95	---	---	5	20%	
Barium	77.5	1.17	2.34	mg/kg dry	10	---	73.1	---	---	6	20%	
Cadmium	0.240	0.234	0.469	mg/kg dry	10	---	ND	---	---	---	20%	J
Chromium	37.6	1.17	2.34	mg/kg dry	10	---	35.7	---	---	5	20%	

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091171 - EPA 3051A						Soil						
Duplicate (1091171-DUP1)			Prepared: 09/30/21 12:03 Analyzed: 10/01/21 04:17									
<u>QC Source Sample: Non-SDG (A110365-12)</u>												
Copper	31.7	2.34	4.69	mg/kg dry	10	---	29.6	---	---	7	20%	
Lead	14.4	0.234	0.469	mg/kg dry	10	---	13.8	---	---	4	20%	
Mercury	0.0985	0.0937	0.187	mg/kg dry	10	---	0.0955	---	---	3	20%	J
Selenium	ND	1.17	2.34	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	0.234	0.469	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	106	4.69	9.37	mg/kg dry	10	---	99.9	---	---	6	20%	

Matrix Spike (1091171-MS1)			Prepared: 09/30/21 12:03 Analyzed: 10/01/21 04:21									
<u>QC Source Sample: Non-SDG (A110365-12)</u>												
<u>EPA 6020B</u>												
Antimony	56.9	1.26	2.51	mg/kg dry	10	62.8	ND	91	75-125%	---	---	Q-41
Arsenic	132	1.26	2.51	mg/kg dry	10	126	9.95	97	75-125%	---	---	
Barium	201	1.26	2.51	mg/kg dry	10	126	73.1	102	75-125%	---	---	
Cadmium	116	0.251	0.502	mg/kg dry	10	126	ND	93	75-125%	---	---	
Chromium	172	1.26	2.51	mg/kg dry	10	126	35.7	108	75-125%	---	---	
Copper	151	2.51	5.02	mg/kg dry	10	126	29.6	97	75-125%	---	---	
Lead	126	0.251	0.502	mg/kg dry	10	126	13.8	90	75-125%	---	---	
Mercury	2.32	0.100	0.201	mg/kg dry	10	2.51	ND	92	75-125%	---	---	
Selenium	60.6	1.26	2.51	mg/kg dry	10	62.8	ND	96	75-125%	---	---	
Silver	58.8	0.251	0.502	mg/kg dry	10	62.8	ND	94	75-125%	---	---	
Zinc	228	5.02	10.0	mg/kg dry	10	126	99.9	102	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090684 - Matrix Matched Direct Inject						Water						
Blank (1090684-BLK1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 01:31						
<u>EPA 6020B (Diss)</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
LCS (1090684-BS1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 01:35						
<u>EPA 6020B (Diss)</u>												
Arsenic	54.5	0.500	1.00	ug/L	1	55.6	---	98	80-120%	---	---	
Barium	55.9	0.500	1.00	ug/L	1	55.6	---	101	80-120%	---	---	
Cadmium	53.6	0.100	0.200	ug/L	1	55.6	---	97	80-120%	---	---	
Chromium	52.1	1.00	2.00	ug/L	1	55.6	---	94	80-120%	---	---	
Lead	54.7	0.100	0.200	ug/L	1	55.6	---	98	80-120%	---	---	
Mercury	1.06	0.0400	0.0800	ug/L	1	1.11	---	95	80-120%	---	---	
Selenium	27.8	0.500	1.00	ug/L	1	27.8	---	100	80-120%	---	---	
Silver	28.0	0.100	0.200	ug/L	1	27.8	---	101	80-120%	---	---	
Duplicate (1090684-DUP1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 02:02						
<u>QC Source Sample: B7 (A110581-06)</u>												
<u>EPA 6020B (Diss)</u>												
Arsenic	0.639	0.500	1.00	ug/L	1	---	0.657	---	---	3	20%	J
Barium	57.6	0.500	1.00	ug/L	1	---	57.8	---	---	0.3	20%	
Cadmium	0.125	0.100	0.200	ug/L	1	---	0.108	---	---	15	20%	J
Chromium	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	20%	
Lead	0.142	0.100	0.200	ug/L	1	---	0.139	---	---	2	20%	J
Mercury	ND	0.0400	0.0800	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (1090684-MS1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 02:06						

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090684 - Matrix Matched Direct Inject						Water						
Matrix Spike (1090684-MS1)						Prepared: 09/17/21 14:41 Analyzed: 09/19/21 02:06						
<u>QC Source Sample: B7 (A110581-06)</u>												
<u>EPA 6020B (Diss)</u>												
Arsenic	56.7	0.500	1.00	ug/L	1	55.6	0.657	101	75-125%	---	---	
Barium	109	0.500	1.00	ug/L	1	55.6	57.8	93	75-125%	---	---	
Cadmium	54.4	0.100	0.200	ug/L	1	55.6	0.108	98	75-125%	---	---	
Chromium	52.7	1.00	2.00	ug/L	1	55.6	ND	95	75-125%	---	---	
Lead	53.6	0.100	0.200	ug/L	1	55.6	0.139	96	75-125%	---	---	
Mercury	1.05	0.0400	0.0800	ug/L	1	1.11	ND	95	75-125%	---	---	
Selenium	29.1	0.500	1.00	ug/L	1	27.8	ND	105	75-125%	---	---	
Silver	27.4	0.100	0.200	ug/L	1	27.8	ND	99	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090720 - Total Solids (Dry Weight)							Soil					
Duplicate (1090720-DUP1)			Prepared: 09/20/21 09:47 Analyzed: 09/21/21 07:48									
<u>QC Source Sample: Non-SDG (A110443-01)</u>												
% Solids	86.6	1.00	1.00	%	1	---	87.8	---	---	1	10%	
Duplicate (1090720-DUP2)			Prepared: 09/20/21 09:47 Analyzed: 09/21/21 07:48									
<u>QC Source Sample: Non-SDG (A110443-11)</u>												
% Solids	92.7	1.00	1.00	%	1	---	92.5	---	---	0.2	10%	
Duplicate (1090720-DUP3)			Prepared: 09/20/21 09:47 Analyzed: 09/21/21 07:48									
<u>QC Source Sample: Non-SDG (A110561-03)</u>												
% Solids	74.0	1.00	1.00	%	1	---	73.4	---	---	0.7	10%	
Duplicate (1090720-DUP4)			Prepared: 09/20/21 09:47 Analyzed: 09/21/21 07:48									
<u>QC Source Sample: Non-SDG (A110621-06)</u>												
% Solids	90.9	1.00	1.00	%	1	---	90.9	---	---	0.009	10%	
Duplicate (1090720-DUP5)			Prepared: 09/20/21 09:47 Analyzed: 09/21/21 07:48									
<u>QC Source Sample: Non-SDG (A110626-03)</u>												
% Solids	58.4	1.00	1.00	%	1	---	58.0	---	---	0.8	10%	
Duplicate (1090720-DUP6)			Prepared: 09/20/21 20:06 Analyzed: 09/21/21 07:48									
<u>QC Source Sample: Non-SDG (A110687-01)</u>												
% Solids	80.6	1.00	1.00	%	1	---	80.6	---	---	0.002	10%	
Duplicate (1090720-DUP7)			Prepared: 09/20/21 20:06 Analyzed: 09/21/21 07:48									
<u>QC Source Sample: Non-SDG (A110687-02)</u>												
% Solids	81.8	1.00	1.00	%	1	---	81.8	---	---	0.0007	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

<u>Prep: EPA 3510C (Fuels/Acid Ext.)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090838</u>							
A110581-06	Water	NWTPH-Dx LL	09/16/21 14:45	09/22/21 10:18	1050mL/2mL	1000mL/2mL	0.95

<u>Prep: EPA 3546 (Fuels)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090785</u>							
A110581-07	Soil	NWTPH-Dx	09/16/21 13:53	09/21/21 14:44	10.65g/5mL	10g/5mL	0.94

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

<u>Prep: EPA 5030B</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090877</u>							
A110581-06	Water	NWTPH-Gx (MS)	09/16/21 14:45	09/23/21 09:03	5mL/5mL	5mL/5mL	1.00

<u>Prep: EPA 5035A</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1091056</u>							
A110581-07	Soil	NWTPH-Gx (MS)	09/16/21 13:53	09/16/21 13:53	22.24g/20mL	5g/5mL	0.90

Volatile Organic Compounds by EPA 8260D

<u>Prep: EPA 5030B</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090877</u>							
A110581-06	Water	EPA 8260D	09/16/21 14:45	09/23/21 09:03	5mL/5mL	5mL/5mL	1.00

<u>Prep: EPA 5035A</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1091056</u>							
A110581-07	Soil	5035A/8260D	09/16/21 13:53	09/16/21 13:53	22.24g/20mL	5g/5mL	0.90

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

<u>Prep: EPA 3510C (Acid Extraction)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3510C (Acid Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090901</u>							
A110581-06RE1	Water	EPA 8270E SIM	09/16/21 14:45	09/23/21 10:26	1060mL/2mL	1000mL/2mL	0.94

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090650</u>							
A110581-07	Soil	EPA 8270E SIM	09/16/21 13:53	09/17/21 08:22	10.14g/5mL	10g/5mL	0.99

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1091171</u>							
A110581-07	Soil	EPA 6020B	09/16/21 13:53	09/30/21 12:03	0.495g/50mL	0.5g/50mL	1.01

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090684</u>							
A110581-06	Water	EPA 6020B (Diss)	09/16/21 14:45	09/17/21 14:41	45mL/50mL	45mL/50mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090720</u>							
A110581-07	Soil	EPA 8000D	09/16/21 13:53	09/20/21 09:47			NA

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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- COMP** Sample is a composite of discrete samples. See prep information for details.
- F-03** The result for this hydrocarbon range is elevated due to the presence of individual analyte peaks in the quantitation range that are not representative of the fuel pattern reported.
- F-11** The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-02** Spike recovery is outside of established control limits due to matrix interference.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-17** RPD between original and duplicate sample is outside of established control limits.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-41** Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +1%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +12%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +13%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +16%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +2%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +25%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +28%. The results are reported as Estimated Values.

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- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +35%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
- Q-54i** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +51%. The results are reported as Estimated Values.
- Q-54j** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +6%. The results are reported as Estimated Values.
- Q-54k** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +7%. The results are reported as Estimated Values.
- Q-54l** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -8%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- S-03** Reextraction and analysis, or analysis of laboratory duplicate, confirms surrogate failure due to sample matrix effect.
- S-06** Surrogate recovery is outside of established control limits.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.
- X** See Case Narrative.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.
- "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to 1/2 the Reporting Limit (RL).
-For Blank hits falling between 1/2 the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A110581 - 11 03 21 1516).

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EORB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

A110581

CHAIN OF CUSTODY

COLES & BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835	Apex Labs Lab Project No. _____ Chain of Custody No. <u>1 of 1</u>	Sample Received at LC (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) _____ No Provide Preliminary Results _____ Yes																																																																																																																	
Project Manager: <u>Jill Betts</u> Project No.: <u>319</u> Project Name: <u>EORB</u> Collected by: _____	Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ State _____	Analyses to be Performed Dissolved RCRA & metals Total RCRA & Metals plus Antimony, Copper and Zinc PAHs by EPA Method 8270SM PAHs by EPA Method 8260B VOCs by EPA Method 8260B NW PH-G NW PH-D																																																																																																																	
Comments Metals analyzed by EPA Methods 200/8020A/7471B. B7(10-265)C is a composite sample. Please see sample description for directions.	Matrix Soil _____ Water _____ Other _____	Remarks <u>hold</u>																																																																																																																	
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Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110581 - 11 03 21 1516
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Environmental Consulting **Element WO#:** A110581

Project/Project #: EQRB / 319

Delivery Info:
 Date/time received: 9/16/21 @ 1700 By: [Signature]
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 9/16/21 @ 1700 By: [Signature]

Chain of Custody included? Yes No Custody seals? Yes No

Signed/dated by client? Yes No

Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.8</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>real/gel</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
 Green dots applied to out of temperature samples? Yes/No
 Out of temperature samples form initiated? Yes/No

Sample Inspection: Date/time inspected: 9/16/21 @ 1758 By: TAG

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: B17 B7-15-16.5 T reads
2.12, B08 0-3 jars read 88-03

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: 3/3 voas have sea

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA

Comments: _____

Additional information:

Labeled by: [Signature] Witness: [Signature] Cooler Inspected by: TAG

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, November 3, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A110712 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A110712, which was received by the laboratory on 9/21/2021 at 11:15:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 1.9 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	<u>Report ID:</u> A110712 - 11 03 21 1522
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	------------------------------------------------------------

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B8 15-16.5	A110712-01	Soil	09/20/21 15:08	09/21/21 11:15
B8 17.5-19	A110712-02	Soil	09/20/21 15:25	09/21/21 11:15
B8 20-21.5	A110712-03	Soil	09/20/21 15:30	09/21/21 11:15
B8 25-26.5	A110712-04	Soil	09/20/21 15:42	09/21/21 11:15
B8	A110712-05	Water	09/21/21 08:45	09/21/21 11:15
B8 (15-21.5)C	A110712-06	Soil	09/20/21 15:08	09/21/21 11:15

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B8 (A110712-05)			Matrix: Water			Batch: 1090999			
Diesel	0.106	0.0408	0.0816	mg/L	1	09/28/21 00:04	NWTPH-Dx LL	F-11	
Oil	ND	0.0816	0.163	mg/L	1	09/28/21 00:04	NWTPH-Dx LL		
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/28/21 00:04</i>	<i>NWTPH-Dx LL</i>	
B8 (15-21.5)C (A110712-06RE1)			Matrix: Soil			Batch: 1091067			
Diesel	ND	11.1	25.0	mg/kg dry	1	09/28/21 22:14	NWTPH-Dx		
Oil	67.7	22.3	50.0	mg/kg dry	1	09/28/21 22:14	NWTPH-Dx	F-13	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 90 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/28/21 22:14</i>	<i>NWTPH-Dx</i>	<i>Q-41</i>

Apex Laboratories

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B8 (A110712-05)			Matrix: Water			Batch: 1090989		
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	09/27/21 12:44	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>09/27/21 12:44</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>		<i>1</i>	<i>09/27/21 12:44</i>	<i>NWTPH-Gx (MS)</i>
B8 (15-21.5)C (A110712-06)			Matrix: Soil			Batch: 1109576		COMP, V-15
Gasoline Range Organics	ND	3.21	6.43	mg/kg dry	50	10/01/21 13:10	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 115 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>10/01/21 13:10</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>109 %</i>		<i>50-150 %</i>		<i>1</i>	<i>10/01/21 13:10</i>	<i>NWTPH-Gx (MS)</i>

Apex Laboratories

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B8 (A110712-05)			Matrix: Water			Batch: 1090989		
Acetone	ND	20.0	20.0	ug/L	1	09/27/21 12:44	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Benzene	0.281	0.100	0.200	ug/L	1	09/27/21 12:44	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	09/27/21 12:44	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	09/27/21 12:44	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	09/27/21 12:44	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	09/27/21 12:44	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	09/27/21 12:44	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	09/27/21 12:44	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	09/27/21 12:44	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	09/27/21 12:44	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	09/27/21 12:44	EPA 8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
 Tigard, OR 97223
 503-718-2323
 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B8 (A110712-05)			Matrix: Water			Batch: 1090989		
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	09/27/21 12:44	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	09/27/21 12:44	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	09/27/21 12:44	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	5.00	10.0	ug/L	1	09/27/21 12:44	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Naphthalene	ND	2.00	2.00	ug/L	1	09/27/21 12:44	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	09/27/21 12:44	EPA 8260D	
1,1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	09/27/21 12:44	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	09/27/21 12:44	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	09/27/21 12:44	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	09/27/21 12:44	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	09/27/21 12:44	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	09/27/21 12:44	EPA 8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B8 (A110712-05)			Matrix: Water			Batch: 1090989		
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 103 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>09/27/21 12:44</i>	<i>EPA 8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>102 %</i>	<i>80-120 %</i>	<i>1</i>	<i>09/27/21 12:44</i>	<i>EPA 8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>101 %</i>	<i>80-120 %</i>	<i>1</i>	<i>09/27/21 12:44</i>	<i>EPA 8260D</i>	
B8 (15-21.5)C (A110712-06)			Matrix: Soil			Batch: 1109576		COMP, V-15
Acetone	ND	643	1290	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Acrylonitrile	ND	64.3	129	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Benzene	50.2	6.43	12.9	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Bromobenzene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Bromochloromethane	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Bromodichloromethane	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Bromoform	ND	64.3	129	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Bromomethane	ND	643	643	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
2-Butanone (MEK)	ND	321	643	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
n-Butylbenzene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
sec-Butylbenzene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
tert-Butylbenzene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Carbon disulfide	ND	321	643	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Carbon tetrachloride	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Chlorobenzene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Chloroethane	ND	321	643	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Chloroform	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Chloromethane	ND	161	321	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
2-Chlorotoluene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
4-Chlorotoluene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Dibromochloromethane	ND	64.3	129	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	321	321	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Dibromomethane	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,2-Dichlorobenzene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,3-Dichlorobenzene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,4-Dichlorobenzene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Dichlorodifluoromethane	ND	64.3	129	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,1-Dichloroethane	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B8 (15-21.5)C (A110712-06)				Matrix: Soil		Batch: 1109576		COMP, V-15
1,2-Dichloroethane (EDC)	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,1-Dichloroethene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
cis-1,2-Dichloroethene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
trans-1,2-Dichloroethene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,2-Dichloropropane	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,3-Dichloropropane	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
2,2-Dichloropropane	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,1-Dichloropropene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
cis-1,3-Dichloropropene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
trans-1,3-Dichloropropene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Ethylbenzene	16.1	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	J
Hexachlorobutadiene	ND	64.3	129	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
2-Hexanone	ND	64.3	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Isopropylbenzene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
4-Isopropyltoluene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Methylene chloride	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Naphthalene	ND	64.3	129	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
n-Propylbenzene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Styrene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Tetrachloroethene (PCE)	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Toluene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,2,3-Trichlorobenzene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,2,4-Trichlorobenzene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,1,1-Trichloroethane	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,1,2-Trichloroethane	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Trichloroethene (TCE)	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Trichlorofluoromethane	ND	64.3	129	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,2,3-Trichloropropane	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
1,2,4-Trimethylbenzene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts</p>	<p style="text-align: right;">Report ID: A110712 - 11 03 21 1522</p>
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B8 (15-21.5)C (A110712-06)				Matrix: Soil		Batch: 1109576		COMP, V-15
1,3,5-Trimethylbenzene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
Vinyl chloride	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
m,p-Xylene	ND	32.1	64.3	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
o-Xylene	ND	16.1	32.1	ug/kg dry	50	10/01/21 13:10	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 108 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>10/01/21 13:10</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>1</i>	<i>10/01/21 13:10</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>1</i>	<i>10/01/21 13:10</i>	<i>5035A/8260D</i>

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ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
			Matrix: Water			Batch: 1090901		
B8 (A110712-05RE1)								
Acenaphthene	0.0295	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	J
Acenaphthylene	ND	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Anthracene	ND	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Benz(a)anthracene	0.0248	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	J
Benzo(a)pyrene	ND	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Chrysene	ND	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Fluoranthene	0.0278	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	J
Fluorene	ND	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Naphthalene	ND	0.0430	0.0860	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Phenanthrene	0.0526	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
Pyrene	0.0591	0.0215	0.0430	ug/L	1	09/23/21 17:27	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 71 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>09/23/21 17:27</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>89 %</i>		<i>50-134 %</i>		<i>1</i>	<i>09/23/21 17:27</i>	<i>EPA 8270E SIM</i>

			Matrix: Soil			Batch: 1090946		
B8 (15-21.5)C (A110712-06)								
Acenaphthene	24.6	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Acenaphthylene	13.1	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Anthracene	20.2	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Benz(a)anthracene	34.8	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Benzo(a)pyrene	39.6	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Benzo(b)fluoranthene	45.3	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	M-05
Benzo(k)fluoranthene	16.1	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	31.7	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Chrysene	39.3	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Fluoranthene	65.4	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Fluorene	12.8	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	31.3	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B8 (15-21.5)C (A110712-06)				Matrix: Soil		Batch: 1090946		
Naphthalene	89.0	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Phenanthrene	80.6	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
Pyrene	82.7	5.70	11.4	ug/kg dry	1	09/27/21 23:55	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 50 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>09/27/21 23:55</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>54 %</i>		<i>54-127 %</i>		<i>1</i>	<i>09/27/21 23:55</i>	<i>EPA 8270E SIM</i>

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B8 (15-21.5)C (A110712-06)				Matrix: Soil				
Batch: 21J0100								
Antimony	ND	0.317	0.634	mg/kg dry	5	10/05/21 23:27	EPA 6020B	
Arsenic	3.16	0.317	0.634	mg/kg dry	5	10/05/21 23:27	EPA 6020B	
Barium	79.7	0.317	0.634	mg/kg dry	5	10/05/21 23:27	EPA 6020B	
Cadmium	0.0987	0.0634	0.127	mg/kg dry	5	10/05/21 23:27	EPA 6020B	J
Chromium	12.6	0.317	0.634	mg/kg dry	5	10/05/21 23:27	EPA 6020B	
Copper	15.7	0.634	1.27	mg/kg dry	5	10/05/21 23:27	EPA 6020B	
Lead	15.5	0.0634	0.127	mg/kg dry	5	10/05/21 23:27	EPA 6020B	
Mercury	0.0410	0.0253	0.0507	mg/kg dry	5	10/05/21 23:27	EPA 6020B	J
Selenium	ND	0.317	0.634	mg/kg dry	5	10/05/21 23:27	EPA 6020B	
Silver	ND	0.0634	0.127	mg/kg dry	5	10/05/21 23:27	EPA 6020B	
Zinc	42.0	1.27	2.53	mg/kg dry	5	10/05/21 23:27	EPA 6020B	

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ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B8 (A110712-05)		Matrix: Water							
Batch: 21J0043									
Arsenic	1.53	0.500	1.00	ug/L	1	10/04/21 17:40	EPA 6020B (Diss)		
Barium	104	0.500	1.00	ug/L	1	10/04/21 17:40	EPA 6020B (Diss)		
Cadmium	0.127	0.100	0.200	ug/L	1	10/04/21 17:40	EPA 6020B (Diss)	J	
Chromium	ND	1.00	2.00	ug/L	1	10/04/21 17:40	EPA 6020B (Diss)		
Lead	ND	0.100	0.200	ug/L	1	10/04/21 17:40	EPA 6020B (Diss)		
Mercury	ND	0.0400	0.0800	ug/L	1	10/04/21 17:40	EPA 6020B (Diss)		
Selenium	ND	0.500	1.00	ug/L	1	10/04/21 17:40	EPA 6020B (Diss)		
Silver	ND	0.100	0.200	ug/L	1	10/04/21 17:40	EPA 6020B (Diss)		

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B8 (15-21.5)C (A110712-06)				Matrix: Soil		Batch: 1090879		
% Solids	86.0	1.00	1.00	%	1	09/24/21 09:14	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090984 - EPA 3546 (Fuels)						Soil						
Blank (1090984-BLK1)						Prepared: 09/27/21 07:21 Analyzed: 09/27/21 09:03						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 81 %		Limits: 50-150 %		Dilution: 1x						
LCS (1090984-BS1)						Prepared: 09/27/21 07:21 Analyzed: 09/27/21 09:23						
<u>NWTPH-Dx</u>												
Diesel	106	10.0	25.0	mg/kg wet	1	125	---	85	38-132%	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 84 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (1090984-DUP1)						Prepared: 09/27/21 07:21 Analyzed: 09/27/21 10:04						
<u>QC Source Sample: Non-SDG (A110948-01RE1)</u>												
Diesel	33.3	9.79	25.0	mg/kg wet	1	---	29.3	---	---	13	30%	
Oil	ND	19.6	50.0	mg/kg wet	1	---	ND	---	---	---	30%	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 70 %		Limits: 50-150 %		Dilution: 1x						
Duplicate (1090984-DUP2)						Prepared: 09/27/21 13:00 Analyzed: 09/27/21 23:00						
<u>QC Source Sample: Non-SDG (A110544-03)</u>												
Diesel	182	12.9	25.7	mg/kg dry	1	---	182	---	---	0.09	30%	
Oil	ND	25.7	51.4	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 45 %		Limits: 50-150 %		Dilution: 1x						S-06
Batch 1090999 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (1090999-BLK1)						Prepared: 09/27/21 10:32 Analyzed: 09/27/21 23:02						
<u>NWTPH-Dx LL</u>												
Diesel	ND	0.0364	0.0727	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.0727	0.145	mg/L	1	---	---	---	---	---	---	
Surr: <i>o</i> -Terphenyl (Surr)		Recovery: 100 %		Limits: 50-150 %		Dilution: 1x						
LCS (1090999-BS1)						Prepared: 09/27/21 10:32 Analyzed: 09/27/21 23:23						
<u>NWTPH-Dx LL</u>												
Diesel	0.424	0.0400	0.0800	mg/L	1	0.500	---	85	36-132%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090999 - EPA 3510C (Fuels/Acid Ext.)						Water						
LCS (1090999-BS1)						Prepared: 09/27/21 10:32 Analyzed: 09/27/21 23:23						
<i>Surr: o-Terphenyl (Surr)</i>						<i>Recovery: 102 % Limits: 50-150 % Dilution: 1x</i>						
LCS Dup (1090999-BSD1)						Prepared: 09/27/21 10:32 Analyzed: 09/27/21 23:44						
<u>NWTPH-Dx LL</u>												
Diesel	0.463	0.0400	0.0800	mg/L	1	0.500	---	93	36-132%	9	30%	
<i>Surr: o-Terphenyl (Surr)</i>						<i>Recovery: 109 % Limits: 50-150 % Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 1091067 - EPA 3546 (Fuels)						Soil							
Blank (1091067-BLK1)						Prepared: 09/28/21 13:03 Analyzed: 09/28/21 21:07							
<u>NWTPH-Dx</u>													
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---		
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---		
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>							Q-41
LCS (1091067-BS1)						Prepared: 09/28/21 13:03 Analyzed: 09/28/21 21:30							
<u>NWTPH-Dx</u>													
Diesel	110	10.0	20.0	mg/kg wet	1	125	---	88	38-132%	---	---		
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>							Q-41
Duplicate (1091067-DUP1)						Prepared: 09/28/21 13:03 Analyzed: 09/28/21 22:59							
<u>QC Source Sample: Non-SDG (A110790-01)</u>													
Diesel	ND	57.8	116	mg/kg dry	5	---	ND	---	---	---	30%		
Oil	610	116	231	mg/kg dry	5	---	640	---	---	5	30%		
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 90 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 5x</i>							Q-41, S-05
Duplicate (1091067-DUP2)						Prepared: 09/28/21 13:03 Analyzed: 09/28/21 22:59							
<u>QC Source Sample: Non-SDG (A110918-06)</u>													
Diesel	ND	10.5	21.0	mg/kg dry	1	---	ND	---	---	---	30%		
Oil	ND	21.0	41.9	mg/kg dry	1	---	ND	---	---	---	30%		
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 64 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>							

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Blank (1090989-BLK1)			Prepared: 09/27/21 07:30 Analyzed: 09/27/21 10:57									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090989-BS2)			Prepared: 09/27/21 07:30 Analyzed: 09/27/21 10:30									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	0.442	0.0500	0.100	mg/L	1	0.500	---	88	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>97 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090989-DUP1)			Prepared: 09/27/21 17:00 Analyzed: 09/27/21 19:02									
<u>QC Source Sample: Non-SDG (A111001-01)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109576 - EPA 5035A						Soil						
Blank (1109576-BLK1)						Prepared: 10/01/21 09:00 Analyzed: 10/01/21 11:49						
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 111 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>109 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1109576-BS2)						Prepared: 10/01/21 09:00 Analyzed: 10/01/21 10:55						
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	22.4	2.50	5.00	mg/kg wet	50	25.0	---	90	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 108 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1109576-DUP1)						Prepared: 09/27/21 10:15 Analyzed: 10/01/21 16:18						
<u>QC Source Sample: Non-SDG (A111121-01)</u>												
Gasoline Range Organics	ND	2.77	5.55	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 110 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>		<i>"</i>						

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5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110712 - 11 03 21 1522

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Blank (1090989-BLK1)			Prepared: 09/27/21 07:30 Analyzed: 09/27/21 10:57									
<u>EPA 8260D</u>												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Blank (1090989-BLK1)			Prepared: 09/27/21 07:30 Analyzed: 09/27/21 10:57									
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	2.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 101 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Blank (1090989-BLK1)						Prepared: 09/27/21 07:30 Analyzed: 09/27/21 10:57						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>"</i>						
LCS (1090989-BS1)						Prepared: 09/27/21 07:30 Analyzed: 09/27/21 09:43						
EPA 8260D												
Acetone	39.2	10.0	20.0	ug/L	1	40.0	---	98	80-120%	---	---	
Acrylonitrile	22.6	1.00	2.00	ug/L	1	20.0	---	113	80-120%	---	---	
Benzene	20.5	0.100	0.200	ug/L	1	20.0	---	102	80-120%	---	---	
Bromobenzene	18.9	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Bromochloromethane	20.3	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Bromodichloromethane	22.8	0.500	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
Bromoform	23.2	0.500	1.00	ug/L	1	20.0	---	116	80-120%	---	---	
Bromomethane	26.9	5.00	5.00	ug/L	1	20.0	---	135	80-120%	---	---	Q-56
2-Butanone (MEK)	44.4	5.00	10.0	ug/L	1	40.0	---	111	80-120%	---	---	
n-Butylbenzene	22.6	0.500	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
sec-Butylbenzene	21.1	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
tert-Butylbenzene	20.3	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Carbon disulfide	19.4	5.00	10.0	ug/L	1	20.0	---	97	80-120%	---	---	
Carbon tetrachloride	26.9	0.500	1.00	ug/L	1	20.0	---	134	80-120%	---	---	Q-56
Chlorobenzene	20.7	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Chloroethane	17.6	5.00	5.00	ug/L	1	20.0	---	88	80-120%	---	---	
Chloroform	21.3	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Chloromethane	18.4	2.50	5.00	ug/L	1	20.0	---	92	80-120%	---	---	
2-Chlorotoluene	20.7	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
4-Chlorotoluene	21.3	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
Dibromochloromethane	22.9	0.500	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
1,2-Dibromo-3-chloropropane	20.0	2.50	5.00	ug/L	1	20.0	---	100	80-120%	---	---	
1,2-Dibromoethane (EDB)	20.9	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Dibromomethane	21.5	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,2-Dichlorobenzene	20.6	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
1,3-Dichlorobenzene	20.4	0.250	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
1,4-Dichlorobenzene	20.2	0.250	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
Dichlorodifluoromethane	16.5	0.500	1.00	ug/L	1	20.0	---	83	80-120%	---	---	ICV-01
1,1-Dichloroethane	21.4	0.200	0.400	ug/L	1	20.0	---	107	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
LCS (1090989-BS1)			Prepared: 09/27/21 07:30 Analyzed: 09/27/21 09:43									
1,2-Dichloroethane (EDC)	21.5	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
1,1-Dichloroethene	21.2	0.200	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
cis-1,2-Dichloroethene	21.7	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
trans-1,2-Dichloroethene	21.1	0.200	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
1,2-Dichloropropane	21.6	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
1,3-Dichloropropane	21.1	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
2,2-Dichloropropane	30.8	0.500	1.00	ug/L	1	20.0	---	154	80-120%	---	---	Q-56
1,1-Dichloropropene	20.7	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
cis-1,3-Dichloropropene	22.7	0.500	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
trans-1,3-Dichloropropene	24.4	1.00	2.00	ug/L	1	20.0	---	122	80-120%	---	---	Q-56
Ethylbenzene	20.9	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Hexachlorobutadiene	22.6	2.50	5.00	ug/L	1	20.0	---	113	80-120%	---	---	
2-Hexanone	43.2	5.00	10.0	ug/L	1	40.0	---	108	80-120%	---	---	
Isopropylbenzene	20.6	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
4-Isopropyltoluene	21.0	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
Methylene chloride	18.6	5.00	10.0	ug/L	1	20.0	---	93	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	45.8	5.00	10.0	ug/L	1	40.0	---	114	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	18.8	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Naphthalene	15.8	2.00	2.00	ug/L	1	20.0	---	79	80-120%	---	---	Q-55
n-Propylbenzene	21.1	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Styrene	21.1	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,1,1,2-Tetrachloroethane	27.0	0.200	0.400	ug/L	1	20.0	---	135	80-120%	---	---	Q-56
1,1,2,2-Tetrachloroethane	21.9	0.250	0.500	ug/L	1	20.0	---	110	80-120%	---	---	
Tetrachloroethene (PCE)	20.6	0.200	0.400	ug/L	1	20.0	---	103	80-120%	---	---	
Toluene	19.9	0.250	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
1,2,3-Trichlorobenzene	20.4	1.00	2.00	ug/L	1	20.0	---	102	80-120%	---	---	
1,2,4-Trichlorobenzene	19.5	1.00	2.00	ug/L	1	20.0	---	98	80-120%	---	---	
1,1,1-Trichloroethane	22.0	0.200	0.400	ug/L	1	20.0	---	110	80-120%	---	---	
1,1,2-Trichloroethane	21.0	0.250	0.500	ug/L	1	20.0	---	105	80-120%	---	---	
Trichloroethene (TCE)	19.9	0.200	0.400	ug/L	1	20.0	---	100	80-120%	---	---	
Trichlorofluoromethane	21.8	1.00	2.00	ug/L	1	20.0	---	109	80-120%	---	---	
1,2,3-Trichloropropane	20.9	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
1,2,4-Trimethylbenzene	21.4	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,3,5-Trimethylbenzene	21.0	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B												
Water												
LCS (1090989-BS1)												
Prepared: 09/27/21 07:30						Analyzed: 09/27/21 09:43						
Vinyl chloride	19.4	0.200	0.400	ug/L	1	20.0	---	97	80-120%	---	---	
m,p-Xylene	41.8	0.500	1.00	ug/L	1	40.0	---	105	80-120%	---	---	
o-Xylene	19.8	0.250	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>		<i>"</i>						

Duplicate (1090989-DUP1)											
Prepared: 09/27/21 17:00						Analyzed: 09/27/21 19:02					
QC Source Sample: Non-SDG (A111001-01)											
Acetone	ND	10.0	20.0	ug/L	1	---	ND	---	---	---	30%
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%
Bromobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Bromoform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Bromomethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%
Chloroethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%
Chloroform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Chloromethane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%
Dibromomethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Duplicate (1090989-DUP1)			Prepared: 09/27/21 17:00 Analyzed: 09/27/21 19:02									
QC Source Sample: Non-SDG (A111001-01)												
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	2.00	2.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B												
Water												
Duplicate (1090989-DUP1)			Prepared: 09/27/21 17:00 Analyzed: 09/27/21 19:02									
QC Source Sample: Non-SDG (A111001-01)												
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						

Matrix Spike (1090989-MS1)												
Prepared: 09/27/21 08:47 Analyzed: 09/27/21 16:47												
QC Source Sample: Non-SDG (A110858-03)												
EPA 8260D												
Acetone	45.9	10.0	20.0	ug/L	1	40.0	ND	89	39-160%	---	---	
Acrylonitrile	24.1	1.00	2.00	ug/L	1	20.0	ND	121	63-135%	---	---	
Benzene	22.6	0.100	0.200	ug/L	1	20.0	ND	113	79-120%	---	---	
Bromobenzene	19.8	0.250	0.500	ug/L	1	20.0	ND	99	80-120%	---	---	
Bromochloromethane	22.1	0.500	1.00	ug/L	1	20.0	ND	111	78-123%	---	---	
Bromodichloromethane	24.5	0.500	1.00	ug/L	1	20.0	ND	123	79-125%	---	---	
Bromoform	23.8	0.500	1.00	ug/L	1	20.0	ND	119	66-130%	---	---	
Bromomethane	32.3	5.00	5.00	ug/L	1	20.0	ND	161	53-141%	---	---	Q-54b
2-Butanone (MEK)	49.1	5.00	10.0	ug/L	1	40.0	ND	123	56-143%	---	---	
n-Butylbenzene	22.7	0.500	1.00	ug/L	1	20.0	ND	114	75-128%	---	---	
sec-Butylbenzene	21.8	0.500	1.00	ug/L	1	20.0	ND	109	77-126%	---	---	
tert-Butylbenzene	21.1	0.500	1.00	ug/L	1	20.0	ND	106	78-124%	---	---	
Carbon disulfide	20.5	5.00	10.0	ug/L	1	20.0	ND	103	64-133%	---	---	
Carbon tetrachloride	29.4	0.500	1.00	ug/L	1	20.0	ND	147	72-136%	---	---	Q-54a
Chlorobenzene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	80-120%	---	---	
Chloroethane	19.1	5.00	5.00	ug/L	1	20.0	ND	96	60-138%	---	---	
Chloroform	23.7	0.500	1.00	ug/L	1	20.0	ND	118	79-124%	---	---	
Chloromethane	20.1	2.50	5.00	ug/L	1	20.0	ND	101	50-139%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Matrix Spike (1090989-MS1)			Prepared: 09/27/21 08:47 Analyzed: 09/27/21 16:47									
QC Source Sample: Non-SDG (A110858-03)												
2-Chlorotoluene	21.3	0.500	1.00	ug/L	1	20.0	ND	107	79-122%	---	---	
4-Chlorotoluene	21.6	0.500	1.00	ug/L	1	20.0	ND	108	78-122%	---	---	
Dibromochloromethane	24.0	0.500	1.00	ug/L	1	20.0	ND	120	74-126%	---	---	
1,2-Dibromo-3-chloropropane	20.9	2.50	5.00	ug/L	1	20.0	ND	105	62-128%	---	---	
1,2-Dibromoethane (EDB)	21.7	0.250	0.500	ug/L	1	20.0	ND	109	77-121%	---	---	
Dibromomethane	23.0	0.500	1.00	ug/L	1	20.0	ND	115	79-123%	---	---	
1,2-Dichlorobenzene	20.7	0.250	0.500	ug/L	1	20.0	ND	103	80-120%	---	---	
1,3-Dichlorobenzene	20.7	0.250	0.500	ug/L	1	20.0	ND	104	80-120%	---	---	
1,4-Dichlorobenzene	20.4	0.250	0.500	ug/L	1	20.0	ND	102	79-120%	---	---	
Dichlorodifluoromethane	19.2	0.500	1.00	ug/L	1	20.0	ND	96	32-152%	---	---	ICV-01
1,1-Dichloroethane	23.6	0.200	0.400	ug/L	1	20.0	ND	118	77-125%	---	---	
1,2-Dichloroethane (EDC)	22.9	0.200	0.400	ug/L	1	20.0	ND	114	73-128%	---	---	
1,1-Dichloroethene	23.1	0.200	0.400	ug/L	1	20.0	ND	116	71-131%	---	---	
cis-1,2-Dichloroethene	23.5	0.200	0.400	ug/L	1	20.0	ND	117	78-123%	---	---	
trans-1,2-Dichloroethene	23.3	0.200	0.400	ug/L	1	20.0	ND	116	75-124%	---	---	
1,2-Dichloropropane	23.2	0.250	0.500	ug/L	1	20.0	ND	116	78-122%	---	---	
1,3-Dichloropropane	22.3	0.500	1.00	ug/L	1	20.0	ND	112	80-120%	---	---	
2,2-Dichloropropane	31.4	0.500	1.00	ug/L	1	20.0	ND	157	60-139%	---	---	Q-54h
1,1-Dichloropropene	23.1	0.500	1.00	ug/L	1	20.0	ND	115	79-125%	---	---	
cis-1,3-Dichloropropene	20.7	0.500	1.00	ug/L	1	20.0	ND	104	75-124%	---	---	
trans-1,3-Dichloropropene	24.5	1.00	2.00	ug/L	1	20.0	ND	123	73-127%	---	---	Q-54d
Ethylbenzene	22.2	0.250	0.500	ug/L	1	20.0	ND	111	79-121%	---	---	
Hexachlorobutadiene	21.8	2.50	5.00	ug/L	1	20.0	ND	109	66-134%	---	---	
2-Hexanone	45.1	5.00	10.0	ug/L	1	40.0	ND	113	57-139%	---	---	
Isopropylbenzene	22.0	0.500	1.00	ug/L	1	20.0	ND	110	72-131%	---	---	
4-Isopropyltoluene	21.5	0.500	1.00	ug/L	1	20.0	ND	108	77-127%	---	---	
Methylene chloride	20.1	5.00	10.0	ug/L	1	20.0	ND	100	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	47.5	5.00	10.0	ug/L	1	40.0	ND	119	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	19.3	0.500	1.00	ug/L	1	20.0	ND	96	71-124%	---	---	
Naphthalene	15.3	2.00	2.00	ug/L	1	20.0	ND	76	61-128%	---	---	Q-54m
n-Propylbenzene	21.7	0.250	0.500	ug/L	1	20.0	ND	109	76-126%	---	---	
Styrene	22.5	0.500	1.00	ug/L	1	20.0	ND	112	78-123%	---	---	
1,1,1,2-Tetrachloroethane	28.2	0.200	0.400	ug/L	1	20.0	ND	141	78-124%	---	---	Q-54b

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B												
Water												
Matrix Spike (1090989-MS1)			Prepared: 09/27/21 08:47 Analyzed: 09/27/21 16:47									
QC Source Sample: Non-SDG (A110858-03)												
1,1,2,2-Tetrachloroethane	22.5	0.250	0.500	ug/L	1	20.0	ND	112	71-121%	---	---	
Tetrachloroethene (PCE)	21.7	0.200	0.400	ug/L	1	20.0	ND	108	74-129%	---	---	
Toluene	21.3	0.250	0.500	ug/L	1	20.0	ND	107	80-121%	---	---	
1,2,3-Trichlorobenzene	20.0	1.00	2.00	ug/L	1	20.0	ND	100	69-129%	---	---	
1,2,4-Trichlorobenzene	18.6	1.00	2.00	ug/L	1	20.0	ND	93	69-130%	---	---	
1,1,1-Trichloroethane	24.7	0.200	0.400	ug/L	1	20.0	ND	124	74-131%	---	---	
1,1,2-Trichloroethane	21.9	0.250	0.500	ug/L	1	20.0	ND	109	80-120%	---	---	
Trichloroethene (TCE)	22.0	0.200	0.400	ug/L	1	20.0	ND	110	79-123%	---	---	
Trichlorofluoromethane	26.4	1.00	2.00	ug/L	1	20.0	ND	132	65-141%	---	---	
1,2,3-Trichloropropane	22.0	0.500	1.00	ug/L	1	20.0	ND	110	73-122%	---	---	
1,2,4-Trimethylbenzene	21.5	0.500	1.00	ug/L	1	20.0	ND	108	76-124%	---	---	
1,3,5-Trimethylbenzene	21.7	0.500	1.00	ug/L	1	20.0	ND	108	75-124%	---	---	
Vinyl chloride	21.8	0.200	0.400	ug/L	1	20.0	ND	109	58-137%	---	---	
m,p-Xylene	44.2	0.500	1.00	ug/L	1	40.0	ND	110	80-121%	---	---	
o-Xylene	20.9	0.250	0.500	ug/L	1	20.0	ND	105	78-122%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>92 %</i>		<i>80-120 %</i>		<i>"</i>						

Matrix Spike Dup (1090989-MSD1)			Prepared: 09/27/21 08:47 Analyzed: 09/27/21 17:14									
QC Source Sample: Non-SDG (A110858-03)												
Acetone	45.9	10.0	20.0	ug/L	1	40.0	ND	89	39-160%	0.07	30%	
Acrylonitrile	25.1	1.00	2.00	ug/L	1	20.0	ND	126	63-135%	4	30%	
Benzene	23.3	0.100	0.200	ug/L	1	20.0	ND	117	79-120%	3	30%	
Bromobenzene	20.8	0.250	0.500	ug/L	1	20.0	ND	104	80-120%	5	30%	
Bromochloromethane	23.1	0.500	1.00	ug/L	1	20.0	ND	116	78-123%	4	30%	
Bromodichloromethane	25.6	0.500	1.00	ug/L	1	20.0	ND	128	79-125%	4	30%	Q-01
Bromoform	24.1	0.500	1.00	ug/L	1	20.0	ND	121	66-130%	1	30%	
Bromomethane	31.3	5.00	5.00	ug/L	1	20.0	ND	157	53-141%	3	30%	Q-54b
2-Butanone (MEK)	50.0	5.00	10.0	ug/L	1	40.0	ND	125	56-143%	2	30%	
n-Butylbenzene	24.0	0.500	1.00	ug/L	1	20.0	ND	120	75-128%	6	30%	
sec-Butylbenzene	22.9	0.500	1.00	ug/L	1	20.0	ND	115	77-126%	5	30%	
tert-Butylbenzene	22.2	0.500	1.00	ug/L	1	20.0	ND	111	78-124%	5	30%	

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Matrix Spike Dup (1090989-MSD1)						Prepared: 09/27/21 08:47 Analyzed: 09/27/21 17:14						
QC Source Sample: Non-SDG (A110858-03)												
Carbon disulfide	22.4	5.00	10.0	ug/L	1	20.0	ND	112	64-133%	9	30%	
Carbon tetrachloride	30.4	0.500	1.00	ug/L	1	20.0	ND	152	72-136%	3	30%	Q-54a
Chlorobenzene	22.5	0.250	0.500	ug/L	1	20.0	ND	113	80-120%	2	30%	
Chloroethane	20.6	5.00	5.00	ug/L	1	20.0	ND	103	60-138%	8	30%	
Chloroform	24.4	0.500	1.00	ug/L	1	20.0	ND	122	79-124%	3	30%	
Chloromethane	20.9	2.50	5.00	ug/L	1	20.0	ND	105	50-139%	4	30%	
2-Chlorotoluene	22.3	0.500	1.00	ug/L	1	20.0	ND	111	79-122%	4	30%	
4-Chlorotoluene	22.9	0.500	1.00	ug/L	1	20.0	ND	114	78-122%	6	30%	
Dibromochloromethane	24.4	0.500	1.00	ug/L	1	20.0	ND	122	74-126%	2	30%	
1,2-Dibromo-3-chloropropane	21.4	2.50	5.00	ug/L	1	20.0	ND	107	62-128%	2	30%	
1,2-Dibromoethane (EDB)	22.2	0.250	0.500	ug/L	1	20.0	ND	111	77-121%	2	30%	
Dibromomethane	23.9	0.500	1.00	ug/L	1	20.0	ND	120	79-123%	4	30%	
1,2-Dichlorobenzene	21.7	0.250	0.500	ug/L	1	20.0	ND	109	80-120%	5	30%	
1,3-Dichlorobenzene	21.5	0.250	0.500	ug/L	1	20.0	ND	108	80-120%	4	30%	
1,4-Dichlorobenzene	21.4	0.250	0.500	ug/L	1	20.0	ND	107	79-120%	5	30%	
Dichlorodifluoromethane	19.5	0.500	1.00	ug/L	1	20.0	ND	98	32-152%	2	30%	ICV-01
1,1-Dichloroethane	24.3	0.200	0.400	ug/L	1	20.0	ND	122	77-125%	3	30%	
1,2-Dichloroethane (EDC)	23.4	0.200	0.400	ug/L	1	20.0	ND	117	73-128%	2	30%	
1,1-Dichloroethene	25.0	0.200	0.400	ug/L	1	20.0	ND	125	71-131%	8	30%	
cis-1,2-Dichloroethene	24.0	0.200	0.400	ug/L	1	20.0	ND	120	78-123%	2	30%	
trans-1,2-Dichloroethene	24.4	0.200	0.400	ug/L	1	20.0	ND	122	75-124%	5	30%	
1,2-Dichloropropane	24.0	0.250	0.500	ug/L	1	20.0	ND	120	78-122%	4	30%	
1,3-Dichloropropane	22.7	0.500	1.00	ug/L	1	20.0	ND	113	80-120%	1	30%	
2,2-Dichloropropane	32.2	0.500	1.00	ug/L	1	20.0	ND	161	60-139%	2	30%	Q-54h
1,1-Dichloropropene	23.8	0.500	1.00	ug/L	1	20.0	ND	119	79-125%	3	30%	
cis-1,3-Dichloropropene	21.7	0.500	1.00	ug/L	1	20.0	ND	109	75-124%	5	30%	
trans-1,3-Dichloropropene	25.4	1.00	2.00	ug/L	1	20.0	ND	127	73-127%	3	30%	Q-54d
Ethylbenzene	22.9	0.250	0.500	ug/L	1	20.0	ND	114	79-121%	3	30%	
Hexachlorobutadiene	23.2	2.50	5.00	ug/L	1	20.0	ND	116	66-134%	6	30%	
2-Hexanone	47.1	5.00	10.0	ug/L	1	40.0	ND	118	57-139%	4	30%	
Isopropylbenzene	22.7	0.500	1.00	ug/L	1	20.0	ND	114	72-131%	3	30%	
4-Isopropyltoluene	22.7	0.500	1.00	ug/L	1	20.0	ND	113	77-127%	5	30%	
Methylene chloride	20.5	5.00	10.0	ug/L	1	20.0	ND	102	74-124%	2	30%	

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Darrell Auvil, Client Services Manager



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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Matrix Spike Dup (1090989-MSD1)			Prepared: 09/27/21 08:47 Analyzed: 09/27/21 17:14									
QC Source Sample: Non-SDG (A110858-03)												
4-Methyl-2-pentanone (MiBK)	49.1	5.00	10.0	ug/L	1	40.0	ND	123	67-130%	3	30%	
Methyl tert-butyl ether (MTBE)	20.2	0.500	1.00	ug/L	1	20.0	ND	101	71-124%	5	30%	
Naphthalene	16.1	2.00	2.00	ug/L	1	20.0	ND	80	61-128%	5	30%	Q-54m
n-Propylbenzene	23.0	0.250	0.500	ug/L	1	20.0	ND	115	76-126%	6	30%	
Styrene	22.8	0.500	1.00	ug/L	1	20.0	ND	114	78-123%	1	30%	
1,1,1,2-Tetrachloroethane	28.4	0.200	0.400	ug/L	1	20.0	ND	142	78-124%	0.8	30%	Q-54b
1,1,2,2-Tetrachloroethane	23.6	0.250	0.500	ug/L	1	20.0	ND	118	71-121%	5	30%	
Tetrachloroethene (PCE)	22.5	0.200	0.400	ug/L	1	20.0	ND	112	74-129%	4	30%	
Toluene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	80-121%	3	30%	
1,2,3-Trichlorobenzene	21.3	1.00	2.00	ug/L	1	20.0	ND	107	69-129%	6	30%	
1,2,4-Trichlorobenzene	19.5	1.00	2.00	ug/L	1	20.0	ND	97	69-130%	4	30%	
1,1,1-Trichloroethane	25.5	0.200	0.400	ug/L	1	20.0	ND	128	74-131%	3	30%	
1,1,2-Trichloroethane	22.2	0.250	0.500	ug/L	1	20.0	ND	111	80-120%	2	30%	
Trichloroethene (TCE)	23.0	0.200	0.400	ug/L	1	20.0	ND	115	79-123%	4	30%	
Trichlorofluoromethane	26.6	1.00	2.00	ug/L	1	20.0	ND	133	65-141%	0.8	30%	
1,2,3-Trichloropropane	22.6	0.500	1.00	ug/L	1	20.0	ND	113	73-122%	3	30%	
1,2,4-Trimethylbenzene	22.7	0.500	1.00	ug/L	1	20.0	ND	114	76-124%	6	30%	
1,3,5-Trimethylbenzene	22.7	0.500	1.00	ug/L	1	20.0	ND	113	75-124%	5	30%	
Vinyl chloride	22.7	0.200	0.400	ug/L	1	20.0	ND	114	58-137%	4	30%	
m,p-Xylene	45.3	0.500	1.00	ug/L	1	40.0	ND	113	80-121%	3	30%	
o-Xylene	21.2	0.250	0.500	ug/L	1	20.0	ND	106	78-122%	1	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109576 - EPA 5035A						Soil						
Blank (1109576-BLK1)			Prepared: 10/01/21 09:00 Analyzed: 10/01/21 11:49									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	167	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109576 - EPA 5035A						Soil						
Blank (1109576-BLK1)			Prepared: 10/01/21 09:00 Analyzed: 10/01/21 11:49									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	---
2-Hexanone	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	---
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	---
4-Methyl-2-pentanone (MiBK)	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	---
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	---
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	---
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	---
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	---
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	---
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	---

Surr: 1,4-Difluorobenzene (Surr) Recovery: 109 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109576 - EPA 5035A						Soil						
Blank (1109576-BLK1)						Prepared: 10/01/21 09:00 Analyzed: 10/01/21 11:49						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (1109576-BS1)						Prepared: 10/01/21 09:00 Analyzed: 10/01/21 10:28						
5035A/8260D												
Acetone	1860	500	1000	ug/kg wet	50	2000	---	93	80-120%	---	---	
Acrylonitrile	1020	50.0	100	ug/kg wet	50	1000	---	102	80-120%	---	---	
Benzene	1190	5.00	10.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
Bromobenzene	1000	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Bromochloromethane	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Bromodichloromethane	1190	25.0	50.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
Bromoform	880	50.0	100	ug/kg wet	50	1000	---	88	80-120%	---	---	
Bromomethane	1650	500	500	ug/kg wet	50	1000	---	165	80-120%	---	---	Q-56
2-Butanone (MEK)	1910	250	500	ug/kg wet	50	2000	---	95	80-120%	---	---	
n-Butylbenzene	922	25.0	50.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
sec-Butylbenzene	997	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
tert-Butylbenzene	913	25.0	50.0	ug/kg wet	50	1000	---	91	80-120%	---	---	
Carbon disulfide	1470	250	500	ug/kg wet	50	1000	---	147	80-120%	---	---	Q-56
Carbon tetrachloride	1320	25.0	50.0	ug/kg wet	50	1000	---	132	80-120%	---	---	Q-56
Chlorobenzene	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Chloroethane	1560	250	500	ug/kg wet	50	1000	---	156	80-120%	---	---	Q-56
Chloroform	1220	25.0	50.0	ug/kg wet	50	1000	---	122	80-120%	---	---	Q-56
Chloromethane	1060	125	250	ug/kg wet	50	1000	---	106	80-120%	---	---	
2-Chlorotoluene	986	25.0	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
4-Chlorotoluene	964	25.0	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
Dibromochloromethane	949	50.0	100	ug/kg wet	50	1000	---	95	80-120%	---	---	
1,2-Dibromo-3-chloropropane	776	250	250	ug/kg wet	50	1000	---	78	80-120%	---	---	Q-55
1,2-Dibromoethane (EDB)	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Dibromomethane	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,2-Dichlorobenzene	958	12.5	25.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
1,3-Dichlorobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,4-Dichlorobenzene	964	12.5	25.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
Dichlorodifluoromethane	1150	50.0	100	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,1-Dichloroethane	1170	12.5	25.0	ug/kg wet	50	1000	---	117	80-120%	---	---	

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ANALYTICAL REPORT

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109576 - EPA 5035A						Soil						
LCS (1109576-BS1)						Prepared: 10/01/21 09:00 Analyzed: 10/01/21 10:28						
1,2-Dichloroethane (EDC)	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,1-Dichloroethene	1570	12.5	25.0	ug/kg wet	50	1000	---	157	80-120%	---	---	Q-56
cis-1,2-Dichloroethene	1190	12.5	25.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
trans-1,2-Dichloroethene	1220	12.5	25.0	ug/kg wet	50	1000	---	122	80-120%	---	---	Q-56
1,2-Dichloropropane	1190	12.5	25.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
1,3-Dichloropropane	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
2,2-Dichloropropane	1380	25.0	50.0	ug/kg wet	50	1000	---	138	80-120%	---	---	Q-56
1,1-Dichloropropene	1180	25.0	50.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
cis-1,3-Dichloropropene	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
trans-1,3-Dichloropropene	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Ethylbenzene	996	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Hexachlorobutadiene	932	50.0	100	ug/kg wet	50	1000	---	93	80-120%	---	---	
2-Hexanone	1480	500	500	ug/kg wet	50	2000	---	74	80-120%	---	---	Q-55
Isopropylbenzene	974	25.0	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
4-Isopropyltoluene	948	25.0	50.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
Methylene chloride	1250	250	500	ug/kg wet	50	1000	---	125	80-120%	---	---	Q-56
4-Methyl-2-pentanone (MiBK)	1550	500	500	ug/kg wet	50	2000	---	78	80-120%	---	---	Q-55
Methyl tert-butyl ether (MTBE)	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
Naphthalene	807	50.0	100	ug/kg wet	50	1000	---	81	80-120%	---	---	
n-Propylbenzene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Styrene	954	25.0	50.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1140	12.5	25.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
1,1,2,2-Tetrachloroethane	928	25.0	50.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
Tetrachloroethene (PCE)	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Toluene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,2,3-Trichlorobenzene	931	125	250	ug/kg wet	50	1000	---	93	80-120%	---	---	
1,2,4-Trichlorobenzene	856	125	250	ug/kg wet	50	1000	---	86	80-120%	---	---	
1,1,1-Trichloroethane	1320	12.5	25.0	ug/kg wet	50	1000	---	132	80-120%	---	---	Q-56
1,1,2-Trichloroethane	1050	12.5	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Trichloroethene (TCE)	1230	12.5	25.0	ug/kg wet	50	1000	---	123	80-120%	---	---	Q-56
Trichlorofluoromethane	1410	50.0	100	ug/kg wet	50	1000	---	141	80-120%	---	---	Q-56
1,2,3-Trichloropropane	973	25.0	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
1,2,4-Trimethylbenzene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,3,5-Trimethylbenzene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109576 - EPA 5035A						Soil						
LCS (1109576-BS1)			Prepared: 10/01/21 09:00 Analyzed: 10/01/21 10:28									
Vinyl chloride	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
m,p-Xylene	1920	25.0	50.0	ug/kg wet	50	2000	---	96	80-120%	---	---	
o-Xylene	926	12.5	25.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 109 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (1109576-DUP1)			Prepared: 09/27/21 10:15 Analyzed: 10/01/21 16:18									
QC Source Sample: Non-SDG (A111121-01)												
Acetone	ND	555	1110	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	55.5	111	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	5.55	11.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	55.5	111	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	555	555	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	277	555	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	277	555	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	277	555	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	139	277	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	55.5	111	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	277	277	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109576 - EPA 5035A						Soil						
Duplicate (1109576-DUP1)			Prepared: 09/27/21 10:15 Analyzed: 10/01/21 16:18									
QC Source Sample: Non-SDG (A111121-01)												
1,3-Dichlorobenzene	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	55.5	111	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	55.5	111	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	55.5	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	55.5	111	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	139	277	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	139	277	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109576 - EPA 5035A												
Soil												
Duplicate (1109576-DUP1)												
						Prepared: 09/27/21 10:15 Analyzed: 10/01/21 16:18						
QC Source Sample: Non-SDG (A111121-01)												
Trichloroethene (TCE)	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	55.5	111	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	27.7	55.5	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	13.9	27.7	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 108 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (1109576-MS1)												
						Prepared: 09/27/21 13:20 Analyzed: 10/01/21 17:39						
QC Source Sample: Non-SDG (A111121-03)												
5035A/8260D												
Acetone	2030	530	1060	ug/kg dry	50	2120	ND	96	36-164%	---	---	
Acrylonitrile	1150	53.0	106	ug/kg dry	50	1060	ND	109	65-134%	---	---	
Benzene	1230	5.30	10.6	ug/kg dry	50	1060	ND	116	77-121%	---	---	
Bromobenzene	1050	13.3	26.5	ug/kg dry	50	1060	ND	99	78-121%	---	---	
Bromochloromethane	1140	26.5	53.0	ug/kg dry	50	1060	ND	107	78-125%	---	---	
Bromodichloromethane	1260	26.5	53.0	ug/kg dry	50	1060	ND	119	75-127%	---	---	
Bromoform	947	53.0	106	ug/kg dry	50	1060	ND	89	67-132%	---	---	
Bromomethane	1850	530	530	ug/kg dry	50	1060	ND	175	53-143%	---	---	Q-54k
2-Butanone (MEK)	2110	265	530	ug/kg dry	50	2120	ND	100	51-148%	---	---	
n-Butylbenzene	920	26.5	53.0	ug/kg dry	50	1060	ND	87	70-128%	---	---	
sec-Butylbenzene	1010	26.5	53.0	ug/kg dry	50	1060	ND	95	73-126%	---	---	
tert-Butylbenzene	926	26.5	53.0	ug/kg dry	50	1060	ND	87	73-125%	---	---	
Carbon disulfide	1540	265	530	ug/kg dry	50	1060	ND	145	63-132%	---	---	Q-54f
Carbon tetrachloride	1370	26.5	53.0	ug/kg dry	50	1060	ND	130	70-135%	---	---	Q-54
Chlorobenzene	1080	13.3	26.5	ug/kg dry	50	1060	ND	102	79-120%	---	---	
Chloroethane	1780	265	530	ug/kg dry	50	1060	ND	168	59-139%	---	---	Q-54i
Chloroform	1270	26.5	53.0	ug/kg dry	50	1060	ND	120	78-123%	---	---	Q-54d
Chloromethane	1070	133	265	ug/kg dry	50	1060	ND	101	50-136%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109576 - EPA 5035A						Soil						
Matrix Spike (1109576-MS1)						Prepared: 09/27/21 13:20 Analyzed: 10/01/21 17:39						
QC Source Sample: Non-SDG (A111121-03)												
2-Chlorotoluene	1020	26.5	53.0	ug/kg dry	50	1060	ND	96	75-122%	---	---	
4-Chlorotoluene	986	26.5	53.0	ug/kg dry	50	1060	ND	93	72-124%	---	---	
Dibromochloromethane	985	53.0	106	ug/kg dry	50	1060	ND	93	74-126%	---	---	
1,2-Dibromo-3-chloropropane	832	265	265	ug/kg dry	50	1060	ND	79	61-132%	---	---	Q-54n
1,2-Dibromoethane (EDB)	1090	26.5	53.0	ug/kg dry	50	1060	ND	102	78-122%	---	---	
Dibromomethane	1190	26.5	53.0	ug/kg dry	50	1060	ND	113	78-125%	---	---	
1,2-Dichlorobenzene	998	13.3	26.5	ug/kg dry	50	1060	ND	94	78-121%	---	---	
1,3-Dichlorobenzene	1040	13.3	26.5	ug/kg dry	50	1060	ND	99	77-121%	---	---	
1,4-Dichlorobenzene	1000	13.3	26.5	ug/kg dry	50	1060	ND	94	75-120%	---	---	
Dichlorodifluoromethane	1230	53.0	106	ug/kg dry	50	1060	ND	116	29-149%	---	---	
1,1-Dichloroethane	1300	13.3	26.5	ug/kg dry	50	1060	ND	123	76-125%	---	---	
1,2-Dichloroethane (EDC)	1180	13.3	26.5	ug/kg dry	50	1060	ND	112	73-128%	---	---	
1,1-Dichloroethene	1650	13.3	26.5	ug/kg dry	50	1060	ND	156	70-131%	---	---	Q-54j
cis-1,2-Dichloroethene	1250	13.3	26.5	ug/kg dry	50	1060	ND	118	77-123%	---	---	
trans-1,2-Dichloroethene	1270	13.3	26.5	ug/kg dry	50	1060	ND	120	74-125%	---	---	Q-54d
1,2-Dichloropropane	1240	13.3	26.5	ug/kg dry	50	1060	ND	117	76-123%	---	---	
1,3-Dichloropropane	1060	26.5	53.0	ug/kg dry	50	1060	ND	100	77-121%	---	---	
2,2-Dichloropropane	1380	26.5	53.0	ug/kg dry	50	1060	ND	131	67-133%	---	---	Q-54c
1,1-Dichloropropene	1210	26.5	53.0	ug/kg dry	50	1060	ND	114	76-125%	---	---	
cis-1,3-Dichloropropene	1200	26.5	53.0	ug/kg dry	50	1060	ND	113	74-126%	---	---	
trans-1,3-Dichloropropene	1040	26.5	53.0	ug/kg dry	50	1060	ND	99	71-130%	---	---	
Ethylbenzene	1020	13.3	26.5	ug/kg dry	50	1060	ND	96	76-122%	---	---	
Hexachlorobutadiene	899	53.0	106	ug/kg dry	50	1060	ND	85	61-135%	---	---	
2-Hexanone	1610	530	530	ug/kg dry	50	2120	ND	76	53-145%	---	---	Q-54o
Isopropylbenzene	987	26.5	53.0	ug/kg dry	50	1060	ND	93	68-134%	---	---	
4-Isopropyltoluene	961	26.5	53.0	ug/kg dry	50	1060	ND	91	73-127%	---	---	
Methylene chloride	1250	265	530	ug/kg dry	50	1060	ND	118	70-128%	---	---	Q-54l
4-Methyl-2-pentanone (MiBK)	1660	265	530	ug/kg dry	50	2120	ND	79	65-135%	---	---	Q-54n
Methyl tert-butyl ether (MTBE)	1200	26.5	53.0	ug/kg dry	50	1060	ND	113	73-125%	---	---	
Naphthalene	851	53.0	106	ug/kg dry	50	1060	ND	80	62-129%	---	---	
n-Propylbenzene	1030	13.3	26.5	ug/kg dry	50	1060	ND	98	73-125%	---	---	
Styrene	984	26.5	53.0	ug/kg dry	50	1060	ND	93	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1190	13.3	26.5	ug/kg dry	50	1060	ND	112	78-125%	---	---	

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109576 - EPA 5035A						Soil						
Matrix Spike (1109576-MS1)			Prepared: 09/27/21 13:20 Analyzed: 10/01/21 17:39									
QC Source Sample: Non-SDG (A111121-03)												
1,1,2,2-Tetrachloroethane	979	26.5	53.0	ug/kg dry	50	1060	ND	92	70-124%	---	---	
Tetrachloroethene (PCE)	1120	13.3	26.5	ug/kg dry	50	1060	ND	106	73-128%	---	---	
Toluene	1050	26.5	53.0	ug/kg dry	50	1060	ND	99	77-121%	---	---	
1,2,3-Trichlorobenzene	967	133	265	ug/kg dry	50	1060	ND	91	66-130%	---	---	
1,2,4-Trichlorobenzene	890	133	265	ug/kg dry	50	1060	ND	84	67-129%	---	---	
1,1,1-Trichloroethane	1350	13.3	26.5	ug/kg dry	50	1060	ND	128	73-130%	---	---	Q-54
1,1,2-Trichloroethane	1100	13.3	26.5	ug/kg dry	50	1060	ND	104	78-121%	---	---	
Trichloroethene (TCE)	1260	13.3	26.5	ug/kg dry	50	1060	ND	119	77-123%	---	---	Q-54g
Trichlorofluoromethane	1520	53.0	106	ug/kg dry	50	1060	ND	143	62-140%	---	---	Q-54e
1,2,3-Trichloropropane	1000	26.5	53.0	ug/kg dry	50	1060	ND	95	73-125%	---	---	
1,2,4-Trimethylbenzene	1030	26.5	53.0	ug/kg dry	50	1060	ND	97	75-123%	---	---	
1,3,5-Trimethylbenzene	1050	26.5	53.0	ug/kg dry	50	1060	ND	99	73-124%	---	---	
Vinyl chloride	1170	13.3	26.5	ug/kg dry	50	1060	ND	111	56-135%	---	---	
m,p-Xylene	1990	26.5	53.0	ug/kg dry	50	2120	ND	94	77-124%	---	---	
o-Xylene	961	13.3	26.5	ug/kg dry	50	1060	ND	91	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 107 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>95 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090841 - EPA 3510C (Acid Extraction)						Water						
Blank (1090841-BLK1)						Prepared: 09/22/21 10:43 Analyzed: 09/22/21 14:29						
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 68 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>94 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS (1090841-BS1)						Prepared: 09/22/21 10:43 Analyzed: 09/22/21 14:54						
<u>EPA 8270E SIM</u>												
Acenaphthene	2.79	0.0100	0.0200	ug/L	1	4.00	---	70	47-122%	---	---	
Acenaphthylene	2.89	0.0100	0.0200	ug/L	1	4.00	---	72	41-130%	---	---	
Anthracene	3.01	0.0100	0.0200	ug/L	1	4.00	---	75	57-123%	---	---	
Benz(a)anthracene	3.13	0.0100	0.0200	ug/L	1	4.00	---	78	58-125%	---	---	
Benzo(a)pyrene	3.32	0.0100	0.0200	ug/L	1	4.00	---	83	54-128%	---	---	
Benzo(b)fluoranthene	3.26	0.0100	0.0200	ug/L	1	4.00	---	82	53-131%	---	---	
Benzo(k)fluoranthene	3.62	0.0100	0.0200	ug/L	1	4.00	---	90	57-129%	---	---	
Benzo(g,h,i)perylene	3.50	0.0100	0.0200	ug/L	1	4.00	---	88	50-134%	---	---	
Chrysene	3.37	0.0100	0.0200	ug/L	1	4.00	---	84	59-123%	---	---	
Dibenz(a,h)anthracene	3.42	0.0100	0.0200	ug/L	1	4.00	---	86	51-134%	---	---	
Fluoranthene	3.02	0.0100	0.0200	ug/L	1	4.00	---	76	57-128%	---	---	
Fluorene	2.81	0.0100	0.0200	ug/L	1	4.00	---	70	52-124%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090841 - EPA 3510C (Acid Extraction)						Water						
LCS (1090841-BS1)						Prepared: 09/22/21 10:43 Analyzed: 09/22/21 14:54						
Indeno(1,2,3-cd)pyrene	3.25	0.0100	0.0200	ug/L	1	4.00	---	81	52-134%	---	---	
Naphthalene	2.51	0.0200	0.0400	ug/L	1	4.00	---	63	40-121%	---	---	
Phenanthrene	3.03	0.0100	0.0200	ug/L	1	4.00	---	76	59-120%	---	---	
Pyrene	3.05	0.0100	0.0200	ug/L	1	4.00	---	76	57-126%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>85 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS Dup (1090841-BSD1)						Prepared: 09/22/21 10:43 Analyzed: 09/22/21 15:20							Q-19
EPA 8270E SIM													
Acenaphthene	2.77	0.0100	0.0200	ug/L	1	4.00	---	69	47-122%	0.8	30%		
Acenaphthylene	2.93	0.0100	0.0200	ug/L	1	4.00	---	73	41-130%	1	30%		
Anthracene	3.05	0.0100	0.0200	ug/L	1	4.00	---	76	57-123%	2	30%		
Benz(a)anthracene	3.18	0.0100	0.0200	ug/L	1	4.00	---	79	58-125%	1	30%		
Benzo(a)pyrene	3.34	0.0100	0.0200	ug/L	1	4.00	---	84	54-128%	0.9	30%		
Benzo(b)fluoranthene	3.39	0.0100	0.0200	ug/L	1	4.00	---	85	53-131%	4	30%		
Benzo(k)fluoranthene	3.67	0.0100	0.0200	ug/L	1	4.00	---	92	57-129%	1	30%		
Benzo(g,h,i)perylene	3.51	0.0100	0.0200	ug/L	1	4.00	---	88	50-134%	0.3	30%		
Chrysene	3.41	0.0100	0.0200	ug/L	1	4.00	---	85	59-123%	1	30%		
Dibenz(a,h)anthracene	3.50	0.0100	0.0200	ug/L	1	4.00	---	87	51-134%	2	30%		
Fluoranthene	3.04	0.0100	0.0200	ug/L	1	4.00	---	76	57-128%	0.6	30%		
Fluorene	2.82	0.0100	0.0200	ug/L	1	4.00	---	71	52-124%	0.3	30%		
Indeno(1,2,3-cd)pyrene	3.29	0.0100	0.0200	ug/L	1	4.00	---	82	52-134%	1	30%		
Naphthalene	2.51	0.0200	0.0400	ug/L	1	4.00	---	63	40-121%	0.2	30%		
Phenanthrene	3.09	0.0100	0.0200	ug/L	1	4.00	---	77	59-120%	2	30%		
Pyrene	3.00	0.0100	0.0200	ug/L	1	4.00	---	75	57-126%	2	30%		
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 70 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>							
<i>p-Terphenyl-d14 (Surr)</i>		<i>85 %</i>		<i>50-134 %</i>		<i>"</i>							

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090901 - EPA 3510C (Acid Extraction)						Water						
Blank (1090901-BLK1)			Prepared: 09/23/21 10:26 Analyzed: 09/23/21 14:07									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0364	0.0727	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS (1090901-BS1)			Prepared: 09/23/21 10:26 Analyzed: 09/23/21 14:32									
<u>EPA 8270E SIM</u>												
Acenaphthene	6.18	0.0200	0.0400	ug/L	1	8.00	---	77	47-122%	---	---	
Acenaphthylene	6.29	0.0200	0.0400	ug/L	1	8.00	---	79	41-130%	---	---	
Anthracene	6.81	0.0200	0.0400	ug/L	1	8.00	---	85	57-123%	---	---	
Benz(a)anthracene	6.92	0.0200	0.0400	ug/L	1	8.00	---	87	58-125%	---	---	
Benzo(a)pyrene	7.39	0.0200	0.0400	ug/L	1	8.00	---	92	54-128%	---	---	
Benzo(b)fluoranthene	7.22	0.0200	0.0400	ug/L	1	8.00	---	90	53-131%	---	---	
Benzo(k)fluoranthene	7.94	0.0200	0.0400	ug/L	1	8.00	---	99	57-129%	---	---	
Benzo(g,h,i)perylene	8.18	0.0200	0.0400	ug/L	1	8.00	---	102	50-134%	---	---	
Chrysene	7.32	0.0200	0.0400	ug/L	1	8.00	---	92	59-123%	---	---	
Dibenz(a,h)anthracene	8.18	0.0200	0.0400	ug/L	1	8.00	---	102	51-134%	---	---	
Fluoranthene	6.55	0.0200	0.0400	ug/L	1	8.00	---	82	57-128%	---	---	
Fluorene	6.09	0.0200	0.0400	ug/L	1	8.00	---	76	52-124%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090901 - EPA 3510C (Acid Extraction)						Water						
LCS (1090901-BS1)						Prepared: 09/23/21 10:26 Analyzed: 09/23/21 14:32						
Indeno(1,2,3-cd)pyrene	7.47	0.0200	0.0400	ug/L	1	8.00	---	93	52-134%	---	---	
Naphthalene	5.41	0.0400	0.0800	ug/L	1	8.00	---	68	40-121%	---	---	
Phenanthrene	6.97	0.0200	0.0400	ug/L	1	8.00	---	87	59-120%	---	---	
Pyrene	6.46	0.0200	0.0400	ug/L	1	8.00	---	81	57-126%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 83 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>92 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS Dup (1090901-BSD1)						Prepared: 09/23/21 10:26 Analyzed: 09/23/21 14:57							Q-19
EPA 8270E SIM													
Acenaphthene	6.63	0.0200	0.0400	ug/L	1	8.00	---	83	47-122%	7	30%		
Acenaphthylene	6.78	0.0200	0.0400	ug/L	1	8.00	---	85	41-130%	8	30%		
Anthracene	6.84	0.0200	0.0400	ug/L	1	8.00	---	86	57-123%	0.4	30%		
Benz(a)anthracene	6.92	0.0200	0.0400	ug/L	1	8.00	---	86	58-125%	0.1	30%		
Benzo(a)pyrene	7.09	0.0200	0.0400	ug/L	1	8.00	---	89	54-128%	4	30%		
Benzo(b)fluoranthene	7.29	0.0200	0.0400	ug/L	1	8.00	---	91	53-131%	0.9	30%		
Benzo(k)fluoranthene	7.73	0.0200	0.0400	ug/L	1	8.00	---	97	57-129%	3	30%		
Benzo(g,h,i)perylene	8.06	0.0200	0.0400	ug/L	1	8.00	---	101	50-134%	1	30%		
Chrysene	7.21	0.0200	0.0400	ug/L	1	8.00	---	90	59-123%	2	30%		
Dibenz(a,h)anthracene	7.54	0.0200	0.0400	ug/L	1	8.00	---	94	51-134%	8	30%		
Fluoranthene	6.30	0.0200	0.0400	ug/L	1	8.00	---	79	57-128%	4	30%		
Fluorene	6.39	0.0200	0.0400	ug/L	1	8.00	---	80	52-124%	5	30%		
Indeno(1,2,3-cd)pyrene	7.36	0.0200	0.0400	ug/L	1	8.00	---	92	52-134%	1	30%		
Naphthalene	6.17	0.0400	0.0800	ug/L	1	8.00	---	77	40-121%	13	30%		
Phenanthrene	6.92	0.0200	0.0400	ug/L	1	8.00	---	86	59-120%	0.8	30%		
Pyrene	6.21	0.0200	0.0400	ug/L	1	8.00	---	78	57-126%	4	30%		
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>							
<i>p-Terphenyl-d14 (Surr)</i>		<i>91 %</i>		<i>50-134 %</i>		<i>"</i>							

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090946 - EPA 3546												
Soil												
Blank (1090946-BLK1)												
Prepared: 09/24/21 10:03 Analyzed: 09/24/21 15:50												
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>76 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1090946-BS1)												
Prepared: 09/24/21 10:03 Analyzed: 09/24/21 16:15												
<u>EPA 8270E SIM</u>												
Acenaphthene	578	5.00	10.0	ug/kg wet	1	800	---	72	40-123%	---	---	
Acenaphthylene	593	5.00	10.0	ug/kg wet	1	800	---	74	32-132%	---	---	
Anthracene	562	5.00	10.0	ug/kg wet	1	800	---	70	47-123%	---	---	
Benz(a)anthracene	546	5.00	10.0	ug/kg wet	1	800	---	68	49-126%	---	---	
Benzo(a)pyrene	548	5.00	10.0	ug/kg wet	1	800	---	69	45-129%	---	---	
Benzo(b)fluoranthene	552	5.00	10.0	ug/kg wet	1	800	---	69	45-132%	---	---	
Benzo(k)fluoranthene	630	5.00	10.0	ug/kg wet	1	800	---	79	47-132%	---	---	
Benzo(g,h,i)perylene	625	5.00	10.0	ug/kg wet	1	800	---	78	43-134%	---	---	
Chrysene	588	5.00	10.0	ug/kg wet	1	800	---	74	50-124%	---	---	
Dibenz(a,h)anthracene	627	5.00	10.0	ug/kg wet	1	800	---	78	45-134%	---	---	
Fluoranthene	511	5.00	10.0	ug/kg wet	1	800	---	64	50-127%	---	---	
Fluorene	546	5.00	10.0	ug/kg wet	1	800	---	68	43-125%	---	---	

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090946 - EPA 3546												
Soil												
LCS (1090946-BS1)												
						Prepared: 09/24/21 10:03 Analyzed: 09/24/21 16:15						
Indeno(1,2,3-cd)pyrene	573	5.00	10.0	ug/kg wet	1	800	---	72	45-133%	---	---	
Naphthalene	566	5.00	10.0	ug/kg wet	1	800	---	71	35-123%	---	---	
Phenanthrene	582	5.00	10.0	ug/kg wet	1	800	---	73	50-121%	---	---	
Pyrene	496	5.00	10.0	ug/kg wet	1	800	---	62	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 73 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>74 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1090946-DUP1)												
						Prepared: 09/24/21 10:03 Analyzed: 09/24/21 17:07						
QC Source Sample: Non-SDG (A110505-01)												
Acenaphthene	ND	11.5	11.5	ug/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	ND	16.1	16.1	ug/kg dry	1	---	ND	---	---	---	30%	R-02
Anthracene	ND	5.76	11.5	ug/kg dry	1	---	ND	---	---	---	30%	
Benz(a)anthracene	ND	5.76	11.5	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(a)pyrene	ND	5.76	11.5	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	6.19	5.76	11.5	ug/kg dry	1	---	ND	---	---	---	30%	Q-05, J
Benzo(k)fluoranthene	ND	5.76	11.5	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	5.76	11.5	ug/kg dry	1	---	ND	---	---	---	30%	
Chrysene	8.08	5.76	11.5	ug/kg dry	1	---	ND	---	---	---	30%	Q-05, J
Dibenz(a,h)anthracene	ND	5.76	11.5	ug/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	19.5	5.76	11.5	ug/kg dry	1	---	13.4	---	---	37	30%	Q-05
Fluorene	13.7	5.76	11.5	ug/kg dry	1	---	16.2	---	---	17	30%	
Indeno(1,2,3-cd)pyrene	ND	5.76	11.5	ug/kg dry	1	---	ND	---	---	---	30%	
Naphthalene	115	5.76	11.5	ug/kg dry	1	---	91.4	---	---	23	30%	
Phenanthrene	45.8	5.76	11.5	ug/kg dry	1	---	41.7	---	---	10	30%	
Pyrene	21.4	5.76	11.5	ug/kg dry	1	---	14.5	---	---	38	30%	Q-05
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 59 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>59 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (1090946-MS1)												
						Prepared: 09/24/21 10:03 Analyzed: 09/24/21 17:58						
QC Source Sample: Non-SDG (A110890-01)												
EPA 8270E SIM												
Acenaphthene	1810	362	362	ug/kg dry	1	1020	ND	142	40-123%	---	---	Q-02
Acenaphthylene	1040	91.8	91.8	ug/kg dry	1	1020	ND	102	32-132%	---	---	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090946 - EPA 3546						Soil						
Matrix Spike (1090946-MS1)						Prepared: 09/24/21 10:03 Analyzed: 09/24/21 17:58						
QC Source Sample: Non-SDG (A110890-01)												
Anthracene	1130	110	110	ug/kg dry	1	1020	ND	111	47-123%	---	---	
Benz(a)anthracene	687	37.0	37.0	ug/kg dry	1	1020	ND	67	49-126%	---	---	
Benzo(a)pyrene	669	6.38	12.8	ug/kg dry	1	1020	ND	66	45-129%	---	---	
Benzo(b)fluoranthene	660	6.38	12.8	ug/kg dry	1	1020	ND	65	45-132%	---	---	
Benzo(k)fluoranthene	727	6.38	12.8	ug/kg dry	1	1020	ND	71	47-132%	---	---	
Benzo(g,h,i)perylene	703	6.38	12.8	ug/kg dry	1	1020	ND	69	43-134%	---	---	
Chrysene	802	38.3	38.3	ug/kg dry	1	1020	ND	79	50-124%	---	---	
Dibenz(a,h)anthracene	654	6.38	12.8	ug/kg dry	1	1020	ND	64	45-134%	---	---	
Fluoranthene	846	6.38	12.8	ug/kg dry	1	1020	45.3	78	50-127%	---	---	
Fluorene	3770	6.38	12.8	ug/kg dry	1	1020	939	278	43-125%	---	---	Q-01
Indeno(1,2,3-cd)pyrene	657	6.38	12.8	ug/kg dry	1	1020	ND	64	45-133%	---	---	
Naphthalene	2280	6.38	12.8	ug/kg dry	1	1020	343	190	35-123%	---	---	Q-01
Phenanthrene	7900	6.38	12.8	ug/kg dry	1	1020	1770	601	50-121%	---	---	Q-03
Pyrene	1060	6.38	12.8	ug/kg dry	1	1020	75.9	96	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 60 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>61 %</i>		<i>54-127 %</i>		<i>"</i>						

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0100 - EPA 3051A												
Soil												
Blank (21J0100-BLK1)												
Prepared: 10/05/21 13:10 Analyzed: 10/05/21 23:18												
EPA 6020B												
Antimony	ND	0.240	0.481	mg/kg wet	5	---	---	---	---	---	---	
Arsenic	ND	0.240	0.481	mg/kg wet	5	---	---	---	---	---	---	
Barium	ND	0.240	0.481	mg/kg wet	5	---	---	---	---	---	---	
Cadmium	ND	0.0481	0.0962	mg/kg wet	5	---	---	---	---	---	---	
Chromium	ND	0.240	0.481	mg/kg wet	5	---	---	---	---	---	---	
Copper	ND	0.481	0.962	mg/kg wet	5	---	---	---	---	---	---	
Lead	ND	0.0481	0.0962	mg/kg wet	5	---	---	---	---	---	---	
Mercury	ND	0.0192	0.0385	mg/kg wet	5	---	---	---	---	---	---	
Selenium	ND	0.240	0.481	mg/kg wet	5	---	---	---	---	---	---	
Silver	ND	0.0481	0.0962	mg/kg wet	5	---	---	---	---	---	---	
Zinc	ND	0.962	1.92	mg/kg wet	5	---	---	---	---	---	---	

LCS (21J0100-BS1)												
Prepared: 10/05/21 13:10 Analyzed: 10/05/21 23:22												
EPA 6020B												
Antimony	25.5	0.250	0.500	mg/kg wet	5	25.0	---	102	80-120%	---	---	
Arsenic	50.0	0.250	0.500	mg/kg wet	5	50.0	---	100	80-120%	---	---	
Barium	46.8	0.250	0.500	mg/kg wet	5	50.0	---	94	80-120%	---	---	
Cadmium	47.2	0.0500	0.100	mg/kg wet	5	50.0	---	94	80-120%	---	---	
Chromium	45.8	0.250	0.500	mg/kg wet	5	50.0	---	92	80-120%	---	---	
Copper	47.7	0.500	1.00	mg/kg wet	5	50.0	---	95	80-120%	---	---	
Lead	49.6	0.0500	0.100	mg/kg wet	5	50.0	---	99	80-120%	---	---	
Mercury	0.989	0.0200	0.0400	mg/kg wet	5	1.00	---	99	80-120%	---	---	
Selenium	25.0	0.250	0.500	mg/kg wet	5	25.0	---	100	80-120%	---	---	
Silver	24.7	0.0500	0.100	mg/kg wet	5	25.0	---	99	80-120%	---	---	
Zinc	45.8	1.00	2.00	mg/kg wet	5	50.0	---	92	80-120%	---	---	

Duplicate (21J0100-DUP1)												
Prepared: 10/05/21 13:10 Analyzed: 10/05/21 23:45												
QC Source Sample: Non-SDG (A110922-16)												
Antimony	0.381	0.335	0.671	mg/kg dry	5	---	0.491	---	---	25	20%	J
Arsenic	5.35	0.335	0.671	mg/kg dry	5	---	5.97	---	---	11	20%	
Barium	145	0.335	0.671	mg/kg dry	5	---	167	---	---	14	20%	
Cadmium	0.212	0.0671	0.134	mg/kg dry	5	---	0.225	---	---	6	20%	
Chromium	24.5	0.335	0.671	mg/kg dry	5	---	33.1	---	---	30	20%	Q-04

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0100 - EPA 3051A												
Soil												
Duplicate (21J0100-DUP1)												
						Prepared: 10/05/21 13:10 Analyzed: 10/05/21 23:45						
<u>QC Source Sample: Non-SDG (A110922-16)</u>												
Copper	32.8	0.671	1.34	mg/kg dry	5	---	37.8	---	---	14	20%	
Lead	53.8	0.0671	0.134	mg/kg dry	5	---	54.9	---	---	2	20%	
Mercury	0.0761	0.0268	0.0537	mg/kg dry	5	---	0.0618	---	---	21	20%	Q-05
Selenium	0.378	0.335	0.671	mg/kg dry	5	---	0.451	---	---	18	20%	J
Silver	0.0926	0.0671	0.134	mg/kg dry	5	---	0.0990	---	---	7	20%	J
Zinc	101	1.34	2.68	mg/kg dry	5	---	113	---	---	11	20%	

Matrix Spike (21J0100-MS1)												
						Prepared: 10/05/21 13:10 Analyzed: 10/05/21 23:50						
<u>QC Source Sample: Non-SDG (A110922-16)</u>												
<u>EPA 6020B</u>												
Antimony	28.1	0.308	0.615	mg/kg dry	5	30.8	0.491	90	75-125%	---	---	
Arsenic	65.8	0.308	0.615	mg/kg dry	5	61.5	5.97	97	75-125%	---	---	
Barium	225	0.308	0.615	mg/kg dry	5	61.5	167	96	75-125%	---	---	
Cadmium	56.9	0.0615	0.123	mg/kg dry	5	61.5	0.225	92	75-125%	---	---	
Chromium	87.5	0.308	0.615	mg/kg dry	5	61.5	33.1	88	75-125%	---	---	
Copper	91.2	0.615	1.23	mg/kg dry	5	61.5	37.8	87	75-125%	---	---	
Lead	109	0.0615	0.123	mg/kg dry	5	61.5	54.9	88	75-125%	---	---	
Mercury	1.18	0.0246	0.0492	mg/kg dry	5	1.23	0.0618	91	75-125%	---	---	
Selenium	29.5	0.308	0.615	mg/kg dry	5	30.8	0.451	94	75-125%	---	---	
Silver	29.8	0.0615	0.123	mg/kg dry	5	30.8	0.0990	96	75-125%	---	---	
Zinc	161	1.23	2.46	mg/kg dry	5	61.5	113	79	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0043 - Matrix Matched Direct Inject												
Water												
Blank (21J0043-BLK1)												
						Prepared: 10/04/21 13:00 Analyzed: 10/04/21 17:31						
<u>EPA 6020B (Diss)</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
LCS (21J0043-BS1)												
						Prepared: 10/04/21 13:00 Analyzed: 10/04/21 17:36						
<u>EPA 6020B (Diss)</u>												
Arsenic	56.2	0.500	1.00	ug/L	1	55.6	---	101	80-120%	---	---	
Barium	52.3	0.500	1.00	ug/L	1	55.6	---	94	80-120%	---	---	
Cadmium	53.0	0.100	0.200	ug/L	1	55.6	---	95	80-120%	---	---	
Chromium	51.9	1.00	2.00	ug/L	1	55.6	---	93	80-120%	---	---	
Lead	53.2	0.100	0.200	ug/L	1	55.6	---	96	80-120%	---	---	
Mercury	1.05	0.0400	0.0800	ug/L	1	1.11	---	95	80-120%	---	---	
Selenium	27.4	0.500	1.00	ug/L	1	27.8	---	99	80-120%	---	---	
Silver	27.2	0.100	0.200	ug/L	1	27.8	---	98	80-120%	---	---	
Duplicate (21J0043-DUP1)												
						Prepared: 10/04/21 13:00 Analyzed: 10/04/21 17:45						
<u>QC Source Sample: B8 (A110712-05)</u>												
<u>EPA 6020B (Diss)</u>												
Arsenic	1.46	0.500	1.00	ug/L	1	---	1.53	---	---	5	20%	
Barium	103	0.500	1.00	ug/L	1	---	104	---	---	0.9	20%	
Cadmium	0.124	0.100	0.200	ug/L	1	---	0.127	---	---	3	20%	
Chromium	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	20%	
Lead	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Mercury	ND	0.0400	0.0800	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Duplicate (21J0043-DUP2)												
						Prepared: 10/04/21 13:00 Analyzed: 10/05/21 12:32						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0043 - Matrix Matched Direct Inject						Water						
Duplicate (21J0043-DUP2)						Prepared: 10/04/21 13:00 Analyzed: 10/05/21 12:32						
<u>QC Source Sample: B8 (A110712-05RE1)</u>												
<u>EPA 6020B (Diss)</u>												
Selenium	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	20%	Q-16
Matrix Spike (21J0043-MS1)						Prepared: 10/04/21 13:00 Analyzed: 10/04/21 17:49						
<u>QC Source Sample: B8 (A110712-05)</u>												
<u>EPA 6020B (Diss)</u>												
Arsenic	58.1	0.500	1.00	ug/L	1	55.6	1.53	102	75-125%	---	---	
Barium	151	0.500	1.00	ug/L	1	55.6	104	85	75-125%	---	---	
Chromium	49.3	1.00	2.00	ug/L	1	55.6	ND	89	75-125%	---	---	
Lead	50.0	0.100	0.200	ug/L	1	55.6	ND	90	75-125%	---	---	
Mercury	1.02	0.0400	0.0800	ug/L	1	1.11	ND	92	75-125%	---	---	
Matrix Spike (21J0043-MS4)						Prepared: 10/04/21 13:00 Analyzed: 10/13/21 01:00						
<u>QC Source Sample: B8 (A110712-05)</u>												
<u>EPA 6020B (Diss)</u>												
Cadmium	53.4	0.100	0.200	ug/L	1	55.6	0.127	96	75-125%	---	---	Q-16
Selenium	28.2	0.500	1.00	ug/L	1	27.8	ND	101	75-125%	---	---	Q-16
Silver	28.1	0.100	0.200	ug/L	1	27.8	ND	101	75-125%	---	---	Q-16

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090879 - Total Solids (Dry Weight)						Soil						
Duplicate (1090879-DUP1)			Prepared: 09/23/21 08:02 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110705-03)</u>												
% Solids	92.0	1.00	1.00	%	1	---	91.9	---	---	0.09	10%	
Duplicate (1090879-DUP2)			Prepared: 09/23/21 08:02 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110705-23)</u>												
% Solids	87.9	1.00	1.00	%	1	---	88.1	---	---	0.2	10%	
Duplicate (1090879-DUP3)			Prepared: 09/23/21 08:02 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110746-01)</u>												
% Solids	68.1	1.00	1.00	%	1	---	69.6	---	---	2	10%	
Duplicate (1090879-DUP4)			Prepared: 09/23/21 08:02 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110788-01)</u>												
% Solids	94.7	1.00	1.00	%	1	---	93.8	---	---	0.9	10%	
Duplicate (1090879-DUP5)			Prepared: 09/23/21 08:02 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110834-02)</u>												
% Solids	75.8	1.00	1.00	%	1	---	76.3	---	---	0.6	10%	
Duplicate (1090879-DUP6)			Prepared: 09/23/21 08:02 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110837-04)</u>												
% Solids	78.2	1.00	1.00	%	1	---	77.1	---	---	1	10%	
Duplicate (1090879-DUP7)			Prepared: 09/23/21 08:02 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110839-02)</u>												
% Solids	77.3	1.00	1.00	%	1	---	77.0	---	---	0.4	10%	
Duplicate (1090879-DUP8)			Prepared: 09/23/21 08:02 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110842-02)</u>												
% Solids	78.2	1.00	1.00	%	1	---	78.6	---	---	0.6	10%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090879 - Total Solids (Dry Weight)							Soil					
Duplicate (1090879-DUP9)			Prepared: 09/23/21 08:02 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110845-01)</u>												
% Solids	74.9	1.00	1.00	%	1	---	74.8	---	---	0.2	10%	
Duplicate (1090879-DUPA)			Prepared: 09/23/21 08:02 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110847-07)</u>												
% Solids	80.1	1.00	1.00	%	1	---	79.2	---	---	1	10%	
Duplicate (1090879-DUPB)			Prepared: 09/23/21 18:09 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110883-01)</u>												
% Solids	82.5	1.00	1.00	%	1	---	82.7	---	---	0.2	10%	
Duplicate (1090879-DUPC)			Prepared: 09/23/21 20:36 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110887-01)</u>												
% Solids	84.4	1.00	1.00	%	1	---	83.5	---	---	1	10%	
Duplicate (1090879-DUPD)			Prepared: 09/23/21 20:36 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110887-02)</u>												
% Solids	83.9	1.00	1.00	%	1	---	83.6	---	---	0.4	10%	
Duplicate (1090879-DUPE)			Prepared: 09/23/21 20:36 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110888-01)</u>												
% Solids	77.4	1.00	1.00	%	1	---	76.9	---	---	0.7	10%	
Duplicate (1090879-DUPF)			Prepared: 09/23/21 20:36 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110888-02)</u>												
% Solids	74.3	1.00	1.00	%	1	---	74.7	---	---	0.5	10%	
Duplicate (1090879-DUPG)			Prepared: 09/23/21 20:36 Analyzed: 09/24/21 09:14									
<u>QC Source Sample: Non-SDG (A110888-03)</u>												
% Solids	75.3	1.00	1.00	%	1	---	75.5	---	---	0.3	10%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	--------------------	-------	----------	-----------------	------------------	-------	-----------------	-----	--------------	-------

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090999</u>							
A110712-05	Water	NWTPH-Dx LL	09/21/21 08:45	09/27/21 10:32	980mL/2mL	1000mL/2mL	1.02

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1091067</u>							
A110712-06RE1	Soil	NWTPH-Dx	09/20/21 15:08	09/28/21 13:03	10.44g/5mL	10g/5mL	0.96

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090989</u>							
A110712-05	Water	NWTPH-Gx (MS)	09/21/21 08:45	09/27/21 08:47	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1109576</u>							
A110712-06	Soil	NWTPH-Gx (MS)	09/20/21 15:08	09/20/21 15:08	20.73g/20mL	5g/5mL	0.97

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090989</u>							
A110712-05	Water	EPA 8260D	09/21/21 08:45	09/27/21 08:47	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1109576</u>							
A110712-06	Soil	5035A/8260D	09/20/21 15:08	09/20/21 15:08	20.73g/20mL	5g/5mL	0.97

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3510C (Acid Extraction)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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 ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3510C (Acid Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1090901							
A110712-05RE1	Water	EPA 8270E SIM	09/21/21 08:45	09/23/21 12:11	930mL/2mL	1000mL/2mL	1.08

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1090946							
A110712-06	Soil	EPA 8270E SIM	09/20/21 15:08	09/24/21 10:03	10.21g/5mL	10g/5mL	0.98

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 21J0100							
A110712-06	Soil	EPA 6020B	09/20/21 15:08	10/05/21 13:10	0.459g/50mL	0.5g/50mL	1.09

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 21J0043							
A110712-05	Water	EPA 6020B (Diss)	09/21/21 08:45	10/04/21 13:00	45mL/50mL	45mL/50mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 1090879							
A110712-06	Soil	EPA 8000D	09/20/21 15:08	09/23/21 08:02			NA

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- COMP** Sample is a composite of discrete samples. See prep information for details.
- F-11** The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
- F-13** The chromatographic pattern does not resemble the fuel standard used for quantitation
- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-05** Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-02** Spike recovery is outside of established control limits due to matrix interference.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-41** Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +12%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +14%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +15%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +18%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +2%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +21%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +27%. The results are reported as Estimated Values.

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ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +3%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +34%. The results are reported as Estimated Values.
- Q-54i** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +36%. The results are reported as Estimated Values.
- Q-54j** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +37%. The results are reported as Estimated Values.
- Q-54k** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +45%. The results are reported as Estimated Values.
- Q-54l** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
- Q-54m** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -1%. The results are reported as Estimated Values.
- Q-54n** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -2%. The results are reported as Estimated Values.
- Q-54o** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -6%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- S-06** Surrogate recovery is outside of established control limits.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A110712 - 11 03 21 1522)

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A110712 - 11 03 21 1522).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EORB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
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COLES + BETTS ENVIRONMENTAL CONSULTING, LLC
 5741 NE Flanders St., Portland, OR 97213
 office: 503-477-6150
 mobile: 503-819-2835

Project Manager: **Jill Betts**
 Project No: **319**
 Project Name: **EORB**
 Collected by: **Jill Betts**

Comments:
 Metals analyzed by EPA Methods 200.6/200.7/471B.
 * Please use to make composite sample BB (15-215)C.

CHAIN OF CUSTODY

Apex Labs
 Lab Project No. _____
 Chain of Custody No. **106**

Samples Received at 4C (Y or N) _____
 Appropriate Containers Used (Y or N) _____
 Provide Verbal Results (Y or N) _____
 Provide Preliminary Results _____
 Yes _____
 No _____

Lab ID	Sample #	Date	Time	Sample Description	Matrix		Number of Containers		Analyzes to be Performed				Remarks		
					Soil	Water	Other	Test: Filtrate	Test: Sediment	Test: Both	Test: Both	Test: Both		Test: Both	Test: Both
BB 15-145	9	9/20/21	3:05		X		2								
BB 17-19	1	9/20/21	3:25		X		1								
BB 20-215	1	9/20/21	3:30		X		1								
BB 15-265	9	9/20/21	3:42		X		1								
BB 15-215	10	9/20/21			X		1								

Relinquished by: _____	Date: _____	Time: _____	Company: COLES + BETTS ENV
Relinquished by: _____	Date: _____	Time: _____	Company: _____
Relinquished by: _____	Date: _____	Time: _____	Company: _____

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110712 - 11 03 21 1522
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Environmental Consulting Element WO#: A1 I0712
 Project/Project #: EQRB/319

Delivery Info:
 Date/time received: 9/21/21 @ 1115 By: 80
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 9/21/21 @ 1115 By: 80
 Chain of Custody included? Yes No Custody seals? Yes No
 Signed/dated by client? Yes No
 Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.9</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>80</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
 Green dots applied to out of temperature samples? Yes/No
 Out of temperature samples form initiated? Yes/No
Sample Inspection: Date/time inspected: 9/21/21 @ 11:40 By: 15
 All samples intact? Yes No Comments: _____

 Bottle labels/COCs agree? Yes No Comments: _____

 COC/container discrepancies form initiated? Yes No
 Containers/volumes received appropriate for analysis? Yes No Comments: _____

 Do VOA vials have visible headspace? Yes No NA
 Comments: 1/3 vials have HS, 1/3 has sediment in vial.
 Water samples: pH checked: Yes No NA pH appropriate? Yes No NA
 Comments: 2/2 HCL Amber pH > 7.

Additional information: Received Extra Sample B8 25.26.5 w/ date and time of 9/20/21 @ 212

Labeled by: [Signature] Witness: MAS Cooler Inspected by: [Signature]

Darrell Auvil



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, November 3, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A110804 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A 110804, which was received by the laboratory on 9/22/2021 at 2:19:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 5.4 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-6 11	A110804-01	Soil	09/22/21 11:15	09/22/21 14:19
B-6 15	A110804-02	Soil	09/22/21 12:07	09/22/21 14:19
B-6 20	A110804-03	Soil	09/22/21 12:17	09/22/21 14:19
B-6 25	A110804-04	Soil	09/22/21 12:28	09/22/21 14:19
B-6 10-25C	A110804-05	Soil	09/22/21 11:15	09/22/21 14:19
B-6	A110804-06	Water	09/22/21 13:35	09/22/21 14:19

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 10-25C (A110804-05)				Matrix: Soil		Batch: 1091067		
Diesel	ND	13.3	26.6	mg/kg dry	1	09/29/21 02:00	NWTPH-Dx	
Oil	ND	26.6	53.3	mg/kg dry	1	09/29/21 02:00	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 77 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/29/21 02:00</i>	<i>NWTPH-Dx</i>	<i>Q-41</i>
B-6 (A110804-06)				Matrix: Water		Batch: 1091053		
Diesel	0.119	0.0500	0.100	mg/L	1	09/29/21 01:31	NWTPH-Dx LL	
Oil	0.583	0.100	0.200	mg/L	1	09/29/21 01:31	NWTPH-Dx LL	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/29/21 01:31</i>	<i>NWTPH-Dx LL</i>	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 10-25C (A110804-05)				Matrix: Soil		Batch: 21J0018		COMP, V-15
Gasoline Range Organics	ND	3.98	7.96	mg/kg dry	50	10/04/21 21:02	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>10/04/21 21:02</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>94 %</i>		<i>50-150 %</i>	<i>1</i>	<i>10/04/21 21:02</i>	<i>NWTPH-Gx (MS)</i>	
B-6 (A110804-06)				Matrix: Water		Batch: 1090989		
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	09/27/21 14:32	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>09/27/21 14:32</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>	<i>1</i>	<i>09/27/21 14:32</i>	<i>NWTPH-Gx (MS)</i>	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 10-25C (A110804-05)				Matrix: Soil		Batch: 21J0018		COMP, V-15
Acetone	ND	796	1590	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Acrylonitrile	ND	79.6	159	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Benzene	ND	7.96	15.9	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Bromobenzene	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Bromochloromethane	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Bromodichloromethane	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Bromoform	ND	79.6	159	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Bromomethane	ND	796	796	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
2-Butanone (MEK)	ND	398	796	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
n-Butylbenzene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
sec-Butylbenzene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
tert-Butylbenzene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Carbon disulfide	ND	398	796	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Carbon tetrachloride	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Chlorobenzene	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Chloroethane	ND	398	796	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Chloroform	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Chloromethane	ND	199	398	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
2-Chlorotoluene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
4-Chlorotoluene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Dibromochloromethane	ND	79.6	159	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	199	398	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Dibromomethane	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,2-Dichlorobenzene	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,3-Dichlorobenzene	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,4-Dichlorobenzene	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Dichlorodifluoromethane	ND	79.6	159	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,1-Dichloroethane	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,1-Dichloroethene	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
cis-1,2-Dichloroethene	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
trans-1,2-Dichloroethene	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 10-25C (A110804-05)				Matrix: Soil		Batch: 21J0018		COMP, V-15
1,2-Dichloropropane	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,3-Dichloropropane	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
2,2-Dichloropropane	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,1-Dichloropropene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
cis-1,3-Dichloropropene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
trans-1,3-Dichloropropene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Ethylbenzene	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Hexachlorobutadiene	ND	79.6	159	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
2-Hexanone	ND	398	796	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Isopropylbenzene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
4-Isopropyltoluene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Methylene chloride	ND	398	796	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	398	796	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Naphthalene	ND	79.6	159	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
n-Propylbenzene	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Styrene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,1,1,2,2-Tetrachloroethane	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Tetrachloroethene (PCE)	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Toluene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,2,3-Trichlorobenzene	ND	199	398	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,2,4-Trichlorobenzene	ND	199	398	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,1,1-Trichloroethane	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,1,2-Trichloroethane	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Trichloroethene (TCE)	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Trichlorofluoromethane	ND	79.6	159	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,2,3-Trichloropropane	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,2,4-Trimethylbenzene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
1,3,5-Trimethylbenzene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
Vinyl chloride	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
m,p-Xylene	ND	39.8	79.6	ug/kg dry	50	10/04/21 21:02	5035A/8260D	
o-Xylene	ND	19.9	39.8	ug/kg dry	50	10/04/21 21:02	5035A/8260D	

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 10-25C (A110804-05)				Matrix: Soil		Batch: 21J0018		COMP, V-15
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>10/04/21 21:02</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>				<i>80-120 %</i>	<i>1</i>	<i>10/04/21 21:02</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>				<i>79-120 %</i>	<i>1</i>	<i>10/04/21 21:02</i>	<i>5035A/8260D</i>	
B-6 (A110804-06)				Matrix: Water		Batch: 1090989		
Acetone	ND	20.0	20.0	ug/L	1	09/27/21 14:32	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	09/27/21 14:32	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	09/27/21 14:32	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	09/27/21 14:32	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	09/27/21 14:32	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Chloroform	1.30	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	09/27/21 14:32	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	09/27/21 14:32	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	09/27/21 14:32	EPA 8260D	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 (A110804-06)				Matrix: Water		Batch: 1090989		
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	09/27/21 14:32	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	09/27/21 14:32	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	09/27/21 14:32	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	09/27/21 14:32	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	09/27/21 14:32	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	09/27/21 14:32	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	09/27/21 14:32	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	5.00	10.0	ug/L	1	09/27/21 14:32	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Naphthalene	ND	2.00	2.00	ug/L	1	09/27/21 14:32	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	09/27/21 14:32	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	09/27/21 14:32	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	09/27/21 14:32	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	09/27/21 14:32	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	09/27/21 14:32	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	09/27/21 14:32	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	09/27/21 14:32	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 (A110804-06)			Matrix: Water			Batch: 1090989		
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	09/27/21 14:32	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	09/27/21 14:32	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	09/27/21 14:32	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>09/27/21 14:32</i>	<i>EPA 8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/27/21 14:32</i>	<i>EPA 8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>1</i>	<i>09/27/21 14:32</i>	<i>EPA 8260D</i>

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 10-25C (A110804-05)				Matrix: Soil		Batch: 1090986		
Acenaphthene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Acenaphthylene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Anthracene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Benz(a)anthracene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Benzo(a)pyrene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Chrysene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Fluoranthene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Fluorene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Naphthalene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Phenanthrene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
Pyrene	ND	6.71	13.4	ug/kg dry	1	09/27/21 15:56	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 76 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>09/27/21 15:56</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>87 %</i>		<i>54-127 %</i>		<i>1</i>	<i>09/27/21 15:56</i>	<i>EPA 8270E SIM</i>

B-6 (A110804-06)				Matrix: Water		Batch: 1091053		Q-22
Acenaphthene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Acenaphthylene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Anthracene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Benz(a)anthracene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Benzo(a)pyrene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Chrysene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Fluoranthene	0.0350	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	J
Fluorene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
				Matrix: Water			Batch: 1091053	Q-22
Naphthalene	ND	0.0500	0.100	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Phenanthrene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	
Pyrene	ND	0.0250	0.0500	ug/L	1	09/28/21 17:25	EPA 8270E SIM	

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-6 10-25C (A110804-05)		Matrix: Soil							
Batch: 21J0057									
Antimony	ND	0.699	1.40	mg/kg dry	10	10/05/21 05:08	EPA 6020B		
Arsenic	7.98	0.699	1.40	mg/kg dry	10	10/05/21 05:08	EPA 6020B		
Barium	163	0.699	1.40	mg/kg dry	10	10/05/21 05:08	EPA 6020B		
Cadmium	0.186	0.140	0.280	mg/kg dry	10	10/05/21 05:08	EPA 6020B	J	
Chromium	18.1	0.699	1.40	mg/kg dry	10	10/05/21 05:08	EPA 6020B		
Copper	25.4	1.40	2.80	mg/kg dry	10	10/05/21 05:08	EPA 6020B		
Lead	9.78	0.140	0.280	mg/kg dry	10	10/05/21 05:08	EPA 6020B		
Mercury	ND	0.0559	0.112	mg/kg dry	10	10/05/21 05:08	EPA 6020B		
Selenium	ND	0.699	1.40	mg/kg dry	10	10/05/21 05:08	EPA 6020B		
Silver	ND	0.140	0.280	mg/kg dry	10	10/05/21 05:08	EPA 6020B		
Zinc	68.3	2.80	5.59	mg/kg dry	10	10/05/21 05:08	EPA 6020B		

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-6 (A110804-06)		Matrix: Water							
Batch: 21J0041									
Arsenic	ND	0.500	1.00	ug/L	1	10/05/21 14:30	EPA 6020B (Diss)	FILT1	
Barium	24.2	0.500	1.00	ug/L	1	10/05/21 14:30	EPA 6020B (Diss)	FILT1	
Cadmium	0.101	0.100	0.200	ug/L	1	10/05/21 14:30	EPA 6020B (Diss)	J, FILT1	
Chromium	ND	1.00	2.00	ug/L	1	10/05/21 14:30	EPA 6020B (Diss)	FILT1	
Lead	ND	0.100	0.200	ug/L	1	10/05/21 14:30	EPA 6020B (Diss)	FILT1	
Mercury	ND	0.0400	0.0800	ug/L	1	10/05/21 14:30	EPA 6020B (Diss)	FILT1	
Selenium	ND	0.500	1.00	ug/L	1	10/05/21 14:30	EPA 6020B (Diss)	FILT1	
Silver	ND	0.100	0.200	ug/L	1	10/05/21 14:30	EPA 6020B (Diss)	FILT1	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 10-25C (A110804-05)				Matrix: Soil		Batch: 1090963		
% Solids	73.0	1.00	1.00	%	1	09/27/21 07:45	EPA 8000D	

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ANALYTICAL SAMPLE RESULTS

Lab Filtration

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 (A110804-06)				Matrix: Water		Batch: 1090970		
Lab Filtration (prep only)	PREP			N/A	1	09/24/21 15:30	NA	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091053 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (1091053-BLK1)						Prepared: 09/28/21 10:56 Analyzed: 09/29/21 00:28						
<u>NWTPH-Dx LL</u>												
Diesel	ND	0.0364	0.0727	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.0727	0.145	mg/L	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1091053-BS1)						Prepared: 09/28/21 10:56 Analyzed: 09/29/21 00:49						
<u>NWTPH-Dx LL</u>												
Diesel	0.435	0.0400	0.0800	mg/L	1	0.500	---	87	36-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS Dup (1091053-BSD1)						Prepared: 09/28/21 10:56 Analyzed: 09/29/21 01:11						
<u>NWTPH-Dx LL</u>												
Diesel	0.400	0.0400	0.0800	mg/L	1	0.500	---	80	36-132%	8	30%	Q-19
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Batch 1091067 - EPA 3546 (Fuels)						Soil						
Blank (1091067-BLK1)						Prepared: 09/28/21 13:03 Analyzed: 09/28/21 21:07						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						Q-41
LCS (1091067-BS1)						Prepared: 09/28/21 13:03 Analyzed: 09/28/21 21:30						
<u>NWTPH-Dx</u>												
Diesel	110	10.0	20.0	mg/kg wet	1	125	---	88	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						Q-41
Duplicate (1091067-DUP1)						Prepared: 09/28/21 13:03 Analyzed: 09/28/21 22:59						
<u>QC Source Sample: Non-SDG (A110790-01)</u>												
Diesel	ND	57.8	116	mg/kg dry	5	---	ND	---	---	---	30%	
Oil	610	116	231	mg/kg dry	5	---	640	---	---	5	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 90 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 5x</i>						Q-41, S-05

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091067 - EPA 3546 (Fuels)							Soil					
Duplicate (1091067-DUP2)						Prepared: 09/28/21 13:03 Analyzed: 09/28/21 22:59						
QC Source Sample: Non-SDG (A110918-06)												
Diesel	ND	10.5	21.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	21.0	41.9	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 64 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Blank (1090989-BLK1)			Prepared: 09/27/21 07:30 Analyzed: 09/27/21 10:57									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (1090989-BS2)			Prepared: 09/27/21 07:30 Analyzed: 09/27/21 10:30									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	0.442	0.0500	0.100	mg/L	1	0.500	---	88	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>97 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (1090989-DUP1)			Prepared: 09/27/21 17:00 Analyzed: 09/27/21 19:02									
<u>QC Source Sample: Non-SDG (A111001-01)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0018 - EPA 5035A						Soil						
Blank (21J0018-BLK1)			Prepared: 10/04/21 09:00 Analyzed: 10/04/21 12:03									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>93 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (21J0018-BS2)			Prepared: 10/04/21 09:00 Analyzed: 10/04/21 11:09									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	24.6	2.50	5.00	mg/kg wet	50	25.0	---	98	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>95 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (21J0018-DUP1)			Prepared: 09/28/21 11:10 Analyzed: 10/04/21 17:26									
<u>QC Source Sample: Non-SDG (A111139-01)</u>												
Gasoline Range Organics	ND	3.72	7.44	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 104 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>93 %</i>		<i>50-150 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A110804 - 11 03 21 1528

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Blank (1090989-BLK1)			Prepared: 09/27/21 07:30 Analyzed: 09/27/21 10:57									
<u>EPA 8260D</u>												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
 Tigard, OR 97223
 503-718-2323
 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Blank (1090989-BLK1)			Prepared: 09/27/21 07:30 Analyzed: 09/27/21 10:57									
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	2.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 101 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Blank (1090989-BLK1)						Prepared: 09/27/21 07:30 Analyzed: 09/27/21 10:57						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>"</i>						
LCS (1090989-BS1)						Prepared: 09/27/21 07:30 Analyzed: 09/27/21 09:43						
EPA 8260D												
Acetone	39.2	10.0	20.0	ug/L	1	40.0	---	98	80-120%	---	---	
Acrylonitrile	22.6	1.00	2.00	ug/L	1	20.0	---	113	80-120%	---	---	
Benzene	20.5	0.100	0.200	ug/L	1	20.0	---	102	80-120%	---	---	
Bromobenzene	18.9	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Bromochloromethane	20.3	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Bromodichloromethane	22.8	0.500	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
Bromoform	23.2	0.500	1.00	ug/L	1	20.0	---	116	80-120%	---	---	
Bromomethane	26.9	5.00	5.00	ug/L	1	20.0	---	135	80-120%	---	---	Q-56
2-Butanone (MEK)	44.4	5.00	10.0	ug/L	1	40.0	---	111	80-120%	---	---	
n-Butylbenzene	22.6	0.500	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
sec-Butylbenzene	21.1	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
tert-Butylbenzene	20.3	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
Carbon disulfide	19.4	5.00	10.0	ug/L	1	20.0	---	97	80-120%	---	---	
Carbon tetrachloride	26.9	0.500	1.00	ug/L	1	20.0	---	134	80-120%	---	---	Q-56
Chlorobenzene	20.7	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Chloroethane	17.6	5.00	5.00	ug/L	1	20.0	---	88	80-120%	---	---	
Chloroform	21.3	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Chloromethane	18.4	2.50	5.00	ug/L	1	20.0	---	92	80-120%	---	---	
2-Chlorotoluene	20.7	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
4-Chlorotoluene	21.3	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
Dibromochloromethane	22.9	0.500	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
1,2-Dibromo-3-chloropropane	20.0	2.50	5.00	ug/L	1	20.0	---	100	80-120%	---	---	
1,2-Dibromoethane (EDB)	20.9	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Dibromomethane	21.5	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,2-Dichlorobenzene	20.6	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
1,3-Dichlorobenzene	20.4	0.250	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
1,4-Dichlorobenzene	20.2	0.250	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
Dichlorodifluoromethane	16.5	0.500	1.00	ug/L	1	20.0	---	83	80-120%	---	---	ICV-01
1,1-Dichloroethane	21.4	0.200	0.400	ug/L	1	20.0	---	107	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
LCS (1090989-BS1)			Prepared: 09/27/21 07:30 Analyzed: 09/27/21 09:43									
1,2-Dichloroethane (EDC)	21.5	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
1,1-Dichloroethene	21.2	0.200	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
cis-1,2-Dichloroethene	21.7	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
trans-1,2-Dichloroethene	21.1	0.200	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
1,2-Dichloropropane	21.6	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
1,3-Dichloropropane	21.1	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
2,2-Dichloropropane	30.8	0.500	1.00	ug/L	1	20.0	---	154	80-120%	---	---	Q-56
1,1-Dichloropropene	20.7	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
cis-1,3-Dichloropropene	22.7	0.500	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
trans-1,3-Dichloropropene	24.4	1.00	2.00	ug/L	1	20.0	---	122	80-120%	---	---	Q-56
Ethylbenzene	20.9	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Hexachlorobutadiene	22.6	2.50	5.00	ug/L	1	20.0	---	113	80-120%	---	---	
2-Hexanone	43.2	5.00	10.0	ug/L	1	40.0	---	108	80-120%	---	---	
Isopropylbenzene	20.6	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
4-Isopropyltoluene	21.0	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
Methylene chloride	18.6	5.00	10.0	ug/L	1	20.0	---	93	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	45.8	5.00	10.0	ug/L	1	40.0	---	114	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	18.8	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Naphthalene	15.8	2.00	2.00	ug/L	1	20.0	---	79	80-120%	---	---	Q-55
n-Propylbenzene	21.1	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Styrene	21.1	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,1,1,2-Tetrachloroethane	27.0	0.200	0.400	ug/L	1	20.0	---	135	80-120%	---	---	Q-56
1,1,2,2-Tetrachloroethane	21.9	0.250	0.500	ug/L	1	20.0	---	110	80-120%	---	---	
Tetrachloroethene (PCE)	20.6	0.200	0.400	ug/L	1	20.0	---	103	80-120%	---	---	
Toluene	19.9	0.250	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
1,2,3-Trichlorobenzene	20.4	1.00	2.00	ug/L	1	20.0	---	102	80-120%	---	---	
1,2,4-Trichlorobenzene	19.5	1.00	2.00	ug/L	1	20.0	---	98	80-120%	---	---	
1,1,1-Trichloroethane	22.0	0.200	0.400	ug/L	1	20.0	---	110	80-120%	---	---	
1,1,2-Trichloroethane	21.0	0.250	0.500	ug/L	1	20.0	---	105	80-120%	---	---	
Trichloroethene (TCE)	19.9	0.200	0.400	ug/L	1	20.0	---	100	80-120%	---	---	
Trichlorofluoromethane	21.8	1.00	2.00	ug/L	1	20.0	---	109	80-120%	---	---	
1,2,3-Trichloropropane	20.9	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
1,2,4-Trimethylbenzene	21.4	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,3,5-Trimethylbenzene	21.0	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B												
Water												
LCS (1090989-BS1)												
Prepared: 09/27/21 07:30						Analyzed: 09/27/21 09:43						
Vinyl chloride	19.4	0.200	0.400	ug/L	1	20.0	---	97	80-120%	---	---	
m,p-Xylene	41.8	0.500	1.00	ug/L	1	40.0	---	105	80-120%	---	---	
o-Xylene	19.8	0.250	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>		<i>"</i>						

Duplicate (1090989-DUP1)											
Prepared: 09/27/21 17:00						Analyzed: 09/27/21 19:02					
QC Source Sample: Non-SDG (A111001-01)											
Acetone	ND	10.0	20.0	ug/L	1	---	ND	---	---	---	30%
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%
Bromobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Bromoform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Bromomethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%
Chloroethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%
Chloroform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Chloromethane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%
Dibromomethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Duplicate (1090989-DUP1)			Prepared: 09/27/21 17:00 Analyzed: 09/27/21 19:02									
QC Source Sample: Non-SDG (A111001-01)												
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	2.00	2.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B												
Water												
Duplicate (1090989-DUP1)			Prepared: 09/27/21 17:00 Analyzed: 09/27/21 19:02									
QC Source Sample: Non-SDG (A111001-01)												
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						

Matrix Spike (1090989-MS1)			Prepared: 09/27/21 08:47 Analyzed: 09/27/21 16:47									
QC Source Sample: Non-SDG (A110858-03)												
EPA 8260D												
Acetone	45.9	10.0	20.0	ug/L	1	40.0	ND	89	39-160%	---	---	
Acrylonitrile	24.1	1.00	2.00	ug/L	1	20.0	ND	121	63-135%	---	---	
Benzene	22.6	0.100	0.200	ug/L	1	20.0	ND	113	79-120%	---	---	
Bromobenzene	19.8	0.250	0.500	ug/L	1	20.0	ND	99	80-120%	---	---	
Bromochloromethane	22.1	0.500	1.00	ug/L	1	20.0	ND	111	78-123%	---	---	
Bromodichloromethane	24.5	0.500	1.00	ug/L	1	20.0	ND	123	79-125%	---	---	
Bromoform	23.8	0.500	1.00	ug/L	1	20.0	ND	119	66-130%	---	---	
Bromomethane	32.3	5.00	5.00	ug/L	1	20.0	ND	161	53-141%	---	---	Q-54a
2-Butanone (MEK)	49.1	5.00	10.0	ug/L	1	40.0	ND	123	56-143%	---	---	
n-Butylbenzene	22.7	0.500	1.00	ug/L	1	20.0	ND	114	75-128%	---	---	
sec-Butylbenzene	21.8	0.500	1.00	ug/L	1	20.0	ND	109	77-126%	---	---	
tert-Butylbenzene	21.1	0.500	1.00	ug/L	1	20.0	ND	106	78-124%	---	---	
Carbon disulfide	20.5	5.00	10.0	ug/L	1	20.0	ND	103	64-133%	---	---	
Carbon tetrachloride	29.4	0.500	1.00	ug/L	1	20.0	ND	147	72-136%	---	---	Q-54
Chlorobenzene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	80-120%	---	---	
Chloroethane	19.1	5.00	5.00	ug/L	1	20.0	ND	96	60-138%	---	---	
Chloroform	23.7	0.500	1.00	ug/L	1	20.0	ND	118	79-124%	---	---	
Chloromethane	20.1	2.50	5.00	ug/L	1	20.0	ND	101	50-139%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Matrix Spike (1090989-MS1)						Prepared: 09/27/21 08:47 Analyzed: 09/27/21 16:47						
<u>QC Source Sample: Non-SDG (A110858-03)</u>												
2-Chlorotoluene	21.3	0.500	1.00	ug/L	1	20.0	ND	107	79-122%	---	---	
4-Chlorotoluene	21.6	0.500	1.00	ug/L	1	20.0	ND	108	78-122%	---	---	
Dibromochloromethane	24.0	0.500	1.00	ug/L	1	20.0	ND	120	74-126%	---	---	
1,2-Dibromo-3-chloropropane	20.9	2.50	5.00	ug/L	1	20.0	ND	105	62-128%	---	---	
1,2-Dibromoethane (EDB)	21.7	0.250	0.500	ug/L	1	20.0	ND	109	77-121%	---	---	
Dibromomethane	23.0	0.500	1.00	ug/L	1	20.0	ND	115	79-123%	---	---	
1,2-Dichlorobenzene	20.7	0.250	0.500	ug/L	1	20.0	ND	103	80-120%	---	---	
1,3-Dichlorobenzene	20.7	0.250	0.500	ug/L	1	20.0	ND	104	80-120%	---	---	
1,4-Dichlorobenzene	20.4	0.250	0.500	ug/L	1	20.0	ND	102	79-120%	---	---	
Dichlorodifluoromethane	19.2	0.500	1.00	ug/L	1	20.0	ND	96	32-152%	---	---	ICV-01
1,1-Dichloroethane	23.6	0.200	0.400	ug/L	1	20.0	ND	118	77-125%	---	---	
1,2-Dichloroethane (EDC)	22.9	0.200	0.400	ug/L	1	20.0	ND	114	73-128%	---	---	
1,1-Dichloroethene	23.1	0.200	0.400	ug/L	1	20.0	ND	116	71-131%	---	---	
cis-1,2-Dichloroethene	23.5	0.200	0.400	ug/L	1	20.0	ND	117	78-123%	---	---	
trans-1,2-Dichloroethene	23.3	0.200	0.400	ug/L	1	20.0	ND	116	75-124%	---	---	
1,2-Dichloropropane	23.2	0.250	0.500	ug/L	1	20.0	ND	116	78-122%	---	---	
1,3-Dichloropropane	22.3	0.500	1.00	ug/L	1	20.0	ND	112	80-120%	---	---	
2,2-Dichloropropane	31.4	0.500	1.00	ug/L	1	20.0	ND	157	60-139%	---	---	Q-54c
1,1-Dichloropropene	23.1	0.500	1.00	ug/L	1	20.0	ND	115	79-125%	---	---	
cis-1,3-Dichloropropene	20.7	0.500	1.00	ug/L	1	20.0	ND	104	75-124%	---	---	
trans-1,3-Dichloropropene	24.5	1.00	2.00	ug/L	1	20.0	ND	123	73-127%	---	---	Q-54b
Ethylbenzene	22.2	0.250	0.500	ug/L	1	20.0	ND	111	79-121%	---	---	
Hexachlorobutadiene	21.8	2.50	5.00	ug/L	1	20.0	ND	109	66-134%	---	---	
2-Hexanone	45.1	5.00	10.0	ug/L	1	40.0	ND	113	57-139%	---	---	
Isopropylbenzene	22.0	0.500	1.00	ug/L	1	20.0	ND	110	72-131%	---	---	
4-Isopropyltoluene	21.5	0.500	1.00	ug/L	1	20.0	ND	108	77-127%	---	---	
Methylene chloride	20.1	5.00	10.0	ug/L	1	20.0	ND	100	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	47.5	5.00	10.0	ug/L	1	40.0	ND	119	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	19.3	0.500	1.00	ug/L	1	20.0	ND	96	71-124%	---	---	
Naphthalene	15.3	2.00	2.00	ug/L	1	20.0	ND	76	61-128%	---	---	Q-54d
n-Propylbenzene	21.7	0.250	0.500	ug/L	1	20.0	ND	109	76-126%	---	---	
Styrene	22.5	0.500	1.00	ug/L	1	20.0	ND	112	78-123%	---	---	
1,1,1,2-Tetrachloroethane	28.2	0.200	0.400	ug/L	1	20.0	ND	141	78-124%	---	---	Q-54a

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B												
Water												
Matrix Spike (1090989-MS1)			Prepared: 09/27/21 08:47 Analyzed: 09/27/21 16:47									
QC Source Sample: Non-SDG (A110858-03)												
1,1,2,2-Tetrachloroethane	22.5	0.250	0.500	ug/L	1	20.0	ND	112	71-121%	---	---	
Tetrachloroethene (PCE)	21.7	0.200	0.400	ug/L	1	20.0	ND	108	74-129%	---	---	
Toluene	21.3	0.250	0.500	ug/L	1	20.0	ND	107	80-121%	---	---	
1,2,3-Trichlorobenzene	20.0	1.00	2.00	ug/L	1	20.0	ND	100	69-129%	---	---	
1,2,4-Trichlorobenzene	18.6	1.00	2.00	ug/L	1	20.0	ND	93	69-130%	---	---	
1,1,1-Trichloroethane	24.7	0.200	0.400	ug/L	1	20.0	ND	124	74-131%	---	---	
1,1,2-Trichloroethane	21.9	0.250	0.500	ug/L	1	20.0	ND	109	80-120%	---	---	
Trichloroethene (TCE)	22.0	0.200	0.400	ug/L	1	20.0	ND	110	79-123%	---	---	
Trichlorofluoromethane	26.4	1.00	2.00	ug/L	1	20.0	ND	132	65-141%	---	---	
1,2,3-Trichloropropane	22.0	0.500	1.00	ug/L	1	20.0	ND	110	73-122%	---	---	
1,2,4-Trimethylbenzene	21.5	0.500	1.00	ug/L	1	20.0	ND	108	76-124%	---	---	
1,3,5-Trimethylbenzene	21.7	0.500	1.00	ug/L	1	20.0	ND	108	75-124%	---	---	
Vinyl chloride	21.8	0.200	0.400	ug/L	1	20.0	ND	109	58-137%	---	---	
m,p-Xylene	44.2	0.500	1.00	ug/L	1	40.0	ND	110	80-121%	---	---	
o-Xylene	20.9	0.250	0.500	ug/L	1	20.0	ND	105	78-122%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>92 %</i>		<i>80-120 %</i>		<i>"</i>						

Matrix Spike Dup (1090989-MSD1)			Prepared: 09/27/21 08:47 Analyzed: 09/27/21 17:14									
QC Source Sample: Non-SDG (A110858-03)												
Acetone	45.9	10.0	20.0	ug/L	1	40.0	ND	89	39-160%	0.07	30%	
Acrylonitrile	25.1	1.00	2.00	ug/L	1	20.0	ND	126	63-135%	4	30%	
Benzene	23.3	0.100	0.200	ug/L	1	20.0	ND	117	79-120%	3	30%	
Bromobenzene	20.8	0.250	0.500	ug/L	1	20.0	ND	104	80-120%	5	30%	
Bromochloromethane	23.1	0.500	1.00	ug/L	1	20.0	ND	116	78-123%	4	30%	
Bromodichloromethane	25.6	0.500	1.00	ug/L	1	20.0	ND	128	79-125%	4	30%	Q-01
Bromoform	24.1	0.500	1.00	ug/L	1	20.0	ND	121	66-130%	1	30%	
Bromomethane	31.3	5.00	5.00	ug/L	1	20.0	ND	157	53-141%	3	30%	Q-54a
2-Butanone (MEK)	50.0	5.00	10.0	ug/L	1	40.0	ND	125	56-143%	2	30%	
n-Butylbenzene	24.0	0.500	1.00	ug/L	1	20.0	ND	120	75-128%	6	30%	
sec-Butylbenzene	22.9	0.500	1.00	ug/L	1	20.0	ND	115	77-126%	5	30%	
tert-Butylbenzene	22.2	0.500	1.00	ug/L	1	20.0	ND	111	78-124%	5	30%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B						Water						
Matrix Spike Dup (1090989-MSD1)						Prepared: 09/27/21 08:47 Analyzed: 09/27/21 17:14						
<u>QC Source Sample: Non-SDG (A110858-03)</u>												
Carbon disulfide	22.4	5.00	10.0	ug/L	1	20.0	ND	112	64-133%	9	30%	
Carbon tetrachloride	30.4	0.500	1.00	ug/L	1	20.0	ND	152	72-136%	3	30%	Q-54
Chlorobenzene	22.5	0.250	0.500	ug/L	1	20.0	ND	113	80-120%	2	30%	
Chloroethane	20.6	5.00	5.00	ug/L	1	20.0	ND	103	60-138%	8	30%	
Chloroform	24.4	0.500	1.00	ug/L	1	20.0	ND	122	79-124%	3	30%	
Chloromethane	20.9	2.50	5.00	ug/L	1	20.0	ND	105	50-139%	4	30%	
2-Chlorotoluene	22.3	0.500	1.00	ug/L	1	20.0	ND	111	79-122%	4	30%	
4-Chlorotoluene	22.9	0.500	1.00	ug/L	1	20.0	ND	114	78-122%	6	30%	
Dibromochloromethane	24.4	0.500	1.00	ug/L	1	20.0	ND	122	74-126%	2	30%	
1,2-Dibromo-3-chloropropane	21.4	2.50	5.00	ug/L	1	20.0	ND	107	62-128%	2	30%	
1,2-Dibromoethane (EDB)	22.2	0.250	0.500	ug/L	1	20.0	ND	111	77-121%	2	30%	
Dibromomethane	23.9	0.500	1.00	ug/L	1	20.0	ND	120	79-123%	4	30%	
1,2-Dichlorobenzene	21.7	0.250	0.500	ug/L	1	20.0	ND	109	80-120%	5	30%	
1,3-Dichlorobenzene	21.5	0.250	0.500	ug/L	1	20.0	ND	108	80-120%	4	30%	
1,4-Dichlorobenzene	21.4	0.250	0.500	ug/L	1	20.0	ND	107	79-120%	5	30%	
Dichlorodifluoromethane	19.5	0.500	1.00	ug/L	1	20.0	ND	98	32-152%	2	30%	ICV-01
1,1-Dichloroethane	24.3	0.200	0.400	ug/L	1	20.0	ND	122	77-125%	3	30%	
1,2-Dichloroethane (EDC)	23.4	0.200	0.400	ug/L	1	20.0	ND	117	73-128%	2	30%	
1,1-Dichloroethene	25.0	0.200	0.400	ug/L	1	20.0	ND	125	71-131%	8	30%	
cis-1,2-Dichloroethene	24.0	0.200	0.400	ug/L	1	20.0	ND	120	78-123%	2	30%	
trans-1,2-Dichloroethene	24.4	0.200	0.400	ug/L	1	20.0	ND	122	75-124%	5	30%	
1,2-Dichloropropane	24.0	0.250	0.500	ug/L	1	20.0	ND	120	78-122%	4	30%	
1,3-Dichloropropane	22.7	0.500	1.00	ug/L	1	20.0	ND	113	80-120%	1	30%	
2,2-Dichloropropane	32.2	0.500	1.00	ug/L	1	20.0	ND	161	60-139%	2	30%	Q-54c
1,1-Dichloropropene	23.8	0.500	1.00	ug/L	1	20.0	ND	119	79-125%	3	30%	
cis-1,3-Dichloropropene	21.7	0.500	1.00	ug/L	1	20.0	ND	109	75-124%	5	30%	
trans-1,3-Dichloropropene	25.4	1.00	2.00	ug/L	1	20.0	ND	127	73-127%	3	30%	Q-54b
Ethylbenzene	22.9	0.250	0.500	ug/L	1	20.0	ND	114	79-121%	3	30%	
Hexachlorobutadiene	23.2	2.50	5.00	ug/L	1	20.0	ND	116	66-134%	6	30%	
2-Hexanone	47.1	5.00	10.0	ug/L	1	40.0	ND	118	57-139%	4	30%	
Isopropylbenzene	22.7	0.500	1.00	ug/L	1	20.0	ND	114	72-131%	3	30%	
4-Isopropyltoluene	22.7	0.500	1.00	ug/L	1	20.0	ND	113	77-127%	5	30%	
Methylene chloride	20.5	5.00	10.0	ug/L	1	20.0	ND	102	74-124%	2	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090989 - EPA 5030B												
Water												
Matrix Spike Dup (1090989-MSD1)												
Prepared: 09/27/21 08:47 Analyzed: 09/27/21 17:14												
QC Source Sample: Non-SDG (A110858-03)												
4-Methyl-2-pentanone (MiBK)	49.1	5.00	10.0	ug/L	1	40.0	ND	123	67-130%	3	30%	
Methyl tert-butyl ether (MTBE)	20.2	0.500	1.00	ug/L	1	20.0	ND	101	71-124%	5	30%	
Naphthalene	16.1	2.00	2.00	ug/L	1	20.0	ND	80	61-128%	5	30%	Q-54d
n-Propylbenzene	23.0	0.250	0.500	ug/L	1	20.0	ND	115	76-126%	6	30%	
Styrene	22.8	0.500	1.00	ug/L	1	20.0	ND	114	78-123%	1	30%	
1,1,1,2-Tetrachloroethane	28.4	0.200	0.400	ug/L	1	20.0	ND	142	78-124%	0.8	30%	Q-54a
1,1,2,2-Tetrachloroethane	23.6	0.250	0.500	ug/L	1	20.0	ND	118	71-121%	5	30%	
Tetrachloroethene (PCE)	22.5	0.200	0.400	ug/L	1	20.0	ND	112	74-129%	4	30%	
Toluene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	80-121%	3	30%	
1,2,3-Trichlorobenzene	21.3	1.00	2.00	ug/L	1	20.0	ND	107	69-129%	6	30%	
1,2,4-Trichlorobenzene	19.5	1.00	2.00	ug/L	1	20.0	ND	97	69-130%	4	30%	
1,1,1-Trichloroethane	25.5	0.200	0.400	ug/L	1	20.0	ND	128	74-131%	3	30%	
1,1,2-Trichloroethane	22.2	0.250	0.500	ug/L	1	20.0	ND	111	80-120%	2	30%	
Trichloroethene (TCE)	23.0	0.200	0.400	ug/L	1	20.0	ND	115	79-123%	4	30%	
Trichlorofluoromethane	26.6	1.00	2.00	ug/L	1	20.0	ND	133	65-141%	0.8	30%	
1,2,3-Trichloropropane	22.6	0.500	1.00	ug/L	1	20.0	ND	113	73-122%	3	30%	
1,2,4-Trimethylbenzene	22.7	0.500	1.00	ug/L	1	20.0	ND	114	76-124%	6	30%	
1,3,5-Trimethylbenzene	22.7	0.500	1.00	ug/L	1	20.0	ND	113	75-124%	5	30%	
Vinyl chloride	22.7	0.200	0.400	ug/L	1	20.0	ND	114	58-137%	4	30%	
m,p-Xylene	45.3	0.500	1.00	ug/L	1	40.0	ND	113	80-121%	3	30%	
o-Xylene	21.2	0.250	0.500	ug/L	1	20.0	ND	106	78-122%	1	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0018 - EPA 5035A						Soil						
Blank (21J0018-BLK1)						Prepared: 10/04/21 09:00 Analyzed: 10/04/21 12:03						
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0018 - EPA 5035A						Soil						
Blank (21J0018-BLK1)			Prepared: 10/04/21 09:00 Analyzed: 10/04/21 12:03									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	28.8	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	B-02, J
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0018 - EPA 5035A						Soil						
Blank (21J0018-BLK1)						Prepared: 10/04/21 09:00 Analyzed: 10/04/21 12:03						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>101 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (21J0018-BS1)						Prepared: 10/04/21 09:00 Analyzed: 10/04/21 10:42						
5035A/8260D												
Acetone	1960	500	1000	ug/kg wet	50	2000	---	98	80-120%	---	---	
Acrylonitrile	1140	50.0	100	ug/kg wet	50	1000	---	114	80-120%	---	---	
Benzene	1030	5.00	10.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Bromobenzene	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Bromochloromethane	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Bromodichloromethane	915	25.0	50.0	ug/kg wet	50	1000	---	92	80-120%	---	---	
Bromoform	873	50.0	100	ug/kg wet	50	1000	---	87	80-120%	---	---	
Bromomethane	1220	500	500	ug/kg wet	50	1000	---	122	80-120%	---	---	Q-56
2-Butanone (MEK)	2050	250	500	ug/kg wet	50	2000	---	102	80-120%	---	---	
n-Butylbenzene	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
sec-Butylbenzene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
tert-Butylbenzene	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Carbon disulfide	988	250	500	ug/kg wet	50	1000	---	99	80-120%	---	---	
Carbon tetrachloride	876	25.0	50.0	ug/kg wet	50	1000	---	88	80-120%	---	---	
Chlorobenzene	932	12.5	25.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
Chloroethane	893	250	500	ug/kg wet	50	1000	---	89	80-120%	---	---	
Chloroform	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Chloromethane	935	125	250	ug/kg wet	50	1000	---	94	80-120%	---	---	
2-Chlorotoluene	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
4-Chlorotoluene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Dibromochloromethane	860	50.0	100	ug/kg wet	50	1000	---	86	80-120%	---	---	
1,2-Dibromo-3-chloropropane	826	125	250	ug/kg wet	50	1000	---	83	80-120%	---	---	
1,2-Dibromoethane (EDB)	989	25.0	50.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
Dibromomethane	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,2-Dichlorobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,3-Dichlorobenzene	989	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,4-Dichlorobenzene	967	12.5	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Dichlorodifluoromethane	984	50.0	100	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,1-Dichloroethane	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0018 - EPA 5035A						Soil						
LCS (21J0018-BS1)			Prepared: 10/04/21 09:00 Analyzed: 10/04/21 10:42									
1,2-Dichloroethane (EDC)	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,1-Dichloroethene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
cis-1,2-Dichloroethene	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
trans-1,2-Dichloroethene	1050	12.5	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,2-Dichloropropane	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,3-Dichloropropane	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
2,2-Dichloropropane	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,1-Dichloropropene	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
cis-1,3-Dichloropropene	984	25.0	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
trans-1,3-Dichloropropene	946	25.0	50.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
Ethylbenzene	950	12.5	25.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
Hexachlorobutadiene	1100	50.0	100	ug/kg wet	50	1000	---	110	80-120%	---	---	
2-Hexanone	2100	250	500	ug/kg wet	50	2000	---	105	80-120%	---	---	
Isopropylbenzene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
4-Isopropyltoluene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Methylene chloride	1140	250	500	ug/kg wet	50	1000	---	114	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2140	250	500	ug/kg wet	50	2000	---	107	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Naphthalene	1060	50.0	100	ug/kg wet	50	1000	---	106	80-120%	---	---	
n-Propylbenzene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Styrene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,1,1,2-Tetrachloroethane	904	25.0	50.0	ug/kg wet	50	1000	---	90	80-120%	---	---	
1,1,2,2-Tetrachloroethane	998	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Tetrachloroethene (PCE)	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Toluene	999	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,2,3-Trichlorobenzene	1050	125	250	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,2,4-Trichlorobenzene	1060	125	250	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,1,1-Trichloroethane	984	12.5	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,1,2-Trichloroethane	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Trichloroethene (TCE)	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Trichlorofluoromethane	1110	50.0	100	ug/kg wet	50	1000	---	111	80-120%	---	---	
1,2,3-Trichloropropane	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,2,4-Trimethylbenzene	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,3,5-Trimethylbenzene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	B-02

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0018 - EPA 5035A						Soil						
LCS (21J0018-BS1)						Prepared: 10/04/21 09:00 Analyzed: 10/04/21 10:42						
Vinyl chloride	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
m,p-Xylene	1970	25.0	50.0	ug/kg wet	50	2000	---	99	80-120%	---	---	
o-Xylene	994	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (21J0018-DUP1)						Prepared: 09/28/21 11:10 Analyzed: 10/04/21 17:26						
QC Source Sample: Non-SDG (A111139-01)												
Acetone	ND	744	1490	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	74.4	149	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	7.44	14.9	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	74.4	149	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	744	744	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	372	744	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	372	744	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	372	744	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	186	372	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	74.4	149	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	186	372	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0018 - EPA 5035A							Soil					
Duplicate (21J0018-DUP1)			Prepared: 09/28/21 11:10 Analyzed: 10/04/21 17:26									
QC Source Sample: Non-SDG (A111139-01)												
1,3-Dichlorobenzene	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	74.4	149	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	74.4	149	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	372	744	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	372	744	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	372	744	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	74.4	149	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	186	372	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	186	372	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0018 - EPA 5035A												
Soil												
Duplicate (21J0018-DUP1)												
Prepared: 09/28/21 11:10 Analyzed: 10/04/21 17:26												
QC Source Sample: Non-SDG (A111139-01)												
Trichloroethene (TCE)	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	74.4	149	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	37.2	74.4	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	18.6	37.2	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (21J0018-MS1)												
Prepared: 09/28/21 16:10 Analyzed: 10/04/21 19:14												
QC Source Sample: Non-SDG (A111139-04)												
5035A/8260D												
Acetone	3520	768	1540	ug/kg dry	50	3070	ND	115	36-164%	---	---	
Acrylonitrile	1840	76.8	154	ug/kg dry	50	1540	ND	120	65-134%	---	---	
Benzene	1610	7.68	15.4	ug/kg dry	50	1540	ND	105	77-121%	---	---	
Bromobenzene	1600	19.2	38.4	ug/kg dry	50	1540	ND	104	78-121%	---	---	
Bromochloromethane	1660	38.4	76.8	ug/kg dry	50	1540	ND	108	78-125%	---	---	
Bromodichloromethane	1470	38.4	76.8	ug/kg dry	50	1540	ND	96	75-127%	---	---	
Bromoform	1460	76.8	154	ug/kg dry	50	1540	ND	95	67-132%	---	---	
Bromomethane	2020	768	768	ug/kg dry	50	1540	ND	132	53-143%	---	---	Q-54b
2-Butanone (MEK)	3370	384	768	ug/kg dry	50	3070	ND	110	51-148%	---	---	
n-Butylbenzene	1670	38.4	76.8	ug/kg dry	50	1540	ND	109	70-128%	---	---	
sec-Butylbenzene	1580	38.4	76.8	ug/kg dry	50	1540	ND	103	73-126%	---	---	
tert-Butylbenzene	1550	38.4	76.8	ug/kg dry	50	1540	ND	101	73-125%	---	---	
Carbon disulfide	1440	384	768	ug/kg dry	50	1540	ND	94	63-132%	---	---	
Carbon tetrachloride	1490	38.4	76.8	ug/kg dry	50	1540	ND	97	70-135%	---	---	
Chlorobenzene	1480	19.2	38.4	ug/kg dry	50	1540	ND	96	79-120%	---	---	
Chloroethane	1650	384	768	ug/kg dry	50	1540	ND	108	59-139%	---	---	
Chloroform	1620	38.4	76.8	ug/kg dry	50	1540	ND	105	78-123%	---	---	
Chloromethane	1430	192	384	ug/kg dry	50	1540	ND	93	50-136%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0018 - EPA 5035A						Soil						
Matrix Spike (21J0018-MS1)			Prepared: 09/28/21 16:10 Analyzed: 10/04/21 19:14									
<u>QC Source Sample: Non-SDG (A111139-04)</u>												
2-Chlorotoluene	1640	38.4	76.8	ug/kg dry	50	1540	ND	107	75-122%	---	---	
4-Chlorotoluene	1580	38.4	76.8	ug/kg dry	50	1540	ND	103	72-124%	---	---	
Dibromochloromethane	1450	76.8	154	ug/kg dry	50	1540	ND	95	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1380	192	384	ug/kg dry	50	1540	ND	90	61-132%	---	---	
1,2-Dibromoethane (EDB)	1570	38.4	76.8	ug/kg dry	50	1540	ND	103	78-122%	---	---	
Dibromomethane	1650	38.4	76.8	ug/kg dry	50	1540	ND	107	78-125%	---	---	
1,2-Dichlorobenzene	1550	19.2	38.4	ug/kg dry	50	1540	ND	101	78-121%	---	---	
1,3-Dichlorobenzene	1540	19.2	38.4	ug/kg dry	50	1540	ND	100	77-121%	---	---	
1,4-Dichlorobenzene	1490	19.2	38.4	ug/kg dry	50	1540	ND	97	75-120%	---	---	
Dichlorodifluoromethane	1510	76.8	154	ug/kg dry	50	1540	ND	98	29-149%	---	---	
1,1-Dichloroethane	1610	19.2	38.4	ug/kg dry	50	1540	ND	105	76-125%	---	---	
1,2-Dichloroethane (EDC)	1640	19.2	38.4	ug/kg dry	50	1540	ND	107	73-128%	---	---	
1,1-Dichloroethene	1640	19.2	38.4	ug/kg dry	50	1540	ND	107	70-131%	---	---	
cis-1,2-Dichloroethene	1630	19.2	38.4	ug/kg dry	50	1540	ND	106	77-123%	---	---	
trans-1,2-Dichloroethene	1620	19.2	38.4	ug/kg dry	50	1540	ND	105	74-125%	---	---	
1,2-Dichloropropane	1610	19.2	38.4	ug/kg dry	50	1540	ND	105	76-123%	---	---	
1,3-Dichloropropane	1610	38.4	76.8	ug/kg dry	50	1540	ND	105	77-121%	---	---	
2,2-Dichloropropane	1430	38.4	76.8	ug/kg dry	50	1540	ND	93	67-133%	---	---	
1,1-Dichloropropene	1650	38.4	76.8	ug/kg dry	50	1540	ND	108	76-125%	---	---	
cis-1,3-Dichloropropene	1510	38.4	76.8	ug/kg dry	50	1540	ND	98	74-126%	---	---	
trans-1,3-Dichloropropene	1430	38.4	76.8	ug/kg dry	50	1540	ND	93	71-130%	---	---	
Ethylbenzene	1470	19.2	38.4	ug/kg dry	50	1540	ND	96	76-122%	---	---	
Hexachlorobutadiene	1710	76.8	154	ug/kg dry	50	1540	ND	112	61-135%	---	---	
2-Hexanone	3430	384	768	ug/kg dry	50	3070	ND	112	53-145%	---	---	
Isopropylbenzene	1620	38.4	76.8	ug/kg dry	50	1540	ND	106	68-134%	---	---	
4-Isopropyltoluene	1590	38.4	76.8	ug/kg dry	50	1540	ND	103	73-127%	---	---	
Methylene chloride	1620	384	768	ug/kg dry	50	1540	ND	105	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	3430	384	768	ug/kg dry	50	3070	ND	112	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1580	38.4	76.8	ug/kg dry	50	1540	ND	103	73-125%	---	---	
Naphthalene	1610	76.8	154	ug/kg dry	50	1540	ND	105	62-129%	---	---	
n-Propylbenzene	1590	19.2	38.4	ug/kg dry	50	1540	ND	104	73-125%	---	---	
Styrene	1670	38.4	76.8	ug/kg dry	50	1540	ND	109	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1500	38.4	76.8	ug/kg dry	50	1540	ND	97	78-125%	---	---	

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0018 - EPA 5035A						Soil						
Matrix Spike (21J0018-MS1)			Prepared: 09/28/21 16:10 Analyzed: 10/04/21 19:14									
QC Source Sample: Non-SDG (A111139-04)												
1,1,2,2-Tetrachloroethane	1470	38.4	76.8	ug/kg dry	50	1540	ND	96	70-124%	---	---	
Tetrachloroethene (PCE)	1590	19.2	38.4	ug/kg dry	50	1540	ND	104	73-128%	---	---	
Toluene	1540	38.4	76.8	ug/kg dry	50	1540	ND	100	77-121%	---	---	
1,2,3-Trichlorobenzene	1590	192	384	ug/kg dry	50	1540	ND	104	66-130%	---	---	
1,2,4-Trichlorobenzene	1580	192	384	ug/kg dry	50	1540	ND	103	67-129%	---	---	
1,1,1-Trichloroethane	1590	19.2	38.4	ug/kg dry	50	1540	ND	104	73-130%	---	---	
1,1,2-Trichloroethane	1650	19.2	38.4	ug/kg dry	50	1540	ND	108	78-121%	---	---	
Trichloroethene (TCE)	1750	19.2	38.4	ug/kg dry	50	1540	ND	114	77-123%	---	---	
Trichlorofluoromethane	1760	76.8	154	ug/kg dry	50	1540	ND	115	62-140%	---	---	
1,2,3-Trichloropropane	1650	38.4	76.8	ug/kg dry	50	1540	ND	108	73-125%	---	---	
1,2,4-Trimethylbenzene	1650	38.4	76.8	ug/kg dry	50	1540	ND	107	75-123%	---	---	B-02
1,3,5-Trimethylbenzene	1650	38.4	76.8	ug/kg dry	50	1540	ND	107	73-124%	---	---	
Vinyl chloride	1590	19.2	38.4	ug/kg dry	50	1540	ND	103	56-135%	---	---	
m,p-Xylene	3020	38.4	76.8	ug/kg dry	50	3070	ND	98	77-124%	---	---	
o-Xylene	1570	19.2	38.4	ug/kg dry	50	1540	ND	102	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>79-120 %</i>		<i>"</i>						

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090986 - EPA 3546						Soil						
Blank (1090986-BLK3)			Prepared: 09/27/21 07:49 Analyzed: 09/28/21 09:44									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	2.34	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	B-02, J
Phenanthrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 89 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>101 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1090986-BS1)			Prepared: 09/27/21 07:49 Analyzed: 09/27/21 13:24									
<u>EPA 8270E SIM</u>												
Acenaphthene	425	1.33	2.67	ug/kg wet	1	533	---	80	40-123%	---	---	
Acenaphthylene	444	1.33	2.67	ug/kg wet	1	533	---	83	32-132%	---	---	
Anthracene	436	1.33	2.67	ug/kg wet	1	533	---	82	47-123%	---	---	
Benz(a)anthracene	428	1.33	2.67	ug/kg wet	1	533	---	80	49-126%	---	---	
Benzo(a)pyrene	462	1.33	2.67	ug/kg wet	1	533	---	87	45-129%	---	---	
Benzo(b)fluoranthene	452	1.33	2.67	ug/kg wet	1	533	---	85	45-132%	---	---	
Benzo(k)fluoranthene	469	1.33	2.67	ug/kg wet	1	533	---	88	47-132%	---	---	
Benzo(g,h,i)perylene	467	1.33	2.67	ug/kg wet	1	533	---	88	43-134%	---	---	
Chrysene	455	1.33	2.67	ug/kg wet	1	533	---	85	50-124%	---	---	
Dibenz(a,h)anthracene	497	1.33	2.67	ug/kg wet	1	533	---	93	45-134%	---	---	
Fluoranthene	404	1.33	2.67	ug/kg wet	1	533	---	76	50-127%	---	---	
Fluorene	409	1.33	2.67	ug/kg wet	1	533	---	77	43-125%	---	---	

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090986 - EPA 3546												
Soil												
LCS (1090986-BS1)												
Prepared: 09/27/21 07:49 Analyzed: 09/27/21 13:24												
Indeno(1,2,3-cd)pyrene	451	1.33	2.67	ug/kg wet	1	533	---	84	45-133%	---	---	
Naphthalene	406	1.33	2.67	ug/kg wet	1	533	---	76	35-123%	---	---	B-02
Phenanthrene	434	1.33	2.67	ug/kg wet	1	533	---	81	50-121%	---	---	
Pyrene	404	1.33	2.67	ug/kg wet	1	533	---	76	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>78 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1090986-DUP1)												
Prepared: 09/27/21 07:49 Analyzed: 09/27/21 14:15												
QC Source Sample: Non-SDG (A110619-06)												
Acenaphthene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Acenaphthylene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Anthracene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Benz(a)anthracene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Benzo(a)pyrene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Chrysene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Dibenz(a,h)anthracene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Fluoranthene	ND	133	265	ug/kg dry	40	---	192	---	---	***	30%	Q-04
Fluorene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	133	265	ug/kg dry	40	---	ND	---	---	---	30%	
Naphthalene	148	133	265	ug/kg dry	40	---	226	---	---	42	30%	Q-04, J
Phenanthrene	ND	133	265	ug/kg dry	40	---	320	---	---	***	30%	Q-04
Pyrene	ND	133	265	ug/kg dry	40	---	134	---	---	***	30%	Q-04
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 67 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 40x</i>		<i>S-05</i>				
<i>p-Terphenyl-d14 (Surr)</i>		<i>74 %</i>		<i>54-127 %</i>		<i>"</i>		<i>S-05</i>				

Matrix Spike (1090986-MS1)												
Prepared: 09/27/21 07:49 Analyzed: 09/27/21 15:06												
QC Source Sample: Non-SDG (A110619-14)												
EPA 8270E SIM												
Acenaphthene	630	313	627	ug/kg dry	40	627	ND	100	40-123%	---	---	
Acenaphthylene	426	313	627	ug/kg dry	40	627	ND	68	32-132%	---	---	J

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090986 - EPA 3546						Soil						
Matrix Spike (1090986-MS1)			Prepared: 09/27/21 07:49 Analyzed: 09/27/21 15:06									
QC Source Sample: Non-SDG (A110619-14)												
Anthracene	420	313	627	ug/kg dry	40	627	ND	67	47-123%	---	---	J
Benz(a)anthracene	575	313	627	ug/kg dry	40	627	ND	92	49-126%	---	---	J
Benzo(a)pyrene	441	313	627	ug/kg dry	40	627	ND	70	45-129%	---	---	J
Benzo(b)fluoranthene	491	313	627	ug/kg dry	40	627	ND	78	45-132%	---	---	J
Benzo(k)fluoranthene	469	313	627	ug/kg dry	40	627	ND	75	47-132%	---	---	J
Benzo(g,h,i)perylene	497	313	627	ug/kg dry	40	627	ND	79	43-134%	---	---	J
Chrysene	ND	627	627	ug/kg dry	40	627	ND		50-124%	---	---	Q-02
Dibenz(a,h)anthracene	416	313	627	ug/kg dry	40	627	ND	66	45-134%	---	---	J
Fluoranthene	507	313	627	ug/kg dry	40	627	ND	81	50-127%	---	---	J
Fluorene	454	313	627	ug/kg dry	40	627	ND	72	43-125%	---	---	J
Indeno(1,2,3-cd)pyrene	470	313	627	ug/kg dry	40	627	ND	75	45-133%	---	---	J
Naphthalene	536	313	627	ug/kg dry	40	627	ND	85	35-123%	---	---	J
Phenanthrene	627	313	627	ug/kg dry	40	627	ND	100	50-121%	---	---	J
Pyrene	520	313	627	ug/kg dry	40	627	ND	83	47-127%	---	---	J
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 64 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 40x</i>					S-05	
<i>p-Terphenyl-d14 (Surr)</i>		<i>67 %</i>		<i>54-127 %</i>		<i>"</i>					S-05	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091053 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (1091053-BLK2)						Prepared: 09/28/21 10:56 Analyzed: 09/28/21 16:59						Q-22
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0364	0.0727	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0057 - EPA 3051A						Soil						
Blank (21J0057-BLK1)			Prepared: 10/04/21 16:32 Analyzed: 10/05/21 03:49									
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	
Blank (21J0057-BLK2)			Prepared: 10/04/21 16:32 Analyzed: 10/05/21 17:15									
<u>EPA 6020B</u>												
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	Q-16
LCS (21J0057-BS1)			Prepared: 10/04/21 16:32 Analyzed: 10/05/21 03:55									
<u>EPA 6020B</u>												
Antimony	25.2	0.500	1.00	mg/kg wet	10	25.0	---	101	80-120%	---	---	
Arsenic	52.5	0.500	1.00	mg/kg wet	10	50.0	---	105	80-120%	---	---	
Barium	50.7	0.500	1.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Cadmium	47.9	0.100	0.200	mg/kg wet	10	50.0	---	96	80-120%	---	---	
Chromium	48.5	0.500	1.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Copper	50.1	1.00	2.00	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Lead	48.3	0.100	0.200	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Mercury	0.997	0.0400	0.0800	mg/kg wet	10	1.00	---	100	80-120%	---	---	
Selenium	24.8	0.500	1.00	mg/kg wet	10	25.0	---	99	80-120%	---	---	
Silver	25.2	0.100	0.200	mg/kg wet	10	25.0	---	101	80-120%	---	---	
Zinc	48.4	2.00	4.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Duplicate (21J0057-DUP1)			Prepared: 10/04/21 16:32 Analyzed: 10/05/21 04:06									
<u>QC Source Sample: Non-SDG (A110788-05)</u>												
Antimony	1.48	0.601	1.20	mg/kg dry	10	---	1.58	---	---	6	20%	
Arsenic	6.12	0.601	1.20	mg/kg dry	10	---	6.24	---	---	2	20%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0057 - EPA 3051A												
Soil												
Duplicate (21J0057-DUP1)												
						Prepared: 10/04/21 16:32 Analyzed: 10/05/21 04:06						
<u>QC Source Sample: Non-SDG (A110788-05)</u>												
Barium	162	0.601	1.20	mg/kg dry	10	---	161	---	---	0.5	20%	
Cadmium	0.173	0.120	0.241	mg/kg dry	10	---	0.177	---	---	2	20%	J
Chromium	10.9	0.601	1.20	mg/kg dry	10	---	11.2	---	---	2	20%	
Copper	22.3	1.20	2.41	mg/kg dry	10	---	23.4	---	---	5	20%	
Selenium	ND	0.601	1.20	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	0.120	0.241	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	58.0	2.41	4.81	mg/kg dry	10	---	56.7	---	---	2	20%	
Duplicate (21J0057-DUP2)												
						Prepared: 10/04/21 16:32 Analyzed: 10/05/21 17:24						
<u>QC Source Sample: Non-SDG (A110788-05RE1)</u>												
Lead	7.64	0.120	0.241	mg/kg dry	10	---	7.03	---	---	8	20%	Q-16
Mercury	0.0623	0.0481	0.0962	mg/kg dry	10	---	ND	---	---	20%		J, Q-16
Matrix Spike (21J0057-MS1)												
						Prepared: 10/04/21 16:32 Analyzed: 10/05/21 04:12						
<u>QC Source Sample: Non-SDG (A110788-05)</u>												
<u>EPA 6020B</u>												
Antimony	30.1	0.601	1.20	mg/kg dry	10	30.1	1.58	95	75-125%	---	---	
Arsenic	70.1	0.601	1.20	mg/kg dry	10	60.1	6.24	106	75-125%	---	---	
Barium	224	0.601	1.20	mg/kg dry	10	60.1	161	106	75-125%	---	---	
Cadmium	59.2	0.120	0.241	mg/kg dry	10	60.1	0.177	98	75-125%	---	---	
Chromium	69.1	0.601	1.20	mg/kg dry	10	60.1	11.2	96	75-125%	---	---	
Copper	81.0	1.20	2.41	mg/kg dry	10	60.1	23.4	96	75-125%	---	---	
Selenium	31.1	0.601	1.20	mg/kg dry	10	30.1	ND	103	75-125%	---	---	
Silver	29.6	0.120	0.241	mg/kg dry	10	30.1	ND	98	75-125%	---	---	
Zinc	105	2.41	4.81	mg/kg dry	10	60.1	56.7	80	75-125%	---	---	
Matrix Spike (21J0057-MS2)												
						Prepared: 10/04/21 16:32 Analyzed: 10/05/21 17:29						
<u>QC Source Sample: Non-SDG (A110788-05RE1)</u>												
<u>EPA 6020B</u>												
Lead	62.5	0.120	0.241	mg/kg dry	10	60.1	7.03	92	75-125%	---	---	Q-16
Mercury	1.19	0.0481	0.0962	mg/kg dry	10	1.20	ND	99	75-125%	---	---	Q-16

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0041 - Matrix Matched Direct Inject						Water						
Blank (21J0041-BLK1)						Prepared: 10/04/21 12:35 Analyzed: 10/04/21 23:32						
<u>EPA 6020B (Diss)</u>												
Barium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	FILT3
Cadmium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	FILT3
Lead	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	FILT3
Mercury	ND	0.0400	0.0800	ug/L	1	---	---	---	---	---	---	FILT3
Silver	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	FILT3
Blank (21J0041-BLK2)						Prepared: 10/04/21 12:35 Analyzed: 10/05/21 14:21						
<u>EPA 6020B (Diss)</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	FILT3, Q-16
Chromium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	FILT3, Q-16
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	FILT3, Q-16
LCS (21J0041-BS1)						Prepared: 10/04/21 12:35 Analyzed: 10/04/21 23:36						
<u>EPA 6020B (Diss)</u>												
Barium	49.4	0.500	1.00	ug/L	1	55.6	---	89	80-120%	---	---	
Cadmium	52.4	0.100	0.200	ug/L	1	55.6	---	94	80-120%	---	---	
Lead	53.1	0.100	0.200	ug/L	1	55.6	---	96	80-120%	---	---	
Mercury	1.03	0.0400	0.0800	ug/L	1	1.11	---	93	80-120%	---	---	
Silver	26.2	0.100	0.200	ug/L	1	27.8	---	94	80-120%	---	---	
LCS (21J0041-BS2)						Prepared: 10/04/21 12:35 Analyzed: 10/05/21 14:26						
<u>EPA 6020B (Diss)</u>												
Arsenic	56.1	0.500	1.00	ug/L	1	55.6	---	101	80-120%	---	---	Q-16
Chromium	49.5	1.00	2.00	ug/L	1	55.6	---	89	80-120%	---	---	Q-16
Selenium	27.0	0.500	1.00	ug/L	1	27.8	---	97	80-120%	---	---	
Duplicate (21J0041-DUP1)						Prepared: 10/04/21 12:35 Analyzed: 10/05/21 14:35						
<u>QC Source Sample: B-6 (A110804-06)</u>												
<u>EPA 6020B (Diss)</u>												
Arsenic	0.501	0.500	1.00	ug/L	1	---	ND	---	---		20%	J
Barium	24.1	0.500	1.00	ug/L	1	---	24.2	---	---	0.6	20%	
Cadmium	ND	0.100	0.200	ug/L	1	---	0.101	---	---	***	20%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0041 - Matrix Matched Direct Inject						Water						
Duplicate (21J0041-DUP1)						Prepared: 10/04/21 12:35 Analyzed: 10/05/21 14:35						
QC Source Sample: B-6 (A110804-06)												
Chromium	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	20%	
Lead	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Mercury	ND	0.0400	0.0800	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	
Silver	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	

Matrix Spike (21J0041-MS1)						Prepared: 10/04/21 12:35 Analyzed: 10/05/21 14:39						
QC Source Sample: B-6 (A110804-06)												
EPA 6020B (Diss)												
Arsenic	56.6	0.500	1.00	ug/L	1	55.6	ND	102	75-125%	---	---	
Barium	73.9	0.500	1.00	ug/L	1	55.6	24.2	89	75-125%	---	---	
Cadmium	52.2	0.100	0.200	ug/L	1	55.6	0.101	94	75-125%	---	---	
Chromium	48.9	1.00	2.00	ug/L	1	55.6	ND	88	75-125%	---	---	
Lead	52.4	0.100	0.200	ug/L	1	55.6	ND	94	75-125%	---	---	
Mercury	1.08	0.0400	0.0800	ug/L	1	1.11	ND	97	75-125%	---	---	
Selenium	27.3	0.500	1.00	ug/L	1	27.8	ND	98	75-125%	---	---	
Silver	25.7	0.100	0.200	ug/L	1	27.8	ND	92	75-125%	---	---	

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090963 - Total Solids (Dry Weight)						Soil						
Duplicate (1090963-DUP1)			Prepared: 09/24/21 13:06 Analyzed: 09/27/21 07:45									
<u>QC Source Sample: Non-SDG (A110772-01)</u>												
% Solids	98.1	1.00	1.00	%	1	---	97.9	---	---	0.2	10%	
Duplicate (1090963-DUP2)			Prepared: 09/24/21 13:06 Analyzed: 09/27/21 07:45									
<u>QC Source Sample: Non-SDG (A110803-01)</u>												
% Solids	88.7	1.00	1.00	%	1	---	89.4	---	---	0.8	10%	
Duplicate (1090963-DUP3)			Prepared: 09/24/21 13:06 Analyzed: 09/27/21 07:45									
<u>QC Source Sample: Non-SDG (A110865-01)</u>												
% Solids	72.5	1.00	1.00	%	1	---	71.6	---	---	1	10%	
Duplicate (1090963-DUP4)			Prepared: 09/24/21 13:06 Analyzed: 09/27/21 07:45									
<u>QC Source Sample: Non-SDG (A110868-02)</u>												
% Solids	76.5	1.00	1.00	%	1	---	76.3	---	---	0.2	10%	
Duplicate (1090963-DUP5)			Prepared: 09/24/21 13:06 Analyzed: 09/27/21 07:45									
<u>QC Source Sample: Non-SDG (A110871-02)</u>												
% Solids	75.3	1.00	1.00	%	1	---	75.9	---	---	0.8	10%	
Duplicate (1090963-DUP6)			Prepared: 09/24/21 20:31 Analyzed: 09/27/21 07:45									
<u>QC Source Sample: Non-SDG (A110926-01)</u>												
% Solids	84.6	1.00	1.00	%	1	---	84.7	---	---	0.1	10%	
Duplicate (1090963-DUP7)			Prepared: 09/24/21 20:31 Analyzed: 09/27/21 07:45									
<u>QC Source Sample: Non-SDG (A110926-02)</u>												
% Solids	86.0	1.00	1.00	%	1	---	86.3	---	---	0.4	10%	
Duplicate (1090963-DUP8)			Prepared: 09/24/21 20:31 Analyzed: 09/27/21 07:45									
<u>QC Source Sample: Non-SDG (A110926-03)</u>												
% Solids	81.5	1.00	1.00	%	1	---	81.5	---	---	0.07	10%	

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1090963 - Total Solids (Dry Weight)						Soil						
Duplicate (1090963-DUP9)						Prepared: 09/24/21 20:31 Analyzed: 09/27/21 07:45						
<u>QC Source Sample: Non-SDG (A110946-01)</u>												
% Solids	84.9	1.00	1.00	%	1	---	85.3	---	---	0.4	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1091053</u>							
A110804-06	Water	NWTPH-Dx LL	09/22/21 13:35	09/28/21 10:56	800mL/2mL	1000mL/2mL	1.25

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1091067</u>							
A110804-05	Soil	NWTPH-Dx	09/22/21 11:15	09/28/21 13:03	10.29g/5mL	10g/5mL	0.97

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090989</u>							
A110804-06	Water	NWTPH-Gx (MS)	09/22/21 13:35	09/27/21 08:47	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21J0018</u>							
A110804-05	Soil	NWTPH-Gx (MS)	09/22/21 11:15	09/22/21 11:15	22.45g/20mL	5g/5mL	0.89

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1090989</u>							
A110804-06	Water	EPA 8260D	09/22/21 13:35	09/27/21 08:47	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21J0018</u>							
A110804-05	Soil	5035A/8260D	09/22/21 11:15	09/22/21 11:15	22.45g/20mL	5g/5mL	0.89

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3510C (Fuels/Acid Ext.)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3510C (Fuels/Acid Ext.)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1091053</u>							
A110804-06	Water	EPA 8270E SIM	09/22/21 13:35	09/28/21 10:56	800mL/2mL	1000mL/2mL	1.25

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090986</u>							
A110804-05	Soil	EPA 8270E SIM	09/22/21 11:15	09/27/21 07:49	10.21g/5mL	10g/5mL	0.98

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 21J0057</u>							
A110804-05	Soil	EPA 6020B	09/22/21 11:15	10/04/21 16:32	0.49g/50mL	0.5g/50mL	1.02

Dissolved Metals by EPA 6020B (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 21J0041</u>							
A110804-06	Water	EPA 6020B (Diss)	09/22/21 13:35	10/04/21 12:35	45mL/50mL	45mL/50mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090963</u>							
A110804-05	Soil	EPA 8000D	09/22/21 11:15	09/24/21 13:06			NA

Lab Filtration

Prep: Lab Filtration

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 1090970</u>							
A110804-06	Water	NA	09/22/21 13:35	09/24/21 15:30	200mL/200mL		NA

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- B-02** Analyte detected in an associated blank at a level between one-half the MRL and the MRL. (See Notes and Conventions below.)
- COMP** Sample is a composite of discrete samples. See prep information for details.
- FILT1** Sample was lab filtered and acid preserved prior to analysis. See sample preparation section of report for date and time of filtration.
- FILT3** This is a laboratory filtration blank, associated with filtration batch 1090970. See Prep page of report for associated samples.
- ICV-01** Estimated Result. Initial Calibration Verification (ICV) failed high. There is no effect on non-detect results.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-02** Spike recovery is outside of established control limits due to matrix interference.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-22** Due to limited sample volume or hold time restraints, the NWTPH-Dx extract was used for the 8270 SIM PAH analysis. Therefore no PAH Surrogates and/or Batch QC results are available. Results are Estimated Values.
- Q-41** Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +14%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +15%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +2%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +34%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -1%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-04** Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.

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V-15 Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A110804 - 11 03 21 1528).

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A110804 - 11 03 21 1528).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EORB Project Number: 319 Project Manager: Jill Betts	Report ID: A110804 - 11 03 21 1528
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC
5741 NE Flanders St., Portland, OR 97213
office: 503-477-6150
mobile: 503-819-2835

Project Manager: Jill Betts
Project No.: 319
Project Name: EORB
Collected by: [Signature]

CHAIN OF CUSTODY

Apex Labs
Lab Project No. [Blank]
Chain of Custody No. [Blank]

A110804

LabID	Sample #	Date	Time	Sample Description	Matrix			Number of Containers	Analyses to be Performed				Remarks	
					Soil	Water	Other		NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM		Total RCRA 8 Metals plus Antimony, Copper and Zinc
	B-6 11	9/22/21	11:15		X			1						
	B-6 15	12:05			X			1						
	B-6 20	12:17			X			1						
	B-6 25	12:28			X			1						
	B-6 10-25C				X			5						Call PM
	B-6	9/22/21	11:55		X			5						

Comments:
Metals analyzed by EPA Methods 200.6020A/7471B.
Please compare: B-6 10-25C = B-6 11, B-6 15, B-6 20 + B-6 25. Please call Jill Betts re: Warden Sample.

Relinquished by: [Signature]	Company: Coles & Betts	Date: 9/22/21	Time: 2:19	Received by: [Signature]	Company: Apex
Relinquished by:	Company:	Date:	Time:	Received by:	Company:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:

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[Signature]

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Environmental 1 Element WO#: A1 10804

Project/Project #: EQRB 319

Delivery Info:
Date/time received: 9/22/21 @ 1419 By: JS
Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 9/22/21 @ 1421 By: JS
Chain of Custody included? Yes No Custody seals? Yes No
Signed/dated by client? Yes No
Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>5.4</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>gel</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
Green dots applied to out of temperature samples? Yes No
Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 9/22/21 @ 14:30 By: JS
All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: _____

COC/container discrepancies form initiated? Yes No
Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA
Comments: Seal in all vials.

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA
Comments: _____

Additional information: Subsampled by JS
Witness: JAB

Labeled by: JS Witness: JAB Cooler Inspected by: JS

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Wednesday, November 3, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A111015 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A111015, which was received by the laboratory on 9/27/2021 at 4:06:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 3.9 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-05 10	A111015-01	Soil	09/27/21 11:00	09/27/21 16:06
B-05 12.5	A111015-02	Soil	09/27/21 11:05	09/27/21 16:06
B-05 15	A111015-03	Soil	09/27/21 11:12	09/27/21 16:06
B-05 20	A111015-04	Soil	09/27/21 11:23	09/27/21 16:06
B-05 25	A111015-05	Soil	09/27/21 11:35	09/27/21 16:06
B-05 10-25 C	A111015-06	Soil	09/27/21 11:00	09/27/21 16:06

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-05 10-25 C (A111015-06)				Matrix: Soil		Batch: 1109602		
Diesel	ND	12.8	25.5	mg/kg dry	1	10/01/21 22:32	NWTPH-Dx	
Oil	ND	25.5	51.0	mg/kg dry	1	10/01/21 22:32	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 68 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>10/01/21 22:32</i>	<i>NWTPH-Dx</i>

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-05 10-25 C (A111015-06RE1)				Matrix: Soil		Batch: 21J0126		COMP, V-15
Gasoline Range Organics	ND	4.06	8.11	mg/kg dry	50	10/06/21 11:47	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>10/06/21 11:47</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>94 %</i>		<i>50-150 %</i>		<i>1</i>	<i>10/06/21 11:47</i>	<i>NWTPH-Gx (MS)</i>

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-05 10-25 C (A111015-06RE1)				Matrix: Soil		Batch: 21J0126		COMP, V-15
Acetone	ND	811	1620	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Acrylonitrile	ND	81.1	162	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Benzene	ND	8.11	16.2	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Bromobenzene	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Bromochloromethane	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Bromodichloromethane	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Bromoform	ND	81.1	162	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Bromomethane	ND	811	811	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
2-Butanone (MEK)	ND	406	811	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
n-Butylbenzene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
sec-Butylbenzene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
tert-Butylbenzene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Carbon disulfide	ND	406	811	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Carbon tetrachloride	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Chlorobenzene	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Chloroethane	ND	406	811	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Chloroform	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Chloromethane	ND	203	406	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
2-Chlorotoluene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
4-Chlorotoluene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Dibromochloromethane	ND	81.1	162	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	203	406	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Dibromomethane	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,2-Dichlorobenzene	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,3-Dichlorobenzene	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,4-Dichlorobenzene	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Dichlorodifluoromethane	ND	81.1	162	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,1-Dichloroethane	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,1-Dichloroethene	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
cis-1,2-Dichloroethene	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
trans-1,2-Dichloroethene	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	

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ANALYTICAL REPORT

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6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-05 10-25 C (A111015-06RE1)				Matrix: Soil		Batch: 21J0126		COMP, V-15
1,2-Dichloropropane	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,3-Dichloropropane	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
2,2-Dichloropropane	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,1-Dichloropropene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
cis-1,3-Dichloropropene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
trans-1,3-Dichloropropene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Ethylbenzene	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Hexachlorobutadiene	ND	81.1	162	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
2-Hexanone	ND	406	811	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Isopropylbenzene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
4-Isopropyltoluene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Methylene chloride	ND	406	811	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	406	811	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Naphthalene	ND	81.1	162	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
n-Propylbenzene	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Styrene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,1,1,2,2-Tetrachloroethane	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Tetrachloroethene (PCE)	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Toluene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,2,3-Trichlorobenzene	ND	203	406	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,2,4-Trichlorobenzene	ND	203	406	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,1,1-Trichloroethane	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,1,2-Trichloroethane	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Trichloroethene (TCE)	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Trichlorofluoromethane	ND	81.1	162	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,2,3-Trichloropropane	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,2,4-Trimethylbenzene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
1,3,5-Trimethylbenzene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
Vinyl chloride	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
m,p-Xylene	ND	40.6	81.1	ug/kg dry	50	10/06/21 11:47	5035A/8260D	
o-Xylene	ND	20.3	40.6	ug/kg dry	50	10/06/21 11:47	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-05 10-25 C (A111015-06RE1)				Matrix: Soil		Batch: 21J0126		COMP, V-15
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 97 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>10/06/21 11:47</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>100 %</i>	<i>80-120 %</i>	<i>1</i>	<i>10/06/21 11:47</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>79-120 %</i>	<i>1</i>	<i>10/06/21 11:47</i>	<i>5035A/8260D</i>	

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-05 10-25 C (A111015-06)				Matrix: Soil		Batch: 1109631		
Acenaphthene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Acenaphthylene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Anthracene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Benz(a)anthracene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Benzo(a)pyrene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Chrysene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Fluoranthene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Fluorene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Naphthalene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Phenanthrene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
Pyrene	ND	6.39	12.8	ug/kg dry	1	10/05/21 18:39	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>10/05/21 18:39</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>90 %</i>		<i>54-127 %</i>		<i>1</i>	<i>10/05/21 18:39</i>	<i>EPA 8270E SIM</i>

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-05 10-25 C (A111015-06)		Matrix: Soil						
Batch: 21J0316								
Antimony	ND	0.683	1.37	mg/kg dry	10	10/12/21 03:11	EPA 6020B	
Arsenic	9.38	0.683	1.37	mg/kg dry	10	10/12/21 03:11	EPA 6020B	
Barium	194	0.683	1.37	mg/kg dry	10	10/12/21 03:11	EPA 6020B	
Cadmium	0.244	0.137	0.273	mg/kg dry	10	10/12/21 03:11	EPA 6020B	J
Chromium	24.8	0.683	1.37	mg/kg dry	10	10/12/21 03:11	EPA 6020B	
Copper	30.2	1.37	2.73	mg/kg dry	10	10/12/21 03:11	EPA 6020B	
Lead	10.9	0.137	0.273	mg/kg dry	10	10/12/21 03:11	EPA 6020B	
Mercury	ND	0.0547	0.109	mg/kg dry	10	10/12/21 03:11	EPA 6020B	
Selenium	ND	0.683	1.37	mg/kg dry	10	10/12/21 03:11	EPA 6020B	
Silver	ND	0.137	0.273	mg/kg dry	10	10/12/21 03:11	EPA 6020B	
Zinc	78.3	2.73	5.47	mg/kg dry	10	10/12/21 03:11	EPA 6020B	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-05 10-25 C (A111015-06)				Matrix: Soil		Batch: 1091041		
% Solids	75.0	1.00	1.00	%	1	09/29/21 07:46	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109602 - EPA 3546 (Fuels)						Soil						
Blank (1109602-BLK1)			Prepared: 10/01/21 13:04 Analyzed: 10/01/21 21:47									
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	18.2	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	36.4	mg/kg wet	1	---	---	---	---	---	---	
Mineral Oil	ND	18.2	36.4	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (1109602-BS1)			Prepared: 10/01/21 13:04 Analyzed: 10/01/21 22:10									
<u>NWTPH-Dx</u>												
Diesel	115	10.0	20.0	mg/kg wet	1	125	---	92	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1109602-DUP1)			Prepared: 10/01/21 13:04 Analyzed: 10/01/21 22:55									
<u>QC Source Sample: B-05 10-25 C (A111015-06)</u>												
<u>NWTPH-Dx</u>												
Diesel	ND	12.5	25.1	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	25.1	50.2	mg/kg dry	1	---	ND	---	---	---	30%	
Mineral Oil	ND	25.1	50.2	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 69 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (1109602-DUP2)			Prepared: 10/01/21 18:14 Analyzed: 10/02/21 05:39									
<u>QC Source Sample: Non-SDG (A1J0048-02)</u>												
Diesel	22.9	10.9	21.8	mg/kg dry	1	---	35.1	---	---	42	30%	F-11, Q-05
Oil	ND	21.8	43.6	mg/kg dry	1	---	ND	---	---	---	30%	
Mineral Oil	ND	21.8	43.6	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 72 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0083 - EPA 5035A						Soil						
Blank (21J0083-BLK1)			Prepared: 10/05/21 09:00 Analyzed: 10/05/21 11:15									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 103 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		95 %		50-150 %		"						
LCS (21J0083-BS2)			Prepared: 10/05/21 09:00 Analyzed: 10/05/21 10:48									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	25.6	2.50	5.00	mg/kg wet	50	25.0	---	102	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 104 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		98 %		50-150 %		"						
Duplicate (21J0083-DUP1)			Prepared: 09/29/21 13:30 Analyzed: 10/05/21 17:33									
<u>QC Source Sample: Non-SDG (A111224-02)</u>												
Gasoline Range Organics	278	3.25	6.50	mg/kg dry	50	---	228	---	---	20	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 101 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		105 %		50-150 %		"						
Duplicate (21J0083-DUP2)			Prepared: 09/27/21 11:00 Analyzed: 10/05/21 19:48									
<u>QC Source Sample: B-05 10-25 C (A111015-06)</u>												
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	4.06	8.11	mg/kg dry	50	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)		Recovery: 106 %		Limits: 50-150 %		Dilution: 1x						
1,4-Difluorobenzene (Sur)		95 %		50-150 %		"						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A						Soil						
Blank (21J0126-BLK1)						Prepared: 10/06/21 09:00 Analyzed: 10/06/21 11:20						
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>93 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (21J0126-BS2)						Prepared: 10/06/21 09:00 Analyzed: 10/06/21 10:53						
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	26.6	2.50	5.00	mg/kg wet	50	25.0	---	106	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 101 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>98 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (21J0126-DUP1)						Prepared: 09/28/21 10:46 Analyzed: 10/06/21 12:41						
<u>QC Source Sample: Non-SDG (A1J0063-01)</u>												
Gasoline Range Organics	ND	3.34	6.68	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>95 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (21J0126-DUP2)						Prepared: 09/28/21 11:18 Analyzed: 10/06/21 13:35						
<u>QC Source Sample: Non-SDG (A1J0063-02)</u>												
Gasoline Range Organics	ND	3.68	7.36	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>95 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0083 - EPA 5035A						Soil						
Blank (21J0083-BLK1)			Prepared: 10/05/21 09:00 Analyzed: 10/05/21 11:15									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0083 - EPA 5035A						Soil						
Blank (21J0083-BLK1)			Prepared: 10/05/21 09:00 Analyzed: 10/05/21 11:15									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 100 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0083 - EPA 5035A						Soil						
Blank (21J0083-BLK1)						Prepared: 10/05/21 09:00 Analyzed: 10/05/21 11:15						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (21J0083-BS1)						Prepared: 10/05/21 09:00 Analyzed: 10/05/21 10:21						
5035A/8260D												
Acetone	2200	500	1000	ug/kg wet	50	2000	---	110	80-120%	---	---	
Acrylonitrile	1170	50.0	100	ug/kg wet	50	1000	---	117	80-120%	---	---	
Benzene	1120	5.00	10.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Bromobenzene	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Bromochloromethane	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Bromodichloromethane	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Bromoform	1040	50.0	100	ug/kg wet	50	1000	---	104	80-120%	---	---	
Bromomethane	1320	500	500	ug/kg wet	50	1000	---	132	80-120%	---	---	Q-56
2-Butanone (MEK)	2150	250	500	ug/kg wet	50	2000	---	107	80-120%	---	---	
n-Butylbenzene	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
sec-Butylbenzene	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
tert-Butylbenzene	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Carbon disulfide	964	250	500	ug/kg wet	50	1000	---	96	80-120%	---	---	
Carbon tetrachloride	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Chlorobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Chloroethane	1070	250	500	ug/kg wet	50	1000	---	107	80-120%	---	---	
Chloroform	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Chloromethane	991	125	250	ug/kg wet	50	1000	---	99	80-120%	---	---	
2-Chlorotoluene	1140	25.0	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
4-Chlorotoluene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Dibromochloromethane	1000	50.0	100	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,2-Dibromo-3-chloropropane	942	125	250	ug/kg wet	50	1000	---	94	80-120%	---	---	
1,2-Dibromoethane (EDB)	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Dibromomethane	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,2-Dichlorobenzene	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,3-Dichlorobenzene	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,4-Dichlorobenzene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Dichlorodifluoromethane	1010	50.0	100	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,1-Dichloroethane	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0083 - EPA 5035A						Soil						
LCS (21J0083-BS1)			Prepared: 10/05/21 09:00 Analyzed: 10/05/21 10:21									
1,2-Dichloroethane (EDC)	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,1-Dichloroethene	1140	12.5	25.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
cis-1,2-Dichloroethene	1140	12.5	25.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
trans-1,2-Dichloroethene	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,2-Dichloropropane	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,3-Dichloropropane	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
2,2-Dichloropropane	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,1-Dichloropropene	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
cis-1,3-Dichloropropene	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
trans-1,3-Dichloropropene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Ethylbenzene	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Hexachlorobutadiene	1120	50.0	100	ug/kg wet	50	1000	---	112	80-120%	---	---	
2-Hexanone	2320	250	500	ug/kg wet	50	2000	---	116	80-120%	---	---	
Isopropylbenzene	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
4-Isopropyltoluene	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Methylene chloride	1100	250	500	ug/kg wet	50	1000	---	110	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2340	250	500	ug/kg wet	50	2000	---	117	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Naphthalene	1090	50.0	100	ug/kg wet	50	1000	---	109	80-120%	---	---	
n-Propylbenzene	1110	12.5	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Styrene	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Tetrachloroethene (PCE)	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Toluene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,2,3-Trichlorobenzene	1100	125	250	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,2,4-Trichlorobenzene	1080	125	250	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,1,1-Trichloroethane	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,1,2-Trichloroethane	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Trichloroethene (TCE)	1110	12.5	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Trichlorofluoromethane	1200	50.0	100	ug/kg wet	50	1000	---	120	80-120%	---	---	
1,2,3-Trichloropropane	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,2,4-Trimethylbenzene	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,3,5-Trimethylbenzene	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A111015 - 11 03 21 1533

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0083 - EPA 5035A						Soil						
LCS (21J0083-BS1)						Prepared: 10/05/21 09:00 Analyzed: 10/05/21 10:21						
Vinyl chloride	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
m,p-Xylene	2110	25.0	50.0	ug/kg wet	50	2000	---	106	80-120%	---	---	
o-Xylene	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (21J0083-DUP1)						Prepared: 09/29/21 13:30 Analyzed: 10/05/21 17:33						
QC Source Sample: Non-SDG (A111224-02)												
Acetone	ND	650	1300	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	65.0	130	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	6.50	13.0	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	65.0	130	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	650	650	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	325	650	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	410	32.5	65.0	ug/kg dry	50	---	365	---	---	12	30%	M-02
sec-Butylbenzene	188	32.5	65.0	ug/kg dry	50	---	159	---	---	17	30%	
tert-Butylbenzene	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	325	650	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	48.7	48.7	ug/kg dry	50	---	ND	---	---	---	30%	R-02
Chloroethane	ND	325	650	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	162	325	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	65.0	130	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	162	325	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0083 - EPA 5035A							Soil					
Duplicate (21J0083-DUP1)			Prepared: 09/29/21 13:30 Analyzed: 10/05/21 17:33									
QC Source Sample: Non-SDG (A111224-02)												
1,3-Dichlorobenzene	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	65.0	130	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	442	16.2	32.5	ug/kg dry	50	---	323	---	---	31	30%	Q-04
Hexachlorobutadiene	ND	65.0	130	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	650	650	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	160	32.5	65.0	ug/kg dry	50	---	124	---	---	25	30%	
4-Isopropyltoluene	103	32.5	65.0	ug/kg dry	50	---	96.0	---	---	8	30%	M-02
Methylene chloride	ND	325	650	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	650	650	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	1460	65.0	130	ug/kg dry	50	---	1200	---	---	19	30%	
n-Propylbenzene	723	16.2	32.5	ug/kg dry	50	---	561	---	---	25	30%	
Styrene	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	32.5	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	162	325	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	162	325	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0083 - EPA 5035A												
Soil												
Duplicate (21J0083-DUP1)												
						Prepared: 09/29/21 13:30 Analyzed: 10/05/21 17:33						
QC Source Sample: Non-SDG (A111224-02)												
Trichloroethene (TCE)	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	65.0	130	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	65.0	65.0	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	8490	32.5	65.0	ug/kg dry	50	---	6770	---	---	23	30%	
1,3,5-Trimethylbenzene	3530	32.5	65.0	ug/kg dry	50	---	2920	---	---	19	30%	
Vinyl chloride	ND	16.2	32.5	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	2940	32.5	65.0	ug/kg dry	50	---	2220	---	---	28	30%	
o-Xylene	838	16.2	32.5	ug/kg dry	50	---	635	---	---	28	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (21J0083-DUP2)												
						Prepared: 09/27/21 11:00 Analyzed: 10/05/21 19:48						
QC Source Sample: B-05 10-25 C (A111015-06)												
5035A/8260D												
Acetone	ND	811	1620	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	81.1	162	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	8.11	16.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	81.1	162	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	811	811	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	406	811	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	406	811	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	406	811	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	203	406	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0083 - EPA 5035A							Soil					
Duplicate (21J0083-DUP2)			Prepared: 09/27/21 11:00 Analyzed: 10/05/21 19:48						COMP, V-15			
QC Source Sample: B-05 10-25 C (A111015-06)												
2-Chlorotoluene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	81.1	162	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	203	406	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	81.1	162	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	81.1	162	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	406	811	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	406	811	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	406	811	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	81.1	162	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 21J0083 - EPA 5035A						Soil							
Duplicate (21J0083-DUP2)						Prepared: 09/27/21 11:00 Analyzed: 10/05/21 19:48						COMP, V-15	
QC Source Sample: B-05 10-25 C (A111015-06)													
1,1,2,2-Tetrachloroethane	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%		
Tetrachloroethene (PCE)	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%		
Toluene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,3-Trichlorobenzene	ND	203	406	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,4-Trichlorobenzene	ND	203	406	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,1-Trichloroethane	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%		
1,1,2-Trichloroethane	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%		
Trichloroethene (TCE)	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%		
Trichlorofluoromethane	ND	81.1	162	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,3-Trichloropropane	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%		
1,2,4-Trimethylbenzene	ND	81.1	81.1	ug/kg dry	50	---	ND	---	---	---	30%		
1,3,5-Trimethylbenzene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%		
Vinyl chloride	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%		
m,p-Xylene	ND	40.6	81.1	ug/kg dry	50	---	ND	---	---	---	30%		
o-Xylene	ND	20.3	40.6	ug/kg dry	50	---	ND	---	---	---	30%		
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99%</i>		<i>Limits: 80-120%</i>		<i>Dilution: 1x</i>							
<i>Toluene-d8 (Surr)</i>		<i>99%</i>		<i>80-120%</i>		<i>"</i>							
<i>4-Bromofluorobenzene (Surr)</i>		<i>101%</i>		<i>79-120%</i>		<i>"</i>							

Matrix Spike (21J0083-MS1)						Prepared: 09/29/21 14:20 Analyzed: 10/05/21 18:27						
QC Source Sample: Non-SDG (A111224-03)												
5035A/8260D												
Acetone	1980	465	930	ug/kg dry	50	1860	ND	106	36-164%	---	---	
Acrylonitrile	1070	46.5	93.0	ug/kg dry	50	932	ND	115	65-134%	---	---	
Benzene	963	4.65	9.30	ug/kg dry	50	932	ND	103	77-121%	---	---	
Bromobenzene	958	11.6	23.3	ug/kg dry	50	932	ND	103	78-121%	---	---	
Bromochloromethane	997	23.3	46.5	ug/kg dry	50	932	ND	107	78-125%	---	---	
Bromodichloromethane	947	23.3	46.5	ug/kg dry	50	932	ND	102	75-127%	---	---	
Bromoform	925	46.5	93.0	ug/kg dry	50	932	ND	99	67-132%	---	---	
Bromomethane	1220	465	465	ug/kg dry	50	932	ND	131	53-143%	---	---	Q-54
2-Butanone (MEK)	2020	233	465	ug/kg dry	50	1860	ND	108	51-148%	---	---	
n-Butylbenzene	1560	23.3	46.5	ug/kg dry	50	932	534	110	70-128%	---	---	
sec-Butylbenzene	1190	23.3	46.5	ug/kg dry	50	932	216	105	73-126%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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 503-718-2323
 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0083 - EPA 5035A												
Soil												
Matrix Spike (21J0083-MS1)												
Prepared: 09/29/21 14:20 Analyzed: 10/05/21 18:27												
QC Source Sample: Non-SDG (A111224-03)												
tert-Butylbenzene	951	23.3	46.5	ug/kg dry	50	932	ND	102	73-125%	---	---	
Carbon disulfide	816	233	465	ug/kg dry	50	932	ND	88	63-132%	---	---	
Carbon tetrachloride	1000	23.3	46.5	ug/kg dry	50	932	ND	107	70-135%	---	---	
Chlorobenzene	898	11.6	23.3	ug/kg dry	50	932	ND	96	79-120%	---	---	
Chloroethane	1170	233	465	ug/kg dry	50	932	ND	125	59-139%	---	---	
Chloroform	966	23.3	46.5	ug/kg dry	50	932	ND	104	78-123%	---	---	
Chloromethane	879	116	233	ug/kg dry	50	932	ND	94	50-136%	---	---	
2-Chlorotoluene	1040	23.3	46.5	ug/kg dry	50	932	ND	112	75-122%	---	---	
4-Chlorotoluene	946	23.3	46.5	ug/kg dry	50	932	ND	101	72-124%	---	---	
Dibromochloromethane	939	46.5	93.0	ug/kg dry	50	932	ND	101	74-126%	---	---	
1,2-Dibromo-3-chloropropane	905	116	233	ug/kg dry	50	932	ND	97	61-132%	---	---	
1,2-Dibromoethane (EDB)	962	23.3	46.5	ug/kg dry	50	932	ND	103	78-122%	---	---	
Dibromomethane	978	23.3	46.5	ug/kg dry	50	932	ND	105	78-125%	---	---	
1,2-Dichlorobenzene	943	11.6	23.3	ug/kg dry	50	932	ND	101	78-121%	---	---	
1,3-Dichlorobenzene	931	11.6	23.3	ug/kg dry	50	932	ND	100	77-121%	---	---	
1,4-Dichlorobenzene	900	11.6	23.3	ug/kg dry	50	932	ND	97	75-120%	---	---	
Dichlorodifluoromethane	891	46.5	93.0	ug/kg dry	50	932	ND	96	29-149%	---	---	
1,1-Dichloroethane	977	11.6	23.3	ug/kg dry	50	932	ND	105	76-125%	---	---	
1,2-Dichloroethane (EDC)	970	11.6	23.3	ug/kg dry	50	932	ND	104	73-128%	---	---	
1,1-Dichloroethene	972	11.6	23.3	ug/kg dry	50	932	ND	104	70-131%	---	---	
cis-1,2-Dichloroethene	982	11.6	23.3	ug/kg dry	50	932	ND	105	77-123%	---	---	
trans-1,2-Dichloroethene	978	11.6	23.3	ug/kg dry	50	932	ND	105	74-125%	---	---	
1,2-Dichloropropane	977	11.6	23.3	ug/kg dry	50	932	ND	105	76-123%	---	---	
1,3-Dichloropropane	961	23.3	46.5	ug/kg dry	50	932	ND	103	77-121%	---	---	
2,2-Dichloropropane	902	23.3	46.5	ug/kg dry	50	932	ND	97	67-133%	---	---	
1,1-Dichloropropene	996	23.3	46.5	ug/kg dry	50	932	ND	107	76-125%	---	---	
cis-1,3-Dichloropropene	937	23.3	46.5	ug/kg dry	50	932	ND	101	74-126%	---	---	
trans-1,3-Dichloropropene	901	23.3	46.5	ug/kg dry	50	932	ND	97	71-130%	---	---	
Ethylbenzene	1560	11.6	23.3	ug/kg dry	50	932	661	96	76-122%	---	---	
Hexachlorobutadiene	1190	46.5	93.0	ug/kg dry	50	932	ND	128	61-135%	---	---	
2-Hexanone	2060	233	465	ug/kg dry	50	1860	ND	111	53-145%	---	---	
Isopropylbenzene	1210	23.3	46.5	ug/kg dry	50	932	211	107	68-134%	---	---	
4-Isopropyltoluene	1150	23.3	46.5	ug/kg dry	50	932	127	110	73-127%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0083 - EPA 5035A												
Soil												
Matrix Spike (21J0083-MS1)												
Prepared: 09/29/21 14:20 Analyzed: 10/05/21 18:27												
QC Source Sample: Non-SDG (A111224-03)												
Methylene chloride	970	233	465	ug/kg dry	50	932	ND	104	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	2160	233	465	ug/kg dry	50	1860	ND	116	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	933	23.3	46.5	ug/kg dry	50	932	ND	100	73-125%	---	---	
Naphthalene	2750	46.5	93.0	ug/kg dry	50	932	1590	125	62-129%	---	---	
n-Propylbenzene	1920	11.6	23.3	ug/kg dry	50	932	906	108	73-125%	---	---	
Styrene	1010	23.3	46.5	ug/kg dry	50	932	ND	109	76-124%	---	---	
1,1,1,2-Tetrachloroethane	949	23.3	46.5	ug/kg dry	50	932	ND	102	78-125%	---	---	
1,1,2,2-Tetrachloroethane	995	23.3	46.5	ug/kg dry	50	932	ND	104	70-124%	---	---	
Tetrachloroethene (PCE)	937	11.6	23.3	ug/kg dry	50	932	ND	101	73-128%	---	---	
Toluene	917	23.3	46.5	ug/kg dry	50	932	ND	98	77-121%	---	---	
1,2,3-Trichlorobenzene	1030	116	233	ug/kg dry	50	932	ND	110	66-130%	---	---	
1,2,4-Trichlorobenzene	1040	116	233	ug/kg dry	50	932	ND	111	67-129%	---	---	
1,1,1-Trichloroethane	980	11.6	23.3	ug/kg dry	50	932	ND	105	73-130%	---	---	
1,1,2-Trichloroethane	1030	11.6	23.3	ug/kg dry	50	932	ND	111	78-121%	---	---	
Trichloroethene (TCE)	977	11.6	23.3	ug/kg dry	50	932	ND	105	77-123%	---	---	
Trichlorofluoromethane	1060	46.5	93.0	ug/kg dry	50	932	ND	114	62-140%	---	---	
1,2,3-Trichloropropane	997	23.3	46.5	ug/kg dry	50	932	ND	107	73-125%	---	---	
1,2,4-Trimethylbenzene	13000	23.3	46.5	ug/kg dry	50	932	11700	142	75-123%	---	---	E, Q-03
1,3,5-Trimethylbenzene	4380	23.3	46.5	ug/kg dry	50	932	3240	122	73-124%	---	---	
Vinyl chloride	969	11.6	23.3	ug/kg dry	50	932	ND	104	56-135%	---	---	
m,p-Xylene	4760	23.3	46.5	ug/kg dry	50	1860	2840	103	77-124%	---	---	
o-Xylene	2880	11.6	23.3	ug/kg dry	50	932	1910	105	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A						Soil						
Blank (21J0126-BLK1)			Prepared: 10/06/21 09:00 Analyzed: 10/06/21 11:20									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A						Soil						
Blank (21J0126-BLK1)			Prepared: 10/06/21 09:00 Analyzed: 10/06/21 11:20									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 98 % Limits: 80-120 % Dilution: 1x

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A						Soil						
Blank (21J0126-BLK1)						Prepared: 10/06/21 09:00 Analyzed: 10/06/21 11:20						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (21J0126-BS1)						Prepared: 10/06/21 09:00 Analyzed: 10/06/21 10:26						
5035A/8260D												
Acetone	2020	500	1000	ug/kg wet	50	2000	---	101	80-120%	---	---	
Acrylonitrile	1150	50.0	100	ug/kg wet	50	1000	---	115	80-120%	---	---	
Benzene	1070	5.00	10.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Bromobenzene	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Bromochloromethane	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Bromodichloromethane	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Bromoform	1070	50.0	100	ug/kg wet	50	1000	---	107	80-120%	---	---	
Bromomethane	1260	500	500	ug/kg wet	50	1000	---	126	80-120%	---	---	Q-56
2-Butanone (MEK)	2090	250	500	ug/kg wet	50	2000	---	105	80-120%	---	---	
n-Butylbenzene	1170	25.0	50.0	ug/kg wet	50	1000	---	117	80-120%	---	---	
sec-Butylbenzene	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
tert-Butylbenzene	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Carbon disulfide	848	250	500	ug/kg wet	50	1000	---	85	80-120%	---	---	
Carbon tetrachloride	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Chlorobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Chloroethane	1110	250	500	ug/kg wet	50	1000	---	111	80-120%	---	---	
Chloroform	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Chloromethane	951	125	250	ug/kg wet	50	1000	---	95	80-120%	---	---	
2-Chlorotoluene	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
4-Chlorotoluene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Dibromochloromethane	1050	50.0	100	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,2-Dibromo-3-chloropropane	948	125	250	ug/kg wet	50	1000	---	95	80-120%	---	---	
1,2-Dibromoethane (EDB)	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Dibromomethane	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,2-Dichlorobenzene	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,3-Dichlorobenzene	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,4-Dichlorobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Dichlorodifluoromethane	929	50.0	100	ug/kg wet	50	1000	---	93	80-120%	---	---	
1,1-Dichloroethane	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A						Soil						
LCS (21J0126-BS1)			Prepared: 10/06/21 09:00 Analyzed: 10/06/21 10:26									
1,2-Dichloroethane (EDC)	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
1,1-Dichloroethene	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
cis-1,2-Dichloroethene	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
trans-1,2-Dichloroethene	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
1,2-Dichloropropane	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,3-Dichloropropane	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
2,2-Dichloropropane	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
1,1-Dichloropropene	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
cis-1,3-Dichloropropene	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
trans-1,3-Dichloropropene	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Ethylbenzene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Hexachlorobutadiene	1040	50.0	100	ug/kg wet	50	1000	---	104	80-120%	---	---	
2-Hexanone	2320	250	500	ug/kg wet	50	2000	---	116	80-120%	---	---	
Isopropylbenzene	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
4-Isopropyltoluene	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Methylene chloride	1030	250	500	ug/kg wet	50	1000	---	103	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2320	250	500	ug/kg wet	50	2000	---	116	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Naphthalene	1050	50.0	100	ug/kg wet	50	1000	---	105	80-120%	---	---	
n-Propylbenzene	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Styrene	1140	25.0	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Tetrachloroethene (PCE)	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Toluene	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
1,2,3-Trichlorobenzene	1060	125	250	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,2,4-Trichlorobenzene	1030	125	250	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,1,1-Trichloroethane	1110	12.5	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
1,1,2-Trichloroethane	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Trichloroethene (TCE)	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Trichlorofluoromethane	1110	50.0	100	ug/kg wet	50	1000	---	111	80-120%	---	---	
1,2,3-Trichloropropane	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,2,4-Trimethylbenzene	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,3,5-Trimethylbenzene	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A						Soil						
LCS (21J0126-BS1)						Prepared: 10/06/21 09:00 Analyzed: 10/06/21 10:26						
Vinyl chloride	1050	12.5	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
m,p-Xylene	2120	25.0	50.0	ug/kg wet	50	2000	---	106	80-120%	---	---	
o-Xylene	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>105 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (21J0126-DUP1)						Prepared: 09/28/21 10:46 Analyzed: 10/06/21 12:41						
QC Source Sample: Non-SDG (A1J0063-01)												
Acetone	ND	668	1340	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	66.8	134	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	6.68	13.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	66.8	134	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	668	668	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	334	668	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	334	668	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	334	668	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	167	334	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	66.8	134	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	167	334	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A						Soil						
Duplicate (21J0126-DUP1)			Prepared: 09/28/21 10:46 Analyzed: 10/06/21 12:41									
QC Source Sample: Non-SDG (A1J0063-01)												
1,3-Dichlorobenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	66.8	134	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	66.8	134	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	334	668	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	334	668	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	334	668	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	66.8	134	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	167	334	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	167	334	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A												
Soil												
Duplicate (21J0126-DUP1)												
Prepared: 09/28/21 10:46 Analyzed: 10/06/21 12:41												
QC Source Sample: Non-SDG (A1J0063-01)												
Trichloroethene (TCE)	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	66.8	134	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	33.4	66.8	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (21J0126-DUP2)												
Prepared: 09/28/21 11:18 Analyzed: 10/06/21 13:35												
QC Source Sample: Non-SDG (A1J0063-02)												
Acetone	ND	736	1470	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	73.6	147	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	7.36	14.7	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	73.6	147	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	736	736	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	368	736	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	368	736	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	368	736	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	184	368	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A						Soil						
Duplicate (21J0126-DUP2)			Prepared: 09/28/21 11:18 Analyzed: 10/06/21 13:35									
QC Source Sample: Non-SDG (A1J0063-02)												
4-Chlorotoluene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	73.6	147	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	184	368	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	73.6	147	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	73.6	147	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	368	736	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	368	736	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	368	736	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	73.6	147	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A						Soil						
Duplicate (21J0126-DUP2)			Prepared: 09/28/21 11:18 Analyzed: 10/06/21 13:35									
QC Source Sample: Non-SDG (A1J0063-02)												
Tetrachloroethene (PCE)	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	184	368	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	184	368	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	73.6	147	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	36.8	73.6	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	18.4	36.8	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (21J0126-MS1)			Prepared: 09/28/21 12:42 Analyzed: 10/06/21 15:23									
QC Source Sample: Non-SDG (A1J0063-05)												
5035A/8260D												
Acetone	3250	772	1540	ug/kg dry	50	3090	ND	105	36-164%	---	---	
Acrylonitrile	1810	77.2	154	ug/kg dry	50	1550	ND	117	65-134%	---	---	
Benzene	1610	7.72	15.4	ug/kg dry	50	1550	ND	104	77-121%	---	---	
Bromobenzene	1590	19.3	38.6	ug/kg dry	50	1550	ND	103	78-121%	---	---	
Bromochloromethane	1720	38.6	77.2	ug/kg dry	50	1550	ND	111	78-125%	---	---	
Bromodichloromethane	1550	38.6	77.2	ug/kg dry	50	1550	ND	100	75-127%	---	---	
Bromoform	1620	77.2	154	ug/kg dry	50	1550	ND	104	67-132%	---	---	
Bromomethane	2100	772	772	ug/kg dry	50	1550	ND	136	53-143%	---	---	Q-54a
2-Butanone (MEK)	3450	386	772	ug/kg dry	50	3090	ND	112	51-148%	---	---	
n-Butylbenzene	1700	38.6	77.2	ug/kg dry	50	1550	ND	110	70-128%	---	---	
sec-Butylbenzene	1610	38.6	77.2	ug/kg dry	50	1550	ND	104	73-126%	---	---	
tert-Butylbenzene	1550	38.6	77.2	ug/kg dry	50	1550	ND	101	73-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A							Soil					
Matrix Spike (21J0126-MS1)			Prepared: 09/28/21 12:42 Analyzed: 10/06/21 15:23									
<u>QC Source Sample: Non-SDG (A1J0063-05)</u>												
Carbon disulfide	1200	386	772	ug/kg dry	50	1550	ND	78	63-132%	---	---	
Carbon tetrachloride	1710	38.6	77.2	ug/kg dry	50	1550	ND	110	70-135%	---	---	
Chlorobenzene	1490	19.3	38.6	ug/kg dry	50	1550	ND	96	79-120%	---	---	
Chloroethane	2130	386	772	ug/kg dry	50	1550	ND	138	59-139%	---	---	
Chloroform	1600	38.6	77.2	ug/kg dry	50	1550	ND	103	78-123%	---	---	
Chloromethane	1380	193	386	ug/kg dry	50	1550	ND	89	50-136%	---	---	
2-Chlorotoluene	1650	38.6	77.2	ug/kg dry	50	1550	ND	107	75-122%	---	---	
4-Chlorotoluene	1610	38.6	77.2	ug/kg dry	50	1550	ND	104	72-124%	---	---	
Dibromochloromethane	1600	77.2	154	ug/kg dry	50	1550	ND	103	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1420	193	386	ug/kg dry	50	1550	ND	92	61-132%	---	---	
1,2-Dibromoethane (EDB)	1610	38.6	77.2	ug/kg dry	50	1550	ND	104	78-122%	---	---	
Dibromomethane	1610	38.6	77.2	ug/kg dry	50	1550	ND	104	78-125%	---	---	
1,2-Dichlorobenzene	1550	19.3	38.6	ug/kg dry	50	1550	ND	100	78-121%	---	---	
1,3-Dichlorobenzene	1540	19.3	38.6	ug/kg dry	50	1550	ND	99	77-121%	---	---	
1,4-Dichlorobenzene	1510	19.3	38.6	ug/kg dry	50	1550	ND	97	75-120%	---	---	
Dichlorodifluoromethane	1280	77.2	154	ug/kg dry	50	1550	ND	83	29-149%	---	---	
1,1-Dichloroethane	1620	19.3	38.6	ug/kg dry	50	1550	ND	105	76-125%	---	---	
1,2-Dichloroethane (EDC)	1660	19.3	38.6	ug/kg dry	50	1550	ND	107	73-128%	---	---	
1,1-Dichloroethene	1600	19.3	38.6	ug/kg dry	50	1550	ND	103	70-131%	---	---	
cis-1,2-Dichloroethene	1660	19.3	38.6	ug/kg dry	50	1550	ND	107	77-123%	---	---	
trans-1,2-Dichloroethene	1600	19.3	38.6	ug/kg dry	50	1550	ND	104	74-125%	---	---	
1,2-Dichloropropane	1630	19.3	38.6	ug/kg dry	50	1550	ND	106	76-123%	---	---	
1,3-Dichloropropane	1650	38.6	77.2	ug/kg dry	50	1550	ND	107	77-121%	---	---	
2,2-Dichloropropane	1470	38.6	77.2	ug/kg dry	50	1550	ND	95	67-133%	---	---	
1,1-Dichloropropene	1620	38.6	77.2	ug/kg dry	50	1550	ND	105	76-125%	---	---	
cis-1,3-Dichloropropene	1560	38.6	77.2	ug/kg dry	50	1550	ND	101	74-126%	---	---	
trans-1,3-Dichloropropene	1540	38.6	77.2	ug/kg dry	50	1550	ND	99	71-130%	---	---	
Ethylbenzene	1470	19.3	38.6	ug/kg dry	50	1550	ND	95	76-122%	---	---	
Hexachlorobutadiene	1510	77.2	154	ug/kg dry	50	1550	ND	98	61-135%	---	---	
2-Hexanone	3380	386	772	ug/kg dry	50	3090	ND	109	53-145%	---	---	
Isopropylbenzene	1620	38.6	77.2	ug/kg dry	50	1550	ND	105	68-134%	---	---	
4-Isopropyltoluene	1600	38.6	77.2	ug/kg dry	50	1550	ND	104	73-127%	---	---	
Methylene chloride	1550	386	772	ug/kg dry	50	1550	ND	100	70-128%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0126 - EPA 5035A						Soil						
Matrix Spike (21J0126-MS1)						Prepared: 09/28/21 12:42 Analyzed: 10/06/21 15:23						
QC Source Sample: Non-SDG (A1J0063-05)												
4-Methyl-2-pentanone (MiBK)	3430	386	772	ug/kg dry	50	3090	ND	111	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1520	38.6	77.2	ug/kg dry	50	1550	ND	99	73-125%	---	---	
Naphthalene	1510	77.2	154	ug/kg dry	50	1550	ND	98	62-129%	---	---	
n-Propylbenzene	1630	19.3	38.6	ug/kg dry	50	1550	ND	105	73-125%	---	---	
Styrene	1630	38.6	77.2	ug/kg dry	50	1550	ND	105	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1740	38.6	77.2	ug/kg dry	50	1550	ND	113	78-125%	---	---	
1,1,2,2-Tetrachloroethane	1600	38.6	77.2	ug/kg dry	50	1550	ND	104	70-124%	---	---	
Tetrachloroethene (PCE)	1520	19.3	38.6	ug/kg dry	50	1550	ND	98	73-128%	---	---	
Toluene	1520	38.6	77.2	ug/kg dry	50	1550	ND	98	77-121%	---	---	
1,2,3-Trichlorobenzene	1530	193	386	ug/kg dry	50	1550	ND	99	66-130%	---	---	
1,2,4-Trichlorobenzene	1510	193	386	ug/kg dry	50	1550	ND	97	67-129%	---	---	
1,1,1-Trichloroethane	1630	19.3	38.6	ug/kg dry	50	1550	ND	105	73-130%	---	---	
1,1,2-Trichloroethane	1660	19.3	38.6	ug/kg dry	50	1550	ND	107	78-121%	---	---	
Trichloroethene (TCE)	1580	19.3	38.6	ug/kg dry	50	1550	ND	102	77-123%	---	---	
Trichlorofluoromethane	1720	77.2	154	ug/kg dry	50	1550	ND	111	62-140%	---	---	
1,2,3-Trichloropropane	1600	38.6	77.2	ug/kg dry	50	1550	ND	104	73-125%	---	---	
1,2,4-Trimethylbenzene	1670	38.6	77.2	ug/kg dry	50	1550	ND	108	75-123%	---	---	
1,3,5-Trimethylbenzene	1680	38.6	77.2	ug/kg dry	50	1550	ND	108	73-124%	---	---	
Vinyl chloride	1610	19.3	38.6	ug/kg dry	50	1550	ND	104	56-135%	---	---	
m,p-Xylene	3020	38.6	77.2	ug/kg dry	50	3090	ND	98	77-124%	---	---	
o-Xylene	1560	19.3	38.6	ug/kg dry	50	1550	ND	101	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109631 - EPA 3546						Soil						
Blank (1109631-BLK1)			Prepared: 10/02/21 09:49 Analyzed: 10/04/21 18:24									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	1.42	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	B-02, J
Benzo(a)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>98 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (1109631-BS1)						Prepared: 10/02/21 09:49 Analyzed: 10/04/21 18:50						
<u>EPA 8270E SIM</u>												
Acenaphthene	453	1.33	2.67	ug/kg wet	1	533	---	85	40-123%	---	---	
Acenaphthylene	472	1.33	2.67	ug/kg wet	1	533	---	89	32-132%	---	---	
Anthracene	459	1.33	2.67	ug/kg wet	1	533	---	86	47-123%	---	---	
Benz(a)anthracene	422	1.33	2.67	ug/kg wet	1	533	---	79	49-126%	---	---	
Benzo(a)pyrene	483	1.33	2.67	ug/kg wet	1	533	---	91	45-129%	---	---	
Benzo(b)fluoranthene	497	1.33	2.67	ug/kg wet	1	533	---	93	45-132%	---	---	
Benzo(k)fluoranthene	501	1.33	2.67	ug/kg wet	1	533	---	94	47-132%	---	---	
Benzo(g,h,i)perylene	491	1.33	2.67	ug/kg wet	1	533	---	92	43-134%	---	---	
Chrysene	469	1.33	2.67	ug/kg wet	1	533	---	88	50-124%	---	---	
Dibenz(a,h)anthracene	487	1.33	2.67	ug/kg wet	1	533	---	91	45-134%	---	---	
Fluoranthene	406	1.33	2.67	ug/kg wet	1	533	---	76	50-127%	---	---	
Fluorene	428	1.33	2.67	ug/kg wet	1	533	---	80	43-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109631 - EPA 3546						Soil						
LCS (1109631-BS1)						Prepared: 10/02/21 09:49 Analyzed: 10/04/21 18:50						
Indeno(1,2,3-cd)pyrene	471	1.33	2.67	ug/kg wet	1	533	---	88	45-133%	---	---	
Naphthalene	441	1.33	2.67	ug/kg wet	1	533	---	83	35-123%	---	---	
Phenanthrene	463	1.33	2.67	ug/kg wet	1	533	---	87	50-121%	---	---	
Pyrene	404	1.33	2.67	ug/kg wet	1	533	---	76	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>95 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (1109631-DUP1)						Prepared: 10/02/21 09:49 Analyzed: 10/04/21 19:40						R-04
QC Source Sample: Non-SDG (A110832-02)												
Acenaphthene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Acenaphthylene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Anthracene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Benz(a)anthracene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Benzo(a)pyrene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Chrysene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Dibenz(a,h)anthracene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Fluoranthene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Fluorene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Naphthalene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Phenanthrene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
Pyrene	ND	5.46	10.9	ug/kg dry	4	---	ND	---	---	---	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 39 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 4x</i>						<i>S-03</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>41 %</i>		<i>54-127 %</i>		<i>"</i>						<i>S-03</i>

Matrix Spike (1109631-MS1)						Prepared: 10/02/21 09:49 Analyzed: 10/04/21 20:31						
QC Source Sample: Non-SDG (A110832-04)												
EPA 8270E SIM												
Acenaphthene	239	13.3	26.7	ug/kg dry	10	534	ND	45	40-123%	---	---	
Acenaphthylene	239	13.3	26.7	ug/kg dry	10	534	ND	45	32-132%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1109631 - EPA 3546						Soil						
Matrix Spike (1109631-MS1)						Prepared: 10/02/21 09:49 Analyzed: 10/04/21 20:31						
QC Source Sample: Non-SDG (A110832-04)												
Anthracene	228	13.3	26.7	ug/kg dry	10	534	ND	43	47-123%	---	---	Q-01
Benz(a)anthracene	232	13.3	26.7	ug/kg dry	10	534	ND	44	49-126%	---	---	B-02, Q-01
Benzo(a)pyrene	212	13.3	26.7	ug/kg dry	10	534	ND	40	45-129%	---	---	Q-01
Benzo(b)fluoranthene	242	13.3	26.7	ug/kg dry	10	534	27.2	40	45-132%	---	---	Q-01
Benzo(k)fluoranthene	242	13.3	26.7	ug/kg dry	10	534	ND	45	47-132%	---	---	Q-01
Benzo(g,h,i)perylene	233	13.3	26.7	ug/kg dry	10	534	17.0	40	43-134%	---	---	Q-01
Chrysene	253	13.3	26.7	ug/kg dry	10	534	17.0	44	50-124%	---	---	Q-01
Dibenz(a,h)anthracene	211	13.3	26.7	ug/kg dry	10	534	ND	40	45-134%	---	---	Q-01
Fluoranthene	221	13.3	26.7	ug/kg dry	10	534	17.4	38	50-127%	---	---	Q-01
Fluorene	229	13.3	26.7	ug/kg dry	10	534	ND	43	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	229	13.3	26.7	ug/kg dry	10	534	15.3	40	45-133%	---	---	Q-01
Naphthalene	243	13.3	26.7	ug/kg dry	10	534	ND	46	35-123%	---	---	
Phenanthrene	253	13.3	26.7	ug/kg dry	10	534	14.2	45	50-121%	---	---	Q-01
Pyrene	215	13.3	26.7	ug/kg dry	10	534	17.8	37	47-127%	---	---	Q-01
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 47 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 10x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>49 %</i>		<i>54-127 %</i>		<i>"</i>						
											S-03	

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Darrell Auvil, Client Services Manager

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0316 - EPA 3051A												
Soil												
Blank (21J0316-BLK1)												
						Prepared: 10/11/21 09:17 Analyzed: 10/12/21 02:38						
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	

LCS (21J0316-BS1)												
						Prepared: 10/11/21 09:17 Analyzed: 10/12/21 02:43						
<u>EPA 6020B</u>												
Antimony	29.4	0.500	1.00	mg/kg wet	10	25.0	---	117	80-120%	---	---	
Arsenic	59.5	0.500	1.00	mg/kg wet	10	50.0	---	119	80-120%	---	---	
Barium	58.4	0.500	1.00	mg/kg wet	10	50.0	---	117	80-120%	---	---	
Cadmium	54.1	0.100	0.200	mg/kg wet	10	50.0	---	108	80-120%	---	---	
Chromium	59.2	0.500	1.00	mg/kg wet	10	50.0	---	118	80-120%	---	---	
Copper	57.7	1.00	2.00	mg/kg wet	10	50.0	---	115	80-120%	---	---	
Lead	59.6	0.100	0.200	mg/kg wet	10	50.0	---	119	80-120%	---	---	
Mercury	1.14	0.0400	0.0800	mg/kg wet	10	1.00	---	114	80-120%	---	---	
Selenium	28.1	0.500	1.00	mg/kg wet	10	25.0	---	113	80-120%	---	---	
Silver	28.7	0.100	0.200	mg/kg wet	10	25.0	---	115	80-120%	---	---	
Zinc	54.7	2.00	4.00	mg/kg wet	10	50.0	---	109	80-120%	---	---	

Duplicate (21J0316-DUP1)												
						Prepared: 10/11/21 09:17 Analyzed: 10/12/21 02:52						
<u>QC Source Sample: Non-SDG (A110984-01)</u>												
Antimony	ND	0.756	1.51	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	4.16	0.756	1.51	mg/kg dry	10	---	4.14	---	---	0.4	20%	
Barium	892	0.756	1.51	mg/kg dry	10	---	760	---	---	16	20%	
Cadmium	0.300	0.151	0.302	mg/kg dry	10	---	0.320	---	---	6	20%	J
Chromium	122	0.756	1.51	mg/kg dry	10	---	110	---	---	11	20%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21J0316 - EPA 3051A												
Soil												
Duplicate (21J0316-DUP1)												
						Prepared: 10/11/21 09:17 Analyzed: 10/12/21 02:52						
<u>QC Source Sample: Non-SDG (A110984-01)</u>												
Copper	253	1.51	3.02	mg/kg dry	10	---	224	---	---	12	20%	
Lead	7.98	0.151	0.302	mg/kg dry	10	---	8.78	---	---	10	20%	
Mercury	ND	0.0605	0.121	mg/kg dry	10	---	ND	---	---	---	20%	
Selenium	ND	0.756	1.51	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	0.158	0.151	0.302	mg/kg dry	10	---	0.164	---	---	4	20%	J
Zinc	116	3.02	6.05	mg/kg dry	10	---	119	---	---	3	20%	

Matrix Spike (21J0316-MS1)												
						Prepared: 10/11/21 09:17 Analyzed: 10/12/21 02:57						
<u>QC Source Sample: Non-SDG (A110984-01)</u>												
<u>EPA 6020B</u>												
Antimony	38.0	0.822	1.64	mg/kg dry	10	41.1	ND	92	75-125%	---	---	
Arsenic	93.6	0.822	1.64	mg/kg dry	10	82.2	4.14	109	75-125%	---	---	
Barium	952	0.822	1.64	mg/kg dry	10	82.2	760	234	75-125%	---	---	Q-03
Cadmium	84.3	0.164	0.329	mg/kg dry	10	82.2	0.320	102	75-125%	---	---	
Chromium	247	0.822	1.64	mg/kg dry	10	82.2	110	167	75-125%	---	---	Q-02
Copper	377	1.64	3.29	mg/kg dry	10	82.2	224	186	75-125%	---	---	Q-02
Lead	97.7	0.164	0.329	mg/kg dry	10	82.2	8.78	108	75-125%	---	---	
Mercury	1.75	0.0657	0.131	mg/kg dry	10	1.64	ND	106	75-125%	---	---	
Selenium	42.5	0.822	1.64	mg/kg dry	10	41.1	ND	103	75-125%	---	---	
Silver	44.5	0.164	0.329	mg/kg dry	10	41.1	0.164	108	75-125%	---	---	
Zinc	195	3.29	6.57	mg/kg dry	10	82.2	119	92	75-125%	---	---	

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091041 - Total Solids (Dry Weight)							Soil					
Duplicate (1091041-DUP1)			Prepared: 09/28/21 08:54 Analyzed: 09/29/21 07:46									
<u>QC Source Sample: Non-SDG (A110963-01)</u>												
% Solids	91.7	1.00	1.00	%	1	---	91.7	---	---	0.08	10%	
Duplicate (1091041-DUP2)			Prepared: 09/28/21 08:54 Analyzed: 09/29/21 07:46									
<u>QC Source Sample: Non-SDG (A110983-02)</u>												
% Solids	13.4	1.00	1.00	%	1	---	13.1	---	---	2	10%	
Duplicate (1091041-DUP3)			Prepared: 09/28/21 08:54 Analyzed: 09/29/21 07:46									
<u>QC Source Sample: Non-SDG (A110991-04)</u>												
% Solids	92.2	1.00	1.00	%	1	---	90.0	---	---	2	10%	
Duplicate (1091041-DUP4)			Prepared: 09/28/21 08:54 Analyzed: 09/29/21 07:46									
<u>QC Source Sample: Non-SDG (A111028-01)</u>												
% Solids	86.7	1.00	1.00	%	1	---	86.8	---	---	0.1	10%	
Duplicate (1091041-DUP5)			Prepared: 09/28/21 18:54 Analyzed: 09/29/21 07:46									
<u>QC Source Sample: Non-SDG (A110946-02)</u>												
% Solids	81.3	1.00	1.00	%	1	---	81.5	---	---	0.3	10%	
Duplicate (1091041-DUP6)			Prepared: 09/28/21 18:54 Analyzed: 09/29/21 07:46									
<u>QC Source Sample: Non-SDG (A110946-03)</u>												
% Solids	82.4	1.00	1.00	%	1	---	82.6	---	---	0.3	10%	
Duplicate (1091041-DUP7)			Prepared: 09/28/21 18:54 Analyzed: 09/29/21 07:46									
<u>QC Source Sample: Non-SDG (A110946-04)</u>												
% Solids	81.8	1.00	1.00	%	1	---	82.0	---	---	0.3	10%	
Duplicate (1091041-DUP8)			Prepared: 09/28/21 18:54 Analyzed: 09/29/21 07:46									
<u>QC Source Sample: Non-SDG (A110946-05)</u>												
% Solids	82.3	1.00	1.00	%	1	---	82.5	---	---	0.2	10%	

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 1091041 - Total Solids (Dry Weight)							Soil					
Duplicate (1091041-DUP9)					Prepared: 09/28/21 18:58 Analyzed: 09/29/21 07:46							
<u>QC Source Sample: Non-SDG (A110946-06)</u>												
% Solids	77.7	1.00	1.00	%	1	---	77.8	---	---	0.1	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1109602</u>							
A111015-06	Soil	NWTPH-Dx	09/27/21 11:00	10/01/21 13:04	10.46g/5mL	10g/5mL	0.96

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21J0126</u>							
A111015-06RE1	Soil	NWTPH-Gx (MS)	09/27/21 11:00	09/27/21 11:00	25.89g/25mL	5g/5mL	0.97

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21J0126</u>							
A111015-06RE1	Soil	5035A/8260D	09/27/21 11:00	09/27/21 11:00	25.89g/25mL	5g/5mL	0.97

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1109631</u>							
A111015-06	Soil	EPA 8270E SIM	09/27/21 11:00	10/02/21 12:32	10.43g/5mL	10g/5mL	0.96

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21J0316</u>							
A111015-06	Soil	EPA 6020B	09/27/21 11:00	10/11/21 09:17	0.488g/50mL	0.5g/50mL	1.02

Percent Dry Weight

Prep: Total Solids (Dry Weight)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 1091041</u>							
A111015-06	Soil	EPA 8000D	09/27/21 11:00	09/28/21 08:54			NA

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- B-02** Analyte detected in an associated blank at a level between one-half the MRL and the MRL. (See Notes and Conventions below.)
- COMP** Sample is a composite of discrete samples. See prep information for details.
- E** Estimated Value. The result is above the calibration range of the instrument.
- F-11** The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-02** Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-02** Spike recovery is outside of established control limits due to matrix interference.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +12%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +6%. The results are reported as Estimated Values.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- R-04** Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.
- S-03** Reextraction and analysis, or analysis of laboratory duplicate, confirms surrogate failure due to sample matrix effect.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A111015 - 11 03 21 1533).

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC
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503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A111015 - 11 03 21 1533).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A111015 - 11 03 21 1533
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APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Environmental Consulting Element WO#: A1 I1015

Project/Project #: EQRB/319

Delivery Info:
 Date/time received: 9/27/21 @ 16:06 By: JAG
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 9/27/21 @ 16:06 By: JAG
 Chain of Custody included? Yes No Custody seals? Yes No
 Signed/dated by client? Yes No
 Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>3.9</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Gel</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
 Green dots applied to out of temperature samples? Yes No
 Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 9/27/21 @ 1623 By: MAS
 All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: _____

COC/container discrepancies form initiated? Yes No
 Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA
 Comments: _____

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA
 Comments: _____

Additional information:

Labeled by: MAS Witness: JAG Cooler Inspected by: MAS



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, December 8, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A1K0258 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A1K0258, which was received by the laboratory on 11/4/2021 at 11:06:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 1.6 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-23 6-10	A1K0258-01	Soil	11/04/21 08:50	11/04/21 11:06
B-23 20-25	A1K0258-02	Soil	11/04/21 09:00	11/04/21 11:06

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----------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-23 6-10 (A1K0258-01RE1)			Matrix: Soil		Batch: 21K0651			
Diesel	ND	12.3	25.0	mg/kg dry	1	11/16/21 08:30	NWTPH-Dx	
Oil	190	24.7	50.0	mg/kg dry	1	11/16/21 08:30	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 68 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>11/16/21 08:30</i>	<i>NWTPH-Dx</i>	
B-23 20-25 (A1K0258-02)			Matrix: Soil		Batch: 21K0651			
Diesel	ND	13.6	27.2	mg/kg dry	1	11/16/21 07:08	NWTPH-Dx	
Oil	ND	27.2	54.5	mg/kg dry	1	11/16/21 07:08	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>11/16/21 07:08</i>	<i>NWTPH-Dx</i>	

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<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts</p>	<p style="text-align: right;">Report ID: A1K0258 - 12 08 21 1053</p>
--------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-23 6-10 (A1K0258-01)				Matrix: Soil		Batch: 21K0413		V-15
Gasoline Range Organics	ND	3.57	7.14	mg/kg dry	50	11/10/21 16:23	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 108 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>11/10/21 16:23</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>100 %</i>		<i>50-150 %</i>		<i>1</i>	<i>11/10/21 16:23</i>	<i>NWTPH-Gx (MS)</i>
B-23 20-25 (A1K0258-02)				Matrix: Soil		Batch: 21K0413		V-15
Gasoline Range Organics	ND	4.15	8.31	mg/kg dry	50	11/10/21 16:50	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 111 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>11/10/21 16:50</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>1</i>	<i>11/10/21 16:50</i>	<i>NWTPH-Gx (MS)</i>

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-23 6-10 (A1K0258-01)				Matrix: Soil		Batch: 21K0413		V-15
Acetone	ND	714	1430	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Acrylonitrile	ND	71.4	143	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Benzene	ND	7.14	14.3	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Bromobenzene	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Bromochloromethane	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Bromodichloromethane	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Bromoform	ND	71.4	143	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Bromomethane	ND	714	714	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
2-Butanone (MEK)	ND	357	714	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
n-Butylbenzene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
sec-Butylbenzene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
tert-Butylbenzene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Carbon disulfide	ND	714	714	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Carbon tetrachloride	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Chlorobenzene	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Chloroethane	ND	357	714	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Chloroform	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Chloromethane	ND	179	357	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
2-Chlorotoluene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
4-Chlorotoluene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Dibromochloromethane	ND	71.4	143	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	179	357	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Dibromomethane	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,2-Dichlorobenzene	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,3-Dichlorobenzene	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,4-Dichlorobenzene	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Dichlorodifluoromethane	ND	71.4	143	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,1-Dichloroethane	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,1-Dichloroethene	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
cis-1,2-Dichloroethene	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
trans-1,2-Dichloroethene	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-23 6-10 (A1K0258-01)				Matrix: Soil		Batch: 21K0413		V-15
1,2-Dichloropropane	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,3-Dichloropropane	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
2,2-Dichloropropane	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,1-Dichloropropene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
cis-1,3-Dichloropropene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
trans-1,3-Dichloropropene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Ethylbenzene	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Hexachlorobutadiene	ND	71.4	143	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
2-Hexanone	ND	357	714	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Isopropylbenzene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
4-Isopropyltoluene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Methylene chloride	ND	357	714	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	357	714	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Naphthalene	ND	71.4	143	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
n-Propylbenzene	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Styrene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,1,1,2,2-Tetrachloroethane	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Tetrachloroethene (PCE)	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Toluene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,2,3-Trichlorobenzene	ND	179	357	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,2,4-Trichlorobenzene	ND	179	357	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,1,1-Trichloroethane	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,1,2-Trichloroethane	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Trichloroethene (TCE)	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Trichlorofluoromethane	ND	71.4	143	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,2,3-Trichloropropane	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,2,4-Trimethylbenzene	ND	71.4	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
1,3,5-Trimethylbenzene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
Vinyl chloride	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
m,p-Xylene	ND	35.7	71.4	ug/kg dry	50	11/10/21 16:23	5035A/8260D	
o-Xylene	ND	17.9	35.7	ug/kg dry	50	11/10/21 16:23	5035A/8260D	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-23 6-10 (A1K0258-01)				Matrix: Soil		Batch: 21K0413		V-15
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>11/10/21 16:23</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>103 %</i>		<i>80-120 %</i>	<i>1</i>	<i>11/10/21 16:23</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>	<i>1</i>	<i>11/10/21 16:23</i>	<i>5035A/8260D</i>	
B-23 20-25 (A1K0258-02)				Matrix: Soil		Batch: 21K0413		V-15
Acetone	ND	831	1660	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Acrylonitrile	ND	83.1	166	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Benzene	ND	8.31	16.6	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Bromobenzene	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Bromochloromethane	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Bromodichloromethane	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Bromoform	ND	83.1	166	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Bromomethane	ND	831	831	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
2-Butanone (MEK)	ND	415	831	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
n-Butylbenzene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
sec-Butylbenzene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
tert-Butylbenzene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Carbon disulfide	ND	831	831	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Carbon tetrachloride	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Chlorobenzene	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Chloroethane	ND	415	831	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Chloroform	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Chloromethane	ND	208	415	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
2-Chlorotoluene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
4-Chlorotoluene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Dibromochloromethane	ND	83.1	166	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	208	415	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Dibromomethane	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,2-Dichlorobenzene	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,3-Dichlorobenzene	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,4-Dichlorobenzene	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Dichlorodifluoromethane	ND	83.1	166	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,1-Dichloroethane	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	

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Darrell Auvil, Client Services Manager



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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-23 20-25 (A1K0258-02)				Matrix: Soil		Batch: 21K0413		V-15
1,2-Dichloroethane (EDC)	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,1-Dichloroethene	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
cis-1,2-Dichloroethene	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
trans-1,2-Dichloroethene	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,2-Dichloropropane	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,3-Dichloropropane	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
2,2-Dichloropropane	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,1-Dichloropropene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
cis-1,3-Dichloropropene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
trans-1,3-Dichloropropene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Ethylbenzene	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Hexachlorobutadiene	ND	83.1	166	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
2-Hexanone	ND	415	831	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Isopropylbenzene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
4-Isopropyltoluene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Methylene chloride	ND	415	831	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	415	831	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Naphthalene	ND	83.1	166	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
n-Propylbenzene	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Styrene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Tetrachloroethene (PCE)	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Toluene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,2,3-Trichlorobenzene	ND	208	415	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,2,4-Trichlorobenzene	ND	208	415	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,1,1-Trichloroethane	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,1,2-Trichloroethane	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Trichloroethene (TCE)	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Trichlorofluoromethane	ND	83.1	166	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,2,3-Trichloropropane	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
1,2,4-Trimethylbenzene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts</p>	<p>Report ID: A1K0258 - 12 08 21 1053</p>
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-23 20-25 (A1K0258-02)				Matrix: Soil		Batch: 21K0413		V-15
1,3,5-Trimethylbenzene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
Vinyl chloride	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
m,p-Xylene	ND	41.5	83.1	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
o-Xylene	ND	20.8	41.5	ug/kg dry	50	11/10/21 16:50	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 94 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>11/10/21 16:50</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>1</i>	<i>11/10/21 16:50</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>99 %</i>		<i>79-120 %</i>		<i>1</i>	<i>11/10/21 16:50</i>	<i>5035A/8260D</i>

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-23 6-10 (A1K0258-01)				Matrix: Soil		Batch: 21K0660		
Acenaphthene	ND	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Acenaphthylene	14.0	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Anthracene	ND	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Benz(a)anthracene	27.7	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Benzo(a)pyrene	33.5	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Benzo(b)fluoranthene	36.8	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Benzo(k)fluoranthene	12.4	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	25.2	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Chrysene	30.0	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Fluoranthene	38.6	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Fluorene	ND	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	26.5	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Naphthalene	10.3	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	J
Phenanthrene	18.0	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
Pyrene	47.1	5.95	11.9	ug/kg dry	1	11/17/21 11:01	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 66 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>11/17/21 11:01</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>71 %</i>		<i>54-127 %</i>		<i>1</i>	<i>11/17/21 11:01</i>	<i>EPA 8270E SIM</i>

B-23 20-25 (A1K0258-02)				Matrix: Soil		Batch: 21K0660		
Acenaphthene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Acenaphthylene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Anthracene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Benz(a)anthracene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Benzo(a)pyrene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Chrysene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Fluoranthene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Fluorene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	

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ANALYTICAL REPORT

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 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-23 20-25 (A1K0258-02)				Matrix: Soil		Batch: 21K0660		
Naphthalene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Phenanthrene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
Pyrene	ND	6.57	13.1	ug/kg dry	1	11/17/21 11:26	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 56 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>11/17/21 11:26</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>64 %</i>		<i>54-127 %</i>		<i>1</i>	<i>11/17/21 11:26</i>	<i>EPA 8270E SIM</i>

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-23 6-10 (A1K0258-01)				Matrix: Soil				
Batch: 21K0802								
Antimony	ND	0.680	1.36	mg/kg dry	10	11/19/21 23:18	EPA 6020B	
Arsenic	7.54	0.680	1.36	mg/kg dry	10	11/19/21 23:18	EPA 6020B	
Barium	142	0.680	1.36	mg/kg dry	10	11/19/21 23:18	EPA 6020B	
Cadmium	0.178	0.136	0.272	mg/kg dry	10	11/19/21 23:18	EPA 6020B	J
Chromium	19.2	0.680	1.36	mg/kg dry	10	11/19/21 23:18	EPA 6020B	
Copper	39.6	1.36	2.72	mg/kg dry	10	11/19/21 23:18	EPA 6020B	
Lead	19.4	0.136	0.272	mg/kg dry	10	11/19/21 23:18	EPA 6020B	
Mercury	0.0926	0.0544	0.109	mg/kg dry	10	11/19/21 23:18	EPA 6020B	J
Selenium	ND	0.680	1.36	mg/kg dry	10	11/19/21 23:18	EPA 6020B	
Silver	ND	0.136	0.272	mg/kg dry	10	11/19/21 23:18	EPA 6020B	
Zinc	119	2.72	5.44	mg/kg dry	10	11/19/21 23:18	EPA 6020B	
B-23 20-25 (A1K0258-02)				Matrix: Soil				
Batch: 21K0802								
Antimony	ND	0.747	1.49	mg/kg dry	10	11/19/21 23:23	EPA 6020B	
Arsenic	7.20	0.747	1.49	mg/kg dry	10	11/19/21 23:23	EPA 6020B	
Barium	157	0.747	1.49	mg/kg dry	10	11/19/21 23:23	EPA 6020B	
Cadmium	0.249	0.149	0.299	mg/kg dry	10	11/19/21 23:23	EPA 6020B	J
Chromium	17.8	0.747	1.49	mg/kg dry	10	11/19/21 23:23	EPA 6020B	
Copper	28.5	1.49	2.99	mg/kg dry	10	11/19/21 23:23	EPA 6020B	
Lead	11.0	0.149	0.299	mg/kg dry	10	11/19/21 23:23	EPA 6020B	
Mercury	ND	0.0597	0.119	mg/kg dry	10	11/19/21 23:23	EPA 6020B	
Selenium	ND	0.747	1.49	mg/kg dry	10	11/19/21 23:23	EPA 6020B	
Silver	ND	0.149	0.299	mg/kg dry	10	11/19/21 23:23	EPA 6020B	
Zinc	83.1	2.99	5.97	mg/kg dry	10	11/19/21 23:23	EPA 6020B	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight									
Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-23 6-10 (A1K0258-01)				Matrix: Soil		Batch: 21K0295			
% Solids	80.3	1.00	1.00	%	1	11/09/21 08:32	EPA 8000D		
B-23 20-25 (A1K0258-02)				Matrix: Soil		Batch: 21K0295			
% Solids	71.8	1.00	1.00	%	1	11/09/21 08:32	EPA 8000D		

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0651 - EPA 3546 (Fuels)						Soil						
Blank (21K0651-BLK1)						Prepared: 11/15/21 15:03 Analyzed: 11/15/21 22:26						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 71 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (21K0651-BS1)						Prepared: 11/15/21 15:03 Analyzed: 11/15/21 22:46						
<u>NWTPH-Dx</u>												
Diesel	98.1	10.0	20.0	mg/kg wet	1	125	---	79	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (21K0651-DUP2)						Prepared: 11/15/21 15:04 Analyzed: 11/16/21 09:09						
<u>QC Source Sample: Non-SDG (A1K0283-05)</u>												
Diesel	2060	11.6	25.0	mg/kg dry	1	---	1380	---	---	40	30%	Q-04
Oil	ND	23.2	50.0	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (21K0651-DUP3)						Prepared: 11/15/21 15:03 Analyzed: 11/16/21 07:29						
<u>QC Source Sample: Non-SDG (A1K0173-34RE1)</u>												
Diesel	ND	9.68	19.4	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	88.3	19.4	38.7	mg/kg dry	1	---	100	---	---	13	30%	F-03
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 55 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0413 - EPA 5035A						Soil						
Blank (21K0413-BLK1)			Prepared: 11/10/21 09:00 Analyzed: 11/10/21 11:26									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (21K0413-BS2)			Prepared: 11/10/21 09:00 Analyzed: 11/10/21 10:59									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	25.6	2.50	5.00	mg/kg wet	50	25.0	---	102	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (21K0413-DUP1)			Prepared: 11/01/21 12:15 Analyzed: 11/10/21 19:59									
<u>QC Source Sample: Non-SDG (A1K0369-01)</u>												
Gasoline Range Organics	ND	286	286	mg/kg dry	1000	---	ND	---	---	---	30%	R-06
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>100 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0413 - EPA 5035A						Soil						
Blank (21K0413-BLK1)			Prepared: 11/10/21 09:00 Analyzed: 11/10/21 11:26									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0413 - EPA 5035A						Soil						
Blank (21K0413-BLK1)			Prepared: 11/10/21 09:00 Analyzed: 11/10/21 11:26									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 94% Limits: 80-120% Dilution: 1x

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0413 - EPA 5035A						Soil						
Blank (21K0413-BLK1)						Prepared: 11/10/21 09:00 Analyzed: 11/10/21 11:26						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (21K0413-BS1)						Prepared: 11/10/21 09:00 Analyzed: 11/10/21 10:32						
5035A/8260D												
Acetone	2030	500	1000	ug/kg wet	50	2000	---	102	80-120%	---	---	
Acrylonitrile	1160	50.0	100	ug/kg wet	50	1000	---	116	80-120%	---	---	
Benzene	1030	5.00	10.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Bromobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Bromochloromethane	1190	25.0	50.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
Bromodichloromethane	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Bromoform	1230	50.0	100	ug/kg wet	50	1000	---	123	80-120%	---	---	Q-56
Bromomethane	1240	500	500	ug/kg wet	50	1000	---	124	80-120%	---	---	Q-56
2-Butanone (MEK)	2130	250	500	ug/kg wet	50	2000	---	107	80-120%	---	---	
n-Butylbenzene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
sec-Butylbenzene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
tert-Butylbenzene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Carbon disulfide	668	500	500	ug/kg wet	50	1000	---	67	80-120%	---	---	Q-55
Carbon tetrachloride	1230	25.0	50.0	ug/kg wet	50	1000	---	123	80-120%	---	---	Q-56
Chlorobenzene	974	12.5	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Chloroethane	1260	250	500	ug/kg wet	50	1000	---	126	80-120%	---	---	Q-56
Chloroform	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Chloromethane	1140	125	250	ug/kg wet	50	1000	---	114	80-120%	---	---	
2-Chlorotoluene	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
4-Chlorotoluene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Dibromochloromethane	1170	50.0	100	ug/kg wet	50	1000	---	117	80-120%	---	---	
1,2-Dibromo-3-chloropropane	1000	125	250	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,2-Dibromoethane (EDB)	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Dibromomethane	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,2-Dichlorobenzene	986	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,3-Dichlorobenzene	993	12.5	25.0	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,4-Dichlorobenzene	953	12.5	25.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
Dichlorodifluoromethane	1080	50.0	100	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,1-Dichloroethane	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323

ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0413 - EPA 5035A						Soil						
LCS (21K0413-BS1)			Prepared: 11/10/21 09:00 Analyzed: 11/10/21 10:32									
1,2-Dichloroethane (EDC)	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,1-Dichloroethene	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
cis-1,2-Dichloroethene	1110	12.5	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
trans-1,2-Dichloroethene	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,2-Dichloropropane	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,3-Dichloropropane	1140	25.0	50.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
2,2-Dichloropropane	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,1-Dichloropropene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
cis-1,3-Dichloropropene	1180	25.0	50.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
trans-1,3-Dichloropropene	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
Ethylbenzene	984	12.5	25.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
Hexachlorobutadiene	966	50.0	100	ug/kg wet	50	1000	---	97	80-120%	---	---	
2-Hexanone	2440	250	500	ug/kg wet	50	2000	---	122	80-120%	---	---	Q-56
Isopropylbenzene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
4-Isopropyltoluene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Methylene chloride	961	250	500	ug/kg wet	50	1000	---	96	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2510	250	500	ug/kg wet	50	2000	---	126	80-120%	---	---	Q-56
Methyl tert-butyl ether (MTBE)	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Naphthalene	984	50.0	100	ug/kg wet	50	1000	---	98	80-120%	---	---	
n-Propylbenzene	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Styrene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1250	25.0	50.0	ug/kg wet	50	1000	---	125	80-120%	---	---	Q-56
1,1,2,2-Tetrachloroethane	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Tetrachloroethene (PCE)	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Toluene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,2,3-Trichlorobenzene	990	125	250	ug/kg wet	50	1000	---	99	80-120%	---	---	
1,2,4-Trichlorobenzene	974	125	250	ug/kg wet	50	1000	---	97	80-120%	---	---	
1,1,1-Trichloroethane	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,1,2-Trichloroethane	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Trichloroethene (TCE)	973	12.5	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Trichlorofluoromethane	1140	50.0	100	ug/kg wet	50	1000	---	114	80-120%	---	---	
1,2,3-Trichloropropane	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,2,4-Trimethylbenzene	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,3,5-Trimethylbenzene	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0413 - EPA 5035A						Soil						
LCS (21K0413-BS1)			Prepared: 11/10/21 09:00 Analyzed: 11/10/21 10:32									
Vinyl chloride	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
m,p-Xylene	2010	25.0	50.0	ug/kg wet	50	2000	---	100	80-120%	---	---	
o-Xylene	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>105 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (21K0413-DUP1)			Prepared: 11/01/21 12:15 Analyzed: 11/10/21 19:59									
QC Source Sample: Non-SDG (A1K0369-01)												
Acetone	ND	11400	22900	ug/kg dry	1000	---	ND	---	---	---	30%	
Acrylonitrile	ND	1140	2290	ug/kg dry	1000	---	ND	---	---	---	30%	
Benzene	ND	114	229	ug/kg dry	1000	---	ND	---	---	---	30%	
Bromobenzene	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
Bromochloromethane	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
Bromodichloromethane	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
Bromoform	ND	1140	2290	ug/kg dry	1000	---	ND	---	---	---	30%	
Bromomethane	ND	11400	11400	ug/kg dry	1000	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	5720	11400	ug/kg dry	1000	---	ND	---	---	---	30%	
n-Butylbenzene	ND	1140	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
Carbon disulfide	ND	11400	11400	ug/kg dry	1000	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
Chlorobenzene	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
Chloroethane	ND	5720	11400	ug/kg dry	1000	---	ND	---	---	---	30%	
Chloroform	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
Chloromethane	ND	2860	5720	ug/kg dry	1000	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
Dibromochloromethane	ND	1140	2290	ug/kg dry	1000	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	2860	5720	ug/kg dry	1000	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
Dibromomethane	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0413 - EPA 5035A						Soil						
Duplicate (21K0413-DUP1)			Prepared: 11/01/21 12:15 Analyzed: 11/10/21 19:59									
QC Source Sample: Non-SDG (A1K0369-01)												
1,3-Dichlorobenzene	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	1140	2290	ug/kg dry	1000	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
Ethylbenzene	ND	1430	1430	ug/kg dry	1000	---	ND	---	---	---	30%	R-06
Hexachlorobutadiene	ND	1140	2290	ug/kg dry	1000	---	ND	---	---	---	30%	
2-Hexanone	ND	5720	11400	ug/kg dry	1000	---	ND	---	---	---	30%	
Isopropylbenzene	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
Methylene chloride	ND	5720	11400	ug/kg dry	1000	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	5720	11400	ug/kg dry	1000	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
Naphthalene	ND	1140	2290	ug/kg dry	1000	---	ND	---	---	---	30%	
n-Propylbenzene	ND	1140	1140	ug/kg dry	1000	---	ND	---	---	---	30%	R-06
Styrene	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
Toluene	ND	2000	2000	ug/kg dry	1000	---	ND	---	---	---	30%	R-06
1,2,3-Trichlorobenzene	ND	2860	5720	ug/kg dry	1000	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	2860	5720	ug/kg dry	1000	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0413 - EPA 5035A						Soil						
Duplicate (21K0413-DUP1)			Prepared: 11/01/21 12:15 Analyzed: 11/10/21 19:59									
QC Source Sample: Non-SDG (A1K0369-01)												
Trichloroethene (TCE)	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	1140	2290	ug/kg dry	1000	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	572	1140	ug/kg dry	1000	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	5150	5150	ug/kg dry	1000	---	ND	---	---	---	30%	R-06
1,3,5-Trimethylbenzene	ND	2000	2000	ug/kg dry	1000	---	ND	---	---	---	30%	R-06
Vinyl chloride	ND	286	572	ug/kg dry	1000	---	ND	---	---	---	30%	
m,p-Xylene	ND	5150	5150	ug/kg dry	1000	---	ND	---	---	---	30%	R-06
o-Xylene	ND	1720	1720	ug/kg dry	1000	---	ND	---	---	---	30%	R-06
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 94 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (21K0413-MS1)						Prepared: 11/01/21 13:15 Analyzed: 11/10/21 21:47						
QC Source Sample: Non-SDG (A1K0369-04)												
5035A/8260D												
Acetone	56600	13700	27500	ug/kg dry	1000	55000	ND	103	36-164%	---	---	
Acrylonitrile	68000	1370	2750	ug/kg dry	1000	27500	ND	97	65-134%	---	---	
Benzene	70000	137	275	ug/kg dry	1000	27500	41400	104	77-121%	---	---	
Bromobenzene	27800	343	687	ug/kg dry	1000	27500	ND	101	78-121%	---	---	
Bromochloromethane	33300	687	1370	ug/kg dry	1000	27500	ND	121	78-125%	---	---	
Bromodichloromethane	30500	687	1370	ug/kg dry	1000	27500	ND	99	75-127%	---	---	
Bromoform	32700	1370	2750	ug/kg dry	1000	27500	ND	119	67-132%	---	---	Q-54a
Bromomethane	35700	13700	13700	ug/kg dry	1000	27500	ND	130	53-143%	---	---	Q-54b
2-Butanone (MEK)	95600	6870	13700	ug/kg dry	1000	55000	ND	93	51-148%	---	---	
n-Butylbenzene	58000	687	1370	ug/kg dry	1000	27500	25100	120	70-128%	---	---	
sec-Butylbenzene	38800	687	1370	ug/kg dry	1000	27500	10500	103	73-126%	---	---	
tert-Butylbenzene	28400	687	1370	ug/kg dry	1000	27500	ND	103	73-125%	---	---	
Carbon disulfide	18900	13700	13700	ug/kg dry	1000	27500	ND	69	63-132%	---	---	Q-54e
Carbon tetrachloride	32900	687	1370	ug/kg dry	1000	27500	ND	120	70-135%	---	---	Q-54a
Chlorobenzene	28500	343	687	ug/kg dry	1000	27500	ND	102	79-120%	---	---	
Chloroethane	34200	6870	13700	ug/kg dry	1000	27500	ND	125	59-139%	---	---	Q-54d
Chloroform	30400	687	1370	ug/kg dry	1000	27500	ND	105	78-123%	---	---	
Chloromethane	32000	3430	6870	ug/kg dry	1000	27500	ND	116	50-136%	---	---	

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0413 - EPA 5035A						Soil						
Matrix Spike (21K0413-MS1)						Prepared: 11/01/21 13:15 Analyzed: 11/10/21 21:47						
QC Source Sample: Non-SDG (A1K0369-04)												
2-Chlorotoluene	30400	687	1370	ug/kg dry	1000	27500	ND	110	75-122%	---	---	
4-Chlorotoluene	29200	687	1370	ug/kg dry	1000	27500	ND	106	72-124%	---	---	
Dibromochloromethane	31300	1370	2750	ug/kg dry	1000	27500	ND	114	74-126%	---	---	
1,2-Dibromo-3-chloropropane	28700	3430	6870	ug/kg dry	1000	27500	ND	104	61-132%	---	---	
1,2-Dibromoethane (EDB)	29100	687	1370	ug/kg dry	1000	27500	ND	106	78-122%	---	---	
Dibromomethane	29100	687	1370	ug/kg dry	1000	27500	ND	106	78-125%	---	---	
1,2-Dichlorobenzene	28200	343	687	ug/kg dry	1000	27500	ND	103	78-121%	---	---	
1,3-Dichlorobenzene	27200	343	687	ug/kg dry	1000	27500	ND	99	77-121%	---	---	
1,4-Dichlorobenzene	26400	343	687	ug/kg dry	1000	27500	ND	96	75-120%	---	---	
Dichlorodifluoromethane	30400	1370	2750	ug/kg dry	1000	27500	ND	111	29-149%	---	---	
1,1-Dichloroethane	31000	343	687	ug/kg dry	1000	27500	ND	113	76-125%	---	---	
1,2-Dichloroethane (EDC)	30800	343	687	ug/kg dry	1000	27500	ND	112	73-128%	---	---	
1,1-Dichloroethene	29700	343	687	ug/kg dry	1000	27500	ND	108	70-131%	---	---	
cis-1,2-Dichloroethene	30900	343	687	ug/kg dry	1000	27500	ND	112	77-123%	---	---	
trans-1,2-Dichloroethene	30300	343	687	ug/kg dry	1000	27500	ND	110	74-125%	---	---	
1,2-Dichloropropane	31900	343	687	ug/kg dry	1000	27500	ND	116	76-123%	---	---	
1,3-Dichloropropane	31700	687	1370	ug/kg dry	1000	27500	ND	115	77-121%	---	---	
2,2-Dichloropropane	28000	687	1370	ug/kg dry	1000	27500	ND	102	67-133%	---	---	
1,1-Dichloropropene	29800	687	1370	ug/kg dry	1000	27500	ND	108	76-125%	---	---	
cis-1,3-Dichloropropene	32800	687	1370	ug/kg dry	1000	27500	ND	119	74-126%	---	---	
trans-1,3-Dichloropropene	31100	687	1370	ug/kg dry	1000	27500	ND	113	71-130%	---	---	
Ethylbenzene	272000	343	687	ug/kg dry	1000	27500	242000	108	76-122%	---	---	
Hexachlorobutadiene	31300	1370	2750	ug/kg dry	1000	27500	ND	114	61-135%	---	---	
2-Hexanone	76500	6870	13700	ug/kg dry	1000	55000	ND	124	53-145%	---	---	Q-54
Isopropylbenzene	53600	687	1370	ug/kg dry	1000	27500	23500	110	68-134%	---	---	
4-Isopropyltoluene	34000	687	1370	ug/kg dry	1000	27500	5620	103	73-127%	---	---	
Methylene chloride	27300	6870	13700	ug/kg dry	1000	27500	ND	99	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	93400	6870	13700	ug/kg dry	1000	55000	ND	124	65-135%	---	---	Q-54d
Methyl tert-butyl ether (MTBE)	28400	687	1370	ug/kg dry	1000	27500	ND	103	73-125%	---	---	
Naphthalene	116000	1370	2750	ug/kg dry	1000	27500	82200	124	62-129%	---	---	
n-Propylbenzene	121000	343	687	ug/kg dry	1000	27500	92400	104	73-125%	---	---	
Styrene	32100	687	1370	ug/kg dry	1000	27500	ND	117	76-124%	---	---	
1,1,1,2-Tetrachloroethane	32500	687	1370	ug/kg dry	1000	27500	ND	118	78-125%	---	---	Q-54c

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0413 - EPA 5035A						Soil						
Matrix Spike (21K0413-MS1)						Prepared: 11/01/21 13:15 Analyzed: 11/10/21 21:47						
QC Source Sample: Non-SDG (A1K0369-04)												
1,1,2,2-Tetrachloroethane	33500	687	1370	ug/kg dry	1000	27500	ND	119	70-124%	---	---	
Tetrachloroethene (PCE)	28500	343	687	ug/kg dry	1000	27500	ND	104	73-128%	---	---	
Toluene	496000	687	1370	ug/kg dry	1000	27500	466000	107	77-121%	---	---	E
1,2,3-Trichlorobenzene	29100	3430	6870	ug/kg dry	1000	27500	ND	106	66-130%	---	---	
1,2,4-Trichlorobenzene	28800	3430	6870	ug/kg dry	1000	27500	ND	105	67-129%	---	---	
1,1,1-Trichloroethane	30200	343	687	ug/kg dry	1000	27500	ND	110	73-130%	---	---	
1,1,2-Trichloroethane	34800	343	687	ug/kg dry	1000	27500	ND	126	78-121%	---	---	Q-01
Trichloroethene (TCE)	27700	343	687	ug/kg dry	1000	27500	ND	101	77-123%	---	---	
Trichlorofluoromethane	30600	1370	2750	ug/kg dry	1000	27500	ND	111	62-140%	---	---	
1,2,3-Trichloropropane	31600	687	1370	ug/kg dry	1000	27500	ND	111	73-125%	---	---	
1,2,4-Trimethylbenzene	629000	687	1370	ug/kg dry	1000	27500	613000	59	75-123%	---	---	E, Q-03
1,3,5-Trimethylbenzene	200000	687	1370	ug/kg dry	1000	27500	172000	103	73-124%	---	---	
Vinyl chloride	30600	343	687	ug/kg dry	1000	27500	ND	111	56-135%	---	---	
m,p-Xylene	1230000	687	1370	ug/kg dry	1000	55000	1180000	105	77-124%	---	---	E
o-Xylene	313000	343	687	ug/kg dry	1000	27500	285000	102	77-123%	---	---	E
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 94 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>107 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>93 %</i>		<i>79-120 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0660 - EPA 3546						Soil						
Blank (21K0660-BLK1)			Prepared: 11/16/21 07:24 Analyzed: 11/16/21 09:54									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>92 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (21K0660-BS1)			Prepared: 11/16/21 07:24 Analyzed: 11/16/21 10:19									
<u>EPA 8270E SIM</u>												
Acenaphthene	474	1.33	2.67	ug/kg wet	1	533	---	89	40-123%	---	---	
Acenaphthylene	489	1.33	2.67	ug/kg wet	1	533	---	92	32-132%	---	---	
Anthracene	475	1.33	2.67	ug/kg wet	1	533	---	89	47-123%	---	---	
Benz(a)anthracene	487	1.33	2.67	ug/kg wet	1	533	---	91	49-126%	---	---	
Benzo(a)pyrene	509	1.33	2.67	ug/kg wet	1	533	---	95	45-129%	---	---	
Benzo(b)fluoranthene	522	1.33	2.67	ug/kg wet	1	533	---	98	45-132%	---	---	
Benzo(k)fluoranthene	496	1.33	2.67	ug/kg wet	1	533	---	93	47-132%	---	---	
Benzo(g,h,i)perylene	462	1.33	2.67	ug/kg wet	1	533	---	87	43-134%	---	---	
Chrysene	477	1.33	2.67	ug/kg wet	1	533	---	89	50-124%	---	---	
Dibenz(a,h)anthracene	525	1.33	2.67	ug/kg wet	1	533	---	98	45-134%	---	---	
Fluoranthene	485	1.33	2.67	ug/kg wet	1	533	---	91	50-127%	---	---	
Fluorene	470	1.33	2.67	ug/kg wet	1	533	---	88	43-125%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0660 - EPA 3546						Soil						
LCS (21K0660-BS1)			Prepared: 11/16/21 07:24 Analyzed: 11/16/21 10:19									
Indeno(1,2,3-cd)pyrene	462	1.33	2.67	ug/kg wet	1	533	---	87	45-133%	---	---	
Naphthalene	444	1.33	2.67	ug/kg wet	1	533	---	83	35-123%	---	---	
Phenanthrene	466	1.33	2.67	ug/kg wet	1	533	---	87	50-121%	---	---	
Pyrene	482	1.33	2.67	ug/kg wet	1	533	---	90	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 84 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>93 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (21K0660-DUP1)						Prepared: 11/16/21 07:24 Analyzed: 11/16/21 11:09						
QC Source Sample: Non-SDG (A1K0206-02)												
Acenaphthene	ND	4.81	9.62	ug/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	5.59	4.81	9.62	ug/kg dry	1	---	5.08	---	---	9	30%	J
Anthracene	9.76	4.81	9.62	ug/kg dry	1	---	8.82	---	---	10	30%	
Benz(a)anthracene	46.3	4.81	9.62	ug/kg dry	1	---	43.5	---	---	6	30%	
Benzo(a)pyrene	66.5	4.81	9.62	ug/kg dry	1	---	61.0	---	---	9	30%	
Benzo(b)fluoranthene	95.4	4.81	9.62	ug/kg dry	1	---	88.8	---	---	7	30%	
Benzo(k)fluoranthene	29.3	4.81	9.62	ug/kg dry	1	---	26.1	---	---	12	30%	M-05
Benzo(g,h,i)perylene	80.9	4.81	9.62	ug/kg dry	1	---	77.1	---	---	5	30%	
Chrysene	71.7	4.81	9.62	ug/kg dry	1	---	67.4	---	---	6	30%	
Dibenz(a,h)anthracene	9.22	4.81	9.62	ug/kg dry	1	---	9.34	---	---	1	30%	J
Fluoranthene	101	4.81	9.62	ug/kg dry	1	---	95.2	---	---	6	30%	
Fluorene	ND	4.81	9.62	ug/kg dry	1	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	68.3	4.81	9.62	ug/kg dry	1	---	64.0	---	---	7	30%	
Naphthalene	6.00	4.81	9.62	ug/kg dry	1	---	5.70	---	---	5	30%	J
Phenanthrene	47.2	4.81	9.62	ug/kg dry	1	---	45.8	---	---	3	30%	
Pyrene	120	4.81	9.62	ug/kg dry	1	---	113	---	---	6	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 54 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>69 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (21K0660-MS1)						Prepared: 11/16/21 07:24 Analyzed: 11/16/21 11:59						
QC Source Sample: Non-SDG (A1K0538-07)												
EPA 8270E SIM												
Acenaphthene	703	5.91	11.8	ug/kg dry	1	946	ND	74	40-123%	---	---	
Acenaphthylene	740	5.91	11.8	ug/kg dry	1	946	ND	78	32-132%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0660 - EPA 3546						Soil						
Matrix Spike (21K0660-MS1)						Prepared: 11/16/21 07:24 Analyzed: 11/16/21 11:59						
QC Source Sample: Non-SDG (A1K0538-07)												
Anthracene	700	5.91	11.8	ug/kg dry	1	946	ND	74	47-123%	---	---	
Benz(a)anthracene	705	5.91	11.8	ug/kg dry	1	946	ND	75	49-126%	---	---	
Benzo(a)pyrene	713	5.91	11.8	ug/kg dry	1	946	ND	75	45-129%	---	---	
Benzo(b)fluoranthene	714	5.91	11.8	ug/kg dry	1	946	ND	76	45-132%	---	---	
Benzo(k)fluoranthene	724	5.91	11.8	ug/kg dry	1	946	ND	77	47-132%	---	---	
Benzo(g,h,i)perylene	647	5.91	11.8	ug/kg dry	1	946	ND	68	43-134%	---	---	
Chrysene	690	5.91	11.8	ug/kg dry	1	946	ND	73	50-124%	---	---	
Dibenz(a,h)anthracene	741	5.91	11.8	ug/kg dry	1	946	ND	78	45-134%	---	---	
Fluoranthene	709	5.91	11.8	ug/kg dry	1	946	ND	75	50-127%	---	---	
Fluorene	707	5.91	11.8	ug/kg dry	1	946	ND	75	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	661	5.91	11.8	ug/kg dry	1	946	ND	70	45-133%	---	---	
Naphthalene	708	5.91	11.8	ug/kg dry	1	946	ND	75	35-123%	---	---	
Phenanthrene	700	5.91	11.8	ug/kg dry	1	946	ND	74	50-121%	---	---	
Pyrene	705	5.91	11.8	ug/kg dry	1	946	ND	75	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 72 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>76 %</i>		<i>54-127 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0802 - EPA 3051A						Soil						
Blank (21K0802-BLK1)			Prepared: 11/18/21 09:50 Analyzed: 11/19/21 21:53									
EPA 6020B												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	
LCS (21K0802-BS1)												
										Prepared: 11/18/21 09:50 Analyzed: 11/19/21 22:03		
EPA 6020B												
Antimony	26.3	0.500	1.00	mg/kg wet	10	25.0	---	105	80-120%	---	---	
Arsenic	54.0	0.500	1.00	mg/kg wet	10	50.0	---	108	80-120%	---	---	
Barium	48.4	0.500	1.00	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Cadmium	51.7	0.100	0.200	mg/kg wet	10	50.0	---	103	80-120%	---	---	
Chromium	49.6	0.500	1.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	
Copper	54.2	1.00	2.00	mg/kg wet	10	50.0	---	108	80-120%	---	---	
Lead	51.7	0.100	0.200	mg/kg wet	10	50.0	---	103	80-120%	---	---	
Mercury	0.952	0.0400	0.0800	mg/kg wet	10	1.00	---	95	80-120%	---	---	
Selenium	25.9	0.500	1.00	mg/kg wet	10	25.0	---	104	80-120%	---	---	
Silver	25.3	0.100	0.200	mg/kg wet	10	25.0	---	101	80-120%	---	---	
Zinc	52.5	2.00	4.00	mg/kg wet	10	50.0	---	105	80-120%	---	---	
Duplicate (21K0802-DUP1)												
										Prepared: 11/18/21 09:50 Analyzed: 11/19/21 22:13		
QC Source Sample: Non-SDG (A1J1271-02)												
Antimony	ND	0.556	1.11	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	6.45	0.556	1.11	mg/kg dry	10	---	6.30	---	---	2	20%	
Barium	156	0.556	1.11	mg/kg dry	10	---	152	---	---	3	20%	
Cadmium	0.204	0.111	0.222	mg/kg dry	10	---	0.211	---	---	3	20%	J
Chromium	20.0	0.556	1.11	mg/kg dry	10	---	19.9	---	---	0.6	20%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0802 - EPA 3051A						Soil						
Duplicate (21K0802-DUP1)						Prepared: 11/18/21 09:50 Analyzed: 11/19/21 22:13						
QC Source Sample: Non-SDG (A1J1271-02)												
Copper	16.3	1.11	2.22	mg/kg dry	10	---	15.9	---	---	3	20%	
Lead	13.9	0.111	0.222	mg/kg dry	10	---	14.5	---	---	4	20%	
Mercury	ND	0.0444	0.0889	mg/kg dry	10	---	ND	---	---	---	20%	
Selenium	ND	0.556	1.11	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	0.111	0.222	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	67.6	2.22	4.44	mg/kg dry	10	---	66.4	---	---	2	20%	

Matrix Spike (21K0802-MS1)						Prepared: 11/18/21 09:50 Analyzed: 11/19/21 22:18						
QC Source Sample: Non-SDG (A1J1271-02)												
EPA 6020B												
Antimony	23.5	0.534	1.07	mg/kg dry	10	26.7	ND	88	75-125%	---	---	
Arsenic	61.5	0.534	1.07	mg/kg dry	10	53.4	6.30	103	75-125%	---	---	
Barium	206	0.534	1.07	mg/kg dry	10	53.4	152	101	75-125%	---	---	
Cadmium	51.6	0.107	0.213	mg/kg dry	10	53.4	0.211	96	75-125%	---	---	
Chromium	72.1	0.534	1.07	mg/kg dry	10	53.4	19.9	98	75-125%	---	---	
Copper	69.9	1.07	2.13	mg/kg dry	10	53.4	15.9	101	75-125%	---	---	
Lead	64.3	0.107	0.213	mg/kg dry	10	53.4	14.5	93	75-125%	---	---	
Mercury	1.02	0.0427	0.0854	mg/kg dry	10	1.07	ND	96	75-125%	---	---	
Selenium	25.2	0.534	1.07	mg/kg dry	10	26.7	ND	95	75-125%	---	---	
Silver	25.1	0.107	0.213	mg/kg dry	10	26.7	ND	94	75-125%	---	---	
Zinc	122	2.13	4.27	mg/kg dry	10	53.4	66.4	105	75-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0295 - Total Solids (Dry Weight)							Soil					
Duplicate (21K0295-DUP1)			Prepared: 11/08/21 08:58 Analyzed: 11/09/21 08:32									
<u>QC Source Sample: Non-SDG (A1J1298-02)</u>												
% Solids	45.9	1.00	1.00	%	1	---	45.7	---	---	0.4	10%	
Duplicate (21K0295-DUP2)			Prepared: 11/08/21 08:58 Analyzed: 11/09/21 08:32									
<u>QC Source Sample: Non-SDG (A1K0181-09)</u>												
% Solids	83.8	1.00	1.00	%	1	---	83.9	---	---	0.2	10%	
Duplicate (21K0295-DUP3)			Prepared: 11/08/21 08:58 Analyzed: 11/09/21 08:32									
<u>QC Source Sample: Non-SDG (A1K0211-01)</u>												
% Solids	83.9	1.00	1.00	%	1	---	85.9	---	---	2	10%	
Duplicate (21K0295-DUP4)			Prepared: 11/08/21 08:58 Analyzed: 11/09/21 08:32									
<u>QC Source Sample: Non-SDG (A1K0211-11)</u>												
% Solids	82.0	1.00	1.00	%	1	---	81.6	---	---	0.6	10%	
Duplicate (21K0295-DUP5)			Prepared: 11/08/21 08:58 Analyzed: 11/09/21 08:32									
<u>QC Source Sample: Non-SDG (A1K0220-16)</u>												
% Solids	55.7	1.00	1.00	%	1	---	55.4	---	---	0.5	10%	
Duplicate (21K0295-DUP6)			Prepared: 11/08/21 08:58 Analyzed: 11/09/21 08:32									
<u>QC Source Sample: Non-SDG (A1K0262-04)</u>												
% Solids	86.0	1.00	1.00	%	1	---	88.7	---	---	3	10%	
Duplicate (21K0295-DUP7)			Prepared: 11/08/21 18:23 Analyzed: 11/09/21 08:32									
<u>QC Source Sample: Non-SDG (A1K0269-01)</u>												
% Solids	75.0	1.00	1.00	%	1	---	75.3	---	---	0.4	10%	
Duplicate (21K0295-DUP8)			Prepared: 11/08/21 18:23 Analyzed: 11/09/21 08:32									
<u>QC Source Sample: Non-SDG (A1K0282-01)</u>												
% Solids	76.1	1.00	1.00	%	1	---	74.5	---	---	2	10%	

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0295 - Total Solids (Dry Weight)						Soil						
Duplicate (21K0295-DUP9)						Prepared: 11/08/21 18:23 Analyzed: 11/09/21 08:32						
<u>QC Source Sample: Non-SDG (A1K0313-01)</u>												
% Solids	74.4	1.00	1.00	%	1	---	73.3	---	---	2	10%	
Duplicate (21K0295-DUPA)						Prepared: 11/08/21 19:12 Analyzed: 11/09/21 08:32						
<u>QC Source Sample: Non-SDG (A1K0336-01)</u>												
% Solids	77.8	1.00	1.00	%	1	---	77.8	---	---	0.008	10%	
Duplicate (21K0295-DUPB)						Prepared: 11/08/21 19:12 Analyzed: 11/09/21 08:32						
<u>QC Source Sample: Non-SDG (A1K0337-01)</u>												
% Solids	83.7	1.00	1.00	%	1	---	83.7	---	---	0.02	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 21K0651</u>							
A1K0258-01RE1	Soil	NWTPH-Dx	11/04/21 08:50	11/15/21 15:06	10.1g/5mL	10g/5mL	0.99
A1K0258-02	Soil	NWTPH-Dx	11/04/21 09:00	11/15/21 15:06	10.22g/5mL	10g/5mL	0.98

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 21K0413</u>							
A1K0258-01	Soil	NWTPH-Gx (MS)	11/04/21 08:50	11/05/21 16:28	5.26g/5mL	5g/5mL	0.95
A1K0258-02	Soil	NWTPH-Gx (MS)	11/04/21 09:00	11/05/21 16:28	5.48g/5mL	5g/5mL	0.91

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 21K0413</u>							
A1K0258-01	Soil	5035A/8260D	11/04/21 08:50	11/05/21 16:28	5.26g/5mL	5g/5mL	0.95
A1K0258-02	Soil	5035A/8260D	11/04/21 09:00	11/05/21 16:28	5.48g/5mL	5g/5mL	0.91

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 21K0660</u>							
A1K0258-01	Soil	EPA 8270E SIM	11/04/21 08:50	11/16/21 07:24	10.46g/5mL	10g/5mL	0.96
A1K0258-02	Soil	EPA 8270E SIM	11/04/21 09:00	11/16/21 07:24	10.59g/5mL	10g/5mL	0.94

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 21K0802</u>							
A1K0258-01	Soil	EPA 6020B	11/04/21 08:50	11/18/21 09:50	0.458g/50mL	0.5g/50mL	1.09
A1K0258-02	Soil	EPA 6020B	11/04/21 09:00	11/18/21 09:50	0.466g/50mL	0.5g/50mL	1.07

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0295</u>							
A1K0258-01	Soil	EPA 8000D	11/04/21 08:50	11/08/21 08:58			NA
A1K0258-02	Soil	EPA 8000D	11/04/21 09:00	11/08/21 08:58			NA

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1K0258 - 12 08 21 1053)

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- List of qualifiers including E, F-03, J, M-05, Q-01, Q-03, Q-04, Q-54, Q-54a, Q-54b, Q-54c, Q-54d, Q-54e, Q-55, Q-56, R-06, and V-15 with their respective definitions.

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Darrell Auvil, Client Services Manager



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Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1K0258 - 12 08 21 1053)

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1K0258 - 12 08 21 1053).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0258 - 12 08 21 1053
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Environmental Consulting Element WO#: A1 K0258

Project/Project #: 319/ EQRB

Delivery Info:
 Date/time received: 11/4/21 @ 1106 By: LB
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 11/4/21 @ 1106 By: LB

Chain of Custody included? Yes No Custody seals? Yes No

Signed/dated by client? Yes No

Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.6</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Gel</u>						
Condition:	<u>Good</u>						

Cooler out of temp? (Y/N) Possible reason why: (N)

Green dots applied to out of temperature samples? Yes/No (N)

Out of temperature samples form initiated? Yes/No (N)

Sample Inspection: Date/time inspected: 11/5/21 @ 1615 By: MAS

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: _____

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: _____

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA

Comments: _____

Additional information: _____

Labeled by: MAS Witness: LB Cooler Inspected by: LB

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, December 8, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A1K0351 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A1K0351, which was received by the laboratory on 11/8/2021 at 3:03:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 0.3 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B21 0.6-4.6	A1K0351-01	Soil	11/08/21 11:00	11/08/21 15:03
B21 6.5-10	A1K0351-02	Soil	11/08/21 11:15	11/08/21 15:03
B21 11.5-15	A1K0351-03	Soil	11/08/21 11:25	11/08/21 15:03
B21 16.5-20	A1K0351-04	Soil	11/08/21 11:45	11/08/21 15:03
B21 21.5-25'	A1K0351-05	Soil	11/08/21 12:00	11/08/21 15:03
B21C(0-10)	A1K0351-06	Soil	11/08/21 11:00	11/08/21 15:03
B21C(10-25)	A1K0351-07	Soil	11/08/21 11:25	11/08/21 15:03

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B21C(0-10) (A1K0351-06)				Matrix: Soil		Batch: 21K0825		
Diesel	ND	12.8	25.7	mg/kg dry	1	11/19/21 02:11	NWTPH-Dx	
Oil	ND	25.7	51.4	mg/kg dry	1	11/19/21 02:11	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 81 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>11/19/21 02:11</i>	<i>NWTPH-Dx</i>
B21C(10-25) (A1K0351-07)				Matrix: Soil		Batch: 21K0825		
Diesel	ND	13.2	26.4	mg/kg dry	1	11/19/21 02:32	NWTPH-Dx	
Oil	ND	26.4	52.9	mg/kg dry	1	11/19/21 02:32	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 84 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>11/19/21 02:32</i>	<i>NWTPH-Dx</i>

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B21C(0-10) (A1K0351-06)				Matrix: Soil		Batch: 21K0691		COMP, V-15
Gasoline Range Organics	ND	3.86	7.72	mg/kg dry	50	11/16/21 21:09	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>11/16/21 21:09</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>		<i>1</i>	<i>11/16/21 21:09</i>	<i>NWTPH-Gx (MS)</i>
B21C(10-25) (A1K0351-07)				Matrix: Soil		Batch: 21K0691		COMP, V-15
Gasoline Range Organics	ND	4.04	8.08	mg/kg dry	50	11/16/21 21:36	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>11/16/21 21:36</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>		<i>1</i>	<i>11/16/21 21:36</i>	<i>NWTPH-Gx (MS)</i>

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B21C(0-10) (A1K0351-06)				Matrix: Soil		Batch: 21K0691		COMP, V-15
Acetone	ND	772	1540	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Acrylonitrile	ND	77.2	154	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Benzene	ND	7.72	15.4	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Bromobenzene	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Bromochloromethane	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Bromodichloromethane	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Bromoform	ND	77.2	154	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Bromomethane	ND	772	772	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
2-Butanone (MEK)	ND	386	772	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
n-Butylbenzene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
sec-Butylbenzene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
tert-Butylbenzene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Carbon disulfide	ND	386	772	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Carbon tetrachloride	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Chlorobenzene	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Chloroethane	ND	386	772	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Chloroform	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Chloromethane	ND	193	386	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
2-Chlorotoluene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
4-Chlorotoluene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Dibromochloromethane	ND	77.2	154	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	386	386	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Dibromomethane	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,2-Dichlorobenzene	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,3-Dichlorobenzene	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,4-Dichlorobenzene	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Dichlorodifluoromethane	ND	77.2	154	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,1-Dichloroethane	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,1-Dichloroethene	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
cis-1,2-Dichloroethene	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
trans-1,2-Dichloroethene	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B21C(0-10) (A1K0351-06)				Matrix: Soil		Batch: 21K0691		COMP, V-15
1,2-Dichloropropane	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,3-Dichloropropane	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
2,2-Dichloropropane	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,1-Dichloropropene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
cis-1,3-Dichloropropene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
trans-1,3-Dichloropropene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Ethylbenzene	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Hexachlorobutadiene	ND	77.2	154	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
2-Hexanone	ND	386	772	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Isopropylbenzene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
4-Isopropyltoluene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Methylene chloride	ND	386	772	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	386	772	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Naphthalene	ND	77.2	154	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
n-Propylbenzene	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Styrene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,1,1,2,2-Tetrachloroethane	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Tetrachloroethene (PCE)	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Toluene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,2,3-Trichlorobenzene	ND	193	386	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,2,4-Trichlorobenzene	ND	193	386	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,1,1-Trichloroethane	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,1,2-Trichloroethane	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Trichloroethene (TCE)	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Trichlorofluoromethane	ND	77.2	154	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,2,3-Trichloropropane	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,2,4-Trimethylbenzene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
1,3,5-Trimethylbenzene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
Vinyl chloride	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
m,p-Xylene	ND	38.6	77.2	ug/kg dry	50	11/16/21 21:09	5035A/8260D	
o-Xylene	ND	19.3	38.6	ug/kg dry	50	11/16/21 21:09	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B21C(0-10) (A1K0351-06)				Matrix: Soil		Batch: 21K0691		COMP, V-15
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		1	11/16/21 21:09	5035A/8260D
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		1	11/16/21 21:09	5035A/8260D
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>79-120 %</i>		1	11/16/21 21:09	5035A/8260D
B21C(10-25) (A1K0351-07)				Matrix: Soil		Batch: 21K0691		COMP, V-15
Acetone	ND	808	1620	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Acrylonitrile	ND	80.8	162	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Benzene	ND	8.08	16.2	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Bromobenzene	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Bromochloromethane	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Bromodichloromethane	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Bromoform	ND	80.8	162	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Bromomethane	ND	808	808	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
2-Butanone (MEK)	ND	404	808	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
n-Butylbenzene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
sec-Butylbenzene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
tert-Butylbenzene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Carbon disulfide	ND	404	808	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Carbon tetrachloride	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Chlorobenzene	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Chloroethane	ND	404	808	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Chloroform	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Chloromethane	ND	202	404	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
2-Chlorotoluene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
4-Chlorotoluene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Dibromochloromethane	ND	80.8	162	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	404	404	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Dibromomethane	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,2-Dichlorobenzene	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,3-Dichlorobenzene	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,4-Dichlorobenzene	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Dichlorodifluoromethane	ND	80.8	162	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,1-Dichloroethane	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B21C(10-25) (A1K0351-07)				Matrix: Soil		Batch: 21K0691		COMP, V-15
1,2-Dichloroethane (EDC)	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,1-Dichloroethene	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
cis-1,2-Dichloroethene	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
trans-1,2-Dichloroethene	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,2-Dichloropropane	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,3-Dichloropropane	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
2,2-Dichloropropane	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,1-Dichloropropene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
cis-1,3-Dichloropropene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
trans-1,3-Dichloropropene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Ethylbenzene	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Hexachlorobutadiene	ND	80.8	162	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
2-Hexanone	ND	404	808	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Isopropylbenzene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
4-Isopropyltoluene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Methylene chloride	ND	404	808	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	404	808	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Naphthalene	ND	80.8	162	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
n-Propylbenzene	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Styrene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Tetrachloroethene (PCE)	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Toluene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,2,3-Trichlorobenzene	ND	202	404	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,2,4-Trichlorobenzene	ND	202	404	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,1,1-Trichloroethane	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,1,2-Trichloroethane	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Trichloroethene (TCE)	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Trichlorofluoromethane	ND	80.8	162	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,2,3-Trichloropropane	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
1,2,4-Trimethylbenzene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts</p>	<p style="text-align: right;">Report ID: A1K0351 - 12 08 21 1029</p>
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B21C(10-25) (A1K0351-07)				Matrix: Soil		Batch: 21K0691		COMP, V-15
1,3,5-Trimethylbenzene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
Vinyl chloride	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
m,p-Xylene	ND	40.4	80.8	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
o-Xylene	ND	20.2	40.4	ug/kg dry	50	11/16/21 21:36	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>11/16/21 21:36</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>1</i>	<i>11/16/21 21:36</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>79-120 %</i>		<i>1</i>	<i>11/16/21 21:36</i>	<i>5035A/8260D</i>

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B21C(0-10) (A1K0351-06)				Matrix: Soil		Batch: 21K0661		
Acenaphthene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Acenaphthylene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Anthracene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Benz(a)anthracene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Benzo(a)pyrene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Chrysene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Fluoranthene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Fluorene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Naphthalene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Phenanthrene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
Pyrene	ND	6.17	12.3	ug/kg dry	1	11/17/21 14:48	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 71 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>11/17/21 14:48</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>84 %</i>		<i>54-127 %</i>		<i>1</i>	<i>11/17/21 14:48</i>	<i>EPA 8270E SIM</i>

B21C(10-25) (A1K0351-07)				Matrix: Soil		Batch: 21K0661		
Acenaphthene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Acenaphthylene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Anthracene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Benz(a)anthracene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Benzo(a)pyrene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Chrysene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Fluoranthene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Fluorene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B21C(10-25) (A1K0351-07)				Matrix: Soil		Batch: 21K0661		
Naphthalene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Phenanthrene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
Pyrene	ND	6.68	13.4	ug/kg dry	1	11/17/21 15:13	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 79 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>11/17/21 15:13</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>87 %</i>		<i>54-127 %</i>		<i>1</i>	<i>11/17/21 15:13</i>	<i>EPA 8270E SIM</i>

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B21C(0-10) (A1K0351-06)				Matrix: Soil				
Batch: 21K0979								
Antimony	ND	0.676	1.35	mg/kg dry	10	11/29/21 22:42	EPA 6020B	
Arsenic	11.4	0.676	1.35	mg/kg dry	10	11/29/21 22:42	EPA 6020B	
Barium	192	0.676	1.35	mg/kg dry	10	11/29/21 22:42	EPA 6020B	
Cadmium	0.150	0.135	0.270	mg/kg dry	10	11/29/21 22:42	EPA 6020B	J
Chromium	22.2	0.676	1.35	mg/kg dry	10	11/29/21 22:42	EPA 6020B	
Copper	26.8	1.35	2.70	mg/kg dry	10	11/29/21 22:42	EPA 6020B	
Lead	34.9	0.135	0.270	mg/kg dry	10	11/29/21 22:42	EPA 6020B	
Mercury	0.159	0.0540	0.108	mg/kg dry	10	11/29/21 22:42	EPA 6020B	
Selenium	ND	0.676	1.35	mg/kg dry	10	11/29/21 22:42	EPA 6020B	
Silver	0.169	0.135	0.270	mg/kg dry	10	11/29/21 22:42	EPA 6020B	J
Zinc	88.7	2.70	5.40	mg/kg dry	10	11/29/21 22:42	EPA 6020B	
B21C(10-25) (A1K0351-07)				Matrix: Soil				
Batch: 21K0979								
Antimony	ND	0.715	1.43	mg/kg dry	10	11/29/21 22:57	EPA 6020B	
Arsenic	8.68	0.715	1.43	mg/kg dry	10	11/29/21 22:57	EPA 6020B	
Barium	150	0.715	1.43	mg/kg dry	10	11/29/21 22:57	EPA 6020B	
Cadmium	0.185	0.143	0.286	mg/kg dry	10	11/29/21 22:57	EPA 6020B	J
Chromium	16.5	0.715	1.43	mg/kg dry	10	11/29/21 22:57	EPA 6020B	
Copper	26.1	1.43	2.86	mg/kg dry	10	11/29/21 22:57	EPA 6020B	
Lead	13.0	0.143	0.286	mg/kg dry	10	11/29/21 22:57	EPA 6020B	
Mercury	ND	0.0572	0.114	mg/kg dry	10	11/29/21 22:57	EPA 6020B	
Selenium	ND	0.715	1.43	mg/kg dry	10	11/29/21 22:57	EPA 6020B	
Silver	ND	0.143	0.286	mg/kg dry	10	11/29/21 22:57	EPA 6020B	
Zinc	80.7	2.86	5.72	mg/kg dry	10	11/29/21 22:57	EPA 6020B	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B21C(0-10) (A1K0351-06)				Matrix: Soil		Batch: 21K0410		
% Solids	77.4	1.00	1.00	%	1	11/11/21 08:50	EPA 8000D	
B21C(10-25) (A1K0351-07)				Matrix: Soil		Batch: 21K0410		
% Solids	73.8	1.00	1.00	%	1	11/11/21 08:50	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0825 - EPA 3546 (Fuels)						Soil						
Blank (21K0825-BLK1)						Prepared: 11/18/21 13:33 Analyzed: 11/18/21 22:48						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 92 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (21K0825-BS1)						Prepared: 11/18/21 13:33 Analyzed: 11/18/21 23:09						
<u>NWTPH-Dx</u>												
Diesel	123	10.0	20.0	mg/kg wet	1	125	---	99	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (21K0825-DUP2)						Prepared: 11/18/21 13:33 Analyzed: 11/18/21 23:09						
<u>QC Source Sample: Non-SDG (A1K0791-01)</u>												
Diesel	ND	10.6	21.2	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	21.2	42.5	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (21K0825-DUP3)						Prepared: 11/18/21 13:33 Analyzed: 11/19/21 07:05						
<u>QC Source Sample: Non-SDG (A1K0340-23RE1)</u>												
Diesel	ND	10.4	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	35.3	20.7	50.0	mg/kg dry	1	---	36.5	---	---	3	30%	J
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0691 - EPA 5035A						Soil						
Blank (21K0691-BLK1)			Prepared: 11/16/21 09:00 Analyzed: 11/16/21 14:53									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 101 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (21K0691-BS2)			Prepared: 11/16/21 09:00 Analyzed: 11/16/21 14:26									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	26.2	2.50	5.00	mg/kg wet	50	25.0	---	105	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 100 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>104 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (21K0691-DUP1)			Prepared: 11/10/21 09:53 Analyzed: 11/16/21 18:28									
<u>QC Source Sample: Non-SDG (A1K0538-01)</u>												
Gasoline Range Organics	ND	2.92	5.84	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0691 - EPA 5035A						Soil						
Blank (21K0691-BLK1)			Prepared: 11/16/21 09:00 Analyzed: 11/16/21 14:53									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	167	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0691 - EPA 5035A						Soil						
Blank (21K0691-BLK1)			Prepared: 11/16/21 09:00 Analyzed: 11/16/21 14:53									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 101 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0691 - EPA 5035A						Soil						
Blank (21K0691-BLK1)						Prepared: 11/16/21 09:00 Analyzed: 11/16/21 14:53						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (21K0691-BS1)						Prepared: 11/16/21 09:00 Analyzed: 11/16/21 13:59						
5035A/8260D												
Acetone	1980	500	1000	ug/kg wet	50	2000	---	99	80-120%	---	---	
Acrylonitrile	1140	50.0	100	ug/kg wet	50	1000	---	114	80-120%	---	---	
Benzene	1080	5.00	10.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Bromobenzene	1050	12.5	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Bromochloromethane	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
Bromodichloromethane	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Bromoform	850	50.0	100	ug/kg wet	50	1000	---	85	80-120%	---	---	
Bromomethane	1310	500	500	ug/kg wet	50	1000	---	131	80-120%	---	---	Q-56
2-Butanone (MEK)	2060	250	500	ug/kg wet	50	2000	---	103	80-120%	---	---	
n-Butylbenzene	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
sec-Butylbenzene	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
tert-Butylbenzene	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Carbon disulfide	904	250	500	ug/kg wet	50	1000	---	90	80-120%	---	---	
Carbon tetrachloride	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Chlorobenzene	1000	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Chloroethane	1160	250	500	ug/kg wet	50	1000	---	116	80-120%	---	---	
Chloroform	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Chloromethane	1020	125	250	ug/kg wet	50	1000	---	102	80-120%	---	---	
2-Chlorotoluene	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
4-Chlorotoluene	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Dibromochloromethane	1060	50.0	100	ug/kg wet	50	1000	---	106	80-120%	---	---	
1,2-Dibromo-3-chloropropane	748	250	250	ug/kg wet	50	1000	---	75	80-120%	---	---	Q-55
1,2-Dibromoethane (EDB)	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Dibromomethane	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,2-Dichlorobenzene	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,3-Dichlorobenzene	1050	12.5	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
1,4-Dichlorobenzene	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Dichlorodifluoromethane	1010	50.0	100	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,1-Dichloroethane	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0691 - EPA 5035A						Soil						
LCS (21K0691-BS1)			Prepared: 11/16/21 09:00 Analyzed: 11/16/21 13:59									
1,2-Dichloroethane (EDC)	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,1-Dichloroethene	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
cis-1,2-Dichloroethene	1140	12.5	25.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
trans-1,2-Dichloroethene	1160	12.5	25.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
1,2-Dichloropropane	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,3-Dichloropropane	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
2,2-Dichloropropane	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
1,1-Dichloropropene	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
cis-1,3-Dichloropropene	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
trans-1,3-Dichloropropene	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
Ethylbenzene	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Hexachlorobutadiene	1040	50.0	100	ug/kg wet	50	1000	---	104	80-120%	---	---	
2-Hexanone	2080	250	500	ug/kg wet	50	2000	---	104	80-120%	---	---	
Isopropylbenzene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
4-Isopropyltoluene	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Methylene chloride	1020	250	500	ug/kg wet	50	1000	---	102	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	2090	250	500	ug/kg wet	50	2000	---	104	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Naphthalene	1020	50.0	100	ug/kg wet	50	1000	---	102	80-120%	---	---	
n-Propylbenzene	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Styrene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1110	12.5	25.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Tetrachloroethene (PCE)	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Toluene	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,2,3-Trichlorobenzene	1020	125	250	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,2,4-Trichlorobenzene	1010	125	250	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,1,1-Trichloroethane	1150	12.5	25.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,1,2-Trichloroethane	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Trichloroethene (TCE)	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Trichlorofluoromethane	1300	50.0	100	ug/kg wet	50	1000	---	130	80-120%	---	---	Q-56
1,2,3-Trichloropropane	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
1,2,4-Trimethylbenzene	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
1,3,5-Trimethylbenzene	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0691 - EPA 5035A						Soil						
LCS (21K0691-BS1)			Prepared: 11/16/21 09:00 Analyzed: 11/16/21 13:59									
Vinyl chloride	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
m,p-Xylene	2080	25.0	50.0	ug/kg wet	50	2000	---	104	80-120%	---	---	
o-Xylene	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (21K0691-DUP1)			Prepared: 11/10/21 09:53 Analyzed: 11/16/21 18:28									
QC Source Sample: Non-SDG (A1K0538-01)												
Acetone	ND	584	1170	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	58.4	117	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	ND	5.84	11.7	ug/kg dry	50	---	ND	---	---	---	30%	
Bromobenzene	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	58.4	117	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	584	584	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	292	584	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	292	584	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	292	584	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	146	292	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	58.4	117	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	292	292	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0691 - EPA 5035A						Soil						
Duplicate (21K0691-DUP1)			Prepared: 11/10/21 09:53 Analyzed: 11/16/21 18:28									
QC Source Sample: Non-SDG (A1K0538-01)												
1,3-Dichlorobenzene	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	58.4	117	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	29.2	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	58.4	117	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	292	584	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	292	584	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	292	584	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	58.4	117	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	146	292	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	146	292	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0691 - EPA 5035A						Soil						
Duplicate (21K0691-DUP1)			Prepared: 11/10/21 09:53 Analyzed: 11/16/21 18:28									
QC Source Sample: Non-SDG (A1K0538-01)												
Trichloroethene (TCE)	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	58.4	117	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	73.0	73.0	ug/kg dry	50	---	ND	---	---	---	30%	R-06
1,3,5-Trimethylbenzene	ND	29.2	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	58.4	58.4	ug/kg dry	50	---	ND	---	---	---	30%	
o-Xylene	ND	14.6	29.2	ug/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 100 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (21K0691-MS1)			Prepared: 11/11/21 09:31 Analyzed: 11/16/21 20:15									
QC Source Sample: Non-SDG (A1K0538-05)												
5035A/8260D												
Acetone	1540	373	745	ug/kg dry	50	1490	ND	103	36-164%	---	---	
Acrylonitrile	912	37.3	74.5	ug/kg dry	50	746	ND	122	65-134%	---	---	
Benzene	764	3.73	7.45	ug/kg dry	50	746	ND	102	77-121%	---	---	
Bromobenzene	759	9.32	18.6	ug/kg dry	50	746	ND	102	78-121%	---	---	
Bromochloromethane	866	18.6	37.3	ug/kg dry	50	746	ND	116	78-125%	---	---	
Bromodichloromethane	817	18.6	37.3	ug/kg dry	50	746	ND	109	75-127%	---	---	
Bromoform	622	37.3	74.5	ug/kg dry	50	746	ND	83	67-132%	---	---	
Bromomethane	964	373	373	ug/kg dry	50	746	ND	129	53-143%	---	---	Q-54a
2-Butanone (MEK)	1670	186	373	ug/kg dry	50	1490	ND	112	51-148%	---	---	
n-Butylbenzene	783	18.6	37.3	ug/kg dry	50	746	ND	105	70-128%	---	---	
sec-Butylbenzene	753	18.6	37.3	ug/kg dry	50	746	ND	101	73-126%	---	---	
tert-Butylbenzene	748	18.6	37.3	ug/kg dry	50	746	ND	100	73-125%	---	---	
Carbon disulfide	617	186	373	ug/kg dry	50	746	ND	83	63-132%	---	---	
Carbon tetrachloride	736	18.6	37.3	ug/kg dry	50	746	ND	99	70-135%	---	---	
Chlorobenzene	708	9.32	18.6	ug/kg dry	50	746	ND	95	79-120%	---	---	
Chloroethane	1060	186	373	ug/kg dry	50	746	ND	142	59-139%	---	---	Q-01
Chloroform	787	18.6	37.3	ug/kg dry	50	746	ND	105	78-123%	---	---	
Chloromethane	699	93.2	186	ug/kg dry	50	746	ND	94	50-136%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0691 - EPA 5035A						Soil						
Matrix Spike (21K0691-MS1)						Prepared: 11/11/21 09:31 Analyzed: 11/16/21 20:15						
<u>QC Source Sample: Non-SDG (A1K0538-05)</u>												
2-Chlorotoluene	778	18.6	37.3	ug/kg dry	50	746	ND	104	75-122%	---	---	
4-Chlorotoluene	764	18.6	37.3	ug/kg dry	50	746	ND	102	72-124%	---	---	
Dibromochloromethane	777	37.3	74.5	ug/kg dry	50	746	ND	104	74-126%	---	---	
1,2-Dibromo-3-chloropropane	512	186	186	ug/kg dry	50	746	ND	69	61-132%	---	---	Q-54b
1,2-Dibromoethane (EDB)	808	18.6	37.3	ug/kg dry	50	746	ND	108	78-122%	---	---	
Dibromomethane	825	18.6	37.3	ug/kg dry	50	746	ND	111	78-125%	---	---	
1,2-Dichlorobenzene	712	9.32	18.6	ug/kg dry	50	746	ND	95	78-121%	---	---	
1,3-Dichlorobenzene	729	9.32	18.6	ug/kg dry	50	746	ND	98	77-121%	---	---	
1,4-Dichlorobenzene	729	9.32	18.6	ug/kg dry	50	746	ND	98	75-120%	---	---	
Dichlorodifluoromethane	709	37.3	74.5	ug/kg dry	50	746	ND	95	29-149%	---	---	
1,1-Dichloroethane	804	9.32	18.6	ug/kg dry	50	746	ND	108	76-125%	---	---	
1,2-Dichloroethane (EDC)	813	9.32	18.6	ug/kg dry	50	746	ND	109	73-128%	---	---	
1,1-Dichloroethene	788	9.32	18.6	ug/kg dry	50	746	ND	106	70-131%	---	---	
cis-1,2-Dichloroethene	811	9.32	18.6	ug/kg dry	50	746	ND	109	77-123%	---	---	
trans-1,2-Dichloroethene	809	9.32	18.6	ug/kg dry	50	746	ND	108	74-125%	---	---	
1,2-Dichloropropane	818	9.32	18.6	ug/kg dry	50	746	ND	110	76-123%	---	---	
1,3-Dichloropropane	795	18.6	37.3	ug/kg dry	50	746	ND	107	77-121%	---	---	
2,2-Dichloropropane	718	18.6	37.3	ug/kg dry	50	746	ND	96	67-133%	---	---	
1,1-Dichloropropene	794	18.6	37.3	ug/kg dry	50	746	ND	106	76-125%	---	---	
cis-1,3-Dichloropropene	747	18.6	37.3	ug/kg dry	50	746	ND	100	74-126%	---	---	
trans-1,3-Dichloropropene	805	18.6	37.3	ug/kg dry	50	746	ND	108	71-130%	---	---	
Ethylbenzene	707	9.32	18.6	ug/kg dry	50	746	ND	95	76-122%	---	---	
Hexachlorobutadiene	650	37.3	74.5	ug/kg dry	50	746	ND	87	61-135%	---	---	
2-Hexanone	1530	186	373	ug/kg dry	50	1490	ND	103	53-145%	---	---	
Isopropylbenzene	729	18.6	37.3	ug/kg dry	50	746	ND	98	68-134%	---	---	
4-Isopropyltoluene	752	18.6	37.3	ug/kg dry	50	746	ND	101	73-127%	---	---	
Methylene chloride	731	186	373	ug/kg dry	50	746	ND	98	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	1590	186	373	ug/kg dry	50	1490	ND	107	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	752	18.6	37.3	ug/kg dry	50	746	ND	101	73-125%	---	---	
Naphthalene	695	37.3	74.5	ug/kg dry	50	746	ND	93	62-129%	---	---	
n-Propylbenzene	753	9.32	18.6	ug/kg dry	50	746	ND	101	73-125%	---	---	
Styrene	772	18.6	37.3	ug/kg dry	50	746	ND	103	76-124%	---	---	
1,1,1,2-Tetrachloroethane	791	9.32	18.6	ug/kg dry	50	746	ND	106	78-125%	---	---	

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Darrell Auvil, Client Services Manager



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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0691 - EPA 5035A						Soil						
Matrix Spike (21K0691-MS1)						Prepared: 11/11/21 09:31 Analyzed: 11/16/21 20:15						
QC Source Sample: Non-SDG (A1K0538-05)												
1,1,2,2-Tetrachloroethane	766	18.6	37.3	ug/kg dry	50	746	ND	103	70-124%	---	---	
Tetrachloroethene (PCE)	697	9.32	18.6	ug/kg dry	50	746	ND	93	73-128%	---	---	
Toluene	692	18.6	37.3	ug/kg dry	50	746	ND	93	77-121%	---	---	
1,2,3-Trichlorobenzene	681	93.2	186	ug/kg dry	50	746	ND	91	66-130%	---	---	
1,2,4-Trichlorobenzene	667	93.2	186	ug/kg dry	50	746	ND	89	67-129%	---	---	
1,1,1-Trichloroethane	792	9.32	18.6	ug/kg dry	50	746	ND	106	73-130%	---	---	
1,1,2-Trichloroethane	806	9.32	18.6	ug/kg dry	50	746	ND	108	78-121%	---	---	
Trichloroethene (TCE)	761	9.32	18.6	ug/kg dry	50	746	ND	102	77-123%	---	---	
Trichlorofluoromethane	1090	37.3	74.5	ug/kg dry	50	746	ND	146	62-140%	---	---	Q-54
1,2,3-Trichloropropane	800	18.6	37.3	ug/kg dry	50	746	ND	107	73-125%	---	---	
1,2,4-Trimethylbenzene	813	18.6	37.3	ug/kg dry	50	746	ND	109	75-123%	---	---	
1,3,5-Trimethylbenzene	788	18.6	37.3	ug/kg dry	50	746	ND	106	73-124%	---	---	
Vinyl chloride	819	9.32	18.6	ug/kg dry	50	746	ND	110	56-135%	---	---	
m,p-Xylene	1420	18.6	37.3	ug/kg dry	50	1490	ND	95	77-124%	---	---	
o-Xylene	727	9.32	18.6	ug/kg dry	50	746	ND	97	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0661 - EPA 3546						Soil						
Blank (21K0661-BLK1)			Prepared: 11/16/21 07:25 Analyzed: 11/16/21 12:25									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>88 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (21K0661-BS1)			Prepared: 11/16/21 07:25 Analyzed: 11/16/21 12:50									
<u>EPA 8270E SIM</u>												
Acenaphthene	662	5.00	10.0	ug/kg wet	1	800	---	83	40-123%	---	---	
Acenaphthylene	682	5.00	10.0	ug/kg wet	1	800	---	85	32-132%	---	---	
Anthracene	667	5.00	10.0	ug/kg wet	1	800	---	83	47-123%	---	---	
Benz(a)anthracene	677	5.00	10.0	ug/kg wet	1	800	---	85	49-126%	---	---	
Benzo(a)pyrene	691	5.00	10.0	ug/kg wet	1	800	---	86	45-129%	---	---	
Benzo(b)fluoranthene	710	5.00	10.0	ug/kg wet	1	800	---	89	45-132%	---	---	
Benzo(k)fluoranthene	681	5.00	10.0	ug/kg wet	1	800	---	85	47-132%	---	---	
Benzo(g,h,i)perylene	623	5.00	10.0	ug/kg wet	1	800	---	78	43-134%	---	---	
Chrysene	655	5.00	10.0	ug/kg wet	1	800	---	82	50-124%	---	---	
Dibenz(a,h)anthracene	715	5.00	10.0	ug/kg wet	1	800	---	89	45-134%	---	---	
Fluoranthene	677	5.00	10.0	ug/kg wet	1	800	---	85	50-127%	---	---	
Fluorene	652	5.00	10.0	ug/kg wet	1	800	---	82	43-125%	---	---	

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0661 - EPA 3546						Soil						
LCS (21K0661-BS1)				Prepared: 11/16/21 07:25		Analyzed: 11/16/21 12:50						
Indeno(1,2,3-cd)pyrene	635	5.00	10.0	ug/kg wet	1	800	---	79	45-133%	---	---	
Naphthalene	630	5.00	10.0	ug/kg wet	1	800	---	79	35-123%	---	---	
Phenanthrene	648	5.00	10.0	ug/kg wet	1	800	---	81	50-121%	---	---	
Pyrene	661	5.00	10.0	ug/kg wet	1	800	---	83	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 78 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>86 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (21K0661-DUP1)				Prepared: 11/16/21 07:25		Analyzed: 11/16/21 13:40						
QC Source Sample: Non-SDG (A1K0538-08)												
Acenaphthene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Anthracene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benz(a)anthracene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(a)pyrene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Chrysene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Dibenz(a,h)anthracene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Fluorene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Naphthalene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Phenanthrene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Pyrene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 66 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>72 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (21K0661-MS1)				Prepared: 11/16/21 07:25		Analyzed: 11/16/21 14:30						
QC Source Sample: Non-SDG (A1K0580-07)												
EPA 8270E SIM												
Acenaphthene	768	111	111	ug/kg dry	10	887	ND	87	40-123%	---	---	
Acenaphthylene	746	55.5	111	ug/kg dry	10	887	ND	84	32-132%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0661 - EPA 3546						Soil						
Matrix Spike (21K0661-MS1)						Prepared: 11/16/21 07:25 Analyzed: 11/16/21 14:30						
QC Source Sample: Non-SDG (A1K0580-07)												
Anthracene	841	55.5	111	ug/kg dry	10	887	61.3	88	47-123%	---	---	
Benz(a)anthracene	929	55.5	111	ug/kg dry	10	887	261	75	49-126%	---	---	
Benzo(a)pyrene	1020	55.5	111	ug/kg dry	10	887	372	73	45-129%	---	---	
Benzo(b)fluoranthene	975	55.5	111	ug/kg dry	10	887	372	68	45-132%	---	---	
Benzo(k)fluoranthene	874	55.5	111	ug/kg dry	10	887	129	84	47-132%	---	---	
Benzo(g,h,i)perylene	919	55.5	111	ug/kg dry	10	887	329	66	43-134%	---	---	
Chrysene	968	55.5	111	ug/kg dry	10	887	332	72	50-124%	---	---	
Dibenz(a,h)anthracene	753	55.5	111	ug/kg dry	10	887	ND	85	45-134%	---	---	
Fluoranthene	1420	55.5	111	ug/kg dry	10	887	723	78	50-127%	---	---	
Fluorene	816	55.5	111	ug/kg dry	10	887	91.0	82	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	916	55.5	111	ug/kg dry	10	887	301	69	45-133%	---	---	
Naphthalene	1250	333	333	ug/kg dry	10	887	ND	141	35-123%	---	---	Q-02
Phenanthrene	1350	55.5	111	ug/kg dry	10	887	636	81	50-121%	---	---	
Pyrene	1640	55.5	111	ug/kg dry	10	887	935	79	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 73 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 10x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>82 %</i>		<i>54-127 %</i>		<i>"</i>						

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0979 - EPA 3051A						Soil						
Blank (21K0979-BLK1)			Prepared: 11/23/21 08:24 Analyzed: 11/29/21 22:22									
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	

LCS (21K0979-BS1)						Prepared: 11/23/21 08:24 Analyzed: 11/29/21 22:27						
<u>EPA 6020B</u>												
Antimony	25.3	0.500	1.00	mg/kg wet	10	25.0	---	101	80-120%	---	---	
Arsenic	52.5	0.500	1.00	mg/kg wet	10	50.0	---	105	80-120%	---	---	
Barium	51.3	0.500	1.00	mg/kg wet	10	50.0	---	103	80-120%	---	---	
Cadmium	50.0	0.100	0.200	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Chromium	49.3	0.500	1.00	mg/kg wet	10	50.0	---	99	80-120%	---	---	
Copper	52.8	1.00	2.00	mg/kg wet	10	50.0	---	106	80-120%	---	---	
Lead	50.1	0.100	0.200	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Mercury	0.955	0.0400	0.0800	mg/kg wet	10	1.00	---	95	80-120%	---	---	
Selenium	25.9	0.500	1.00	mg/kg wet	10	25.0	---	103	80-120%	---	---	
Silver	25.0	0.100	0.200	mg/kg wet	10	25.0	---	100	80-120%	---	---	
Zinc	53.3	2.00	4.00	mg/kg wet	10	50.0	---	107	80-120%	---	---	

Duplicate (21K0979-DUP1)						Prepared: 11/23/21 08:24 Analyzed: 11/29/21 22:47						
<u>QC Source Sample: B21C(0-10) (A1K0351-06)</u>												
<u>EPA 6020B</u>												
Antimony	ND	0.673	1.35	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	12.1	0.673	1.35	mg/kg dry	10	---	11.4	---	---	5	20%	
Barium	194	0.673	1.35	mg/kg dry	10	---	192	---	---	1	20%	
Cadmium	ND	0.135	0.269	mg/kg dry	10	---	0.150	---	---	***	20%	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0979 - EPA 3051A						Soil						
Duplicate (21K0979-DUP1)						Prepared: 11/23/21 08:24 Analyzed: 11/29/21 22:47						
QC Source Sample: B21C(0-10) (A1K0351-06)												
Chromium	24.2	0.673	1.35	mg/kg dry	10	---	22.2	---	---	9	20%	
Copper	27.8	1.35	2.69	mg/kg dry	10	---	26.8	---	---	4	20%	
Lead	36.1	0.135	0.269	mg/kg dry	10	---	34.9	---	---	3	20%	
Mercury	0.142	0.0538	0.108	mg/kg dry	10	---	0.159	---	---	12	20%	
Selenium	ND	0.673	1.35	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	0.203	0.135	0.269	mg/kg dry	10	---	0.169	---	---	18	20%	J
Zinc	90.7	2.69	5.38	mg/kg dry	10	---	88.7	---	---	2	20%	

Matrix Spike (21K0979-MS1)						Prepared: 11/23/21 08:24 Analyzed: 11/29/21 22:52						
QC Source Sample: B21C(0-10) (A1K0351-06)												
EPA 6020B												
Antimony	29.4	0.663	1.33	mg/kg dry	10	33.2	ND	89	75-125%	---	---	
Arsenic	79.4	0.663	1.33	mg/kg dry	10	66.3	11.4	102	75-125%	---	---	
Barium	248	0.663	1.33	mg/kg dry	10	66.3	192	84	75-125%	---	---	
Cadmium	66.3	0.133	0.265	mg/kg dry	10	66.3	0.150	100	75-125%	---	---	
Chromium	87.7	0.663	1.33	mg/kg dry	10	66.3	22.2	99	75-125%	---	---	
Copper	92.7	1.33	2.65	mg/kg dry	10	66.3	26.8	99	75-125%	---	---	
Lead	104	0.133	0.265	mg/kg dry	10	66.3	34.9	105	75-125%	---	---	
Mercury	1.36	0.0530	0.106	mg/kg dry	10	1.33	0.159	90	75-125%	---	---	
Selenium	32.6	0.663	1.33	mg/kg dry	10	33.2	ND	98	75-125%	---	---	
Silver	32.8	0.133	0.265	mg/kg dry	10	33.2	0.169	99	75-125%	---	---	
Zinc	161	2.65	5.30	mg/kg dry	10	66.3	88.7	109	75-125%	---	---	

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0410 - Total Solids (Dry Weight)						Soil						
Duplicate (21K0410-DUP1)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0250-20)</u>												
% Solids	97.6	1.00	1.00	%	1	---	97.5	---	---	0.1	10%	
Duplicate (21K0410-DUP2)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0250-30)</u>												
% Solids	93.5	1.00	1.00	%	1	---	93.2	---	---	0.3	10%	
Duplicate (21K0410-DUP3)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0322-41)</u>												
% Solids	86.2	1.00	1.00	%	1	---	87.5	---	---	1	10%	
Duplicate (21K0410-DUP4)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0322-71)</u>												
% Solids	87.1	1.00	1.00	%	1	---	87.1	---	---	0.03	10%	
Duplicate (21K0410-DUP5)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: B21C(0-10) (A1K0351-06)</u>												
<u>EPA 8000D</u>												
% Solids	77.3	1.00	1.00	%	1	---	77.4	---	---	0.1	10%	
Duplicate (21K0410-DUP6)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0369-14)</u>												
% Solids	72.2	1.00	1.00	%	1	---	72.1	---	---	0.2	10%	
Duplicate (21K0410-DUP7)			Prepared: 11/10/21 18:53 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0145-19)</u>												
% Solids	96.8	1.00	1.00	%	1	---	96.5	---	---	0.4	10%	
Duplicate (21K0410-DUP8)			Prepared: 11/10/21 18:53 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0409-01)</u>												
% Solids	93.3	1.00	1.00	%	1	---	93.8	---	---	0.5	10%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0410 - Total Solids (Dry Weight)							Soil					
Duplicate (21K0410-DUP9)			Prepared: 11/10/21 18:53 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0426-01)</u>												
% Solids	87.6	1.00	1.00	%	1	---	87.5	---	---	0.1	10%	
Duplicate (21K0410-DUPA)			Prepared: 11/10/21 18:53 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0433-01)</u>												
% Solids	76.9	1.00	1.00	%	1	---	77.1	---	---	0.2	10%	
Duplicate (21K0410-DUPB)			Prepared: 11/10/21 18:53 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0440-02)</u>												
% Solids	76.7	1.00	1.00	%	1	---	76.4	---	---	0.4	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0825</u>							
A1K0351-06	Soil	NWTPH-Dx	11/08/21 11:00	11/18/21 13:33	10.06g/5mL	10g/5mL	0.99
A1K0351-07	Soil	NWTPH-Dx	11/08/21 11:25	11/18/21 13:33	10.25g/5mL	10g/5mL	0.98

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0691</u>							
A1K0351-06	Soil	NWTPH-Gx (MS)	11/08/21 11:00	11/09/21 11:16	10.32g/10mL	5g/5mL	0.97
A1K0351-07	Soil	NWTPH-Gx (MS)	11/08/21 11:25	11/09/21 11:16	16.13g/15mL	5g/5mL	0.93

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0691</u>							
A1K0351-06	Soil	5035A/8260D	11/08/21 11:00	11/09/21 11:16	10.32g/10mL	5g/5mL	0.97
A1K0351-07	Soil	5035A/8260D	11/08/21 11:25	11/09/21 11:16	16.13g/15mL	5g/5mL	0.93

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0661</u>							
A1K0351-06	Soil	EPA 8270E SIM	11/08/21 11:00	11/16/21 14:13	10.47g/5mL	10g/5mL	0.96
A1K0351-07	Soil	EPA 8270E SIM	11/08/21 11:25	11/16/21 14:13	10.14g/5mL	10g/5mL	0.99

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0979</u>							
A1K0351-06	Soil	EPA 6020B	11/08/21 11:00	11/23/21 08:24	0.478g/50mL	0.5g/50mL	1.05
A1K0351-07	Soil	EPA 6020B	11/08/21 11:25	11/23/21 08:24	0.474g/50mL	0.5g/50mL	1.05

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0410</u>							
A1K0351-06	Soil	EPA 8000D	11/08/21 11:00	11/10/21 09:07			NA
A1K0351-07	Soil	EPA 8000D	11/08/21 11:25	11/10/21 09:07			NA

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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- COMP** Sample is a composite of discrete samples. See prep information for details.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-02** Spike recovery is outside of established control limits due to matrix interference.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +10%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +11%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -5%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-06** Reporting level raised due to possible carryover from a previous sample.
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1K0351 - 12 08 21 1029).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

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Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EORB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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A1K0351

CHAIN OF CUSTODY

Chain of Custody No. 187

COLES & BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835	Laboratory Apex Labs Lab Project No. _____	Liquid with Sediment Sample Test Filter _____ Test Sediment _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ State _____	Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) _____ No Provide Preliminary Results _____ Yes			
Project Manager: Jill Betts Project No.: 319 Project Name: EORB Collected by: Mike Reynolds		Analyses to be Performed Total RCRA 8 Metals plus Antimony, Copper and Zinc _____ PAHs by EPA Method 8270SIM _____ VOCs by EPA Method 8260B _____ NW PH-G _____ NW PH-DX _____				
Comments Metals analyzed by EPA Methods 200.80/204/7471B. Composite B21C(0-10) = B21 D16-4.6T B21 6.5-10 Composite B21C(10-25) = B21 11.5-20.4 B21 10.5-20 + B21 21.5-25		Matrix Soil _____ Water _____ Other _____				
Lab ID	Sample #	Date	Time	Sample Description	Number of Containers	Remarks
	B21 D16-4.6T	8/21	11:00	see notes	1	
	B21 6.5-10		11:45	see notes	1	
	B21 11.5-20		11:25	see notes	1	
	B21 10.5-20		11:45	see notes	1	
	B21 21.5-25		12:00	see notes	1	
	B21C(0-10)			see notes		
	B21C(10-25)			see notes		
Relinquished by		Date	Time	Company	Received by	Company
		8/21	15:03	Apex Labs		
Relinquished by		Date	Time	Company	Received by	Company
Relinquished by		Date	Time	Company	Received by	Company

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0351 - 12 08 21 1029
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APEX LABS COOLER RECEIPT FORM

Client: Coles & Betts Environmental Consulting, LLC Element WO#: A1 K0351

Project/Project #: EQRB #319

Delivery Info:
 Date/time received: 11/8/21 @ 1503 By: AKK
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 11/8/21 @ 1503 By: AKK

Chain of Custody included? Yes No Custody seals? Yes No

Signed/dated by client? Yes No

Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>0.22</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Real Gel</u>						
Condition:	<u>Good</u>						

Cooler out of temp? (Y/N) Possible reason why: Green dots applied to out of temperature samples? Yes/No

Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 11/8/21 @ 1022 By: AKK

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: _____

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: _____

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA

Comments: _____

Additional information:

Labeled by: AKK Witness: AKK Cooler Inspected by: AKK

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Wednesday, December 8, 2021

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A1K0401 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A1K0401, which was received by the laboratory on 11/8/2021 at 3:03:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	1.9 degC
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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-22 10-15	A1K0401-01	Soil	11/08/21 12:40	11/08/21 15:03
B-22 15-17	A1K0401-02	Soil	11/08/21 13:30	11/08/21 15:03
B-22 20-25	A1K0401-03	Soil	11/08/21 13:40	11/08/21 15:03
B-22C 10-25	A1K0401-04	Soil	11/08/21 12:40	11/08/21 15:03
B22	A1K0401-05	Water	11/08/21 13:15	11/08/21 15:03

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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-22C 10-25 (A1K0401-04)			Matrix: Soil			Batch: 21K0825		
Diesel	ND	13.5	27.0	mg/kg dry	1	11/19/21 02:52	NWTPH-Dx	
Oil	ND	27.0	54.0	mg/kg dry	1	11/19/21 02:52	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>11/19/21 02:52</i>	<i>NWTPH-Dx</i>
B22 (A1K0401-05)			Matrix: Water			Batch: 21K0781		PRES
Diesel	0.0431	0.0430	0.0860	mg/L	1	11/18/21 23:50	NWTPH-Dx LL	J
Oil	ND	0.0860	0.172	mg/L	1	11/18/21 23:50	NWTPH-Dx LL	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>11/18/21 23:50</i>	<i>NWTPH-Dx LL</i>

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-22C 10-25 (A1K0401-04)				Matrix: Soil		Batch: 21K0784		COMP, V-15
Gasoline Range Organics	ND	3.99	7.99	mg/kg dry	50	11/18/21 20:12	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 109 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>11/18/21 20:12</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>109 %</i>		<i>50-150 %</i>		<i>1</i>	<i>11/18/21 20:12</i>	<i>NWTPH-Gx (MS)</i>
B22 (A1K0401-05RE1)				Matrix: Water		Batch: 21K0586		
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	11/13/21 11:37	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>11/13/21 11:37</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>		<i>99 %</i>		<i>50-150 %</i>		<i>1</i>	<i>11/13/21 11:37</i>	<i>NWTPH-Gx (MS)</i>

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-22C 10-25 (A1K0401-04)				Matrix: Soil		Batch: 21K0784		COMP, V-15
Acetone	ND	799	1600	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Acrylonitrile	ND	79.9	160	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Benzene	ND	7.99	16.0	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Bromobenzene	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Bromochloromethane	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Bromodichloromethane	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Bromoform	ND	160	160	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Bromomethane	ND	799	799	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
2-Butanone (MEK)	ND	399	799	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
n-Butylbenzene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
sec-Butylbenzene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
tert-Butylbenzene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Carbon disulfide	ND	399	799	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Carbon tetrachloride	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Chlorobenzene	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Chloroethane	ND	399	799	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Chloroform	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Chloromethane	ND	200	399	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
2-Chlorotoluene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
4-Chlorotoluene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Dibromochloromethane	ND	79.9	160	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	399	399	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Dibromomethane	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,2-Dichlorobenzene	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,3-Dichlorobenzene	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,4-Dichlorobenzene	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Dichlorodifluoromethane	ND	79.9	160	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,1-Dichloroethane	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,1-Dichloroethene	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
cis-1,2-Dichloroethene	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
trans-1,2-Dichloroethene	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-22C 10-25 (A1K0401-04)				Matrix: Soil		Batch: 21K0784		COMP, V-15
1,2-Dichloropropane	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,3-Dichloropropane	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
2,2-Dichloropropane	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,1-Dichloropropene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
cis-1,3-Dichloropropene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
trans-1,3-Dichloropropene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Ethylbenzene	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Hexachlorobutadiene	ND	79.9	160	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
2-Hexanone	ND	399	799	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Isopropylbenzene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
4-Isopropyltoluene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Methylene chloride	ND	399	799	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	399	799	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Naphthalene	ND	79.9	160	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
n-Propylbenzene	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Styrene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Tetrachloroethene (PCE)	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Toluene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,2,3-Trichlorobenzene	ND	200	399	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,2,4-Trichlorobenzene	ND	200	399	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,1,1-Trichloroethane	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,1,2-Trichloroethane	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Trichloroethene (TCE)	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Trichlorofluoromethane	ND	79.9	160	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,2,3-Trichloropropane	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,2,4-Trimethylbenzene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
1,3,5-Trimethylbenzene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
Vinyl chloride	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
m,p-Xylene	ND	39.9	79.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	
o-Xylene	ND	20.0	39.9	ug/kg dry	50	11/18/21 20:12	5035A/8260D	

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Darrell Auvil, Client Services Manager



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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-22C 10-25 (A1K0401-04)				Matrix: Soil		Batch: 21K0784		COMP, V-15
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>11/18/21 20:12</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>	<i>1</i>	<i>11/18/21 20:12</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>79-120 %</i>	<i>1</i>	<i>11/18/21 20:12</i>	<i>5035A/8260D</i>	
B22 (A1K0401-05RE1)				Matrix: Water		Batch: 21K0586		
Acetone	ND	10.0	20.0	ug/L	1	11/13/21 11:37	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Benzene	0.315	0.100	0.200	ug/L	1	11/13/21 11:37	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	11/13/21 11:37	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	11/13/21 11:37	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	11/13/21 11:37	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Chloromethane	ND	5.00	5.00	ug/L	1	11/13/21 11:37	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	11/13/21 11:37	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	11/13/21 11:37	EPA 8260D	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B22 (A1K0401-05RE1)			Matrix: Water			Batch: 21K0586		
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	11/13/21 11:37	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	11/13/21 11:37	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	11/13/21 11:37	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	11/13/21 11:37	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	11/13/21 11:37	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	11/13/21 11:37	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	11/13/21 11:37	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	5.00	10.0	ug/L	1	11/13/21 11:37	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Naphthalene	ND	2.00	2.00	ug/L	1	11/13/21 11:37	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	11/13/21 11:37	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	11/13/21 11:37	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/13/21 11:37	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/13/21 11:37	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	11/13/21 11:37	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	11/13/21 11:37	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	11/13/21 11:37	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B22 (A1K0401-05RE1)			Matrix: Water			Batch: 21K0586		
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
Vinyl chloride	ND	0.400	0.400	ug/L	1	11/13/21 11:37	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	11/13/21 11:37	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	11/13/21 11:37	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 96 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>11/13/21 11:37</i>	<i>EPA 8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>1</i>	<i>11/13/21 11:37</i>	<i>EPA 8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>104 %</i>		<i>80-120 %</i>		<i>1</i>	<i>11/13/21 11:37</i>	<i>EPA 8260D</i>

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-22C 10-25 (A1K0401-04)				Matrix: Soil		Batch: 21K0661		
Acenaphthene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Acenaphthylene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Anthracene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Benz(a)anthracene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Benzo(a)pyrene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Chrysene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Fluoranthene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Fluorene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Naphthalene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Phenanthrene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
Pyrene	ND	6.42	12.8	ug/kg dry	1	11/17/21 15:38	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>11/17/21 15:38</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>82 %</i>		<i>54-127 %</i>		<i>1</i>	<i>11/17/21 15:38</i>	<i>EPA 8270E SIM</i>

B22 (A1K0401-05)				Matrix: Water		Batch: 21K0597		
Acenaphthene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Acenaphthylene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Anthracene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Benz(a)anthracene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Benzo(a)pyrene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Chrysene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Fluoranthene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Fluorene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	

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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B22 (A1K0401-05)			Matrix: Water			Batch: 21K0597		
Naphthalene	0.0633	0.0396	0.0792	ug/L	1	11/15/21 14:35	EPA 8270E SIM	J
Phenanthrene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
Pyrene	ND	0.0198	0.0396	ug/L	1	11/15/21 14:35	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 55 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>11/15/21 14:35</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>83 %</i>		<i>50-134 %</i>		<i>1</i>	<i>11/15/21 14:35</i>	<i>EPA 8270E SIM</i>

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-22C 10-25 (A1K0401-04)				Matrix: Soil					
Batch: 21K1001									
Antimony	ND	0.712	1.42	mg/kg dry	10	11/24/21 04:13	EPA 6020B		
Arsenic	10.2	1.42	2.85	mg/kg dry	10	11/24/21 04:13	EPA 6020B		
Barium	179	0.712	1.42	mg/kg dry	10	11/24/21 04:13	EPA 6020B		
Cadmium	ND	0.712	1.42	mg/kg dry	10	11/24/21 04:13	EPA 6020B		
Chromium	23.7	0.712	1.42	mg/kg dry	10	11/24/21 04:13	EPA 6020B		
Copper	30.9	1.42	2.85	mg/kg dry	10	11/24/21 04:13	EPA 6020B		
Lead	14.2	0.142	0.285	mg/kg dry	10	11/24/21 04:13	EPA 6020B		
Mercury	ND	0.0570	0.114	mg/kg dry	10	11/24/21 04:13	EPA 6020B		
Silver	ND	0.142	0.285	mg/kg dry	10	11/24/21 04:13	EPA 6020B		
Zinc	88.0	2.85	5.70	mg/kg dry	10	11/24/21 04:13	EPA 6020B		
B-22C 10-25 (A1K0401-04RE1)				Matrix: Soil					
Batch: 21K1001									
Selenium	ND	0.712	1.42	mg/kg dry	10	11/30/21 22:53	EPA 6020B		

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ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B22 (A1K0401-05)				Matrix: Water					
Batch: 21K0954									
Arsenic	0.969	0.500	1.00	ug/L	1	11/30/21 01:22	EPA 6020B (Diss)	J	
Barium	49.2	0.500	1.00	ug/L	1	11/30/21 01:22	EPA 6020B (Diss)		
Cadmium	ND	0.100	0.200	ug/L	1	11/30/21 01:22	EPA 6020B (Diss)		
Chromium	ND	1.00	2.00	ug/L	1	11/30/21 01:22	EPA 6020B (Diss)		
Lead	ND	0.100	0.200	ug/L	1	11/30/21 01:22	EPA 6020B (Diss)		
Mercury	ND	0.0400	0.0800	ug/L	1	11/30/21 01:22	EPA 6020B (Diss)		
Selenium	0.505	0.500	1.00	ug/L	1	11/30/21 01:22	EPA 6020B (Diss)	J	
Silver	ND	0.100	0.200	ug/L	1	11/30/21 01:22	EPA 6020B (Diss)		

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-22C 10-25 (A1K0401-04)				Matrix: Soil		Batch: 21K0410		
% Solids	73.9	1.00	1.00	%	1	11/11/21 08:50	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0781 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (21K0781-BLK1)						Prepared: 11/18/21 07:10 Analyzed: 11/18/21 22:49						
<u>NWTPH-Dx LL</u>												
Diesel	ND	0.0364	0.0727	mg/L	1	---	---	---	---	---	---	
Oil	ND	0.0727	0.145	mg/L	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (21K0781-BS1)						Prepared: 11/18/21 07:10 Analyzed: 11/18/21 23:09						
<u>NWTPH-Dx LL</u>												
Diesel	0.430	0.0400	0.0800	mg/L	1	0.500	---	86	36-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS Dup (21K0781-BSD1)						Prepared: 11/18/21 07:10 Analyzed: 11/18/21 23:29						
<u>NWTPH-Dx LL</u>												
Diesel	0.405	0.0400	0.0800	mg/L	1	0.500	---	81	36-132%	6	30%	Q-19
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Batch 21K0825 - EPA 3546 (Fuels)						Soil						
Blank (21K0825-BLK1)						Prepared: 11/18/21 13:33 Analyzed: 11/18/21 22:48						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 92 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (21K0825-BS1)						Prepared: 11/18/21 13:33 Analyzed: 11/18/21 23:09						
<u>NWTPH-Dx</u>												
Diesel	123	10.0	20.0	mg/kg wet	1	125	---	99	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (21K0825-DUP2)						Prepared: 11/18/21 13:33 Analyzed: 11/18/21 23:09						
<u>QC Source Sample: Non-SDG (A1K0791-01)</u>												
Diesel	ND	10.6	21.2	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	21.2	42.5	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0825 - EPA 3546 (Fuels)						Soil						
Duplicate (21K0825-DUP3)						Prepared: 11/18/21 13:33 Analyzed: 11/19/21 07:05						
QC Source Sample: Non-SDG (A1K0340-23RE1)												
Diesel	ND	10.4	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	35.3	20.7	50.0	mg/kg dry	1	---	36.5	---	---	3	30%	J
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EORB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0528 - EPA 5030B						Water						
Blank (21K0528-BLK1)			Prepared: 11/12/21 07:15 Analyzed: 11/12/21 09:01									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>100 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (21K0528-BS2)			Prepared: 11/12/21 07:15 Analyzed: 11/12/21 08:34									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	0.461	0.0500	0.100	mg/L	1	0.500	---	92	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>97 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (21K0528-DUP1)			Prepared: 11/12/21 08:14 Analyzed: 11/12/21 12:24									
<u>QC Source Sample: Non-SDG (A1K0538-09)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>102 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0586 - EPA 5030B						Water						
Blank (21K0586-BLK1)			Prepared: 11/13/21 07:35 Analyzed: 11/13/21 11:10									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 98 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>101 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (21K0586-BS2)			Prepared: 11/13/21 07:35 Analyzed: 11/13/21 10:43									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	0.457	0.0500	0.100	mg/L	1	0.500	---	91	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>95 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (21K0586-DUP1)			Prepared: 11/13/21 08:00 Analyzed: 11/13/21 14:44									
<u>QC Source Sample: Non-SDG (A1K0627-01)</u>												
Gasoline Range Organics	ND	0.0500	0.100	mg/L	1	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>102 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
Blank (21K0784-BLK1)			Prepared: 11/18/21 08:00 Analyzed: 11/18/21 10:20									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 112 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>108 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (21K0784-BS2)			Prepared: 11/18/21 08:00 Analyzed: 11/18/21 09:53									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	28.1	2.50	5.00	mg/kg wet	50	25.0	---	112	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (21K0784-DUP1)			Prepared: 11/04/21 11:05 Analyzed: 11/18/21 11:14									
<u>QC Source Sample: Non-SDG (A1K0413-04)</u>												
Gasoline Range Organics	10.9	4.31	8.62	mg/kg dry	50	---	9.23	---	---	16	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 105 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (21K0784-DUP2)			Prepared: 11/04/21 14:10 Analyzed: 11/18/21 12:08									
<u>QC Source Sample: Non-SDG (A1K0413-09)</u>												
Gasoline Range Organics	ND	3.34	6.69	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>109 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0528 - EPA 5030B						Water						
Blank (21K0528-BLK1)			Prepared: 11/12/21 07:15 Analyzed: 11/12/21 09:01									
<u>EPA 8260D</u>												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.200	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0528 - EPA 5030B						Water						
Blank (21K0528-BLK1)			Prepared: 11/12/21 07:15 Analyzed: 11/12/21 09:01									
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.200	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.200	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 98 % Limits: 80-120 % Dilution: 1x

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0528 - EPA 5030B						Water						
Blank (21K0528-BLK1)						Prepared: 11/12/21 07:15 Analyzed: 11/12/21 09:01						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>107 %</i>		<i>80-120 %</i>		<i>"</i>						
LCS (21K0528-BS1)						Prepared: 11/12/21 07:15 Analyzed: 11/12/21 08:01						
EPA 8260D												
Acetone	36.0	10.0	20.0	ug/L	1	40.0	---	90	80-120%	---	---	
Acrylonitrile	17.4	1.00	2.00	ug/L	1	20.0	---	87	80-120%	---	---	
Benzene	19.3	0.100	0.200	ug/L	1	20.0	---	96	80-120%	---	---	
Bromobenzene	21.8	0.250	0.500	ug/L	1	20.0	---	109	80-120%	---	---	
Bromochloromethane	22.0	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
Bromodichloromethane	21.3	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Bromoform	24.7	0.500	1.00	ug/L	1	20.0	---	123	80-120%	---	---	Q-56
Bromomethane	22.5	5.00	5.00	ug/L	1	20.0	---	113	80-120%	---	---	
2-Butanone (MEK)	36.2	5.00	10.0	ug/L	1	40.0	---	91	80-120%	---	---	
n-Butylbenzene	18.7	0.500	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
sec-Butylbenzene	22.0	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
tert-Butylbenzene	21.8	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
Carbon disulfide	18.7	5.00	10.0	ug/L	1	20.0	---	94	80-120%	---	---	
Carbon tetrachloride	22.6	0.500	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
Chlorobenzene	21.1	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Chloroethane	20.3	5.00	5.00	ug/L	1	20.0	---	102	80-120%	---	---	
Chloroform	21.0	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
Chloromethane	15.1	5.00	5.00	ug/L	1	20.0	---	76	80-120%	---	---	Q-55
2-Chlorotoluene	22.1	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
4-Chlorotoluene	21.9	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
Dibromochloromethane	23.5	0.500	1.00	ug/L	1	20.0	---	117	80-120%	---	---	
1,2-Dibromo-3-chloropropane	20.0	2.50	5.00	ug/L	1	20.0	---	100	80-120%	---	---	
1,2-Dibromoethane (EDB)	21.9	0.250	0.500	ug/L	1	20.0	---	110	80-120%	---	---	
Dibromomethane	21.1	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,2-Dichlorobenzene	22.2	0.250	0.500	ug/L	1	20.0	---	111	80-120%	---	---	
1,3-Dichlorobenzene	23.1	0.250	0.500	ug/L	1	20.0	---	116	80-120%	---	---	
1,4-Dichlorobenzene	20.7	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Dichlorodifluoromethane	19.3	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
1,1-Dichloroethane	19.1	0.200	0.400	ug/L	1	20.0	---	95	80-120%	---	---	

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0528 - EPA 5030B						Water						
LCS (21K0528-BS1)			Prepared: 11/12/21 07:15 Analyzed: 11/12/21 08:01									
1,2-Dichloroethane (EDC)	22.6	0.200	0.400	ug/L	1	20.0	---	113	80-120%	---	---	
1,1-Dichloroethene	20.2	0.200	0.200	ug/L	1	20.0	---	101	80-120%	---	---	
cis-1,2-Dichloroethene	20.0	0.200	0.400	ug/L	1	20.0	---	100	80-120%	---	---	
trans-1,2-Dichloroethene	19.5	0.200	0.400	ug/L	1	20.0	---	97	80-120%	---	---	
1,2-Dichloropropane	18.3	0.250	0.500	ug/L	1	20.0	---	92	80-120%	---	---	
1,3-Dichloropropane	21.3	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
2,2-Dichloropropane	24.9	0.500	1.00	ug/L	1	20.0	---	124	80-120%	---	---	Q-56
1,1-Dichloropropene	20.5	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
cis-1,3-Dichloropropene	22.0	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
trans-1,3-Dichloropropene	24.4	0.500	1.00	ug/L	1	20.0	---	122	80-120%	---	---	Q-56
Ethylbenzene	21.0	0.250	0.500	ug/L	1	20.0	---	105	80-120%	---	---	
Hexachlorobutadiene	23.4	2.50	5.00	ug/L	1	20.0	---	117	80-120%	---	---	
2-Hexanone	37.8	5.00	10.0	ug/L	1	40.0	---	95	80-120%	---	---	
Isopropylbenzene	22.2	0.500	1.00	ug/L	1	20.0	---	111	80-120%	---	---	
4-Isopropyltoluene	19.7	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
Methylene chloride	19.4	5.00	10.0	ug/L	1	20.0	---	97	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	39.2	5.00	10.0	ug/L	1	40.0	---	98	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	20.5	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
Naphthalene	16.4	1.00	2.00	ug/L	1	20.0	---	82	80-120%	---	---	
n-Propylbenzene	20.4	0.250	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
Styrene	20.6	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
1,1,1,2-Tetrachloroethane	23.9	0.200	0.400	ug/L	1	20.0	---	120	80-120%	---	---	
1,1,2,2-Tetrachloroethane	19.0	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Tetrachloroethene (PCE)	23.3	0.200	0.200	ug/L	1	20.0	---	117	80-120%	---	---	
Toluene	20.1	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,2,3-Trichlorobenzene	21.4	1.00	2.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,2,4-Trichlorobenzene	22.8	1.00	2.00	ug/L	1	20.0	---	114	80-120%	---	---	
1,1,1-Trichloroethane	21.7	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
1,1,2-Trichloroethane	21.8	0.250	0.500	ug/L	1	20.0	---	109	80-120%	---	---	
Trichloroethene (TCE)	20.8	0.200	0.200	ug/L	1	20.0	---	104	80-120%	---	---	
Trichlorofluoromethane	22.8	1.00	2.00	ug/L	1	20.0	---	114	80-120%	---	---	
1,2,3-Trichloropropane	21.4	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,2,4-Trimethylbenzene	23.2	0.500	1.00	ug/L	1	20.0	---	116	80-120%	---	---	
1,3,5-Trimethylbenzene	22.8	0.500	1.00	ug/L	1	20.0	---	114	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0528 - EPA 5030B						Water						
LCS (21K0528-BS1)			Prepared: 11/12/21 07:15 Analyzed: 11/12/21 08:01									
Vinyl chloride	15.9	0.200	0.200	ug/L	1	20.0	---	80	80-120%	---	---	
m,p-Xylene	44.1	0.500	1.00	ug/L	1	40.0	---	110	80-120%	---	---	
o-Xylene	22.3	0.250	0.500	ug/L	1	20.0	---	112	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 96%</i>		<i>Limits: 80-120%</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98%</i>		<i>80-120%</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96%</i>		<i>80-120%</i>		<i>"</i>						

Duplicate (21K0528-DUP1)						Prepared: 11/12/21 08:14 Analyzed: 11/12/21 12:24						
QC Source Sample: Non-SDG (A1K0538-09)												
Acetone	ND	10.0	20.0	ug/L	1	---	ND	---	---	---	30%	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromoform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromomethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Chloroethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
Chloroform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Chloromethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0528 - EPA 5030B						Water						
Duplicate (21K0528-DUP1)			Prepared: 11/12/21 08:14 Analyzed: 11/12/21 12:24									
QC Source Sample: Non-SDG (A1K0538-09)												
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0528 - EPA 5030B						Water						
Duplicate (21K0528-DUP1)			Prepared: 11/12/21 08:14 Analyzed: 11/12/21 12:24									
QC Source Sample: Non-SDG (A1K0538-09)												
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>107 %</i>		<i>80-120 %</i>		<i>"</i>						

Matrix Spike (21K0528-MS1)						Prepared: 11/12/21 08:14 Analyzed: 11/12/21 13:18						
QC Source Sample: Non-SDG (A1K0538-10)												
EPA 8260D												
Acetone	37.6	10.0	20.0	ug/L	1	40.0	ND	94	39-160%	---	---	
Acrylonitrile	18.5	1.00	2.00	ug/L	1	20.0	ND	93	63-135%	---	---	
Benzene	20.0	0.100	0.200	ug/L	1	20.0	ND	100	79-120%	---	---	
Bromobenzene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	80-120%	---	---	
Bromochloromethane	22.1	0.500	1.00	ug/L	1	20.0	ND	111	78-123%	---	---	
Bromodichloromethane	21.6	0.500	1.00	ug/L	1	20.0	ND	108	79-125%	---	---	
Bromoform	24.3	0.500	1.00	ug/L	1	20.0	ND	122	66-130%	---	---	Q-54d
Bromomethane	22.1	5.00	5.00	ug/L	1	20.0	ND	111	53-141%	---	---	
2-Butanone (MEK)	37.4	5.00	10.0	ug/L	1	40.0	ND	93	56-143%	---	---	
n-Butylbenzene	18.6	0.500	1.00	ug/L	1	20.0	ND	93	75-128%	---	---	
sec-Butylbenzene	22.2	0.500	1.00	ug/L	1	20.0	ND	111	77-126%	---	---	
tert-Butylbenzene	22.5	0.500	1.00	ug/L	1	20.0	ND	113	78-124%	---	---	
Carbon disulfide	19.7	5.00	10.0	ug/L	1	20.0	ND	99	64-133%	---	---	
Carbon tetrachloride	23.9	0.500	1.00	ug/L	1	20.0	ND	119	72-136%	---	---	
Chlorobenzene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	80-120%	---	---	
Chloroethane	22.1	5.00	5.00	ug/L	1	20.0	ND	110	60-138%	---	---	
Chloroform	21.5	0.500	1.00	ug/L	1	20.0	ND	107	79-124%	---	---	
Chloromethane	16.5	5.00	5.00	ug/L	1	20.0	ND	82	50-139%	---	---	Q-54i

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0528 - EPA 5030B						Water						
Matrix Spike (21K0528-MS1)			Prepared: 11/12/21 08:14 Analyzed: 11/12/21 13:18									
QC Source Sample: Non-SDG (A1K0538-10)												
2-Chlorotoluene	22.0	0.500	1.00	ug/L	1	20.0	ND	110	79-122%	---	---	
4-Chlorotoluene	21.6	0.500	1.00	ug/L	1	20.0	ND	108	78-122%	---	---	
Dibromochloromethane	23.0	0.500	1.00	ug/L	1	20.0	ND	115	74-126%	---	---	
1,2-Dibromo-3-chloropropane	20.2	2.50	5.00	ug/L	1	20.0	ND	101	62-128%	---	---	
1,2-Dibromoethane (EDB)	22.0	0.250	0.500	ug/L	1	20.0	ND	110	77-121%	---	---	
Dibromomethane	21.3	0.500	1.00	ug/L	1	20.0	ND	106	79-123%	---	---	
1,2-Dichlorobenzene	21.8	0.250	0.500	ug/L	1	20.0	ND	109	80-120%	---	---	
1,3-Dichlorobenzene	22.7	0.250	0.500	ug/L	1	20.0	ND	114	80-120%	---	---	
1,4-Dichlorobenzene	20.5	0.250	0.500	ug/L	1	20.0	ND	103	79-120%	---	---	
Dichlorodifluoromethane	19.6	0.500	1.00	ug/L	1	20.0	ND	98	32-152%	---	---	
1,1-Dichloroethane	19.4	0.200	0.400	ug/L	1	20.0	ND	97	77-125%	---	---	
1,2-Dichloroethane (EDC)	22.7	0.200	0.400	ug/L	1	20.0	ND	114	73-128%	---	---	
1,1-Dichloroethene	21.5	0.200	0.400	ug/L	1	20.0	ND	108	71-131%	---	---	
cis-1,2-Dichloroethene	20.2	0.200	0.400	ug/L	1	20.0	ND	101	78-123%	---	---	
trans-1,2-Dichloroethene	20.6	0.200	0.400	ug/L	1	20.0	ND	103	75-124%	---	---	
1,2-Dichloropropane	18.6	0.250	0.500	ug/L	1	20.0	ND	93	78-122%	---	---	
1,3-Dichloropropane	21.0	0.500	1.00	ug/L	1	20.0	ND	105	80-120%	---	---	
2,2-Dichloropropane	23.6	0.500	1.00	ug/L	1	20.0	ND	118	60-139%	---	---	Q-54e
1,1-Dichloropropene	21.6	0.500	1.00	ug/L	1	20.0	ND	108	79-125%	---	---	
cis-1,3-Dichloropropene	20.0	0.500	1.00	ug/L	1	20.0	ND	100	75-124%	---	---	
trans-1,3-Dichloropropene	23.7	0.500	1.00	ug/L	1	20.0	ND	118	73-127%	---	---	Q-54b
Ethylbenzene	21.6	0.250	0.500	ug/L	1	20.0	ND	108	79-121%	---	---	
Hexachlorobutadiene	21.2	2.50	5.00	ug/L	1	20.0	ND	106	66-134%	---	---	
2-Hexanone	38.0	5.00	10.0	ug/L	1	40.0	ND	95	57-139%	---	---	
Isopropylbenzene	23.1	0.500	1.00	ug/L	1	20.0	ND	115	72-131%	---	---	
4-Isopropyltoluene	20.0	0.500	1.00	ug/L	1	20.0	ND	100	77-127%	---	---	
Methylene chloride	19.2	5.00	10.0	ug/L	1	20.0	ND	96	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	38.6	5.00	10.0	ug/L	1	40.0	ND	96	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	20.2	0.500	1.00	ug/L	1	20.0	ND	101	71-124%	---	---	
Naphthalene	16.5	1.00	2.00	ug/L	1	20.0	ND	82	61-128%	---	---	
n-Propylbenzene	20.3	0.250	0.500	ug/L	1	20.0	ND	102	76-126%	---	---	
Styrene	20.7	0.500	1.00	ug/L	1	20.0	ND	103	78-123%	---	---	
1,1,1,2-Tetrachloroethane	24.1	0.200	0.400	ug/L	1	20.0	ND	121	78-124%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0528 - EPA 5030B						Water						
Matrix Spike (21K0528-MS1)						Prepared: 11/12/21 08:14 Analyzed: 11/12/21 13:18						
QC Source Sample: Non-SDG (A1K0538-10)												
1,1,2,2-Tetrachloroethane	18.5	0.250	0.500	ug/L	1	20.0	ND	93	71-121%	---	---	
Tetrachloroethene (PCE)	24.3	0.200	0.400	ug/L	1	20.0	ND	122	74-129%	---	---	
Toluene	21.4	0.500	1.00	ug/L	1	20.0	ND	107	80-121%	---	---	
1,2,3-Trichlorobenzene	20.5	1.00	2.00	ug/L	1	20.0	ND	103	69-129%	---	---	
1,2,4-Trichlorobenzene	21.5	1.00	2.00	ug/L	1	20.0	ND	108	69-130%	---	---	
1,1,1-Trichloroethane	22.4	0.200	0.400	ug/L	1	20.0	ND	112	74-131%	---	---	
1,1,2-Trichloroethane	21.9	0.250	0.500	ug/L	1	20.0	ND	109	80-120%	---	---	
Trichloroethene (TCE)	21.6	0.200	0.400	ug/L	1	20.0	ND	108	79-123%	---	---	
Trichlorofluoromethane	24.1	1.00	2.00	ug/L	1	20.0	ND	121	65-141%	---	---	
1,2,3-Trichloropropane	20.9	0.500	1.00	ug/L	1	20.0	ND	104	73-122%	---	---	
1,2,4-Trimethylbenzene	23.5	0.500	1.00	ug/L	1	20.0	ND	118	76-124%	---	---	
1,3,5-Trimethylbenzene	23.2	0.500	1.00	ug/L	1	20.0	ND	116	75-124%	---	---	
Vinyl chloride	17.4	0.200	0.400	ug/L	1	20.0	ND	87	58-137%	---	---	
m,p-Xylene	45.4	0.500	1.00	ug/L	1	40.0	ND	113	80-121%	---	---	
o-Xylene	22.5	0.250	0.500	ug/L	1	20.0	ND	112	78-122%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 96 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0586 - EPA 5030B						Water						
Blank (21K0586-BLK1)			Prepared: 11/13/21 07:35 Analyzed: 11/13/21 11:10									
<u>EPA 8260D</u>												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0586 - EPA 5030B						Water						
Blank (21K0586-BLK1)			Prepared: 11/13/21 07:35 Analyzed: 11/13/21 11:10									
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	2.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.400	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 98 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A1K0401 - 12 08 21 1043

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0586 - EPA 5030B						Water						
Blank (21K0586-BLK1)						Prepared: 11/13/21 07:35 Analyzed: 11/13/21 11:10						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>106 %</i>		<i>80-120 %</i>		<i>"</i>						
LCS (21K0586-BS1)						Prepared: 11/13/21 07:35 Analyzed: 11/13/21 10:08						
EPA 8260D												
Acetone	32.5	10.0	20.0	ug/L	1	40.0	---	81	80-120%	---	---	
Acrylonitrile	16.6	1.00	2.00	ug/L	1	20.0	---	83	80-120%	---	---	
Benzene	17.9	0.100	0.200	ug/L	1	20.0	---	89	80-120%	---	---	
Bromobenzene	20.7	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Bromochloromethane	20.5	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
Bromodichloromethane	19.6	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
Bromoform	22.6	0.500	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
Bromomethane	20.4	5.00	5.00	ug/L	1	20.0	---	102	80-120%	---	---	
2-Butanone (MEK)	33.9	5.00	10.0	ug/L	1	40.0	---	85	80-120%	---	---	
n-Butylbenzene	16.2	0.500	1.00	ug/L	1	20.0	---	81	80-120%	---	---	
sec-Butylbenzene	19.1	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
tert-Butylbenzene	19.4	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
Carbon disulfide	16.8	5.00	10.0	ug/L	1	20.0	---	84	80-120%	---	---	
Carbon tetrachloride	20.0	0.500	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
Chlorobenzene	19.8	0.250	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Chloroethane	18.2	5.00	5.00	ug/L	1	20.0	---	91	80-120%	---	---	
Chloroform	19.1	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
Chloromethane	14.8	5.00	5.00	ug/L	1	20.0	---	74	80-120%	---	---	Q-55
2-Chlorotoluene	19.9	0.500	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
4-Chlorotoluene	20.0	0.500	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
Dibromochloromethane	21.8	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
1,2-Dibromo-3-chloropropane	18.6	2.50	5.00	ug/L	1	20.0	---	93	80-120%	---	---	
1,2-Dibromoethane (EDB)	20.7	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Dibromomethane	19.4	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,2-Dichlorobenzene	20.6	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
1,3-Dichlorobenzene	21.5	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
1,4-Dichlorobenzene	19.2	0.250	0.500	ug/L	1	20.0	---	96	80-120%	---	---	
Dichlorodifluoromethane	20.1	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,1-Dichloroethane	17.2	0.200	0.400	ug/L	1	20.0	---	86	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0586 - EPA 5030B						Water						
LCS (21K0586-BS1)			Prepared: 11/13/21 07:35 Analyzed: 11/13/21 10:08									
1,2-Dichloroethane (EDC)	20.6	0.200	0.400	ug/L	1	20.0	---	103	80-120%	---	---	
1,1-Dichloroethene	17.8	0.200	0.400	ug/L	1	20.0	---	89	80-120%	---	---	
cis-1,2-Dichloroethene	18.2	0.200	0.400	ug/L	1	20.0	---	91	80-120%	---	---	
trans-1,2-Dichloroethene	17.8	0.200	0.400	ug/L	1	20.0	---	89	80-120%	---	---	
1,2-Dichloropropane	17.2	0.250	0.500	ug/L	1	20.0	---	86	80-120%	---	---	
1,3-Dichloropropane	19.5	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
2,2-Dichloropropane	22.9	0.500	1.00	ug/L	1	20.0	---	115	80-120%	---	---	
1,1-Dichloropropene	18.4	0.500	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
cis-1,3-Dichloropropene	20.3	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
trans-1,3-Dichloropropene	22.6	0.500	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
Ethylbenzene	18.8	0.250	0.500	ug/L	1	20.0	---	94	80-120%	---	---	
Hexachlorobutadiene	20.3	2.50	5.00	ug/L	1	20.0	---	101	80-120%	---	---	
2-Hexanone	34.0	5.00	10.0	ug/L	1	40.0	---	85	80-120%	---	---	
Isopropylbenzene	19.7	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
4-Isopropyltoluene	17.4	0.500	1.00	ug/L	1	20.0	---	87	80-120%	---	---	
Methylene chloride	17.8	5.00	10.0	ug/L	1	20.0	---	89	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	35.5	5.00	10.0	ug/L	1	40.0	---	89	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	19.3	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
Naphthalene	15.7	2.00	2.00	ug/L	1	20.0	---	78	80-120%	---	---	Q-55
n-Propylbenzene	17.9	0.250	0.500	ug/L	1	20.0	---	89	80-120%	---	---	
Styrene	18.8	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,1,1,2-Tetrachloroethane	22.3	0.200	0.400	ug/L	1	20.0	---	112	80-120%	---	---	
1,1,2,2-Tetrachloroethane	17.4	0.250	0.500	ug/L	1	20.0	---	87	80-120%	---	---	
Tetrachloroethene (PCE)	21.3	0.200	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
Toluene	18.8	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,2,3-Trichlorobenzene	19.8	1.00	2.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2,4-Trichlorobenzene	20.2	1.00	2.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,1,1-Trichloroethane	19.2	0.200	0.400	ug/L	1	20.0	---	96	80-120%	---	---	
1,1,2-Trichloroethane	20.2	0.250	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
Trichloroethene (TCE)	19.2	0.200	0.400	ug/L	1	20.0	---	96	80-120%	---	---	
Trichlorofluoromethane	21.6	1.00	2.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,2,3-Trichloropropane	20.2	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,2,4-Trimethylbenzene	20.8	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
1,3,5-Trimethylbenzene	20.5	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting	Project: EQRB	
5741 NE Flanders Street	Project Number: 319	Report ID:
Portland, OR 97213	Project Manager: Jill Betts	A1K0401 - 12 08 21 1043

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0586 - EPA 5030B						Water						
LCS (21K0586-BS1)			Prepared: 11/13/21 07:35 Analyzed: 11/13/21 10:08									
Vinyl chloride	15.8	0.400	0.400	ug/L	1	20.0	---	79	80-120%	---	---	Q-55
m,p-Xylene	39.9	0.500	1.00	ug/L	1	40.0	---	100	80-120%	---	---	
o-Xylene	19.9	0.250	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 96%</i>		<i>Limits: 80-120%</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>96%</i>		<i>80-120%</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>100%</i>		<i>80-120%</i>		<i>"</i>						

Duplicate (21K0586-DUP1)			Prepared: 11/13/21 08:00 Analyzed: 11/13/21 14:44									
QC Source Sample: Non-SDG (A1K0627-01)												
Acetone	ND	10.0	20.0	ug/L	1	---	ND	---	---	---	30%	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromoform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromomethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Chloroethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
Chloroform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Chloromethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0586 - EPA 5030B						Water						
Duplicate (21K0586-DUP1)			Prepared: 11/13/21 08:00 Analyzed: 11/13/21 14:44									
QC Source Sample: Non-SDG (A1K0627-01)												
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	2.00	2.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0586 - EPA 5030B												
Water												
Duplicate (21K0586-DUP1)												
Prepared: 11/13/21 08:00 Analyzed: 11/13/21 14:44												
QC Source Sample: Non-SDG (A1K0627-01)												
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	ND	0.400	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr) Recovery: 99 % Limits: 80-120 % Dilution: 1x</i> <i>Toluene-d8 (Surr) 97 % 80-120 % "</i> <i>4-Bromofluorobenzene (Surr) 105 % 80-120 % "</i>												

Matrix Spike (21K0586-MS1)												
Prepared: 11/13/21 08:00 Analyzed: 11/13/21 16:04												
QC Source Sample: Non-SDG (A1K0577-02)												
EPA 8260D												
Acetone	38.0	10.0	20.0	ug/L	1	40.0	ND	95	39-160%	---	---	
Acrylonitrile	17.8	1.00	2.00	ug/L	1	20.0	ND	89	63-135%	---	---	
Benzene	19.9	0.100	0.200	ug/L	1	20.0	ND	100	79-120%	---	---	
Bromobenzene	21.7	0.250	0.500	ug/L	1	20.0	ND	108	80-120%	---	---	
Bromochloromethane	22.1	0.500	1.00	ug/L	1	20.0	ND	111	78-123%	---	---	
Bromodichloromethane	21.3	0.500	1.00	ug/L	1	20.0	ND	107	79-125%	---	---	
Bromoform	23.5	0.500	1.00	ug/L	1	20.0	ND	118	66-130%	---	---	
Bromomethane	23.4	5.00	5.00	ug/L	1	20.0	ND	117	53-141%	---	---	
2-Butanone (MEK)	37.9	5.00	10.0	ug/L	1	40.0	ND	95	56-143%	---	---	
n-Butylbenzene	19.2	0.500	1.00	ug/L	1	20.0	ND	96	75-128%	---	---	
sec-Butylbenzene	22.8	0.500	1.00	ug/L	1	20.0	ND	114	77-126%	---	---	
tert-Butylbenzene	22.7	0.500	1.00	ug/L	1	20.0	ND	114	78-124%	---	---	
Carbon disulfide	19.6	5.00	10.0	ug/L	1	20.0	ND	98	64-133%	---	---	
Carbon tetrachloride	23.8	0.500	1.00	ug/L	1	20.0	ND	119	72-136%	---	---	
Chlorobenzene	21.5	0.250	0.500	ug/L	1	20.0	ND	107	80-120%	---	---	
Chloroethane	20.4	5.00	5.00	ug/L	1	20.0	ND	102	60-138%	---	---	
Chloroform	21.2	0.500	1.00	ug/L	1	20.0	ND	106	79-124%	---	---	
Chloromethane	16.1	5.00	5.00	ug/L	1	20.0	ND	81	50-139%	---	---	Q-54j

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0586 - EPA 5030B						Water						
Matrix Spike (21K0586-MS1)						Prepared: 11/13/21 08:00 Analyzed: 11/13/21 16:04						
<u>QC Source Sample: Non-SDG (A1K0577-02)</u>												
2-Chlorotoluene	22.4	0.500	1.00	ug/L	1	20.0	ND	112	79-122%	---	---	
4-Chlorotoluene	21.7	0.500	1.00	ug/L	1	20.0	ND	109	78-122%	---	---	
Dibromochloromethane	22.2	0.500	1.00	ug/L	1	20.0	ND	111	74-126%	---	---	
1,2-Dibromo-3-chloropropane	19.5	2.50	5.00	ug/L	1	20.0	ND	98	62-128%	---	---	
1,2-Dibromoethane (EDB)	21.5	0.250	0.500	ug/L	1	20.0	ND	108	77-121%	---	---	
Dibromomethane	21.1	0.500	1.00	ug/L	1	20.0	ND	105	79-123%	---	---	
1,2-Dichlorobenzene	22.1	0.250	0.500	ug/L	1	20.0	ND	110	80-120%	---	---	
1,3-Dichlorobenzene	22.9	0.250	0.500	ug/L	1	20.0	ND	114	80-120%	---	---	
1,4-Dichlorobenzene	20.4	0.250	0.500	ug/L	1	20.0	ND	102	79-120%	---	---	
Dichlorodifluoromethane	20.7	0.500	1.00	ug/L	1	20.0	ND	103	32-152%	---	---	
1,1-Dichloroethane	19.4	0.200	0.400	ug/L	1	20.0	ND	97	77-125%	---	---	
1,2-Dichloroethane (EDC)	22.4	0.200	0.400	ug/L	1	20.0	ND	112	73-128%	---	---	
1,1-Dichloroethene	21.6	0.200	0.400	ug/L	1	20.0	ND	108	71-131%	---	---	
cis-1,2-Dichloroethene	20.4	0.200	0.400	ug/L	1	20.0	ND	102	78-123%	---	---	
trans-1,2-Dichloroethene	20.5	0.200	0.400	ug/L	1	20.0	ND	102	75-124%	---	---	
1,2-Dichloropropane	18.7	0.250	0.500	ug/L	1	20.0	ND	93	78-122%	---	---	
1,3-Dichloropropane	20.8	0.500	1.00	ug/L	1	20.0	ND	104	80-120%	---	---	
2,2-Dichloropropane	23.0	0.500	1.00	ug/L	1	20.0	ND	115	60-139%	---	---	
1,1-Dichloropropene	21.7	0.500	1.00	ug/L	1	20.0	ND	109	79-125%	---	---	
cis-1,3-Dichloropropene	18.9	0.500	1.00	ug/L	1	20.0	ND	95	75-124%	---	---	
trans-1,3-Dichloropropene	23.1	0.500	1.00	ug/L	1	20.0	ND	116	73-127%	---	---	
Ethylbenzene	21.1	0.250	0.500	ug/L	1	20.0	ND	105	79-121%	---	---	
Hexachlorobutadiene	23.1	2.50	5.00	ug/L	1	20.0	ND	116	66-134%	---	---	
2-Hexanone	36.5	5.00	10.0	ug/L	1	40.0	ND	91	57-139%	---	---	
Isopropylbenzene	22.3	0.500	1.00	ug/L	1	20.0	ND	111	72-131%	---	---	
4-Isopropyltoluene	20.1	0.500	1.00	ug/L	1	20.0	ND	100	77-127%	---	---	
Methylene chloride	19.2	5.00	10.0	ug/L	1	20.0	ND	96	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	38.1	5.00	10.0	ug/L	1	40.0	ND	95	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	20.0	0.500	1.00	ug/L	1	20.0	ND	100	71-124%	---	---	
Naphthalene	16.9	2.00	2.00	ug/L	1	20.0	ND	85	61-128%	---	---	Q-54g
n-Propylbenzene	20.6	0.250	0.500	ug/L	1	20.0	ND	103	76-126%	---	---	
Styrene	18.7	0.500	1.00	ug/L	1	20.0	ND	93	78-123%	---	---	
1,1,1,2-Tetrachloroethane	23.6	0.200	0.400	ug/L	1	20.0	ND	118	78-124%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0586 - EPA 5030B						Water						
Matrix Spike (21K0586-MS1)			Prepared: 11/13/21 08:00 Analyzed: 11/13/21 16:04									
QC Source Sample: Non-SDG (A1K0577-02)												
1,1,2,2-Tetrachloroethane	18.7	0.250	0.500	ug/L	1	20.0	ND	94	71-121%	---	---	
Tetrachloroethene (PCE)	23.3	0.200	0.400	ug/L	1	20.0	ND	116	74-129%	---	---	
Toluene	20.3	0.500	1.00	ug/L	1	20.0	ND	102	80-121%	---	---	
1,2,3-Trichlorobenzene	21.5	1.00	2.00	ug/L	1	20.0	ND	108	69-129%	---	---	
1,2,4-Trichlorobenzene	22.6	1.00	2.00	ug/L	1	20.0	ND	113	69-130%	---	---	
1,1,1-Trichloroethane	22.8	0.200	0.400	ug/L	1	20.0	ND	114	74-131%	---	---	
1,1,2-Trichloroethane	21.3	0.250	0.500	ug/L	1	20.0	ND	107	80-120%	---	---	
Trichloroethene (TCE)	21.8	0.200	0.400	ug/L	1	20.0	ND	109	79-123%	---	---	
Trichlorofluoromethane	23.7	1.00	2.00	ug/L	1	20.0	ND	119	65-141%	---	---	
1,2,3-Trichloropropane	21.2	0.500	1.00	ug/L	1	20.0	ND	106	73-122%	---	---	
1,2,4-Trimethylbenzene	23.5	0.500	1.00	ug/L	1	20.0	ND	118	76-124%	---	---	
1,3,5-Trimethylbenzene	23.7	0.500	1.00	ug/L	1	20.0	ND	118	75-124%	---	---	
Vinyl chloride	17.7	0.400	0.400	ug/L	1	20.0	ND	89	58-137%	---	---	Q-54f
m,p-Xylene	44.5	0.500	1.00	ug/L	1	40.0	ND	111	80-121%	---	---	
o-Xylene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	78-122%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>95 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
Blank (21K0784-BLK1)			Prepared: 11/18/21 08:00 Analyzed: 11/18/21 10:20									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	66.7	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	167	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
Blank (21K0784-BLK1)			Prepared: 11/18/21 08:00 Analyzed: 11/18/21 10:20									
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 103 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
Blank (21K0784-BLK1)						Prepared: 11/18/21 08:00 Analyzed: 11/18/21 10:20						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 97 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (21K0784-BS1)						Prepared: 11/18/21 08:00 Analyzed: 11/18/21 09:10						
5035A/8260D												
Acetone	2020	500	1000	ug/kg wet	50	2000	---	101	80-120%	---	---	
Acrylonitrile	1140	50.0	100	ug/kg wet	50	1000	---	114	80-120%	---	---	
Benzene	1030	5.00	10.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Bromobenzene	958	12.5	25.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
Bromochloromethane	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
Bromodichloromethane	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Bromoform	770	100	100	ug/kg wet	50	1000	---	77	80-120%	---	---	Q-55
Bromomethane	1210	500	500	ug/kg wet	50	1000	---	121	80-120%	---	---	Q-56
2-Butanone (MEK)	2070	250	500	ug/kg wet	50	2000	---	103	80-120%	---	---	
n-Butylbenzene	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
sec-Butylbenzene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
tert-Butylbenzene	985	25.0	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
Carbon disulfide	886	250	500	ug/kg wet	50	1000	---	89	80-120%	---	---	
Carbon tetrachloride	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
Chlorobenzene	930	12.5	25.0	ug/kg wet	50	1000	---	93	80-120%	---	---	
Chloroethane	1340	250	500	ug/kg wet	50	1000	---	134	80-120%	---	---	Q-56
Chloroform	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Chloromethane	1000	125	250	ug/kg wet	50	1000	---	100	80-120%	---	---	
2-Chlorotoluene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
4-Chlorotoluene	1000	25.0	50.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Dibromochloromethane	977	50.0	100	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,2-Dibromo-3-chloropropane	740	250	250	ug/kg wet	50	1000	---	74	80-120%	---	---	Q-55
1,2-Dibromoethane (EDB)	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Dibromomethane	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,2-Dichlorobenzene	944	12.5	25.0	ug/kg wet	50	1000	---	94	80-120%	---	---	
1,3-Dichlorobenzene	974	12.5	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
1,4-Dichlorobenzene	961	12.5	25.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
Dichlorodifluoromethane	934	50.0	100	ug/kg wet	50	1000	---	93	80-120%	---	---	
1,1-Dichloroethane	1060	12.5	25.0	ug/kg wet	50	1000	---	106	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
LCS (21K0784-BS1)			Prepared: 11/18/21 08:00 Analyzed: 11/18/21 09:10									
1,2-Dichloroethane (EDC)	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
1,1-Dichloroethene	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
cis-1,2-Dichloroethene	1070	12.5	25.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
trans-1,2-Dichloroethene	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
1,2-Dichloropropane	1080	12.5	25.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
1,3-Dichloropropane	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
2,2-Dichloropropane	1100	25.0	50.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,1-Dichloropropene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
cis-1,3-Dichloropropene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
trans-1,3-Dichloropropene	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Ethylbenzene	972	12.5	25.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
Hexachlorobutadiene	968	50.0	100	ug/kg wet	50	1000	---	97	80-120%	---	---	
2-Hexanone	1910	250	500	ug/kg wet	50	2000	---	96	80-120%	---	---	
Isopropylbenzene	985	25.0	50.0	ug/kg wet	50	1000	---	98	80-120%	---	---	
4-Isopropyltoluene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Methylene chloride	977	250	500	ug/kg wet	50	1000	---	98	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	1950	250	500	ug/kg wet	50	2000	---	97	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	965	25.0	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
Naphthalene	918	50.0	100	ug/kg wet	50	1000	---	92	80-120%	---	---	
n-Propylbenzene	1040	12.5	25.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
Styrene	971	25.0	50.0	ug/kg wet	50	1000	---	97	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Tetrachloroethene (PCE)	1000	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Toluene	958	25.0	50.0	ug/kg wet	50	1000	---	96	80-120%	---	---	
1,2,3-Trichlorobenzene	922	125	250	ug/kg wet	50	1000	---	92	80-120%	---	---	
1,2,4-Trichlorobenzene	875	125	250	ug/kg wet	50	1000	---	88	80-120%	---	---	
1,1,1-Trichloroethane	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
1,1,2-Trichloroethane	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Trichloroethene (TCE)	1020	12.5	25.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
Trichlorofluoromethane	1440	50.0	100	ug/kg wet	50	1000	---	144	80-120%	---	---	Q-56
1,2,3-Trichloropropane	1020	25.0	50.0	ug/kg wet	50	1000	---	102	80-120%	---	---	
1,2,4-Trimethylbenzene	1040	25.0	50.0	ug/kg wet	50	1000	---	104	80-120%	---	---	
1,3,5-Trimethylbenzene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
LCS (21K0784-BS1)			Prepared: 11/18/21 08:00 Analyzed: 11/18/21 09:10									
Vinyl chloride	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
m,p-Xylene	1940	25.0	50.0	ug/kg wet	50	2000	---	97	80-120%	---	---	
o-Xylene	949	12.5	25.0	ug/kg wet	50	1000	---	95	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>102 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>94 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (21K0784-DUP1)			Prepared: 11/04/21 11:05 Analyzed: 11/18/21 11:14									
QC Source Sample: Non-SDG (A1K0413-04)												
Acetone	ND	862	1720	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	86.2	172	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	2300	8.62	17.2	ug/kg dry	50	---	2080	---	---	10	30%	
Bromobenzene	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	172	172	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	862	862	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	431	862	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	431	862	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	431	862	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	215	431	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	86.2	172	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	431	431	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
Duplicate (21K0784-DUP1)			Prepared: 11/04/21 11:05 Analyzed: 11/18/21 11:14									
QC Source Sample: Non-SDG (A1K0413-04)												
1,3-Dichlorobenzene	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	86.2	172	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	51.7	21.5	43.1	ug/kg dry	50	---	35.9	---	---	36	30%	Q-05
Hexachlorobutadiene	ND	86.2	172	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	431	862	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	431	862	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	431	862	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	130	86.2	172	ug/kg dry	50	---	ND	---	---	---	30%	Q-05, J
n-Propylbenzene	24.1	21.5	43.1	ug/kg dry	50	---	21.8	---	---	10	30%	J
Styrene	69.8	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	Q-05, J
1,1,1,2-Tetrachloroethane	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	97.4	21.5	43.1	ug/kg dry	50	---	126	---	---	26	30%	
Toluene	198	43.1	86.2	ug/kg dry	50	---	129	---	---	42	30%	Q-05
1,2,3-Trichlorobenzene	ND	215	431	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	215	431	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
Duplicate (21K0784-DUP1)			Prepared: 11/04/21 11:05 Analyzed: 11/18/21 11:14									
QC Source Sample: Non-SDG (A1K0413-04)												
Trichloroethene (TCE)	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	86.2	172	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	43.1	86.2	ug/kg dry	50	---	50.7	---	---	***	30%	Q-05
1,3,5-Trimethylbenzene	ND	43.1	86.2	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	21.5	43.1	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	153	43.1	86.2	ug/kg dry	50	---	126	---	---	19	30%	
o-Xylene	48.3	21.5	43.1	ug/kg dry	50	---	35.9	---	---	29	30%	Q-05
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 101 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (21K0784-DUP2)			Prepared: 11/04/21 14:10 Analyzed: 11/18/21 12:08									
QC Source Sample: Non-SDG (A1K0413-09)												
Acetone	ND	669	1340	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	66.9	134	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	24.1	6.69	13.4	ug/kg dry	50	---	48.5	---	---	67	30%	Q-04
Bromobenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	134	134	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	669	669	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	334	669	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	334	669	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	334	669	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	167	334	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
Duplicate (21K0784-DUP2)			Prepared: 11/04/21 14:10 Analyzed: 11/18/21 12:08									
QC Source Sample: Non-SDG (A1K0413-09)												
4-Chlorotoluene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	66.9	134	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	334	334	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	66.9	134	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	17.4	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	Q-05, J
Hexachlorobutadiene	ND	66.9	134	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	334	669	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	334	669	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	334	669	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	66.9	134	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Styrene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
Duplicate (21K0784-DUP2)			Prepared: 11/04/21 14:10 Analyzed: 11/18/21 12:08									
QC Source Sample: Non-SDG (A1K0413-09)												
Tetrachloroethene (PCE)	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	167	334	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	167	334	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	66.9	134	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	77.6	33.4	66.9	ug/kg dry	50	---	57.5	---	---	30	30%	
1,3,5-Trimethylbenzene	ND	33.4	66.9	ug/kg dry	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	16.7	33.4	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	62.2	33.4	66.9	ug/kg dry	50	---	58.2	---	---	7	30%	Q-05, J
o-Xylene	26.8	16.7	33.4	ug/kg dry	50	---	23.1	---	---	14	30%	Q-05, J
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>101 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>92 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (21K0784-MS1)			Prepared: 11/05/21 09:00 Analyzed: 11/18/21 13:01									
QC Source Sample: Non-SDG (A1K0413-19)												
5035A/8260D												
Acetone	4110	942	1880	ug/kg dry	50	3770	ND	109	36-164%	---	---	
Acrylonitrile	2490	94.2	188	ug/kg dry	50	1880	ND	132	65-134%	---	---	
Benzene	3240	9.42	18.8	ug/kg dry	50	1880	1170	110	77-121%	---	---	
Bromobenzene	1910	23.6	47.1	ug/kg dry	50	1880	ND	102	78-121%	---	---	
Bromochloromethane	2360	47.1	94.2	ug/kg dry	50	1880	ND	125	78-125%	---	---	
Bromodichloromethane	2200	47.1	94.2	ug/kg dry	50	1880	ND	117	75-127%	---	---	
Bromoform	1530	188	188	ug/kg dry	50	1880	ND	81	67-132%	---	---	Q-54h
Bromomethane	2740	942	942	ug/kg dry	50	1880	ND	145	53-143%	---	---	Q-54
2-Butanone (MEK)	4420	471	942	ug/kg dry	50	3770	ND	117	51-148%	---	---	
n-Butylbenzene	2110	47.1	94.2	ug/kg dry	50	1880	ND	112	70-128%	---	---	
sec-Butylbenzene	2030	47.1	94.2	ug/kg dry	50	1880	ND	108	73-126%	---	---	
tert-Butylbenzene	1970	47.1	94.2	ug/kg dry	50	1880	ND	105	73-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
Matrix Spike (21K0784-MS1)			Prepared: 11/05/21 09:00 Analyzed: 11/18/21 13:01									
QC Source Sample: Non-SDG (A1K0413-19)												
Carbon disulfide	1730	471	942	ug/kg dry	50	1880	ND	92	63-132%	---	---	
Carbon tetrachloride	2000	47.1	94.2	ug/kg dry	50	1880	ND	106	70-135%	---	---	
Chlorobenzene	1850	23.6	47.1	ug/kg dry	50	1880	ND	98	79-120%	---	---	
Chloroethane	2990	471	942	ug/kg dry	50	1880	ND	159	59-139%	---	---	Q-54a
Chloroform	2110	47.1	94.2	ug/kg dry	50	1880	ND	112	78-123%	---	---	
Chloromethane	2000	236	471	ug/kg dry	50	1880	ND	106	50-136%	---	---	
2-Chlorotoluene	2020	47.1	94.2	ug/kg dry	50	1880	ND	108	75-122%	---	---	
4-Chlorotoluene	1990	47.1	94.2	ug/kg dry	50	1880	ND	106	72-124%	---	---	
Dibromochloromethane	1990	94.2	188	ug/kg dry	50	1880	ND	106	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1410	471	471	ug/kg dry	50	1880	ND	75	61-132%	---	---	Q-54j
1,2-Dibromoethane (EDB)	2040	47.1	94.2	ug/kg dry	50	1880	ND	109	78-122%	---	---	
Dibromomethane	2180	47.1	94.2	ug/kg dry	50	1880	ND	116	78-125%	---	---	
1,2-Dichlorobenzene	1860	23.6	47.1	ug/kg dry	50	1880	ND	99	78-121%	---	---	
1,3-Dichlorobenzene	1920	23.6	47.1	ug/kg dry	50	1880	ND	102	77-121%	---	---	
1,4-Dichlorobenzene	1920	23.6	47.1	ug/kg dry	50	1880	ND	102	75-120%	---	---	
Dichlorodifluoromethane	1780	94.2	188	ug/kg dry	50	1880	ND	94	29-149%	---	---	
1,1-Dichloroethane	2190	23.6	47.1	ug/kg dry	50	1880	ND	116	76-125%	---	---	
1,2-Dichloroethane (EDC)	2170	23.6	47.1	ug/kg dry	50	1880	ND	115	73-128%	---	---	
1,1-Dichloroethene	2130	23.6	47.1	ug/kg dry	50	1880	ND	113	70-131%	---	---	
cis-1,2-Dichloroethene	2170	23.6	47.1	ug/kg dry	50	1880	ND	115	77-123%	---	---	
trans-1,2-Dichloroethene	2170	23.6	47.1	ug/kg dry	50	1880	ND	115	74-125%	---	---	
1,2-Dichloropropane	2210	23.6	47.1	ug/kg dry	50	1880	ND	117	76-123%	---	---	
1,3-Dichloropropane	2050	47.1	94.2	ug/kg dry	50	1880	ND	109	77-121%	---	---	
2,2-Dichloropropane	2070	47.1	94.2	ug/kg dry	50	1880	ND	110	67-133%	---	---	
1,1-Dichloropropene	2120	47.1	94.2	ug/kg dry	50	1880	ND	113	76-125%	---	---	
cis-1,3-Dichloropropene	1990	47.1	94.2	ug/kg dry	50	1880	ND	106	74-126%	---	---	
trans-1,3-Dichloropropene	2150	47.1	94.2	ug/kg dry	50	1880	ND	114	71-130%	---	---	
Ethylbenzene	2330	23.6	47.1	ug/kg dry	50	1880	404	103	76-122%	---	---	
Hexachlorobutadiene	1700	94.2	188	ug/kg dry	50	1880	ND	90	61-135%	---	---	
2-Hexanone	3790	471	942	ug/kg dry	50	3770	ND	101	53-145%	---	---	
Isopropylbenzene	1910	47.1	94.2	ug/kg dry	50	1880	ND	102	68-134%	---	---	
4-Isopropyltoluene	1990	47.1	94.2	ug/kg dry	50	1880	ND	106	73-127%	---	---	
Methylene chloride	1970	471	942	ug/kg dry	50	1880	ND	104	70-128%	---	---	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0784 - EPA 5035A						Soil						
Matrix Spike (21K0784-MS1)			Prepared: 11/05/21 09:00 Analyzed: 11/18/21 13:01									
QC Source Sample: Non-SDG (A1K0413-19)												
4-Methyl-2-pentanone (MiBK)	3920	471	942	ug/kg dry	50	3770	ND 104	65-135%	---	---		
Methyl tert-butyl ether (MTBE)	1930	47.1	94.2	ug/kg dry	50	1880	ND 102	73-125%	---	---		
Naphthalene	1940	94.2	188	ug/kg dry	50	1880	ND 103	62-129%	---	---		
n-Propylbenzene	2090	23.6	47.1	ug/kg dry	50	1880	43.3 108	73-125%	---	---		
Styrene	1940	47.1	94.2	ug/kg dry	50	1880	ND 103	76-124%	---	---		
1,1,1,2-Tetrachloroethane	2050	23.6	47.1	ug/kg dry	50	1880	ND 109	78-125%	---	---		
1,1,2,2-Tetrachloroethane	2000	47.1	94.2	ug/kg dry	50	1880	ND 106	70-124%	---	---		
Tetrachloroethene (PCE)	1900	23.6	47.1	ug/kg dry	50	1880	29.2 99	73-128%	---	---		
Toluene	2030	47.1	94.2	ug/kg dry	50	1880	179 98	77-121%	---	---		
1,2,3-Trichlorobenzene	1810	236	471	ug/kg dry	50	1880	ND 96	66-130%	---	---		
1,2,4-Trichlorobenzene	1700	236	471	ug/kg dry	50	1880	ND 90	67-129%	---	---		
1,1,1-Trichloroethane	2120	23.6	47.1	ug/kg dry	50	1880	ND 112	73-130%	---	---		
1,1,2-Trichloroethane	2070	23.6	47.1	ug/kg dry	50	1880	ND 110	78-121%	---	---		
Trichloroethene (TCE)	2060	23.6	47.1	ug/kg dry	50	1880	ND 109	77-123%	---	---		
Trichlorofluoromethane	2990	94.2	188	ug/kg dry	50	1880	ND 159	62-140%	---	---		Q-54c
1,2,3-Trichloropropane	2070	47.1	94.2	ug/kg dry	50	1880	ND 110	73-125%	---	---		
1,2,4-Trimethylbenzene	2240	47.1	94.2	ug/kg dry	50	1880	107 113	75-123%	---	---		
1,3,5-Trimethylbenzene	2090	47.1	94.2	ug/kg dry	50	1880	ND 111	73-124%	---	---		
Vinyl chloride	2130	23.6	47.1	ug/kg dry	50	1880	ND 113	56-135%	---	---		
m,p-Xylene	4210	47.1	94.2	ug/kg dry	50	3770	363 102	77-124%	---	---		
o-Xylene	2000	23.6	47.1	ug/kg dry	50	1880	105 100	77-123%	---	---		
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>79-120 %</i>		<i>"</i>						

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0597 - EPA 3510C (Acid Extraction)						Water						
Blank (21K0597-BLK1)						Prepared: 11/15/21 07:12 Analyzed: 11/15/21 13:19						
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Fluoranthene	0.0168	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	B-02, J
Fluorene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Phenanthrene	0.0144	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	B-02, J
Pyrene	0.0155	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	B-02, J
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 63 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>90 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS (21K0597-BS1)						Prepared: 11/15/21 07:12 Analyzed: 11/15/21 13:44						
<u>EPA 8270E SIM</u>												
Acenaphthene	2.67	0.0100	0.0200	ug/L	1	4.00	---	67	47-122%	---	---	
Acenaphthylene	2.76	0.0100	0.0200	ug/L	1	4.00	---	69	41-130%	---	---	
Anthracene	3.04	0.0100	0.0200	ug/L	1	4.00	---	76	57-123%	---	---	
Benz(a)anthracene	3.26	0.0100	0.0200	ug/L	1	4.00	---	82	58-125%	---	---	
Benzo(a)pyrene	3.30	0.0100	0.0200	ug/L	1	4.00	---	82	54-128%	---	---	
Benzo(b)fluoranthene	3.36	0.0100	0.0200	ug/L	1	4.00	---	84	53-131%	---	---	
Benzo(k)fluoranthene	3.37	0.0100	0.0200	ug/L	1	4.00	---	84	57-129%	---	---	
Benzo(g,h,i)perylene	3.10	0.0100	0.0200	ug/L	1	4.00	---	77	50-134%	---	---	
Chrysene	3.11	0.0100	0.0200	ug/L	1	4.00	---	78	59-123%	---	---	
Dibenz(a,h)anthracene	3.45	0.0100	0.0200	ug/L	1	4.00	---	86	51-134%	---	---	
Fluoranthene	3.24	0.0100	0.0200	ug/L	1	4.00	---	81	57-128%	---	---	B-02
Fluorene	2.82	0.0100	0.0200	ug/L	1	4.00	---	71	52-124%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0597 - EPA 3510C (Acid Extraction)						Water						
LCS (21K0597-BS1)						Prepared: 11/15/21 07:12 Analyzed: 11/15/21 13:44						
Indeno(1,2,3-cd)pyrene	3.01	0.0100	0.0200	ug/L	1	4.00	---	75	52-134%	---	---	
Naphthalene	2.21	0.0200	0.0400	ug/L	1	4.00	---	55	40-121%	---	---	
Phenanthrene	2.99	0.0100	0.0200	ug/L	1	4.00	---	75	59-120%	---	---	B-02
Pyrene	3.19	0.0100	0.0200	ug/L	1	4.00	---	80	57-126%	---	---	B-02
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 68 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>80 %</i>		<i>50-134 %</i>		<i>"</i>						

LCS Dup (21K0597-BSD1)						Prepared: 11/15/21 07:12 Analyzed: 11/15/21 14:09							Q-19
EPA 8270E SIM													
Acenaphthene	2.64	0.0100	0.0200	ug/L	1	4.00	---	66	47-122%	1	30%		
Acenaphthylene	2.78	0.0100	0.0200	ug/L	1	4.00	---	69	41-130%	0.7	30%		
Anthracene	3.24	0.0100	0.0200	ug/L	1	4.00	---	81	57-123%	6	30%		
Benz(a)anthracene	3.48	0.0100	0.0200	ug/L	1	4.00	---	87	58-125%	6	30%		
Benzo(a)pyrene	3.57	0.0100	0.0200	ug/L	1	4.00	---	89	54-128%	8	30%		
Benzo(b)fluoranthene	3.65	0.0100	0.0200	ug/L	1	4.00	---	91	53-131%	8	30%		
Benzo(k)fluoranthene	3.55	0.0100	0.0200	ug/L	1	4.00	---	89	57-129%	5	30%		
Benzo(g,h,i)perylene	3.37	0.0100	0.0200	ug/L	1	4.00	---	84	50-134%	9	30%		
Chrysene	3.40	0.0100	0.0200	ug/L	1	4.00	---	85	59-123%	9	30%		
Dibenz(a,h)anthracene	3.71	0.0100	0.0200	ug/L	1	4.00	---	93	51-134%	7	30%		
Fluoranthene	3.47	0.0100	0.0200	ug/L	1	4.00	---	87	57-128%	7	30%	B-02	
Fluorene	2.91	0.0100	0.0200	ug/L	1	4.00	---	73	52-124%	3	30%		
Indeno(1,2,3-cd)pyrene	3.29	0.0100	0.0200	ug/L	1	4.00	---	82	52-134%	9	30%		
Naphthalene	2.10	0.0200	0.0400	ug/L	1	4.00	---	53	40-121%	5	30%		
Phenanthrene	3.17	0.0100	0.0200	ug/L	1	4.00	---	79	59-120%	6	30%	B-02	
Pyrene	3.43	0.0100	0.0200	ug/L	1	4.00	---	86	57-126%	7	30%	B-02	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 67 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>							
<i>p-Terphenyl-d14 (Surr)</i>		<i>83 %</i>		<i>50-134 %</i>		<i>"</i>							

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0661 - EPA 3546						Soil						
Blank (21K0661-BLK1)			Prepared: 11/16/21 07:25 Analyzed: 11/16/21 12:25									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>88 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (21K0661-BS1)			Prepared: 11/16/21 07:25 Analyzed: 11/16/21 12:50									
<u>EPA 8270E SIM</u>												
Acenaphthene	662	5.00	10.0	ug/kg wet	1	800	---	83	40-123%	---	---	
Acenaphthylene	682	5.00	10.0	ug/kg wet	1	800	---	85	32-132%	---	---	
Anthracene	667	5.00	10.0	ug/kg wet	1	800	---	83	47-123%	---	---	
Benz(a)anthracene	677	5.00	10.0	ug/kg wet	1	800	---	85	49-126%	---	---	
Benzo(a)pyrene	691	5.00	10.0	ug/kg wet	1	800	---	86	45-129%	---	---	
Benzo(b)fluoranthene	710	5.00	10.0	ug/kg wet	1	800	---	89	45-132%	---	---	
Benzo(k)fluoranthene	681	5.00	10.0	ug/kg wet	1	800	---	85	47-132%	---	---	
Benzo(g,h,i)perylene	623	5.00	10.0	ug/kg wet	1	800	---	78	43-134%	---	---	
Chrysene	655	5.00	10.0	ug/kg wet	1	800	---	82	50-124%	---	---	
Dibenz(a,h)anthracene	715	5.00	10.0	ug/kg wet	1	800	---	89	45-134%	---	---	
Fluoranthene	677	5.00	10.0	ug/kg wet	1	800	---	85	50-127%	---	---	
Fluorene	652	5.00	10.0	ug/kg wet	1	800	---	82	43-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0661 - EPA 3546						Soil						
LCS (21K0661-BS1)				Prepared: 11/16/21 07:25		Analyzed: 11/16/21 12:50						
Indeno(1,2,3-cd)pyrene	635	5.00	10.0	ug/kg wet	1	800	---	79	45-133%	---	---	
Naphthalene	630	5.00	10.0	ug/kg wet	1	800	---	79	35-123%	---	---	
Phenanthrene	648	5.00	10.0	ug/kg wet	1	800	---	81	50-121%	---	---	
Pyrene	661	5.00	10.0	ug/kg wet	1	800	---	83	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 78 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>86 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (21K0661-DUP1)				Prepared: 11/16/21 07:25		Analyzed: 11/16/21 13:40						
QC Source Sample: Non-SDG (A1K0538-08)												
Acenaphthene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Anthracene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benz(a)anthracene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(a)pyrene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(b)fluoranthene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(k)fluoranthene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Benzo(g,h,i)perylene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Chrysene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Dibenz(a,h)anthracene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Fluorene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Naphthalene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Phenanthrene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
Pyrene	ND	6.03	12.1	ug/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 66 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>72 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (21K0661-MS1)				Prepared: 11/16/21 07:25		Analyzed: 11/16/21 14:30						
QC Source Sample: Non-SDG (A1K0580-07)												
EPA 8270E SIM												
Acenaphthene	768	111	111	ug/kg dry	10	887	ND	87	40-123%	---	---	
Acenaphthylene	746	55.5	111	ug/kg dry	10	887	ND	84	32-132%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0661 - EPA 3546						Soil						
Matrix Spike (21K0661-MS1)						Prepared: 11/16/21 07:25 Analyzed: 11/16/21 14:30						
QC Source Sample: Non-SDG (A1K0580-07)												
Anthracene	841	55.5	111	ug/kg dry	10	887	61.3	88	47-123%	---	---	
Benz(a)anthracene	929	55.5	111	ug/kg dry	10	887	261	75	49-126%	---	---	
Benzo(a)pyrene	1020	55.5	111	ug/kg dry	10	887	372	73	45-129%	---	---	
Benzo(b)fluoranthene	975	55.5	111	ug/kg dry	10	887	372	68	45-132%	---	---	
Benzo(k)fluoranthene	874	55.5	111	ug/kg dry	10	887	129	84	47-132%	---	---	
Benzo(g,h,i)perylene	919	55.5	111	ug/kg dry	10	887	329	66	43-134%	---	---	
Chrysene	968	55.5	111	ug/kg dry	10	887	332	72	50-124%	---	---	
Dibenz(a,h)anthracene	753	55.5	111	ug/kg dry	10	887	ND	85	45-134%	---	---	
Fluoranthene	1420	55.5	111	ug/kg dry	10	887	723	78	50-127%	---	---	
Fluorene	816	55.5	111	ug/kg dry	10	887	91.0	82	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	916	55.5	111	ug/kg dry	10	887	301	69	45-133%	---	---	
Naphthalene	1250	333	333	ug/kg dry	10	887	ND	141	35-123%	---	---	Q-02
Phenanthrene	1350	55.5	111	ug/kg dry	10	887	636	81	50-121%	---	---	
Pyrene	1640	55.5	111	ug/kg dry	10	887	935	79	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 73 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 10x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>82 %</i>		<i>54-127 %</i>		<i>"</i>						

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K1001 - EPA 3051A						Soil						
Blank (21K1001-BLK1)			Prepared: 11/23/21 10:44 Analyzed: 11/24/21 03:47									
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	
Blank (21K1001-BLK2)			Prepared: 11/23/21 10:44 Analyzed: 11/30/21 22:38									
<u>EPA 6020B</u>												
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	Q-16
LCS (21K1001-BS1)			Prepared: 11/23/21 10:44 Analyzed: 11/24/21 03:52									
<u>EPA 6020B</u>												
Antimony	25.5	0.500	1.00	mg/kg wet	10	25.0	---	102	80-120%	---	---	
Arsenic	53.8	1.00	2.00	mg/kg wet	10	50.0	---	108	80-120%	---	---	
Barium	53.6	0.500	1.00	mg/kg wet	10	50.0	---	107	80-120%	---	---	
Cadmium	50.1	0.500	1.00	mg/kg wet	10	50.0	---	100	80-120%	---	---	
Chromium	51.0	0.500	1.00	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Copper	52.9	1.00	2.00	mg/kg wet	10	50.0	---	106	80-120%	---	---	
Lead	51.2	0.100	0.200	mg/kg wet	10	50.0	---	102	80-120%	---	---	
Mercury	0.923	0.0400	0.0800	mg/kg wet	10	1.00	---	92	80-120%	---	---	
Silver	25.1	0.100	0.200	mg/kg wet	10	25.0	---	100	80-120%	---	---	
Zinc	50.9	2.00	4.00	mg/kg wet	10	50.0	---	102	80-120%	---	---	
LCS (21K1001-BS2)			Prepared: 11/23/21 10:44 Analyzed: 11/30/21 22:43									
<u>EPA 6020B</u>												
Selenium	25.1	0.500	1.00	mg/kg wet	10	25.0	---	101	80-120%	---	---	Q-16
Duplicate (21K1001-DUP1)			Prepared: 11/23/21 10:44 Analyzed: 11/24/21 04:18									

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K1001 - EPA 3051A						Soil						
Duplicate (21K1001-DUP1)						Prepared: 11/23/21 10:44 Analyzed: 11/24/21 04:18						
<u>QC Source Sample: B-22C 10-25 (A1K0401-04)</u>												
<u>EPA 6020B</u>												
Antimony	ND	0.711	1.42	mg/kg dry	10	---	ND	---	---	---	20%	
Arsenic	9.81	1.42	2.84	mg/kg dry	10	---	10.2	---	---	4	20%	
Barium	164	0.711	1.42	mg/kg dry	10	---	179	---	---	9	20%	
Cadmium	ND	0.711	1.42	mg/kg dry	10	---	ND	---	---	---	20%	
Chromium	22.6	0.711	1.42	mg/kg dry	10	---	23.7	---	---	5	20%	
Copper	29.2	1.42	2.84	mg/kg dry	10	---	30.9	---	---	5	20%	
Lead	12.7	0.142	0.284	mg/kg dry	10	---	14.2	---	---	11	20%	
Mercury	ND	0.0568	0.114	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	ND	0.142	0.284	mg/kg dry	10	---	ND	---	---	---	20%	
Zinc	83.9	2.84	5.68	mg/kg dry	10	---	88.0	---	---	5	20%	
Duplicate (21K1001-DUP2)						Prepared: 11/23/21 10:44 Analyzed: 11/30/21 23:08						
<u>QC Source Sample: B-22C 10-25 (A1K0401-04RE1)</u>												
<u>EPA 6020B</u>												
Selenium	ND	0.711	1.42	mg/kg dry	10	---	ND	---	---	---	20%	Q-16
Matrix Spike (21K1001-MS1)						Prepared: 11/23/21 10:44 Analyzed: 11/24/21 04:24						
<u>QC Source Sample: B-22C 10-25 (A1K0401-04)</u>												
<u>EPA 6020B</u>												
Antimony	34.7	0.715	1.43	mg/kg dry	10	35.8	ND	97	75-125%	---	---	
Arsenic	87.8	1.43	2.86	mg/kg dry	10	71.5	10.2	109	75-125%	---	---	
Barium	254	0.715	1.43	mg/kg dry	10	71.5	179	104	75-125%	---	---	
Cadmium	71.9	0.715	1.43	mg/kg dry	10	71.5	ND	101	75-125%	---	---	
Chromium	99.2	0.715	1.43	mg/kg dry	10	71.5	23.7	106	75-125%	---	---	
Copper	105	1.43	2.86	mg/kg dry	10	71.5	30.9	103	75-125%	---	---	
Lead	82.6	0.143	0.286	mg/kg dry	10	71.5	14.2	96	75-125%	---	---	
Mercury	1.34	0.0572	0.114	mg/kg dry	10	1.43	ND	94	75-125%	---	---	
Silver	36.6	0.143	0.286	mg/kg dry	10	35.8	ND	102	75-125%	---	---	
Zinc	158	2.86	5.72	mg/kg dry	10	71.5	88.0	98	75-125%	---	---	
Matrix Spike (21K1001-MS2)						Prepared: 11/23/21 10:44 Analyzed: 11/30/21 23:13						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K1001 - EPA 3051A						Soil						
Matrix Spike (21K1001-MS2)						Prepared: 11/23/21 10:44 Analyzed: 11/30/21 23:13						
<u>QC Source Sample: B-22C 10-25 (A1K0401-04RE1)</u>												
<u>EPA 6020B</u>												
Selenium	35.3	0.715	1.43	mg/kg dry	10	35.8	ND	99	75-125%	---	---	Q-16

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0954 - Matrix Matched Direct Inject												
Water												
Blank (21K0954-BLK1) Prepared: 11/22/21 15:27 Analyzed: 11/30/21 00:57												
<u>EPA 6020B (Diss)</u>												
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Chromium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Lead	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	ug/L	1	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
LCS (21K0954-BS1) Prepared: 11/22/21 15:27 Analyzed: 11/30/21 01:02												
<u>EPA 6020B (Diss)</u>												
Arsenic	57.0	0.500	1.00	ug/L	1	55.6	---	103	80-120%	---	---	
Barium	55.5	0.500	1.00	ug/L	1	55.6	---	100	80-120%	---	---	
Cadmium	54.0	0.100	0.200	ug/L	1	55.6	---	97	80-120%	---	---	
Chromium	52.1	1.00	2.00	ug/L	1	55.6	---	94	80-120%	---	---	
Lead	52.0	0.100	0.200	ug/L	1	55.6	---	94	80-120%	---	---	
Mercury	1.03	0.0400	0.0800	ug/L	1	1.11	---	92	80-120%	---	---	
Selenium	25.8	0.500	1.00	ug/L	1	27.8	---	93	80-120%	---	---	
Silver	26.3	0.100	0.200	ug/L	1	27.8	---	95	80-120%	---	---	
Duplicate (21K0954-DUP1) Prepared: 11/22/21 15:27 Analyzed: 11/30/21 01:26												
<u>QC Source Sample: B22 (A1K0401-05)</u>												
<u>EPA 6020B (Diss)</u>												
Arsenic	0.825	0.500	1.00	ug/L	1	---	0.969	---	---	16	20%	J
Barium	49.9	0.500	1.00	ug/L	1	---	49.2	---	---	1	20%	
Cadmium	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Chromium	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	20%	
Lead	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Mercury	ND	0.0400	0.0800	ug/L	1	---	ND	---	---	---	20%	
Selenium	ND	0.500	1.00	ug/L	1	---	0.505	---	---	***	20%	
Silver	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (21K0954-MS1) Prepared: 11/22/21 15:27 Analyzed: 11/30/21 01:31												

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QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0954 - Matrix Matched Direct Inject						Water						
Matrix Spike (21K0954-MS1)						Prepared: 11/22/21 15:27 Analyzed: 11/30/21 01:31						
<u>QC Source Sample: B22 (A1K0401-05)</u>												
<u>EPA 6020B (Diss)</u>												
Arsenic	59.0	0.500	1.00	ug/L	1	55.6	0.969	104	75-125%	---	---	
Barium	103	0.500	1.00	ug/L	1	55.6	49.2	97	75-125%	---	---	
Cadmium	56.1	0.100	0.200	ug/L	1	55.6	ND	101	75-125%	---	---	
Chromium	52.1	1.00	2.00	ug/L	1	55.6	ND	94	75-125%	---	---	
Lead	52.3	0.100	0.200	ug/L	1	55.6	ND	94	75-125%	---	---	
Mercury	0.937	0.0400	0.0800	ug/L	1	1.11	ND	84	75-125%	---	---	
Selenium	25.5	0.500	1.00	ug/L	1	27.8	0.505	90	75-125%	---	---	
Silver	26.6	0.100	0.200	ug/L	1	27.8	ND	96	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0410 - Total Solids (Dry Weight)							Soil					
Duplicate (21K0410-DUP1)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0250-20)</u>												
% Solids	97.6	1.00	1.00	%	1	---	97.5	---	---	0.1	10%	
Duplicate (21K0410-DUP2)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0250-30)</u>												
% Solids	93.5	1.00	1.00	%	1	---	93.2	---	---	0.3	10%	
Duplicate (21K0410-DUP3)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0322-41)</u>												
% Solids	86.2	1.00	1.00	%	1	---	87.5	---	---	1	10%	
Duplicate (21K0410-DUP4)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0322-71)</u>												
% Solids	87.1	1.00	1.00	%	1	---	87.1	---	---	0.03	10%	
Duplicate (21K0410-DUP5)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0351-06)</u>												
% Solids	77.3	1.00	1.00	%	1	---	77.4	---	---	0.1	10%	
Duplicate (21K0410-DUP6)			Prepared: 11/10/21 09:07 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0369-14)</u>												
% Solids	72.2	1.00	1.00	%	1	---	72.1	---	---	0.2	10%	
Duplicate (21K0410-DUP7)			Prepared: 11/10/21 18:53 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0145-19)</u>												
% Solids	96.8	1.00	1.00	%	1	---	96.5	---	---	0.4	10%	
Duplicate (21K0410-DUP8)			Prepared: 11/10/21 18:53 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0409-01)</u>												
% Solids	93.3	1.00	1.00	%	1	---	93.8	---	---	0.5	10%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21K0410 - Total Solids (Dry Weight)						Soil						
Duplicate (21K0410-DUP9)			Prepared: 11/10/21 18:53 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0426-01)</u>												
% Solids	87.6	1.00	1.00	%	1	---	87.5	---	---	0.1	10%	
Duplicate (21K0410-DUPA)			Prepared: 11/10/21 18:53 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0433-01)</u>												
% Solids	76.9	1.00	1.00	%	1	---	77.1	---	---	0.2	10%	
Duplicate (21K0410-DUPB)			Prepared: 11/10/21 18:53 Analyzed: 11/11/21 08:50									
<u>QC Source Sample: Non-SDG (A1K0440-02)</u>												
% Solids	76.7	1.00	1.00	%	1	---	76.4	---	---	0.4	10%	

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0781</u>							
A1K0401-05	Water	NWTPH-Dx LL	11/08/21 13:15	11/18/21 07:10	930mL/2mL	1000mL/2mL	1.08

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0825</u>							
A1K0401-04	Soil	NWTPH-Dx	11/08/21 12:40	11/18/21 13:33	10.03g/5mL	10g/5mL	1.00

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0586</u>							
A1K0401-05RE1	Water	NWTPH-Gx (MS)	11/08/21 13:15	11/13/21 08:00	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0784</u>							
A1K0401-04	Soil	NWTPH-Gx (MS)	11/08/21 12:40	11/08/21 12:40	16.3g/15mL	5g/5mL	0.92

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030B					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0586</u>							
A1K0401-05RE1	Water	EPA 8260D	11/08/21 13:15	11/13/21 08:00	5mL/5mL	5mL/5mL	1.00

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0784</u>							
A1K0401-04	Soil	5035A/8260D	11/08/21 12:40	11/08/21 12:40	16.3g/15mL	5g/5mL	0.92

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

Prep: EPA 3510C (Acid Extraction)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E SIM

<u>Prep: EPA 3510C (Acid Extraction)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0597</u>							
A1K0401-05	Water	EPA 8270E SIM	11/08/21 13:15	11/15/21 07:12	1010mL/2mL	1000mL/2mL	0.99

<u>Prep: EPA 3546</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0661</u>							
A1K0401-04	Soil	EPA 8270E SIM	11/08/21 12:40	11/16/21 14:13	10.54g/5mL	10g/5mL	0.95

Total Metals by EPA 6020B (ICPMS)

<u>Prep: EPA 3051A</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K1001</u>							
A1K0401-04	Soil	EPA 6020B	11/08/21 12:40	11/23/21 10:44	0.475g/50mL	0.5g/50mL	1.05
A1K0401-04RE1	Soil	EPA 6020B	11/08/21 12:40	11/23/21 10:44	0.475g/50mL	0.5g/50mL	1.05

Dissolved Metals by EPA 6020B (ICPMS)

<u>Prep: Matrix Matched Direct Inject</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0954</u>							
A1K0401-05	Water	EPA 6020B (Diss)	11/08/21 13:15	11/22/21 15:27	45mL/50mL	45mL/50mL	1.00

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21K0410</u>							
A1K0401-04	Soil	EPA 8000D	11/08/21 12:40	11/10/21 18:53			NA

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- B-02** Analyte detected in an associated blank at a level between one-half the MRL and the MRL. (See Notes and Conventions below.)
- COMP** Sample is a composite of discrete samples. See prep information for details.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- PRES** Incomplete field preservation. Additional preservative was added to adjust the pH within the appropriate range for this analysis.
- Q-02** Spike recovery is outside of established control limits due to matrix interference.
- Q-04** Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-19** Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +1%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +14%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +2%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +24%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +3%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +4%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -1%. The results are reported as Estimated Values.
- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -2%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -3%. The results are reported as Estimated Values.
- Q-54i** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -4%. The results are reported as Estimated Values.
- Q-54j** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -6%. The results are reported as Estimated Values.

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Darrell Auvil, Client Services Manager



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Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

<p><u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213</p>	<p>Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts</p>	<p style="text-align: right;"><u>Report ID:</u> A1K0401 - 12 08 21 1043</p>
--------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------

- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- V-15** Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.
- " dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- " wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1K0401 - 12 08 21 1043).

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1K0401 - 12 08 21 1043).

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Table header with columns: Matrix, Analysis, TNI_ID, Analyte, TNI_ID, Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EORB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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CHAIN OF CUSTODY

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC
5741 NE Flanders St., Portland, OR 97213
office: 503-477-6150
mobile: 503-819-2835

Project Manager: Jill Betts
Project No.: 319
Project Name: EORB
Collected by: JMS/AL

Comments:
Metals analyzed by EPA Methods 200.6/200.7/471B.
B-22 10-25' = B-22 10-15' +
B-22 15-17' +
B-22 20-25'

LABORATORY Apex Labs

Lab Project No. 1043

Chain of Custody No. 1043

Samples Received at 4C (Y or N) _____
Appropriate Containers Used (Y or N) _____
Provide Verbal Results (Y or N) _____ No. _____
Provide Preliminary Results _____ Yes _____

Lab ID	Sample #	Date	Time	Sample Description	Matrix			Analyzes to be Performed						Remarks		
					Soil	Water	Other	Number of Containers	NW PH-GX	NW PH-DX	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Total RCRA 8 Metals plus Antimony, Copper and Zinc		Dissolved RCRA 8 metals	RUSH
	B-22 10-15'	11/8/21	12:40	10-15'	X			4	X	X						
	B-22 15-17'	11/8/21	1:30	15-17'	X			4	X	X						
	B-22 20-25'	11/8/21	1:40	20-25'	X			4	X	X						
	B-22 10-25'	11/8/21	1:15	6L	X			8	X	X						See comments

Relinquished by	Date <u>11/8/21</u>	Time <u>15:03</u>	Company <u>Apex Labs</u>
Relinquished by <u>For Coles + Betts</u>	Date	Time	Company
Relinquished by	Date	Time	Company

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1K0401 - 12 08 21 1043
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APEX LABS COOLER RECEIPT FORM

Client: Coles & Betts Environmental Consulting, LLC Element WO#: A1 K0401

Project/Project #: EQRB #319

Delivery Info:
Date/time received: 11/8/21 @ 1503 By: AKK
Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 11/8/21 @ 1503 By: AKK
Chain of Custody included? Yes No Custody seals? Yes No
Signed/dated by client? Yes No
Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>1.9</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>ack sent Gel</u>						
Condition:	<u>Good</u>						

Cooler out of temp? (Y/N) (N) Possible reason why: _____
Green dots applied to out of temperature samples? Yes/No (No)
Out of temperature samples form initiated? Yes/No (No)

Sample Inspection: Date/time inspected: 11/9/21 @ 1022 By: AKK
All samples intact? Yes No Comments: _____
Bottle labels/COCs agree? Yes No Comments: _____
COC/container discrepancies form initiated? Yes No
Containers/volumes received appropriate for analysis? Yes No Comments: _____
Do VOA vials have visible headspace? Yes No NA
Comments: 1/3 HS & 2/3 sed.
Water samples: pH checked: Yes No NA pH appropriate? Yes No NA
Comments: _____

Additional information:

Labeled by: AKK Witness: [Signature] Cooler Inspected by: AKK



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

Friday, January 7, 2022

Jill Betts
Coles & Betts Environmental Consulting
5741 NE Flanders Street
Portland, OR 97213

RE: A1L0021 - EQRB - 319

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A1L0021, which was received by the laboratory on 12/1/2021 at 1:13:00PM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: DAuvil@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	5.3 degC
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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



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Darrell Auvil, Client Services Manager



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<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
B-19 VAC	A1L0021-01	Soil	12/01/21 10:45	12/01/21 13:13
B-32 VAC	A1L0021-02	Soil	12/01/21 10:50	12/01/21 13:13
B-20 VAC	A1L0021-03	Soil	12/01/21 11:10	12/01/21 13:13
B-6 VAC	A1L0021-04	Soil	12/01/21 11:25	12/01/21 13:13
B-8 VAC	A1L0021-05	Soil	12/01/21 11:35	12/01/21 13:13
B-7/B-8 VAC	A1L0021-06	Soil	12/01/21 12:00	12/01/21 13:13

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 VAC (A1L0021-01)				Matrix: Soil		Batch: 21L0203		
Diesel	ND	19.1	38.2	mg/kg dry	1	12/07/21 01:17	NWTPH-Dx	
Oil	ND	38.2	76.3	mg/kg dry	1	12/07/21 01:17	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>12/07/21 01:17</i>	<i>NWTPH-Dx</i>
B-32 VAC (A1L0021-02RE1)				Matrix: Soil		Batch: 21L0258		
Diesel	641	14.4	28.8	mg/kg dry	1	12/08/21 00:54	NWTPH-Dx	F-11
Oil	622	28.8	57.6	mg/kg dry	1	12/08/21 00:54	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 81 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>12/08/21 00:54</i>	<i>NWTPH-Dx</i>
B-20 VAC (A1L0021-03)				Matrix: Soil		Batch: 21L0203		
Diesel	59.3	22.7	45.4	mg/kg dry	1	12/07/21 01:58	NWTPH-Dx	F-17
Oil	ND	45.4	90.8	mg/kg dry	1	12/07/21 01:58	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>12/07/21 01:58</i>	<i>NWTPH-Dx</i>
B-6 VAC (A1L0021-04)				Matrix: Soil		Batch: 21L0203		
Diesel	ND	16.4	32.8	mg/kg dry	1	12/07/21 02:18	NWTPH-Dx	
Oil	ND	32.8	65.5	mg/kg dry	1	12/07/21 02:18	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 65 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>12/07/21 02:18</i>	<i>NWTPH-Dx</i>
B-8 VAC (A1L0021-05)				Matrix: Soil		Batch: 21L0203		
Diesel	ND	34.0	68.0	mg/kg dry	1	12/07/21 02:38	NWTPH-Dx	
Oil	ND	68.0	136	mg/kg dry	1	12/07/21 02:38	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 50-150 %</i>		<i>1</i>	<i>12/07/21 02:38</i>	<i>NWTPH-Dx</i>
B-7/B-8 VAC (A1L0021-06RE1)				Matrix: Soil		Batch: 21L0203		
Diesel	ND	169	337	mg/kg dry	10	12/07/21 08:43	NWTPH-Dx	
Oil	1100	337	675	mg/kg dry	10	12/07/21 08:43	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 94 %</i>		<i>Limits: 50-150 %</i>		<i>10</i>	<i>12/07/21 08:43</i>	<i>NWTPH-Dx S-05</i>

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 VAC (A1L0021-01)			Matrix: Soil		Batch: 21L0179		V-15	
Gasoline Range Organics	ND	6.86	13.7	mg/kg dry	50	12/06/21 13:25	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 109 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/06/21 13:25</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>	<i>1</i>	<i>12/06/21 13:25</i>	<i>NWTPH-Gx (MS)</i>	
B-32 VAC (A1L0021-02)			Matrix: Soil		Batch: 21L0179		V-15	
Gasoline Range Organics	59.8	5.02	10.0	mg/kg dry	50	12/06/21 11:11	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 113 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/06/21 11:11</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>	<i>1</i>	<i>12/06/21 11:11</i>	<i>NWTPH-Gx (MS)</i>	
B-20 VAC (A1L0021-03)			Matrix: Soil		Batch: 21L0179		V-15	
Gasoline Range Organics	ND	9.48	19.0	mg/kg dry	50	12/06/21 11:37	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 115 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/06/21 11:37</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>	<i>1</i>	<i>12/06/21 11:37</i>	<i>NWTPH-Gx (MS)</i>	
B-6 VAC (A1L0021-04)			Matrix: Soil		Batch: 21L0179		V-15	
Gasoline Range Organics	ND	5.71	11.4	mg/kg dry	50	12/06/21 12:04	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 110 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/06/21 12:04</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>	<i>1</i>	<i>12/06/21 12:04</i>	<i>NWTPH-Gx (MS)</i>	
B-8 VAC (A1L0021-05)			Matrix: Soil		Batch: 21L0179		V-15	
Gasoline Range Organics	ND	15.5	31.0	mg/kg dry	50	12/06/21 12:58	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 118 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/06/21 12:58</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>108 %</i>		<i>50-150 %</i>	<i>1</i>	<i>12/06/21 12:58</i>	<i>NWTPH-Gx (MS)</i>	
B-7/B-8 VAC (A1L0021-06)			Matrix: Soil		Batch: 21L0179		V-15	
Gasoline Range Organics	ND	6.10	12.2	mg/kg dry	50	12/06/21 12:31	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 116 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/06/21 12:31</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>	<i>1</i>	<i>12/06/21 12:31</i>	<i>NWTPH-Gx (MS)</i>	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 VAC (A1L0021-01)				Matrix: Soil		Batch: 21L0179		V-15
Acetone	ND	1370	2740	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Acrylonitrile	ND	137	274	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Benzene	ND	13.7	27.4	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Bromobenzene	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Bromochloromethane	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Bromodichloromethane	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Bromoform	ND	137	274	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Bromomethane	ND	1370	1370	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
2-Butanone (MEK)	ND	686	1370	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
n-Butylbenzene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
sec-Butylbenzene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
tert-Butylbenzene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Carbon disulfide	ND	686	1370	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Carbon tetrachloride	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Chlorobenzene	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Chloroethane	ND	686	1370	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Chloroform	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Chloromethane	ND	343	686	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
2-Chlorotoluene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
4-Chlorotoluene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Dibromochloromethane	ND	137	274	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	343	686	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Dibromomethane	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,2-Dichlorobenzene	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,3-Dichlorobenzene	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,4-Dichlorobenzene	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Dichlorodifluoromethane	ND	137	274	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,1-Dichloroethane	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,1-Dichloroethene	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
cis-1,2-Dichloroethene	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
trans-1,2-Dichloroethene	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 VAC (A1L0021-01)				Matrix: Soil		Batch: 21L0179		V-15
1,2-Dichloropropane	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,3-Dichloropropane	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
2,2-Dichloropropane	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,1-Dichloropropene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
cis-1,3-Dichloropropene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
trans-1,3-Dichloropropene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Ethylbenzene	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Hexachlorobutadiene	ND	137	274	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
2-Hexanone	ND	686	1370	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Isopropylbenzene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
4-Isopropyltoluene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Methylene chloride	ND	686	1370	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	686	1370	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Naphthalene	ND	137	274	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
n-Propylbenzene	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Styrene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,1,1,2,2-Tetrachloroethane	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Tetrachloroethene (PCE)	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Toluene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,2,3-Trichlorobenzene	ND	343	686	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,2,4-Trichlorobenzene	ND	343	686	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,1,1-Trichloroethane	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,1,2-Trichloroethane	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Trichloroethene (TCE)	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Trichlorofluoromethane	ND	137	274	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,2,3-Trichloropropane	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,2,4-Trimethylbenzene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
1,3,5-Trimethylbenzene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
Vinyl chloride	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
m,p-Xylene	ND	68.6	137	ug/kg dry	50	12/06/21 13:25	5035A/8260D	
o-Xylene	ND	34.3	68.6	ug/kg dry	50	12/06/21 13:25	5035A/8260D	

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 VAC (A1L0021-01)				Matrix: Soil		Batch: 21L0179		V-15
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		1	12/06/21 13:25	5035A/8260D
<i>Toluene-d8 (Surr)</i>				80-120 %		1	12/06/21 13:25	5035A/8260D
<i>4-Bromofluorobenzene (Surr)</i>				79-120 %		1	12/06/21 13:25	5035A/8260D
B-32 VAC (A1L0021-02)				Matrix: Soil		Batch: 21L0179		V-15
Acetone	ND	1000	2010	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Acrylonitrile	ND	100	201	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Benzene	ND	10.0	20.1	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Bromobenzene	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Bromochloromethane	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Bromodichloromethane	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Bromoform	ND	100	201	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Bromomethane	ND	1000	1000	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
2-Butanone (MEK)	ND	502	1000	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
n-Butylbenzene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
sec-Butylbenzene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
tert-Butylbenzene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Carbon disulfide	ND	502	1000	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Carbon tetrachloride	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Chlorobenzene	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Chloroethane	ND	502	1000	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Chloroform	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Chloromethane	ND	251	502	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
2-Chlorotoluene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
4-Chlorotoluene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Dibromochloromethane	ND	100	201	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	251	502	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Dibromomethane	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,2-Dichlorobenzene	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,3-Dichlorobenzene	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,4-Dichlorobenzene	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Dichlorodifluoromethane	ND	100	201	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,1-Dichloroethane	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 VAC (A1L0021-02)				Matrix: Soil		Batch: 21L0179		V-15
1,2-Dichloroethane (EDC)	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,1-Dichloroethene	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
cis-1,2-Dichloroethene	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
trans-1,2-Dichloroethene	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,2-Dichloropropane	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,3-Dichloropropane	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
2,2-Dichloropropane	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,1-Dichloropropene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
cis-1,3-Dichloropropene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
trans-1,3-Dichloropropene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Ethylbenzene	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Hexachlorobutadiene	ND	100	201	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
2-Hexanone	ND	502	1000	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Isopropylbenzene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
4-Isopropyltoluene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Methylene chloride	ND	502	1000	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
4-Methyl-2-pentanone (MIBK)	ND	502	1000	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Naphthalene	ND	100	201	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
n-Propylbenzene	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Styrene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	528	528	ug/kg dry	50	12/06/21 11:11	5035A/8260D	R-02
Tetrachloroethene (PCE)	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Toluene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,2,3-Trichlorobenzene	ND	251	502	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,2,4-Trichlorobenzene	ND	251	502	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,1,1-Trichloroethane	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,1,2-Trichloroethane	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Trichloroethene (TCE)	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Trichlorofluoromethane	ND	100	201	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,2,3-Trichloropropane	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
1,2,4-Trimethylbenzene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 VAC (A1L0021-02)			Matrix: Soil		Batch: 21L0179		V-15	
1,3,5-Trimethylbenzene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
Vinyl chloride	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
m,p-Xylene	ND	50.2	100	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
o-Xylene	ND	25.1	50.2	ug/kg dry	50	12/06/21 11:11	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>12/06/21 11:11</i>	<i>5035A/8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>95 %</i>		<i>80-120 %</i>		<i>1</i>	<i>12/06/21 11:11</i>	<i>5035A/8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>1</i>	<i>12/06/21 11:11</i>	<i>5035A/8260D</i>
B-20 VAC (A1L0021-03)			Matrix: Soil		Batch: 21L0179		V-15	
Acetone	ND	1900	3790	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Acrylonitrile	ND	190	379	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Benzene	ND	19.0	37.9	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Bromobenzene	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Bromochloromethane	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Bromodichloromethane	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Bromoform	ND	190	379	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Bromomethane	ND	1900	1900	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
2-Butanone (MEK)	ND	948	1900	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
n-Butylbenzene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
sec-Butylbenzene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
tert-Butylbenzene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Carbon disulfide	ND	948	1900	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Carbon tetrachloride	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Chlorobenzene	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Chloroethane	ND	948	1900	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Chloroform	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Chloromethane	ND	474	948	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
2-Chlorotoluene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
4-Chlorotoluene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Dibromochloromethane	ND	190	379	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	474	948	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Dibromomethane	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,2-Dichlorobenzene	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
 Tigard, OR 97223
 503-718-2323
 ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-20 VAC (A1L0021-03)				Matrix: Soil		Batch: 21L0179		V-15
1,3-Dichlorobenzene	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,4-Dichlorobenzene	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Dichlorodifluoromethane	ND	190	379	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,1-Dichloroethane	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,1-Dichloroethene	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
cis-1,2-Dichloroethene	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
trans-1,2-Dichloroethene	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,2-Dichloropropane	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,3-Dichloropropane	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
2,2-Dichloropropane	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,1-Dichloropropene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
cis-1,3-Dichloropropene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
trans-1,3-Dichloropropene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Ethylbenzene	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Hexachlorobutadiene	ND	190	379	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
2-Hexanone	ND	948	1900	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Isopropylbenzene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
4-Isopropyltoluene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Methylene chloride	ND	948	1900	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	948	1900	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Naphthalene	ND	190	379	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
n-Propylbenzene	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Styrene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Tetrachloroethene (PCE)	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Toluene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,2,3-Trichlorobenzene	ND	474	948	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,2,4-Trichlorobenzene	ND	474	948	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,1,1-Trichloroethane	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,1,2-Trichloroethane	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-20 VAC (A1L0021-03)				Matrix: Soil		Batch: 21L0179		V-15
Trichloroethene (TCE)	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Trichlorofluoromethane	ND	190	379	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,2,3-Trichloropropane	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,2,4-Trimethylbenzene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
1,3,5-Trimethylbenzene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
Vinyl chloride	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
m,p-Xylene	ND	94.8	190	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
o-Xylene	ND	47.4	94.8	ug/kg dry	50	12/06/21 11:37	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 102 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/06/21 11:37</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>	<i>1</i>	<i>12/06/21 11:37</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>	<i>1</i>	<i>12/06/21 11:37</i>	<i>5035A/8260D</i>	
B-6 VAC (A1L0021-04)				Matrix: Soil		Batch: 21L0179		V-15
Acetone	ND	1140	2280	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Acrylonitrile	ND	114	228	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Benzene	ND	11.4	22.8	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Bromobenzene	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Bromochloromethane	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Bromodichloromethane	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Bromoform	ND	114	228	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Bromomethane	ND	1140	1140	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
2-Butanone (MEK)	ND	571	1140	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
n-Butylbenzene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
sec-Butylbenzene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
tert-Butylbenzene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Carbon disulfide	ND	571	1140	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Carbon tetrachloride	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Chlorobenzene	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Chloroethane	ND	571	1140	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Chloroform	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Chloromethane	ND	285	571	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
2-Chlorotoluene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
4-Chlorotoluene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Dibromochloromethane	ND	114	228	ug/kg dry	50	12/06/21 12:04	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 VAC (A1L0021-04)				Matrix: Soil		Batch: 21L0179		V-15
1,2-Dibromo-3-chloropropane	ND	285	571	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Dibromomethane	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,2-Dichlorobenzene	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,3-Dichlorobenzene	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,4-Dichlorobenzene	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Dichlorodifluoromethane	ND	114	228	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,1-Dichloroethane	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,1-Dichloroethene	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
cis-1,2-Dichloroethene	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
trans-1,2-Dichloroethene	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,2-Dichloropropane	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,3-Dichloropropane	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
2,2-Dichloropropane	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,1-Dichloropropene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
cis-1,3-Dichloropropene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
trans-1,3-Dichloropropene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Ethylbenzene	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Hexachlorobutadiene	ND	114	228	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
2-Hexanone	ND	571	1140	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Isopropylbenzene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
4-Isopropyltoluene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Methylene chloride	ND	571	1140	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	571	1140	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Naphthalene	ND	114	228	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
n-Propylbenzene	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Styrene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Tetrachloroethene (PCE)	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Toluene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 VAC (A1L0021-04)			Matrix: Soil		Batch: 21L0179		V-15	
1,2,3-Trichlorobenzene	ND	285	571	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,2,4-Trichlorobenzene	ND	285	571	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,1,1-Trichloroethane	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,1,2-Trichloroethane	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Trichloroethene (TCE)	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Trichlorofluoromethane	ND	114	228	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,2,3-Trichloropropane	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,2,4-Trimethylbenzene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
1,3,5-Trimethylbenzene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
Vinyl chloride	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
m,p-Xylene	ND	57.1	114	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
o-Xylene	ND	28.5	57.1	ug/kg dry	50	12/06/21 12:04	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/06/21 12:04</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>95 %</i>		<i>80-120 %</i>	<i>1</i>	<i>12/06/21 12:04</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>	<i>1</i>	<i>12/06/21 12:04</i>	<i>5035A/8260D</i>	

B-8 VAC (A1L0021-05)			Matrix: Soil		Batch: 21L0179		V-15	
Acetone	ND	3100	6200	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Acrylonitrile	ND	310	620	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Benzene	ND	31.0	62.0	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Bromobenzene	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Bromochloromethane	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Bromodichloromethane	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Bromoform	ND	310	620	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Bromomethane	ND	3100	3100	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
2-Butanone (MEK)	ND	1550	3100	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
n-Butylbenzene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
sec-Butylbenzene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
tert-Butylbenzene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Carbon disulfide	ND	1550	3100	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Carbon tetrachloride	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Chlorobenzene	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Chloroethane	ND	1550	3100	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Chloroform	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-8 VAC (A1L0021-05)				Matrix: Soil		Batch: 21L0179		V-15
Chloromethane	ND	775	1550	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
2-Chlorotoluene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
4-Chlorotoluene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Dibromochloromethane	ND	310	620	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	775	1550	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Dibromomethane	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,2-Dichlorobenzene	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,3-Dichlorobenzene	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,4-Dichlorobenzene	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Dichlorodifluoromethane	ND	310	620	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,1-Dichloroethane	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,1-Dichloroethene	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
cis-1,2-Dichloroethene	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
trans-1,2-Dichloroethene	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,2-Dichloropropane	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,3-Dichloropropane	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
2,2-Dichloropropane	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,1-Dichloropropene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
cis-1,3-Dichloropropene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
trans-1,3-Dichloropropene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Ethylbenzene	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Hexachlorobutadiene	ND	310	620	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
2-Hexanone	ND	1550	3100	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Isopropylbenzene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
4-Isopropyltoluene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Methylene chloride	ND	1550	3100	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	1550	3100	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Naphthalene	ND	310	620	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
n-Propylbenzene	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Styrene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-8 VAC (A1L0021-05)				Matrix: Soil		Batch: 21L0179		V-15
1,1,1,2-Tetrachloroethane	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,1,2,2-Tetrachloroethane	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Tetrachloroethene (PCE)	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Toluene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,2,3-Trichlorobenzene	ND	775	1550	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,2,4-Trichlorobenzene	ND	775	1550	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,1,1-Trichloroethane	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,1,2-Trichloroethane	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Trichloroethene (TCE)	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Trichlorofluoromethane	ND	310	620	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,2,3-Trichloropropane	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,2,4-Trimethylbenzene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
1,3,5-Trimethylbenzene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
Vinyl chloride	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
m,p-Xylene	ND	155	310	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
o-Xylene	ND	77.5	155	ug/kg dry	50	12/06/21 12:58	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/06/21 12:58</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>	<i>1</i>	<i>12/06/21 12:58</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>79-120 %</i>	<i>1</i>	<i>12/06/21 12:58</i>	<i>5035A/8260D</i>	

B-7/B-8 VAC (A1L0021-06)				Matrix: Soil		Batch: 21L0179		V-15
Acetone	ND	1220	2440	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Acrylonitrile	ND	122	244	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Benzene	ND	12.2	24.4	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Bromobenzene	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Bromochloromethane	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Bromodichloromethane	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Bromoform	ND	122	244	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Bromomethane	ND	1220	1220	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
2-Butanone (MEK)	ND	610	1220	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
n-Butylbenzene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
sec-Butylbenzene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
tert-Butylbenzene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Carbon disulfide	ND	610	1220	ug/kg dry	50	12/06/21 12:31	5035A/8260D	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-7/B-8 VAC (A1L0021-06)				Matrix: Soil		Batch: 21L0179		V-15
Carbon tetrachloride	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Chlorobenzene	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Chloroethane	ND	610	1220	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Chloroform	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Chloromethane	ND	305	610	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
2-Chlorotoluene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
4-Chlorotoluene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Dibromochloromethane	ND	122	244	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,2-Dibromo-3-chloropropane	ND	305	610	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Dibromomethane	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,2-Dichlorobenzene	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,3-Dichlorobenzene	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,4-Dichlorobenzene	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Dichlorodifluoromethane	ND	122	244	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,1-Dichloroethane	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,1-Dichloroethene	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
cis-1,2-Dichloroethene	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
trans-1,2-Dichloroethene	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,2-Dichloropropane	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,3-Dichloropropane	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
2,2-Dichloropropane	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,1-Dichloropropene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
cis-1,3-Dichloropropene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
trans-1,3-Dichloropropene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Ethylbenzene	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Hexachlorobutadiene	ND	122	244	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
2-Hexanone	ND	610	1220	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Isopropylbenzene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
4-Isopropyltoluene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Methylene chloride	ND	610	1220	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
4-Methyl-2-pentanone (MiBK)	ND	610	1220	ug/kg dry	50	12/06/21 12:31	5035A/8260D	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-7/B-8 VAC (A1L0021-06)				Matrix: Soil		Batch: 21L0179		V-15
Methyl tert-butyl ether (MTBE)	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Naphthalene	ND	122	244	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
n-Propylbenzene	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Styrene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,1,1,2-Tetrachloroethane	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Tetrachloroethene (PCE)	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Toluene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,2,3-Trichlorobenzene	ND	305	610	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,2,4-Trichlorobenzene	ND	305	610	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,1,1-Trichloroethane	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,1,2-Trichloroethane	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Trichloroethene (TCE)	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Trichlorofluoromethane	ND	122	244	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,2,3-Trichloropropane	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,2,4-Trimethylbenzene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
1,3,5-Trimethylbenzene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
Vinyl chloride	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
m,p-Xylene	ND	61.0	122	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
o-Xylene	ND	30.5	61.0	ug/kg dry	50	12/06/21 12:31	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/06/21 12:31</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>95 %</i>		<i>80-120 %</i>	<i>1</i>	<i>12/06/21 12:31</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>	<i>1</i>	<i>12/06/21 12:31</i>	<i>5035A/8260D</i>	

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 VAC (A1L0021-01)				Matrix: Soil		Batch: 21L0457		
Acenaphthene	ND	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Acenaphthylene	ND	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Anthracene	ND	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Benz(a)anthracene	14.4	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	J
Benzo(a)pyrene	22.3	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Benzo(b)fluoranthene	27.1	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	M-05
Benzo(k)fluoranthene	ND	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Benzo(g,h,i)perylene	29.1	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Chrysene	21.1	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Fluoranthene	41.9	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Fluorene	ND	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	24.6	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Naphthalene	ND	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Phenanthrene	23.7	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
Pyrene	55.7	9.06	18.1	ug/kg dry	1	12/13/21 13:54	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 61 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>12/13/21 13:54</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>75 %</i>		<i>54-127 %</i>		<i>1</i>	<i>12/13/21 13:54</i>	<i>EPA 8270E SIM</i>

B-32 VAC (A1L0021-02)				Matrix: Soil		Batch: 21L0336		
Acenaphthene	ND	81.2	81.2	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	R-02
Acenaphthylene	ND	22.1	22.1	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	R-02
Anthracene	ND	14.8	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	
Benz(a)anthracene	39.4	7.38	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	M-05
Benzo(a)pyrene	24.8	7.38	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	
Benzo(b)fluoranthene	40.3	7.38	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	7.38	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	
Benzo(g,h,i)perylene	15.4	7.38	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	
Chrysene	137	7.38	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	7.38	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	
Fluoranthene	89.3	7.38	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	
Fluorene	ND	17.7	17.7	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	R-02
Indeno(1,2,3-cd)pyrene	15.5	7.38	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	

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ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-32 VAC (A1L0021-02)				Matrix: Soil		Batch: 21L0336		
Naphthalene	111	7.38	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	
Phenanthrene	ND	47.3	47.3	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	R-02
Pyrene	132	7.38	14.8	ug/kg dry	1	12/09/21 21:55	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 77 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>12/09/21 21:55</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>91 %</i>		<i>54-127 %</i>		<i>1</i>	<i>12/09/21 21:55</i>	<i>EPA 8270E SIM</i>
B-20 VAC (A1L0021-03)				Matrix: Soil		Batch: 21L0336		
Acenaphthene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Acenaphthylene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Anthracene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Benz(a)anthracene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Benzo(a)pyrene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Chrysene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Fluoranthene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Fluorene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Naphthalene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Phenanthrene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
Pyrene	ND	11.8	23.6	ug/kg dry	1	12/09/21 22:20	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 80 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>12/09/21 22:20</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>93 %</i>		<i>54-127 %</i>		<i>1</i>	<i>12/09/21 22:20</i>	<i>EPA 8270E SIM</i>
B-6 VAC (A1L0021-04)				Matrix: Soil		Batch: 21L0336		
Acenaphthene	ND	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	
Acenaphthylene	ND	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	
Anthracene	ND	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	
Benz(a)anthracene	16.8	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	
Benzo(a)pyrene	15.5	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	J
Benzo(b)fluoranthene	17.4	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	M-05
Benzo(k)fluoranthene	ND	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-6 VAC (A1L0021-04)				Matrix: Soil		Batch: 21L0336		
Benzo(g,h,i)perylene	9.12	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	J
Chrysene	15.5	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	J
Dibenz(a,h)anthracene	ND	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	
Fluoranthene	15.7	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	J
Fluorene	ND	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	10.7	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	J
Naphthalene	ND	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	
Phenanthrene	ND	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	
Pyrene	21.5	8.41	16.8	ug/kg dry	1	12/10/21 17:20	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 77 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>12/10/21 17:20</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>86 %</i>		<i>54-127 %</i>		<i>1</i>	<i>12/10/21 17:20</i>	<i>EPA 8270E SIM</i>
B-8 VAC (A1L0021-05)				Matrix: Soil		Batch: 21L0336		
Acenaphthene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Acenaphthylene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Anthracene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Benz(a)anthracene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Benzo(a)pyrene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Benzo(b)fluoranthene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Benzo(k)fluoranthene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Benzo(g,h,i)perylene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Chrysene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Dibenz(a,h)anthracene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Fluoranthene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Fluorene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Naphthalene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Phenanthrene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
Pyrene	ND	18.1	36.1	ug/kg dry	1	12/10/21 17:45	EPA 8270E SIM	
<i>Surrogate: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 81 %</i>		<i>Limits: 44-120 %</i>		<i>1</i>	<i>12/10/21 17:45</i>	<i>EPA 8270E SIM</i>
<i>p-Terphenyl-d14 (Surr)</i>		<i>83 %</i>		<i>54-127 %</i>		<i>1</i>	<i>12/10/21 17:45</i>	<i>EPA 8270E SIM</i>
B-7/B-8 VAC (A1L0021-06)				Matrix: Soil		Batch: 21L0336		
Acenaphthene	68.2	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	J

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-7/B-8 VAC (A1L0021-06)				Matrix: Soil		Batch: 21L0336		
Acenaphthylene	757	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Anthracene	618	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Benz(a)anthracene	2400	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Benzo(a)pyrene	2220	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Benzo(b)fluoranthene	2490	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Benzo(k)fluoranthene	886	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	M-05
Benzo(g,h,i)perylene	1150	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Chrysene	2200	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Dibenz(a,h)anthracene	275	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Fluoranthene	4400	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Fluorene	199	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Indeno(1,2,3-cd)pyrene	1290	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Naphthalene	484	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Phenanthrene	1940	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Pyrene	4390	35.8	71.5	ug/kg dry	4	12/10/21 18:10	EPA 8270E SIM	
Surrogate: 2-Fluorobiphenyl (Surr)		Recovery: 79 %		Limits: 44-120 %		4	12/10/21 18:10	EPA 8270E SIM
p-Terphenyl-d14 (Surr)		87 %		54-127 %		4	12/10/21 18:10	EPA 8270E SIM

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-19 VAC (A1L0021-01)				Matrix: Soil				
Batch: 21L0344								
Antimony	ND	1.03	2.05	mg/kg dry	10	12/13/21 22:15	EPA 6020B	
Arsenic	7.40	1.03	2.05	mg/kg dry	10	12/13/21 22:15	EPA 6020B	
Barium	286	1.03	2.05	mg/kg dry	10	12/13/21 22:15	EPA 6020B	
Cadmium	ND	0.205	0.411	mg/kg dry	10	12/13/21 22:15	EPA 6020B	
Chromium	36.8	1.03	2.05	mg/kg dry	10	12/13/21 22:15	EPA 6020B	
Copper	35.1	2.05	4.11	mg/kg dry	10	12/13/21 22:15	EPA 6020B	
Lead	13.3	0.205	0.411	mg/kg dry	10	12/13/21 22:15	EPA 6020B	
Mercury	0.139	0.0821	0.164	mg/kg dry	10	12/13/21 22:15	EPA 6020B	J
Selenium	1.17	1.03	2.05	mg/kg dry	10	12/13/21 22:15	EPA 6020B	J
Silver	ND	0.205	0.411	mg/kg dry	10	12/13/21 22:15	EPA 6020B	
Zinc	96.1	4.11	8.21	mg/kg dry	10	12/13/21 22:15	EPA 6020B	

B-32 VAC (A1L0021-02)				Matrix: Soil				
Batch: 21L0344								
Antimony	ND	0.778	1.56	mg/kg dry	10	12/13/21 22:20	EPA 6020B	
Arsenic	4.10	0.778	1.56	mg/kg dry	10	12/13/21 22:20	EPA 6020B	
Barium	161	0.778	1.56	mg/kg dry	10	12/13/21 22:20	EPA 6020B	
Cadmium	ND	0.156	0.311	mg/kg dry	10	12/13/21 22:20	EPA 6020B	
Chromium	32.2	0.778	1.56	mg/kg dry	10	12/13/21 22:20	EPA 6020B	
Copper	35.1	1.56	3.11	mg/kg dry	10	12/13/21 22:20	EPA 6020B	
Lead	6.76	0.156	0.311	mg/kg dry	10	12/13/21 22:20	EPA 6020B	
Mercury	ND	0.0622	0.124	mg/kg dry	10	12/13/21 22:20	EPA 6020B	
Selenium	ND	0.778	1.56	mg/kg dry	10	12/13/21 22:20	EPA 6020B	
Silver	ND	0.156	0.311	mg/kg dry	10	12/13/21 22:20	EPA 6020B	
Zinc	73.8	3.11	6.22	mg/kg dry	10	12/13/21 22:20	EPA 6020B	

B-20 VAC (A1L0021-03)				Matrix: Soil				
Batch: 21L0344								
Antimony	2.83	1.30	2.60	mg/kg dry	10	12/13/21 22:36	EPA 6020B	
Arsenic	7.58	1.30	2.60	mg/kg dry	10	12/13/21 22:36	EPA 6020B	
Barium	243	1.30	2.60	mg/kg dry	10	12/13/21 22:36	EPA 6020B	
Cadmium	ND	0.260	0.520	mg/kg dry	10	12/13/21 22:36	EPA 6020B	
Chromium	34.4	1.30	2.60	mg/kg dry	10	12/13/21 22:36	EPA 6020B	

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-20 VAC (A1L0021-03)				Matrix: Soil				
Copper	49.3	2.60	5.20	mg/kg dry	10	12/13/21 22:36	EPA 6020B	
Lead	17.9	0.260	0.520	mg/kg dry	10	12/13/21 22:36	EPA 6020B	
Mercury	ND	0.104	0.208	mg/kg dry	10	12/13/21 22:36	EPA 6020B	
Selenium	ND	1.30	2.60	mg/kg dry	10	12/13/21 22:36	EPA 6020B	
Silver	ND	0.260	0.520	mg/kg dry	10	12/13/21 22:36	EPA 6020B	
Zinc	158	5.20	10.4	mg/kg dry	10	12/13/21 22:36	EPA 6020B	
B-6 VAC (A1L0021-04)				Matrix: Soil				
Batch: 21L0344								
Antimony	ND	0.893	1.79	mg/kg dry	10	12/13/21 22:52	EPA 6020B	
Arsenic	7.78	0.893	1.79	mg/kg dry	10	12/13/21 22:52	EPA 6020B	
Barium	185	0.893	1.79	mg/kg dry	10	12/13/21 22:52	EPA 6020B	
Cadmium	0.187	0.179	0.357	mg/kg dry	10	12/13/21 22:52	EPA 6020B	J
Chromium	32.9	0.893	1.79	mg/kg dry	10	12/13/21 22:52	EPA 6020B	
Copper	27.9	1.79	3.57	mg/kg dry	10	12/13/21 22:52	EPA 6020B	
Lead	15.3	0.179	0.357	mg/kg dry	10	12/13/21 22:52	EPA 6020B	
Mercury	ND	0.0715	0.143	mg/kg dry	10	12/13/21 22:52	EPA 6020B	
Selenium	ND	0.893	1.79	mg/kg dry	10	12/13/21 22:52	EPA 6020B	
Silver	ND	0.179	0.357	mg/kg dry	10	12/13/21 22:52	EPA 6020B	
Zinc	88.0	3.57	7.15	mg/kg dry	10	12/13/21 22:52	EPA 6020B	
B-8 VAC (A1L0021-05)				Matrix: Soil				
Batch: 21L0344								
Antimony	ND	1.79	3.57	mg/kg dry	10	12/13/21 22:57	EPA 6020B	
Arsenic	4.04	1.79	3.57	mg/kg dry	10	12/13/21 22:57	EPA 6020B	
Barium	147	1.79	3.57	mg/kg dry	10	12/13/21 22:57	EPA 6020B	
Cadmium	ND	0.357	0.715	mg/kg dry	10	12/13/21 22:57	EPA 6020B	
Chromium	18.5	1.79	3.57	mg/kg dry	10	12/13/21 22:57	EPA 6020B	
Copper	20.7	3.57	7.15	mg/kg dry	10	12/13/21 22:57	EPA 6020B	
Lead	12.2	0.357	0.715	mg/kg dry	10	12/13/21 22:57	EPA 6020B	
Mercury	ND	0.143	0.286	mg/kg dry	10	12/13/21 22:57	EPA 6020B	
Selenium	ND	1.79	3.57	mg/kg dry	10	12/13/21 22:57	EPA 6020B	
Silver	ND	0.357	0.715	mg/kg dry	10	12/13/21 22:57	EPA 6020B	
Zinc	68.3	7.15	14.3	mg/kg dry	10	12/13/21 22:57	EPA 6020B	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-7/B-8 VAC (A1L0021-06)		Matrix: Soil							
Batch: 21L0344									
Antimony	0.941	0.918	1.84	mg/kg dry	10	12/13/21 23:02	EPA 6020B	J	
Arsenic	7.04	0.918	1.84	mg/kg dry	10	12/13/21 23:02	EPA 6020B		
Barium	216	0.918	1.84	mg/kg dry	10	12/13/21 23:02	EPA 6020B		
Cadmium	0.207	0.184	0.367	mg/kg dry	10	12/13/21 23:02	EPA 6020B	J	
Chromium	26.7	0.918	1.84	mg/kg dry	10	12/13/21 23:02	EPA 6020B		
Copper	52.7	1.84	3.67	mg/kg dry	10	12/13/21 23:02	EPA 6020B		
Lead	134	0.184	0.367	mg/kg dry	10	12/13/21 23:02	EPA 6020B		
Mercury	0.629	0.0734	0.147	mg/kg dry	10	12/13/21 23:02	EPA 6020B		
Selenium	ND	0.918	1.84	mg/kg dry	10	12/13/21 23:02	EPA 6020B		
Silver	0.335	0.184	0.367	mg/kg dry	10	12/13/21 23:02	EPA 6020B	J	
Zinc	124	3.67	7.34	mg/kg dry	10	12/13/21 23:02	EPA 6020B		

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ANALYTICAL SAMPLE RESULTS

TCLP Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-7/B-8 VAC (A1L0021-06)				Matrix: Soil				
Batch: 21L1018								
Lead	ND	0.0250	0.0500	mg/L	10	12/29/21 23:50	1311/6020B	

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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight									
Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes	
B-19 VAC (A1L0021-01)				Matrix: Soil		Batch: 21L0119			
% Solids	51.6	1.00	1.00	%	1	12/06/21 09:47	EPA 8000D		
B-32 VAC (A1L0021-02)				Matrix: Soil		Batch: 21L0119			
% Solids	64.9	1.00	1.00	%	1	12/06/21 09:47	EPA 8000D		
B-20 VAC (A1L0021-03)				Matrix: Soil		Batch: 21L0119			
% Solids	41.7	1.00	1.00	%	1	12/06/21 09:47	EPA 8000D		
B-6 VAC (A1L0021-04)				Matrix: Soil		Batch: 21L0119			
% Solids	59.0	1.00	1.00	%	1	12/06/21 09:47	EPA 8000D		
B-8 VAC (A1L0021-05)				Matrix: Soil		Batch: 21L0119			
% Solids	27.6	1.00	1.00	%	1	12/06/21 09:47	EPA 8000D		
B-7/B-8 VAC (A1L0021-06)				Matrix: Soil		Batch: 21L0119			
% Solids	55.7	1.00	1.00	%	1	12/06/21 09:47	EPA 8000D		

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ANALYTICAL SAMPLE RESULTS

TCLP Extraction by EPA 1311

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
B-7/B-8 VAC (A1L0021-06)				Matrix: Soil		Batch: 21L0992		
TCLP Extraction	PREP			N/A	1	12/28/21 17:52	EPA 1311	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0203 - EPA 3546 (Fuels)						Soil						
Blank (21L0203-BLK1)						Prepared: 12/06/21 13:14 Analyzed: 12/06/21 22:56						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (21L0203-BS1)						Prepared: 12/06/21 13:14 Analyzed: 12/06/21 23:16						
<u>NWTPH-Dx</u>												
Diesel	117	10.0	20.0	mg/kg wet	1	125	---	93	38-132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 96 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (21L0203-DUP2)						Prepared: 12/06/21 13:14 Analyzed: 12/06/21 23:36						
<u>QC Source Sample: Non-SDG (A1L0024-01)</u>												
Diesel	866	12.9	25.8	mg/kg dry	1	---	861	---	---	0.6	30%	
Oil	ND	25.8	51.6	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 81 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (21L0203-DUP3)						Prepared: 12/06/21 13:14 Analyzed: 12/07/21 08:02						
<u>QC Source Sample: Non-SDG (A1K0340-36RE1)</u>												
Diesel	ND	10.1	25.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	34.0	20.2	50.0	mg/kg dry	1	---	37.0	---	---	8	30%	J
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 76 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Batch 21L0258 - EPA 3546 (Fuels)						Soil						
Blank (21L0258-BLK1)						Prepared: 12/07/21 13:03 Analyzed: 12/07/21 23:29						
<u>NWTPH-Dx</u>												
Diesel	ND	9.09	25.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	18.2	50.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 82 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (21L0258-BS1)						Prepared: 12/07/21 13:03 Analyzed: 12/07/21 23:50						
<u>NWTPH-Dx</u>												
Diesel	107	10.0	25.0	mg/kg wet	1	125	---	86	38-132%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0258 - EPA 3546 (Fuels)						Soil						
LCS (21L0258-BS1)						Prepared: 12/07/21 13:03 Analyzed: 12/07/21 23:50						
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 95 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (21L0258-DUP1)						Prepared: 12/07/21 13:48 Analyzed: 12/08/21 00:33						
QC Source Sample: Non-SDG (A1K1108-01)												
Diesel	ND	14.3	28.6	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	28.6	57.2	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 81 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
Duplicate (21L0258-DUP2)						Prepared: 12/07/21 13:48 Analyzed: 12/08/21 00:59						
QC Source Sample: Non-SDG (A1L0147-11)												
Diesel	ND	10.1	20.2	mg/kg dry	1	---	ND	---	---	---	30%	
Oil	ND	20.2	40.4	mg/kg dry	1	---	ND	---	---	---	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 86 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0179 - EPA 5035A						Soil						
Blank (21L0179-BLK1)			Prepared: 12/06/21 09:00 Analyzed: 12/06/21 10:44									
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	1.67	3.33	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 103 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>106 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (21L0179-BS2)						Prepared: 12/06/21 09:00 Analyzed: 12/06/21 10:17						
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	26.3	2.50	5.00	mg/kg wet	50	25.0	---	105	80-120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 106 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>105 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (21L0179-DUP1)						Prepared: 12/02/21 08:35 Analyzed: 12/06/21 18:21						
<u>QC Source Sample: Non-SDG (A1L0094-02)</u>												
Gasoline Range Organics	4.29	3.01	6.02	mg/kg dry	50	---	27.7	---	---	146	30%	Q-04, J
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>107 %</i>		<i>50-150 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0179 - EPA 5035A						Soil						
Blank (21L0179-BLK1)			Prepared: 12/06/21 09:00 Analyzed: 12/06/21 10:44									
<u>5035A/8260D</u>												
Acetone	ND	333	667	ug/kg wet	50	---	---	---	---	---	---	
Acrylonitrile	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Benzene	ND	3.33	6.67	ug/kg wet	50	---	---	---	---	---	---	
Bromobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Bromochloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromodichloromethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Bromoform	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
Bromomethane	ND	333	333	ug/kg wet	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
n-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Carbon disulfide	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Chloroethane	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Chloroform	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Chloromethane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromochloromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Dibromomethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0179 - EPA 5035A						Soil						
Blank (21L0179-BLK1)						Prepared: 12/06/21 09:00 Analyzed: 12/06/21 10:44						
1,2-Dichloropropane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
2-Hexanone	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Methylene chloride	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	167	333	ug/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
n-Propylbenzene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Styrene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Toluene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	83.3	167	ug/kg wet	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	33.3	66.7	ug/kg wet	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
Vinyl chloride	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	
m,p-Xylene	ND	16.7	33.3	ug/kg wet	50	---	---	---	---	---	---	
o-Xylene	ND	8.33	16.7	ug/kg wet	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) Recovery: 102 % Limits: 80-120 % Dilution: 1x

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0179 - EPA 5035A						Soil						
Blank (21L0179-BLK1)						Prepared: 12/06/21 09:00 Analyzed: 12/06/21 10:44						
<i>Surr: Toluene-d8 (Surr)</i>		<i>Recovery: 99 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>79-120 %</i>		<i>"</i>						
LCS (21L0179-BS1)						Prepared: 12/06/21 09:00 Analyzed: 12/06/21 09:50						
5035A/8260D												
Acetone	2580	500	1000	ug/kg wet	50	2000	---	129	80-120%	---	---	Q-56
Acrylonitrile	1130	50.0	100	ug/kg wet	50	1000	---	113	80-120%	---	---	
Benzene	1100	5.00	10.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Bromobenzene	1050	12.5	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Bromochloromethane	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Bromodichloromethane	1190	25.0	50.0	ug/kg wet	50	1000	---	119	80-120%	---	---	
Bromoform	871	50.0	100	ug/kg wet	50	1000	---	87	80-120%	---	---	
Bromomethane	1330	500	500	ug/kg wet	50	1000	---	133	80-120%	---	---	Q-56
2-Butanone (MEK)	2250	250	500	ug/kg wet	50	2000	---	112	80-120%	---	---	
n-Butylbenzene	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
sec-Butylbenzene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
tert-Butylbenzene	1050	25.0	50.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Carbon disulfide	945	250	500	ug/kg wet	50	1000	---	94	80-120%	---	---	
Carbon tetrachloride	1130	25.0	50.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
Chlorobenzene	999	12.5	25.0	ug/kg wet	50	1000	---	100	80-120%	---	---	
Chloroethane	1110	250	500	ug/kg wet	50	1000	---	111	80-120%	---	---	
Chloroform	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
Chloromethane	1030	125	250	ug/kg wet	50	1000	---	103	80-120%	---	---	
2-Chlorotoluene	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
4-Chlorotoluene	1080	25.0	50.0	ug/kg wet	50	1000	---	108	80-120%	---	---	
Dibromochloromethane	1100	50.0	100	ug/kg wet	50	1000	---	110	80-120%	---	---	
1,2-Dibromo-3-chloropropane	817	125	250	ug/kg wet	50	1000	---	82	80-120%	---	---	
1,2-Dibromoethane (EDB)	1110	25.0	50.0	ug/kg wet	50	1000	---	111	80-120%	---	---	
Dibromomethane	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
1,2-Dichlorobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,3-Dichlorobenzene	1030	12.5	25.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,4-Dichlorobenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Dichlorodifluoromethane	1000	50.0	100	ug/kg wet	50	1000	---	100	80-120%	---	---	
1,1-Dichloroethane	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	

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ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0179 - EPA 5035A						Soil						
LCS (21L0179-BS1)						Prepared: 12/06/21 09:00 Analyzed: 12/06/21 09:50						
1,2-Dichloroethane (EDC)	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,1-Dichloroethene	1120	12.5	25.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
cis-1,2-Dichloroethene	1130	12.5	25.0	ug/kg wet	50	1000	---	113	80-120%	---	---	
trans-1,2-Dichloroethene	1150	12.5	25.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,2-Dichloropropane	1150	12.5	25.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
1,3-Dichloropropane	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
2,2-Dichloropropane	1250	25.0	50.0	ug/kg wet	50	1000	---	125	80-120%	---	---	Q-56
1,1-Dichloropropene	1160	25.0	50.0	ug/kg wet	50	1000	---	116	80-120%	---	---	
cis-1,3-Dichloropropene	1150	25.0	50.0	ug/kg wet	50	1000	---	115	80-120%	---	---	
trans-1,3-Dichloropropene	1200	25.0	50.0	ug/kg wet	50	1000	---	120	80-120%	---	---	
Ethylbenzene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
Hexachlorobutadiene	957	50.0	100	ug/kg wet	50	1000	---	96	80-120%	---	---	
2-Hexanone	1950	250	500	ug/kg wet	50	2000	---	98	80-120%	---	---	
Isopropylbenzene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
4-Isopropyltoluene	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Methylene chloride	990	250	500	ug/kg wet	50	1000	---	99	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	1910	250	500	ug/kg wet	50	2000	---	96	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1070	25.0	50.0	ug/kg wet	50	1000	---	107	80-120%	---	---	
Naphthalene	984	50.0	100	ug/kg wet	50	1000	---	98	80-120%	---	---	
n-Propylbenzene	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Styrene	1030	25.0	50.0	ug/kg wet	50	1000	---	103	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1140	12.5	25.0	ug/kg wet	50	1000	---	114	80-120%	---	---	
1,1,2,2-Tetrachloroethane	1060	25.0	50.0	ug/kg wet	50	1000	---	106	80-120%	---	---	
Tetrachloroethene (PCE)	1050	12.5	25.0	ug/kg wet	50	1000	---	105	80-120%	---	---	
Toluene	1010	25.0	50.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
1,2,3-Trichlorobenzene	982	125	250	ug/kg wet	50	1000	---	98	80-120%	---	---	
1,2,4-Trichlorobenzene	964	125	250	ug/kg wet	50	1000	---	96	80-120%	---	---	
1,1,1-Trichloroethane	1180	12.5	25.0	ug/kg wet	50	1000	---	118	80-120%	---	---	
1,1,2-Trichloroethane	1090	12.5	25.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
Trichloroethene (TCE)	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
Trichlorofluoromethane	1180	50.0	100	ug/kg wet	50	1000	---	118	80-120%	---	---	
1,2,3-Trichloropropane	1090	25.0	50.0	ug/kg wet	50	1000	---	109	80-120%	---	---	
1,2,4-Trimethylbenzene	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	
1,3,5-Trimethylbenzene	1120	25.0	50.0	ug/kg wet	50	1000	---	112	80-120%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0179 - EPA 5035A						Soil						
LCS (21L0179-BS1)						Prepared: 12/06/21 09:00 Analyzed: 12/06/21 09:50						
Vinyl chloride	1100	12.5	25.0	ug/kg wet	50	1000	---	110	80-120%	---	---	
m,p-Xylene	2020	25.0	50.0	ug/kg wet	50	2000	---	101	80-120%	---	---	
o-Xylene	1010	12.5	25.0	ug/kg wet	50	1000	---	101	80-120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 104 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>99 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

Duplicate (21L0179-DUP1)						Prepared: 12/02/21 08:35 Analyzed: 12/06/21 18:21						
QC Source Sample: Non-SDG (A1L0094-02)												
Acetone	ND	602	1200	ug/kg dry	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	60.2	120	ug/kg dry	50	---	ND	---	---	---	30%	
Benzene	313	6.02	12.0	ug/kg dry	50	---	1250	---	---	120	30%	Q-04
Bromobenzene	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Bromoform	ND	60.2	120	ug/kg dry	50	---	ND	---	---	---	30%	
Bromomethane	ND	602	602	ug/kg dry	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	301	602	ug/kg dry	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	301	602	ug/kg dry	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroethane	ND	301	602	ug/kg dry	50	---	ND	---	---	---	30%	
Chloroform	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Chloromethane	ND	151	301	ug/kg dry	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	60.2	120	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	151	301	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Dibromomethane	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0179 - EPA 5035A						Soil						
Duplicate (21L0179-DUP1)			Prepared: 12/02/21 08:35 Analyzed: 12/06/21 18:21									
QC Source Sample: Non-SDG (A1L0094-02)												
1,3-Dichlorobenzene	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	60.2	120	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	142	15.1	30.1	ug/kg dry	50	---	1130	---	---	156	30%	Q-04
Hexachlorobutadiene	ND	60.2	120	ug/kg dry	50	---	ND	---	---	---	30%	
2-Hexanone	ND	301	602	ug/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	30.1	60.2	ug/kg dry	50	---	37.3	---	---	***	30%	Q-04
4-Isopropyltoluene	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Methylene chloride	ND	301	602	ug/kg dry	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	301	602	ug/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	60.2	120	ug/kg dry	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	15.1	30.1	ug/kg dry	50	---	67.1	---	---	***	30%	Q-04
Styrene	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	30.1	60.2	ug/kg dry	50	---	127	---	---	***	30%	Q-04
1,2,3-Trichlorobenzene	ND	151	301	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	151	301	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0179 - EPA 5035A						Soil						
Duplicate (21L0179-DUP1)			Prepared: 12/02/21 08:35 Analyzed: 12/06/21 18:21									
QC Source Sample: Non-SDG (A1L0094-02)												
Trichloroethene (TCE)	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	60.2	120	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	30.1	60.2	ug/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	30.1	60.2	ug/kg dry	50	---	156	---	---	***	30%	Q-04
1,3,5-Trimethylbenzene	ND	30.1	60.2	ug/kg dry	50	---	109	---	---	***	30%	Q-04
Vinyl chloride	ND	15.1	30.1	ug/kg dry	50	---	ND	---	---	---	30%	
m,p-Xylene	391	30.1	60.2	ug/kg dry	50	---	3400	---	---		159 30%	Q-04
o-Xylene	139	15.1	30.1	ug/kg dry	50	---	1020	---	---		152 30%	Q-04
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>96 %</i>		<i>79-120 %</i>		<i>"</i>						

Matrix Spike (21L0179-MS1)						Prepared: 12/02/21 08:40 Analyzed: 12/06/21 19:14						
QC Source Sample: Non-SDG (A1L0094-03)												
5035A/8260D												
Acetone	2390	593	1190	ug/kg dry	50	2370	ND	101	36-164%	---	---	Q-54b
Acrylonitrile	1430	59.3	119	ug/kg dry	50	1180	ND	121	65-134%	---	---	
Benzene	1570	5.93	11.9	ug/kg dry	50	1180	305	107	77-121%	---	---	
Bromobenzene	1200	14.8	29.6	ug/kg dry	50	1180	ND	102	78-121%	---	---	
Bromochloromethane	1390	29.6	59.3	ug/kg dry	50	1180	ND	117	78-125%	---	---	
Bromodichloromethane	1370	29.6	59.3	ug/kg dry	50	1180	ND	116	75-127%	---	---	
Bromoform	990	59.3	119	ug/kg dry	50	1180	ND	84	67-132%	---	---	
Bromomethane	1580	593	593	ug/kg dry	50	1180	ND	133	53-143%	---	---	Q-54
2-Butanone (MEK)	2510	296	593	ug/kg dry	50	2370	ND	106	51-148%	---	---	
n-Butylbenzene	1240	29.6	59.3	ug/kg dry	50	1180	ND	105	70-128%	---	---	
sec-Butylbenzene	1220	29.6	59.3	ug/kg dry	50	1180	ND	103	73-126%	---	---	
tert-Butylbenzene	1160	29.6	59.3	ug/kg dry	50	1180	ND	98	73-125%	---	---	
Carbon disulfide	1050	296	593	ug/kg dry	50	1180	ND	89	63-132%	---	---	
Carbon tetrachloride	1220	29.6	59.3	ug/kg dry	50	1180	ND	103	70-135%	---	---	
Chlorobenzene	1150	14.8	29.6	ug/kg dry	50	1180	ND	97	79-120%	---	---	
Chloroethane	1740	296	593	ug/kg dry	50	1180	ND	147	59-139%	---	---	Q-01
Chloroform	1300	29.6	59.3	ug/kg dry	50	1180	ND	110	78-123%	---	---	
Chloromethane	1170	148	296	ug/kg dry	50	1180	ND	99	50-136%	---	---	

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ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0179 - EPA 5035A						Soil						
Matrix Spike (21L0179-MS1)						Prepared: 12/02/21 08:40 Analyzed: 12/06/21 19:14						
QC Source Sample: Non-SDG (A1L0094-03)												
2-Chlorotoluene	1280	29.6	59.3	ug/kg dry	50	1180	ND	108	75-122%	---	---	
4-Chlorotoluene	1220	29.6	59.3	ug/kg dry	50	1180	ND	103	72-124%	---	---	
Dibromochloromethane	1250	59.3	119	ug/kg dry	50	1180	ND	106	74-126%	---	---	
1,2-Dibromo-3-chloropropane	900	148	296	ug/kg dry	50	1180	ND	76	61-132%	---	---	
1,2-Dibromoethane (EDB)	1270	29.6	59.3	ug/kg dry	50	1180	ND	107	78-122%	---	---	
Dibromomethane	1370	29.6	59.3	ug/kg dry	50	1180	ND	116	78-125%	---	---	
1,2-Dichlorobenzene	1120	14.8	29.6	ug/kg dry	50	1180	ND	95	78-121%	---	---	
1,3-Dichlorobenzene	1160	14.8	29.6	ug/kg dry	50	1180	ND	98	77-121%	---	---	
1,4-Dichlorobenzene	1140	14.8	29.6	ug/kg dry	50	1180	ND	97	75-120%	---	---	
Dichlorodifluoromethane	1140	59.3	119	ug/kg dry	50	1180	ND	96	29-149%	---	---	
1,1-Dichloroethane	1310	14.8	29.6	ug/kg dry	50	1180	ND	111	76-125%	---	---	
1,2-Dichloroethane (EDC)	1300	14.8	29.6	ug/kg dry	50	1180	ND	110	73-128%	---	---	
1,1-Dichloroethene	1270	14.8	29.6	ug/kg dry	50	1180	ND	108	70-131%	---	---	
cis-1,2-Dichloroethene	1300	14.8	29.6	ug/kg dry	50	1180	ND	110	77-123%	---	---	
trans-1,2-Dichloroethene	1290	14.8	29.6	ug/kg dry	50	1180	ND	109	74-125%	---	---	
1,2-Dichloropropane	1340	14.8	29.6	ug/kg dry	50	1180	ND	113	76-123%	---	---	
1,3-Dichloropropane	1250	29.6	59.3	ug/kg dry	50	1180	ND	106	77-121%	---	---	
2,2-Dichloropropane	1250	29.6	59.3	ug/kg dry	50	1180	ND	106	67-133%	---	---	Q-54a
1,1-Dichloropropene	1270	29.6	59.3	ug/kg dry	50	1180	ND	107	76-125%	---	---	
cis-1,3-Dichloropropene	1230	29.6	59.3	ug/kg dry	50	1180	ND	104	74-126%	---	---	
trans-1,3-Dichloropropene	1340	29.6	59.3	ug/kg dry	50	1180	ND	113	71-130%	---	---	
Ethylbenzene	1430	14.8	29.6	ug/kg dry	50	1180	260	99	76-122%	---	---	
Hexachlorobutadiene	976	59.3	119	ug/kg dry	50	1180	ND	82	61-135%	---	---	
2-Hexanone	2130	296	593	ug/kg dry	50	2370	ND	90	53-145%	---	---	
Isopropylbenzene	1170	29.6	59.3	ug/kg dry	50	1180	ND	99	68-134%	---	---	
4-Isopropyltoluene	1170	29.6	59.3	ug/kg dry	50	1180	ND	99	73-127%	---	---	
Methylene chloride	1210	296	593	ug/kg dry	50	1180	ND	102	70-128%	---	---	
4-Methyl-2-pentanone (MiBK)	2210	296	593	ug/kg dry	50	2370	ND	93	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1200	29.6	59.3	ug/kg dry	50	1180	ND	102	73-125%	---	---	
Naphthalene	1070	59.3	119	ug/kg dry	50	1180	ND	90	62-129%	---	---	
n-Propylbenzene	1300	14.8	29.6	ug/kg dry	50	1180	68.2	104	73-125%	---	---	
Styrene	1200	29.6	59.3	ug/kg dry	50	1180	ND	101	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1300	14.8	29.6	ug/kg dry	50	1180	ND	110	78-125%	---	---	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0179 - EPA 5035A						Soil						
Matrix Spike (21L0179-MS1)						Prepared: 12/02/21 08:40 Analyzed: 12/06/21 19:14						
QC Source Sample: Non-SDG (A1L0094-03)												
1,1,2,2-Tetrachloroethane	1230	29.6	59.3	ug/kg dry	50	1180	ND	104	70-124%	---	---	
Tetrachloroethene (PCE)	1120	14.8	29.6	ug/kg dry	50	1180	ND	95	73-128%	---	---	
Toluene	1170	29.6	59.3	ug/kg dry	50	1180	42.7	95	77-121%	---	---	
1,2,3-Trichlorobenzene	1060	148	296	ug/kg dry	50	1180	ND	89	66-130%	---	---	
1,2,4-Trichlorobenzene	1010	148	296	ug/kg dry	50	1180	ND	85	67-129%	---	---	
1,1,1-Trichloroethane	1290	14.8	29.6	ug/kg dry	50	1180	ND	109	73-130%	---	---	
1,1,2-Trichloroethane	1290	14.8	29.6	ug/kg dry	50	1180	ND	109	78-121%	---	---	
Trichloroethene (TCE)	1250	14.8	29.6	ug/kg dry	50	1180	ND	105	77-123%	---	---	
Trichlorofluoromethane	1580	59.3	119	ug/kg dry	50	1180	ND	134	62-140%	---	---	
1,2,3-Trichloropropane	1250	29.6	59.3	ug/kg dry	50	1180	ND	106	73-125%	---	---	
1,2,4-Trimethylbenzene	2060	29.6	59.3	ug/kg dry	50	1180	665	118	75-123%	---	---	
1,3,5-Trimethylbenzene	1480	29.6	59.3	ug/kg dry	50	1180	179	110	73-124%	---	---	
Vinyl chloride	1320	14.8	29.6	ug/kg dry	50	1180	ND	111	56-135%	---	---	
m,p-Xylene	4160	29.6	59.3	ug/kg dry	50	2370	1690	105	77-124%	---	---	
o-Xylene	1880	14.8	29.6	ug/kg dry	50	1180	646	104	77-123%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 103 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>98 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>79-120 %</i>		<i>"</i>						

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ANALYTICAL REPORT

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0336 - EPA 3546												
Soil												
Blank (21L0336-BLK1)												
						Prepared: 12/09/21 07:23 Analyzed: 12/09/21 11:52						
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (21L0336-BS1)												
						Prepared: 12/09/21 07:23 Analyzed: 12/09/21 12:17						
<u>EPA 8270E SIM</u>												
Acenaphthene	752	5.00	10.0	ug/kg wet	1	800	---	94	40-123%	---	---	
Acenaphthylene	791	5.00	10.0	ug/kg wet	1	800	---	99	32-132%	---	---	
Anthracene	746	5.00	10.0	ug/kg wet	1	800	---	93	47-123%	---	---	
Benz(a)anthracene	766	5.00	10.0	ug/kg wet	1	800	---	96	49-126%	---	---	
Benzo(a)pyrene	785	5.00	10.0	ug/kg wet	1	800	---	98	45-129%	---	---	
Benzo(b)fluoranthene	781	5.00	10.0	ug/kg wet	1	800	---	98	45-132%	---	---	
Benzo(k)fluoranthene	808	5.00	10.0	ug/kg wet	1	800	---	101	47-132%	---	---	
Benzo(g,h,i)perylene	760	5.00	10.0	ug/kg wet	1	800	---	95	43-134%	---	---	
Chrysene	730	5.00	10.0	ug/kg wet	1	800	---	91	50-124%	---	---	
Dibenz(a,h)anthracene	781	5.00	10.0	ug/kg wet	1	800	---	98	45-134%	---	---	
Fluoranthene	757	5.00	10.0	ug/kg wet	1	800	---	95	50-127%	---	---	
Fluorene	749	5.00	10.0	ug/kg wet	1	800	---	94	43-125%	---	---	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0336 - EPA 3546						Soil						
LCS (21L0336-BS1)						Prepared: 12/09/21 07:23 Analyzed: 12/09/21 12:17						
Indeno(1,2,3-cd)pyrene	717	5.00	10.0	ug/kg wet	1	800	---	90	45-133%	---	---	
Naphthalene	713	5.00	10.0	ug/kg wet	1	800	---	89	35-123%	---	---	
Phenanthrene	734	5.00	10.0	ug/kg wet	1	800	---	92	50-121%	---	---	
Pyrene	749	5.00	10.0	ug/kg wet	1	800	---	94	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>115 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (21L0336-DUP1)						Prepared: 12/09/21 07:23 Analyzed: 12/09/21 13:07							PRO
QC Source Sample: Non-SDG (A1K1251-02)													
Acenaphthene	ND	5.02	10.0	ug/kg dry	1	---	ND	---	---	---	30%		
Acenaphthylene	15.0	5.02	10.0	ug/kg dry	1	---	14.8	---	---	1	30%		
Anthracene	13.2	5.02	10.0	ug/kg dry	1	---	15.8	---	---	18	30%		
Benz(a)anthracene	81.6	5.02	10.0	ug/kg dry	1	---	83.1	---	---	2	30%		
Benzo(a)pyrene	152	5.02	10.0	ug/kg dry	1	---	154	---	---	1	30%		
Benzo(b)fluoranthene	162	5.02	10.0	ug/kg dry	1	---	162	---	---	0.2	30%		
Benzo(k)fluoranthene	51.3	5.02	10.0	ug/kg dry	1	---	52.5	---	---	2	30%	M-05	
Benzo(g,h,i)perylene	190	5.02	10.0	ug/kg dry	1	---	193	---	---	2	30%		
Chrysene	107	5.02	10.0	ug/kg dry	1	---	111	---	---	4	30%		
Dibenz(a,h)anthracene	14.5	5.02	10.0	ug/kg dry	1	---	14.2	---	---	2	30%		
Fluoranthene	197	5.02	10.0	ug/kg dry	1	---	195	---	---	0.9	30%		
Fluorene	5.11	5.02	10.0	ug/kg dry	1	---	5.56	---	---	8	30%	J	
Indeno(1,2,3-cd)pyrene	151	5.02	10.0	ug/kg dry	1	---	154	---	---	2	30%		
Naphthalene	ND	5.02	10.0	ug/kg dry	1	---	5.60	---	---	***	30%	Q-05	
Phenanthrene	134	5.02	10.0	ug/kg dry	1	---	140	---	---	5	30%		
Pyrene	274	5.02	10.0	ug/kg dry	1	---	271	---	---	1	30%		
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 84 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>							
<i>p-Terphenyl-d14 (Surr)</i>		<i>103 %</i>		<i>54-127 %</i>		<i>"</i>							

Matrix Spike (21L0336-MS1)						Prepared: 12/09/21 07:23 Analyzed: 12/09/21 13:32							PRO
QC Source Sample: Non-SDG (A1K1251-02)													
EPA 8270E SIM													
Acenaphthene	593	4.86	9.72	ug/kg dry	1	778	ND	76	40-123%	---	---		
Acenaphthylene	630	4.86	9.72	ug/kg dry	1	778	14.8	79	32-132%	---	---		

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0336 - EPA 3546						Soil						
Matrix Spike (21L0336-MS1)						Prepared: 12/09/21 07:23 Analyzed: 12/09/21 13:32						PRO
QC Source Sample: Non-SDG (A1K1251-02)												
Anthracene	644	4.86	9.72	ug/kg dry	1	778	15.8	81	47-123%	---	---	
Benz(a)anthracene	731	4.86	9.72	ug/kg dry	1	778	83.1	83	49-126%	---	---	
Benzo(a)pyrene	821	4.86	9.72	ug/kg dry	1	778	154	86	45-129%	---	---	
Benzo(b)fluoranthene	843	4.86	9.72	ug/kg dry	1	778	162	88	45-132%	---	---	
Benzo(k)fluoranthene	716	4.86	9.72	ug/kg dry	1	778	52.5	85	47-132%	---	---	
Benzo(g,h,i)perylene	835	4.86	9.72	ug/kg dry	1	778	193	82	43-134%	---	---	
Chrysene	739	4.86	9.72	ug/kg dry	1	778	111	81	50-124%	---	---	
Dibenz(a,h)anthracene	671	4.86	9.72	ug/kg dry	1	778	14.2	84	45-134%	---	---	
Fluoranthene	812	4.86	9.72	ug/kg dry	1	778	195	79	50-127%	---	---	
Fluorene	601	4.86	9.72	ug/kg dry	1	778	5.56	77	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	765	4.86	9.72	ug/kg dry	1	778	154	79	45-133%	---	---	
Naphthalene	578	4.86	9.72	ug/kg dry	1	778	5.60	74	35-123%	---	---	
Phenanthrene	753	4.86	9.72	ug/kg dry	1	778	140	79	50-121%	---	---	
Pyrene	862	4.86	9.72	ug/kg dry	1	778	271	76	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 81 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>106 %</i>		<i>54-127 %</i>		<i>"</i>						

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----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0457 - EPA 3546						Soil						
Blank (21L0457-BLK1)			Prepared: 12/13/21 07:58 Analyzed: 12/13/21 13:04									
<u>EPA 8270E SIM</u>												
Acenaphthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	4.55	9.09	ug/kg wet	1	---	---	---	---	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 89 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>100 %</i>		<i>54-127 %</i>		<i>"</i>						

LCS (21L0457-BS1)			Prepared: 12/13/21 07:58 Analyzed: 12/13/21 13:29									
<u>EPA 8270E SIM</u>												
Acenaphthene	570	5.00	10.0	ug/kg wet	1	800	---	71	40-123%	---	---	
Acenaphthylene	589	5.00	10.0	ug/kg wet	1	800	---	74	32-132%	---	---	
Anthracene	652	5.00	10.0	ug/kg wet	1	800	---	82	47-123%	---	---	
Benz(a)anthracene	733	5.00	10.0	ug/kg wet	1	800	---	92	49-126%	---	---	
Benzo(a)pyrene	751	5.00	10.0	ug/kg wet	1	800	---	94	45-129%	---	---	
Benzo(b)fluoranthene	743	5.00	10.0	ug/kg wet	1	800	---	93	45-132%	---	---	
Benzo(k)fluoranthene	770	5.00	10.0	ug/kg wet	1	800	---	96	47-132%	---	---	
Benzo(g,h,i)perylene	761	5.00	10.0	ug/kg wet	1	800	---	95	43-134%	---	---	
Chrysene	706	5.00	10.0	ug/kg wet	1	800	---	88	50-124%	---	---	
Dibenz(a,h)anthracene	764	5.00	10.0	ug/kg wet	1	800	---	96	45-134%	---	---	
Fluoranthene	696	5.00	10.0	ug/kg wet	1	800	---	87	50-127%	---	---	
Fluorene	572	5.00	10.0	ug/kg wet	1	800	---	71	43-125%	---	---	

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0457 - EPA 3546												
Soil												
LCS (21L0457-BS1)												
Prepared: 12/13/21 07:58						Analyzed: 12/13/21 13:29						
Indeno(1,2,3-cd)pyrene	692	5.00	10.0	ug/kg wet	1	800	---	87	45-133%	---	---	
Naphthalene	532	5.00	10.0	ug/kg wet	1	800	---	66	35-123%	---	---	
Phenanthrene	648	5.00	10.0	ug/kg wet	1	800	---	81	50-121%	---	---	
Pyrene	694	5.00	10.0	ug/kg wet	1	800	---	87	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 71 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>96 %</i>		<i>54-127 %</i>		<i>"</i>						

Duplicate (21L0457-DUP1)												
Prepared: 12/13/21 07:58						Analyzed: 12/13/21 14:19						
QC Source Sample: B-19 VAC (A1L0021-01)												
EPA 8270E SIM												
Acenaphthene	ND	9.21	18.4	ug/kg dry	1	---	ND	---	---	---	30%	
Acenaphthylene	ND	9.21	18.4	ug/kg dry	1	---	ND	---	---	---	30%	
Anthracene	ND	9.21	18.4	ug/kg dry	1	---	ND	---	---	---	30%	
Benz(a)anthracene	15.9	9.21	18.4	ug/kg dry	1	---	14.4	---	---	9	30%	J
Benzo(a)pyrene	25.5	9.21	18.4	ug/kg dry	1	---	22.3	---	---	14	30%	
Benzo(b)fluoranthene	30.0	9.21	18.4	ug/kg dry	1	---	27.1	---	---	10	30%	M-05
Benzo(k)fluoranthene	9.45	9.21	18.4	ug/kg dry	1	---	ND	---	---		30%	Q-05, J
Benzo(g,h,i)perylene	32.7	9.21	18.4	ug/kg dry	1	---	29.1	---	---	12	30%	
Chrysene	23.6	9.21	18.4	ug/kg dry	1	---	21.1	---	---	12	30%	
Dibenz(a,h)anthracene	ND	9.21	18.4	ug/kg dry	1	---	ND	---	---	---	30%	
Fluoranthene	47.6	9.21	18.4	ug/kg dry	1	---	41.9	---	---	13	30%	
Fluorene	ND	9.21	18.4	ug/kg dry	1	---	ND	---	---	---	30%	
Indeno(1,2,3-cd)pyrene	27.9	9.21	18.4	ug/kg dry	1	---	24.6	---	---	13	30%	
Naphthalene	ND	9.21	18.4	ug/kg dry	1	---	ND	---	---	---	30%	
Phenanthrene	26.0	9.21	18.4	ug/kg dry	1	---	23.7	---	---	9	30%	
Pyrene	63.6	9.21	18.4	ug/kg dry	1	---	55.7	---	---	13	30%	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 76 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>90 %</i>		<i>54-127 %</i>		<i>"</i>						

Matrix Spike (21L0457-MS1)												
Prepared: 12/13/21 07:58						Analyzed: 12/13/21 16:00						
QC Source Sample: Non-SDG (A1L0433-05)												
EPA 8270E SIM												
Acenaphthene	851	6.57	13.1	ug/kg dry	1	1050	ND	81	40-123%	---	---	

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Darrell Auvil, Client Services Manager



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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0457 - EPA 3546						Soil						
Matrix Spike (21L0457-MS1)			Prepared: 12/13/21 07:58 Analyzed: 12/13/21 16:00									
QC Source Sample: Non-SDG (A1L0433-05)												
Acenaphthylene	913	6.57	13.1	ug/kg dry	1	1050	ND	87	32-132%	---	---	
Anthracene	875	6.57	13.1	ug/kg dry	1	1050	ND	83	47-123%	---	---	
Benz(a)anthracene	886	6.57	13.1	ug/kg dry	1	1050	ND	84	49-126%	---	---	
Benzo(a)pyrene	917	6.57	13.1	ug/kg dry	1	1050	ND	87	45-129%	---	---	
Benzo(b)fluoranthene	893	6.57	13.1	ug/kg dry	1	1050	ND	85	45-132%	---	---	
Benzo(k)fluoranthene	934	6.57	13.1	ug/kg dry	1	1050	ND	89	47-132%	---	---	
Benzo(g,h,i)perylene	906	6.57	13.1	ug/kg dry	1	1050	ND	86	43-134%	---	---	
Chrysene	867	6.57	13.1	ug/kg dry	1	1050	ND	82	50-124%	---	---	
Dibenz(a,h)anthracene	909	6.57	13.1	ug/kg dry	1	1050	ND	86	45-134%	---	---	
Fluoranthene	885	6.57	13.1	ug/kg dry	1	1050	ND	84	50-127%	---	---	
Fluorene	874	6.57	13.1	ug/kg dry	1	1050	ND	83	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	850	6.57	13.1	ug/kg dry	1	1050	ND	81	45-133%	---	---	
Naphthalene	853	6.57	13.1	ug/kg dry	1	1050	ND	81	35-123%	---	---	
Phenanthrene	863	6.57	13.1	ug/kg dry	1	1050	ND	82	50-121%	---	---	
Pyrene	878	6.57	13.1	ug/kg dry	1	1050	ND	84	47-127%	---	---	
<i>Surr: 2-Fluorobiphenyl (Surr)</i>		<i>Recovery: 85 %</i>		<i>Limits: 44-120 %</i>		<i>Dilution: 1x</i>						
<i>p-Terphenyl-d14 (Surr)</i>		<i>94 %</i>		<i>54-127 %</i>		<i>"</i>						

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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0344 - EPA 3051A												
Soil												
Blank (21L0344-BLK1)												
Prepared: 12/09/21 08:33 Analyzed: 12/13/21 21:07												
<u>EPA 6020B</u>												
Antimony	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	0.962	1.92	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	0.0385	0.0769	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	0.481	0.962	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	0.0962	0.192	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	1.92	3.85	mg/kg wet	10	---	---	---	---	---	---	

LCS (21L0344-BS1)												
Prepared: 12/09/21 08:33 Analyzed: 12/13/21 21:12												
<u>EPA 6020B</u>												
Antimony	25.5	0.500	1.00	mg/kg wet	10	25.0	---	102	80-120%	---	---	
Arsenic	53.0	0.500	1.00	mg/kg wet	10	50.0	---	106	80-120%	---	---	
Barium	51.6	0.500	1.00	mg/kg wet	10	50.0	---	103	80-120%	---	---	
Cadmium	48.3	0.100	0.200	mg/kg wet	10	50.0	---	97	80-120%	---	---	
Chromium	50.6	0.500	1.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Copper	50.4	1.00	2.00	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Lead	50.4	0.100	0.200	mg/kg wet	10	50.0	---	101	80-120%	---	---	
Mercury	0.991	0.0400	0.0800	mg/kg wet	10	1.00	---	99	80-120%	---	---	
Selenium	25.1	0.500	1.00	mg/kg wet	10	25.0	---	100	80-120%	---	---	
Silver	25.9	0.100	0.200	mg/kg wet	10	25.0	---	104	80-120%	---	---	
Zinc	50.9	2.00	4.00	mg/kg wet	10	50.0	---	102	80-120%	---	---	

Duplicate (21L0344-DUP1)												
Prepared: 12/09/21 08:33 Analyzed: 12/13/21 22:41												
<u>QC Source Sample: B-20 VAC (A1L0021-03)</u>												
<u>EPA 6020B</u>												
Antimony	3.34	1.18	2.37	mg/kg dry	10	---	2.83	---	---	17	20%	
Arsenic	8.02	1.18	2.37	mg/kg dry	10	---	7.58	---	---	6	20%	
Barium	237	1.18	2.37	mg/kg dry	10	---	243	---	---	2	20%	
Cadmium	ND	0.237	0.474	mg/kg dry	10	---	ND	---	---	---	20%	

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Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
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QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0344 - EPA 3051A						Soil						
Duplicate (21L0344-DUP1)						Prepared: 12/09/21 08:33 Analyzed: 12/13/21 22:41						
QC Source Sample: B-20 VAC (A1L0021-03)												
Chromium	32.6	1.18	2.37	mg/kg dry	10	---	34.4	---	---	5	20%	
Copper	50.0	2.37	4.74	mg/kg dry	10	---	49.3	---	---	1	20%	
Lead	17.7	0.237	0.474	mg/kg dry	10	---	17.9	---	---	1	20%	
Mercury	ND	0.0948	0.190	mg/kg dry	10	---	ND	---	---	---	20%	
Selenium	ND	1.18	2.37	mg/kg dry	10	---	ND	---	---	---	20%	
Silver	0.265	0.237	0.474	mg/kg dry	10	---	ND	---	---	---	20%	J
Zinc	174	4.74	9.48	mg/kg dry	10	---	158	---	---	9	20%	

Matrix Spike (21L0344-MS1)						Prepared: 12/09/21 08:33 Analyzed: 12/13/21 22:46						
QC Source Sample: B-20 VAC (A1L0021-03)												
EPA 6020B												
Antimony	61.9	1.24	2.47	mg/kg dry	10	61.8	2.83	96	75-125%	---	---	
Arsenic	137	1.24	2.47	mg/kg dry	10	124	7.58	105	75-125%	---	---	
Barium	397	1.24	2.47	mg/kg dry	10	124	243	125	75-125%	---	---	
Cadmium	122	0.247	0.494	mg/kg dry	10	124	ND	99	75-125%	---	---	
Chromium	159	1.24	2.47	mg/kg dry	10	124	34.4	101	75-125%	---	---	
Copper	168	2.47	4.94	mg/kg dry	10	124	49.3	96	75-125%	---	---	
Lead	137	0.247	0.494	mg/kg dry	10	124	17.9	96	75-125%	---	---	
Mercury	2.36	0.0989	0.198	mg/kg dry	10	2.47	ND	96	75-125%	---	---	
Selenium	61.5	1.24	2.47	mg/kg dry	10	61.8	ND	100	75-125%	---	---	
Silver	61.6	0.247	0.494	mg/kg dry	10	61.8	ND	100	75-125%	---	---	
Zinc	294	4.94	9.89	mg/kg dry	10	124	158	110	75-125%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

TCLP Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L1018 - EPA 1311/3015						Solid						
Blank (21L1018-BLK1)			Prepared: 12/29/21 12:42 Analyzed: 12/29/21 23:40									
<u>1311/6020B</u>												
Lead	ND	0.0250	0.0500	mg/L	10	---	---	---	---	---	---	TCLP
LCS (21L1018-BS1)			Prepared: 12/29/21 12:42 Analyzed: 12/29/21 23:45									
<u>1311/6020B</u>												
Lead	5.11	0.0250	0.0500	mg/L	10	5.00	---	102	80-120%	---	---	TCLP
Matrix Spike (21L1018-MS1)			Prepared: 12/29/21 12:42 Analyzed: 12/29/21 23:55									
<u>QC Source Sample: B-7/B-8 VAC (A1L0021-06)</u>												
<u>1311/6020B</u>												
Lead	5.11	0.0250	0.0500	mg/L	10	5.00	ND	102	50-150%	---	---	
Matrix Spike (21L1018-MS2)			Prepared: 12/29/21 12:42 Analyzed: 12/30/21 00:24									
<u>QC Source Sample: Non-SDG (A1L0853-01)</u>												
<u>1311/6020B</u>												
Lead	5.22	0.0250	0.0500	mg/L	10	5.00	ND	104	50-150%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 21L0119 - Total Solids (Dry Weight)						Soil						
Duplicate (21L0119-DUP1)			Prepared: 12/03/21 08:31 Analyzed: 12/06/21 09:47									
<u>QC Source Sample: Non-SDG (A1K1193-01)</u>												
% Solids	13.7	1.00	1.00	%	1	---	12.8	---	---	7	10%	
Duplicate (21L0119-DUP2)			Prepared: 12/03/21 08:31 Analyzed: 12/06/21 09:47									
<u>QC Source Sample: Non-SDG (A1L0024-03)</u>												
% Solids	76.9	1.00	1.00	%	1	---	77.1	---	---	0.3	10%	
Duplicate (21L0119-DUP3)			Prepared: 12/03/21 08:31 Analyzed: 12/06/21 09:47									
<u>QC Source Sample: Non-SDG (A1L0024-14)</u>												
% Solids	82.8	1.00	1.00	%	1	---	82.6	---	---	0.2	10%	
Duplicate (21L0119-DUP4)			Prepared: 12/03/21 08:31 Analyzed: 12/06/21 09:47									
<u>QC Source Sample: Non-SDG (A1L0038-04)</u>												
% Solids	43.9	1.00	1.00	%	1	---	45.9	---	---	4	10%	
Duplicate (21L0119-DUP5)			Prepared: 12/03/21 08:31 Analyzed: 12/06/21 09:47									
<u>QC Source Sample: Non-SDG (A1L0048-04)</u>												
% Solids	81.7	1.00	1.00	%	1	---	79.3	---	---	3	10%	
Duplicate (21L0119-DUP6)			Prepared: 12/03/21 08:31 Analyzed: 12/06/21 09:47									
<u>QC Source Sample: Non-SDG (A1L0072-02)</u>												
% Solids	76.9	1.00	1.00	%	1	---	76.1	---	---	1	10%	
Duplicate (21L0119-DUP7)			Prepared: 12/03/21 19:10 Analyzed: 12/06/21 09:47									
<u>QC Source Sample: Non-SDG (A1L0120-01)</u>												
% Solids	84.8	1.00	1.00	%	1	---	86.2	---	---	2	10%	
Duplicate (21L0119-DUP8)			Prepared: 12/03/21 19:10 Analyzed: 12/06/21 09:47									
<u>QC Source Sample: Non-SDG (A1L0120-02)</u>												
% Solids	82.5	1.00	1.00	%	1	---	82.2	---	---	0.3	10%	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
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No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323

ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21L0203</u>							
A1L0021-01	Soil	NWTPH-Dx	12/01/21 10:45	12/06/21 13:14	10.16g/5mL	10g/5mL	0.98
A1L0021-03	Soil	NWTPH-Dx	12/01/21 11:10	12/06/21 13:14	10.56g/5mL	10g/5mL	0.95
A1L0021-04	Soil	NWTPH-Dx	12/01/21 11:25	12/06/21 13:14	10.34g/5mL	10g/5mL	0.97
A1L0021-05	Soil	NWTPH-Dx	12/01/21 11:35	12/06/21 13:14	10.66g/5mL	10g/5mL	0.94
A1L0021-06RE1	Soil	NWTPH-Dx	12/01/21 12:00	12/06/21 13:14	10.64g/5mL	10g/5mL	0.94
<u>Batch: 21L0258</u>							
A1L0021-02RE1	Soil	NWTPH-Dx	12/01/21 10:50	12/07/21 13:03	10.69g/5mL	10g/5mL	0.94

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21L0179</u>							
A1L0021-01	Soil	NWTPH-Gx (MS)	12/01/21 10:45	12/01/21 17:05	5.37g/5mL	5g/5mL	0.93
A1L0021-02	Soil	NWTPH-Gx (MS)	12/01/21 10:50	12/01/21 17:06	5.24g/5mL	5g/5mL	0.95
A1L0021-03	Soil	NWTPH-Gx (MS)	12/01/21 11:10	12/01/21 17:08	5.01g/5mL	5g/5mL	1.00
A1L0021-04	Soil	NWTPH-Gx (MS)	12/01/21 11:25	12/01/21 17:10	5.33g/5mL	5g/5mL	0.94
A1L0021-05	Soil	NWTPH-Gx (MS)	12/01/21 11:35	12/01/21 17:11	5.07g/5mL	5g/5mL	0.99
A1L0021-06	Soil	NWTPH-Gx (MS)	12/01/21 12:00	12/01/21 17:13	5.46g/5mL	5g/5mL	0.92

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21L0179</u>							
A1L0021-01	Soil	5035A/8260D	12/01/21 10:45	12/01/21 17:05	5.37g/5mL	5g/5mL	0.93
A1L0021-02	Soil	5035A/8260D	12/01/21 10:50	12/01/21 17:06	5.24g/5mL	5g/5mL	0.95
A1L0021-03	Soil	5035A/8260D	12/01/21 11:10	12/01/21 17:08	5.01g/5mL	5g/5mL	1.00
A1L0021-04	Soil	5035A/8260D	12/01/21 11:25	12/01/21 17:10	5.33g/5mL	5g/5mL	0.94
A1L0021-05	Soil	5035A/8260D	12/01/21 11:35	12/01/21 17:11	5.07g/5mL	5g/5mL	0.99
A1L0021-06	Soil	5035A/8260D	12/01/21 12:00	12/01/21 17:13	5.46g/5mL	5g/5mL	0.92

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor

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ORELAP ID: OR100062

Coles & Betts Environmental Consulting 5741 NE Flanders Street Portland, OR 97213	Project: EQRB Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
----------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (SIM)

Prep: EPA 3546					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21L0336</u>							
A1L0021-02	Soil	EPA 8270E SIM	12/01/21 10:50	12/09/21 11:17	10.43g/5mL	10g/5mL	0.96
A1L0021-03	Soil	EPA 8270E SIM	12/01/21 11:10	12/09/21 11:17	10.18g/5mL	10g/5mL	0.98
A1L0021-04	Soil	EPA 8270E SIM	12/01/21 11:25	12/09/21 11:17	10.07g/5mL	10g/5mL	0.99
A1L0021-05	Soil	EPA 8270E SIM	12/01/21 11:35	12/09/21 11:17	10.03g/5mL	10g/5mL	1.00
A1L0021-06	Soil	EPA 8270E SIM	12/01/21 12:00	12/09/21 11:17	10.04g/5mL	10g/5mL	1.00
<u>Batch: 21L0457</u>							
A1L0021-01	Soil	EPA 8270E SIM	12/01/21 10:45	12/13/21 07:58	10.7g/5mL	10g/5mL	0.94

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21L0344</u>							
A1L0021-01	Soil	EPA 6020B	12/01/21 10:45	12/09/21 08:33	0.472g/50mL	0.5g/50mL	1.06
A1L0021-02	Soil	EPA 6020B	12/01/21 10:50	12/09/21 08:33	0.495g/50mL	0.5g/50mL	1.01
A1L0021-03	Soil	EPA 6020B	12/01/21 11:10	12/09/21 08:33	0.461g/50mL	0.5g/50mL	1.08
A1L0021-04	Soil	EPA 6020B	12/01/21 11:25	12/09/21 08:33	0.474g/50mL	0.5g/50mL	1.05
A1L0021-05	Soil	EPA 6020B	12/01/21 11:35	12/09/21 08:33	0.507g/50mL	0.5g/50mL	0.99
A1L0021-06	Soil	EPA 6020B	12/01/21 12:00	12/09/21 08:33	0.489g/50mL	0.5g/50mL	1.02

TCLP Metals by EPA 6020B (ICPMS)

Prep: EPA 1311/3015					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21L1018</u>							
A1L0021-06	Soil	1311/6020B	12/01/21 12:00	12/29/21 12:42	10mL/50mL	10mL/50mL	1.00

Percent Dry Weight

Prep: Total Solids (Dry Weight)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21L0119</u>							
A1L0021-01	Soil	EPA 8000D	12/01/21 10:45	12/03/21 08:31			NA
A1L0021-02	Soil	EPA 8000D	12/01/21 10:50	12/03/21 08:31			NA
A1L0021-03	Soil	EPA 8000D	12/01/21 11:10	12/03/21 08:31			NA
A1L0021-04	Soil	EPA 8000D	12/01/21 11:25	12/03/21 08:31			NA

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 ORELAP ID: OR100062

<u>Coles & Betts Environmental Consulting</u> 5741 NE Flanders Street Portland, OR 97213	Project: <u>EQRB</u> Project Number: 319 Project Manager: Jill Betts	Report ID: A1L0021 - 01 07 22 1523
-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

<u>Prep: Total Solids (Dry Weight)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
A1L0021-05	Soil	EPA 8000D	12/01/21 11:35	12/03/21 08:31			NA
A1L0021-06	Soil	EPA 8000D	12/01/21 12:00	12/03/21 08:31			NA

TCLP Extraction by EPA 1311

<u>Prep: EPA 1311 (TCLP)</u>					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 21L0992</u>							
A1L0021-06	Soil	EPA 1311	12/01/21 12:00	12/28/21 17:52	100g/1999.1g	100g/2000g	NA

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Coles & Betts Environmental Consulting

5741 NE Flanders Street
Portland, OR 97213

Project: EQRB

Project Number: 319

Project Manager: Jill Betts

Report ID:

A1L0021 - 01 07 22 1523

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- F-11 The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.
- F-17 No fuel pattern detected. The Diesel result represents carbon range C12 to C24, and the Oil result represents >C24 to C40.
- H-02 This sample was extracted outside of the recommended holding time.
- J Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- M-05 Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
- PRO Sample has undergone sample processing prior to extraction and analysis.
- Q-01 Spike recovery and/or RPD is outside acceptance limits.
- Q-04 Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
- Q-05 Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-54 Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +13%. The results are reported as Estimated Values.
- Q-54a Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
- Q-54b Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +9%. The results are reported as Estimated Values.
- Q-56 Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- R-02 The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-05 Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- TCLP This batch QC sample was prepared with TCLP or SPLP fluid from preparation batch 21L0992.
- V-15 Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.

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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.
- "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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Table with 3 columns: Client (Coles & Betts Environmental Consulting), Project (EQRB), and Report ID (A1L0021 - 01 07 22 1523).

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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Handwritten signature of Darrell Auvil

Darrell Auvil, Client Services Manager



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-----------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------	-----------------------------------------------------

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
--------	----------	--------	---------	--------	---------------

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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APEX LABS COOLER RECEIPT FORM

Client: Coles + Betts Environmental Consulting, LLC Element WO#: A1 L0021

Project/Project #: EQRB / 319

Delivery Info:
 Date/time received: 12/1/21 @ 1313 By: 80
 Delivered by: Apex Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 12/1/21 @ 1313 By: (80)
 Chain of Custody included? Yes No Custody seals? Yes No
 Signed/dated by client? Yes No
 Signed/dated by Apex? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>5.3</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>real</u>						
Condition:	<u>good</u>						

Cooler out of temp? (Y/N) Possible reason why: _____
 Green dots applied to out of temperature samples? Yes No
 Out of temperature samples form initiated? Yes No
Sample Inspection: Date/time inspected: 12/1/21 @ 1634 By: HAS
 All samples intact? Yes No Comments: _____

 Bottle labels/COCs agree? Yes No Comments: _____

 COC/container discrepancies form initiated? Yes No
 Containers/volumes received appropriate for analysis? Yes No Comments: _____

 Do VOA vials have visible headspace? Yes No NA
 Comments: _____
 Water samples: pH checked: Yes No NA pH appropriate? Yes No NA
 Comments: _____

Additional information:

Labeled by: HAS Witness: (Signature) Cooler Inspected by: HAS



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December 09, 2021

Analytical Report for Service Request No: K2110479

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

RE: EQRB / 319

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory September 09, 2021
For your reference, these analyses have been assigned our service request number **K2110479**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals
Butyltins
Semi-Volatile Petroleum Products by GCFID
Volatile Petroleum Products by GCFID
Ultra Low Level Organochlorine Pesticides by GCECD
Low Level Organochlorine Pesticidesby GC
Polychlorinated Biphenyls (PCBs)
Chlorinated Herbicides
Volatile Organic Compounds
Volatile Organic Compounds by GC MS, Unpreserved
Polycyclic Aromatic Hydrocarbons
Low Level Semivolatile Organic Compounds by GCMS
Polynuclear Aromatic Hydrocarbonsby GC/MS SIM Ultra Low Level
Subcontract Lab Results

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB
Sample Matrix: Soil, Water

Service Request: K2110479
Date Received: 09/09/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Four soil, water samples were received for analysis at ALS Environmental on 09/09/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 09/27/2021: The upper control criterion was exceeded for Benzoic Acid in Duplicate Laboratory Control Samples (LCS/DLCS) KQ2118144-05 KQ2118144-06. The analyte in question was/were not detected in the associated field samples. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method 8270D, 09/27/2021: The control criteria were exceeded for Phenol-d6 in B-24 (0-10)C by three percent. The field samples analyzed in this sequence did not contain the analytes in question above the MRL. The problem indicated a potential slight low bias, the data quality was not significantly affected. No further corrective action was taken.

Method 8270D, 09/27/2021: The control criteria were exceeded for p-Terphenyl-d14 in B-24 by twelve percent due to suspected matrix interference. The field samples analyzed in this sequence did not contain the analytes in question above the MRL. The problem indicated a potential slight low bias, the data quality was not significantly affected. No further corrective action was taken.

Method 8270D, 09/27/2021: The internal standard recoveries in sample B-24 was outside control criteria because of incorrect standard amount added to extract vial. Insufficient sample remained for additional analysis. The results quantified using this internal standard were corrected and flagged to indicate the problem.

Method 8270D, 09/27/2021: Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

Method 8270D, 09/25/2021: The upper control criterion was exceeded for a few analytes in Laboratory Control Sample (LCS) KQ2117835-03. The analytes in question were not detected in the associated field samples above the MRL. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

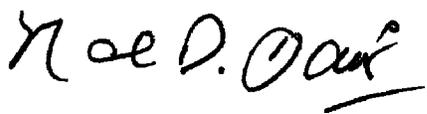
Method 8270D, 10/04/2021: The control criteria were exceeded for Fluoranthene-d10 and Terphenyl-d14 in sample B-24 due to matrix interference. The presence of non-target background components prevented adequate resolution of the surrogate. Accurate quantitation was not possible. No further corrective action was appropriate.

Semivolatile GC:

Method 8081B, 10/29/2021: The analysis of 8081B requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Methoxychlor. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method 8081B, 10/29/2021: The upper control criterion was exceeded for Toxaphene in Laboratory Control Sample (LCS) KQ2118278-10. The analyte in question was not detected in the associated field samples. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method 8081B, 10/27/2021: The analysis of several samples were initially performed past the recommended holding time due to

Approved by 

Date 12/09/2021

an instrument error. Efforts were made to analyze the samples as soon as the error was identified. The data was flagged to indicate the holding time violation.

Method 8151A, 10/23/2021: Sample B-24 was requested past the recommended holding time. The analysis was performed as soon as possible after by the laboratory. The data was flagged to indicate the holding time violation.

Method 8151A, 10/23/2021: The analysis of 8151A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for 2,4-D and Dichlorprop. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 10/23/2021: The analysis of 8151A requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for 2,4-Dichlorophenylacetic Acid. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 10/23/2021: The upper control criterion was exceeded for Dalapon in Duplicate Laboratory Control Sample (DLCS). The analyte in question was not detected in the associated field samples. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method ALS SOP Butyltins, 10/14/2021: The Relative Percent Difference (RPD) for all analytes in the replicate Laboratory Control Sample (LCS) analyses (KQ2119331-01 and KQ2119331-02) was outside control criteria. All spike recoveries in the LCS and DLCS were within acceptance limits. No further corrective action was taken.

Method ALS SOP Butyltins, 10/02/2021: The analysis of ALS SOP Butyltins requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Tri-n-propyltin. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method ALS SOP Butyltins, 10/02/2021: Due to interference introduced in the grignard reaction, some sample analytes and surrogates display retention time shifting outside +/-0.03 normally observed in this method and particular matrix. Note that the samples received all the possible cleanups within the scope of the method, the shifting was still within +/-0.06 threshold. The experience of the analyst in the interpretation of chromatograms and the shifts in the QC confirm the analytes. No further corrective action needed.

Method NWTPH-Dx, 10/27/2021: The upper control criterion was exceeded for range organics and surrogates in various Continuing Calibration Verifications (CCVs). The field samples analyzed in this sequence were ran multiple times with similar results. Since the apparent problem indicated a potential slight high bias, the data quality was not significantly affected. No further corrective action was required.

Metals:

No significant anomalies were noted with this analysis.

Subcontracted Analytical Parameters:

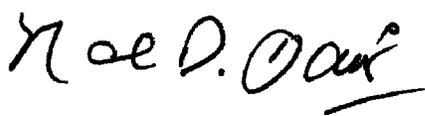
Dioxins and Furans by EPA Method 8290

The analysis for Dioxins and Furans was performed at ALS Houston, Texas Laboratory. The data for this analysis is included in the corresponding section of this report.

Volatiles by GC/MS:

Method 8260C, 09/16/2021: Sample B-24 (10-20)C was received with insufficient holding time remaining. The analysis was performed as soon as possible after receipt by the laboratory. The data was flagged to indicate the holding time violation.

Method 8260C, 09/16/2021: Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not

Approved by 

Date 12/09/2021

significantly affected. No further corrective action was required.

Method 8260C, 09/16/2021: The advisory criterion was exceeded for one or more of the following analytes in replicate Laboratory Control Sample (LCS/DLCS): Bromoform, Dibromochloromethane and 2-Butanone (MEK). As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, these compounds are not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only. No further corrective action was required.

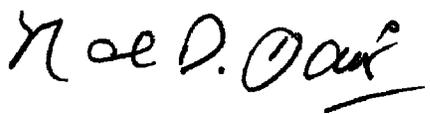
Method 8260C, 09/16/2021: The upper control criterion was exceeded for Dibromofluoromethane in Duplicate Laboratory Control Sample (DLCS). The analyte in question was not detected in the associated field samples. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method 8260C, 10/04/2021: Sample B-24 (0-10)C was received with insufficient holding time remaining. The analysis was performed as soon as possible after receipt by the laboratory. The data was flagged to indicate the holding time violation.

Method 8260C, 10/04/2021: Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8260C, 10/04/2021: The advisory criterion was exceeded for one or more of the following analytes in Laboratory Control Sample (LCS): Methylene Chloride. As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, these compounds are not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only. No further corrective action was required.

Method 8260C, 09/16/2021: A few analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Approved by 

Date 12/09/2021



Chain of Custody

ALS Environmental—Kelso Laboratory
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169110479

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835				Laboratory ALS Labs				CHAIN OF CUSTODY Chain of Custody No. _____						
Project Manager Jill Betts Project No. 319 Project Name EQR8 Collected by <i>Jake Munsey</i>				Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____				Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>						
Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. - See composite notes below.				Matrix Soil _____ Water _____ Other _____	Number of Containers _____	Analyses to be Performed								Remarks
Soil Water Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH	Remarks	
Lab ID	Sample #	Date	Time	Sample Description										
		9/9/21	1500	B-24 (0-5)	X	4								
		9/8/21	1510	B-24 (5-10)	X	4								
		9/8/21	1630	B-24 (10-15)	X	4								
		9/8/21	1640	B-24 (15-20)	X	4								
		9/8/21	1700	B-24 (20-25)	X	4								
		9/9/21	1800	B-24	X		✓	✓	✓	✓	✓	✓	✓	Dissoived metals are field filtered.
	B24 (0-10)			B-24 (0-5)+B-24 (5-10)			✓	✓	✓	✓	✓	✓	✓	
	B24 (10-25)			B-24 (10-15)+B-24 (15-20)+B-24 (20-25)			✓	✓	✓	✓	✓	✓	✓	
Relinquished by <i>Jake Munsey</i>				Company APCY		Date 9/9/2021		Time 0700		Received by <i>DLW</i>		Date 9-9-21 125		Company ACS
Relinquished by				Company		Date		Time		Received by		Date		Company
Relinquished by				Company		Date		Time		Received by		Date		Company

PM *Mark*

Cooler Receipt and Preservation Form

Client COLES + BETTS Service Request K21 10479
Received: 9.9.21 Opened: 9.9.21 By: SW Unloaded: 9.9.21 By: SW

- Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 - Samples were received in: (circle) Cooler Box Envelope Other NA
 - Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: *Frozen Partially Thawed Thawed*

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID/NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
4.3		1R02					
2.2		1R02					

- Packing material: *Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves* _____
- Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- Were samples received in good condition (unbroken) NA Y N
- Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- Did all sample labels and tags agree with custody papers? NA Y N
- Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- Were VOA vials received without headspace? Indicate in the table below. NA Y N
- Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Total Solids

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Analysis Method: 160.3 Modified
Prep Method: None

Service Request: K2110479
Date Collected: 09/8/21
Date Received: 09/9/21
Units: Percent
Basis: As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
B-24 (0-10)C	K2110479-003	78.8	-	-	1	09/14/21 15:11	
B-24 (10-20)C	K2110479-007	89.8	-	-	1	09/14/21 15:11	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21
Date Received: 09/09/21
Date Analyzed: 09/14/21

Replicate Sample Summary
Inorganic Parameters

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Units: Percent
Basis: As Received

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2110479-003DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total	160.3 Modified	-	78.8	83.1	81.0	5	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	4.41	mg/Kg	0.62	0.07	5	09/16/21 12:18	09/15/21	
Barium	6020A	61.6	mg/Kg	0.062	0.025	5	09/16/21 12:18	09/15/21	
Cadmium	6020A	0.069	mg/Kg	0.025	0.009	5	09/16/21 12:18	09/15/21	
Chromium	6020A	12.2	mg/Kg	0.25	0.07	5	09/16/21 12:18	09/15/21	
Lead	6020A	3.54	mg/Kg	0.062	0.025	5	09/16/21 12:18	09/15/21	
Mercury	7471B	0.010 J	mg/Kg	0.023	0.006	1	09/21/21 13:16	09/16/21	
Selenium	6020A	0.1 J	mg/Kg	1.2	0.1	5	09/16/21 12:18	09/15/21	
Silver	6020A	0.019 J	mg/Kg	0.025	0.005	5	09/16/21 12:18	09/15/21	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.55	mg/Kg	0.40	0.05	5	09/16/21 12:30	09/15/21	
Barium	6020A	53.1	mg/Kg	0.040	0.016	5	09/16/21 12:30	09/15/21	
Cadmium	6020A	0.056	mg/Kg	0.016	0.006	5	09/16/21 12:30	09/15/21	
Chromium	6020A	10.5	mg/Kg	0.16	0.05	5	09/16/21 12:30	09/15/21	
Lead	6020A	2.27	mg/Kg	0.040	0.016	5	09/16/21 12:30	09/15/21	
Mercury	7471B	0.015 J	mg/Kg	0.021	0.005	1	09/21/21 13:25	09/16/21	
Selenium	6020A	0.13 J	mg/Kg	0.80	0.07	5	09/16/21 12:30	09/15/21	
Silver	6020A	0.016 J	mg/Kg	0.016	0.003	5	09/16/21 12:30	09/15/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-24
Lab Code: K2110479-008

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	3.82	ug/L	0.50	0.09	1	09/28/21 18:32	09/16/21	
Barium	6020A	8.72	ug/L	0.050	0.020	1	09/28/21 18:32	09/16/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	09/28/21 18:32	09/16/21	
Chromium	6020A	1.80	ug/L	0.20	0.03	1	09/28/21 18:32	09/16/21	
Lead	6020A	0.116	ug/L	0.020	0.006	1	09/28/21 18:32	09/16/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	09/15/21 13:10	09/14/21	
Selenium	6020A	0.3 J	ug/L	1.0	0.2	1	09/28/21 18:32	09/16/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	09/28/21 18:32	09/16/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-24
Lab Code: K2110479-008

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	28.3	ug/L	5.0	0.9	1	09/28/21 18:29	09/16/21	
Barium	6020A	1100	ug/L	0.50	0.20	1	09/28/21 18:29	09/16/21	
Cadmium	6020A	1.86	ug/L	0.20	0.08	1	09/28/21 18:29	09/16/21	
Chromium	6020A	182	ug/L	2.0	0.3	1	09/28/21 18:29	09/16/21	
Lead	6020A	65.2	ug/L	0.20	0.06	1	09/28/21 18:29	09/16/21	
Mercury	7470A	0.04 J	ug/L	0.20	0.02	1	09/15/21 13:08	09/14/21	
Selenium	6020A	3 J	ug/L	10	2	1	09/28/21 18:29	09/16/21	
Silver	6020A	0.74	ug/L	0.20	0.09	1	09/28/21 18:29	09/16/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2117833-03

Service Request: K2110479
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	mg/Kg	0.5	0.06	5	09/16/21 12:14	09/15/21	
Barium	6020A	ND U	mg/Kg	0.05	0.020	5	09/16/21 12:14	09/15/21	
Cadmium	6020A	ND U	mg/Kg	0.020	0.007	5	09/16/21 12:14	09/15/21	
Chromium	6020A	ND U	mg/Kg	0.20	0.06	5	09/16/21 12:14	09/15/21	
Lead	6020A	ND U	mg/Kg	0.05	0.020	5	09/16/21 12:14	09/15/21	
Selenium	6020A	ND U	mg/Kg	1.0	0.09	5	09/16/21 12:14	09/15/21	
Silver	6020A	ND U	mg/Kg	0.020	0.004	5	09/16/21 12:14	09/15/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2117962-01

Service Request: K2110479
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	ug/L	0.50	0.09	1	09/28/21 18:12	09/16/21	
Barium	6020A	ND U	ug/L	0.050	0.020	1	09/28/21 18:12	09/16/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	09/28/21 18:12	09/16/21	
Chromium	6020A	ND U	ug/L	0.20	0.03	1	09/28/21 18:12	09/16/21	
Lead	6020A	ND U	ug/L	0.020	0.006	1	09/28/21 18:12	09/16/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	09/28/21 18:12	09/16/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	09/28/21 18:12	09/16/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2117657-01

Service Request: K2110479
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	0.04 J	ug/L	0.20	0.02	1	09/15/21 12:46	09/14/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2117832-03

Service Request: K2110479
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Date Extracted</u>	<u>Q</u>
Mercury	7471B	ND U	mg/Kg	0.02	0.005	1	09/21/21 13:11	09/16/21	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21
Date Received: 09/09/21
Date Analyzed: 09/16/21

Replicate Sample Summary

Total Metals

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2117833-01 Result			
Arsenic	6020A	0.45	0.05	4.41	4.54	4.48	3	20
Barium	6020A	0.045	0.018	61.6	71.9	66.8	16	20
Cadmium	6020A	0.018	0.006	0.069	0.062	0.066	10	20
Chromium	6020A	0.18	0.05	12.2	11.7	12.0	4	20
Lead	6020A	0.045	0.018	3.54	3.08	3.31	14	20
Selenium	6020A	0.89	0.08	0.14 J	0.12 J	0.13	20	20
Silver	6020A	0.018	0.004	0.019 J	0.018	0.019	7	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21
Date Received: 09/09/21
Date Analyzed: 09/21/21

Replicate Sample Summary

Total Metals

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2117832-01			
Mercury	7471B	0.024	0.006	0.010 J	0.016 J	0.013	40 #	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21
Date Received: 09/09/21
Date Analyzed: 09/16/21
Date Extracted: 09/15/21

Matrix Spike Summary
Total Metals

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003
Analysis Method: 6020A
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2117833-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.41	91.7	88.1	99	75-125
Barium	61.6	251	176	108	75-125
Cadmium	0.069	8.93	8.81	101	75-125
Chromium	12.2	44.6	35.3	92	75-125
Lead	3.54	95.9	88.1	105	75-125
Selenium	0.14 J	86.4	88.1	98	75-125
Silver	0.019 J	8.69	8.81	98	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21
Date Received: 09/09/21
Date Analyzed: 09/21/21
Date Extracted: 09/16/21

Matrix Spike Summary
Total Metals

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003
Analysis Method: 7471B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2117832-02

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	0.010 J	0.605	0.547	109	80-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 09/16/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2117833-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	99.5	100	100	80-120
Barium	6020A	200	200	100	80-120
Cadmium	6020A	9.93	10.0	99	80-120
Chromium	6020A	40.5	40.0	101	80-120
Lead	6020A	102	100	102	80-120
Selenium	6020A	104	100	104	80-120
Silver	6020A	9.95	10.0	100	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 09/28/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2117962-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	47.4	50.0	95	80-120
Barium	6020A	95.9	100	96	80-120
Cadmium	6020A	24.7	25.0	99	80-120
Chromium	6020A	9.47	10.0	95	80-120
Lead	6020A	47.5	50.0	95	80-120
Selenium	6020A	49.2	50.0	98	80-120
Silver	6020A	11.8	12.5	95	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 09/15/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2117657-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	5.41	5.00	108	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 09/21/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2117832-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7471B	0.557	0.500	111	80-120



Butyltins

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.3	0.33	1	10/02/21 01:02	9/16/21	
Di-n-butyltin Cation	ND U	1.3	0.24	1	10/02/21 01:02	9/16/21	
Tri-n-butyltin Cation	0.56 J	1.3	0.54	1	10/02/21 01:02	9/16/21	
Tetra-n-butyltin	0.70 J	1.3	0.56	1	10/02/21 01:02	9/16/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	87	10 - 152	10/02/21 01:02	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15

Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.1	0.29	1	10/14/21 14:27	9/30/21	
Di-n-butyltin Cation	ND U	1.1	0.21	1	10/14/21 14:27	9/30/21	
Tri-n-butyltin Cation	ND U	1.1	0.48	1	10/14/21 14:27	9/30/21	
Tetra-n-butyltin	ND U	1.1	0.49	1	10/14/21 14:27	9/30/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	100	10 - 152	10/14/21 14:27	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15

Sample Name: B-24
Lab Code: K2110479-008

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.052	0.031	1	09/23/21 12:43	9/14/21	
Di-n-butyltin Cation	0.014 J	0.052	0.0077	1	09/23/21 12:43	9/14/21	
Tri-n-butyltin Cation	ND U	0.052	0.013	1	09/23/21 12:43	9/14/21	
Tetra-n-butyltin	ND U	0.052	0.040	1	09/23/21 12:43	9/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	61	10 - 195	09/23/21 12:43	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: Method

Sample Name	Lab Code	Tri-n-propyltin
		10-152
B-24 (0-10)C	K2110479-003	87
B-24 (10-20)C	K2110479-007	100
Method Blank	KQ2117873-04	59
Method Blank	KQ2119331-03	89
Lab Control Sample	KQ2117873-03	107
Lab Control Sample	KQ2119331-01	95
Duplicate Lab Control Sample	KQ2119331-02	27

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: Method

Sample Name	Lab Code	Tri-n-propyltin
		10-195
B-24	K2110479-008	61
Method Blank	KQ2117758-03	50
Lab Control Sample	KQ2117758-01	46
Duplicate Lab Control Sample	KQ2117758-02	54

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2117758-03

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.050	0.029	1	09/23/21 11:54	9/14/21	
Di-n-butyltin Cation	0.0098 J	0.050	0.0073	1	09/23/21 11:54	9/14/21	
Tri-n-butyltin Cation	ND U	0.050	0.012	1	09/23/21 11:54	9/14/21	
Tetra-n-butyltin	ND U	0.050	0.038	1	09/23/21 11:54	9/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	50	10 - 195	09/23/21 11:54	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2117873-04

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.97	0.26	1	10/01/21 20:22	9/16/21	
Di-n-butyltin Cation	ND U	0.97	0.19	1	10/01/21 20:22	9/16/21	
Tri-n-butyltin Cation	ND U	0.97	0.43	1	10/01/21 20:22	9/16/21	
Tetra-n-butyltin	ND U	0.97	0.44	1	10/01/21 20:22	9/16/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	59	10 - 152	10/01/21 20:22	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119331-03

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.99	0.26	1	10/14/21 12:48	9/30/21	
Di-n-butyltin Cation	ND U	0.99	0.19	1	10/14/21 12:48	9/30/21	
Tri-n-butyltin Cation	ND U	0.99	0.43	1	10/14/21 12:48	9/30/21	
Tetra-n-butyltin	ND U	0.99	0.44	1	10/14/21 12:48	9/30/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	89	10 - 152	10/14/21 12:48	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 10/01/21
Date Extracted: 09/16/21

Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 741121

Lab Control Sample
KQ2117873-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Di-n-butyltin Cation	8.43 P	19.2	44	10-190
n-Butyltin Cation	7.37	15.6	47	10-200
Tetra-n-butyltin	23.1	25.0	92	10-194
Tri-n-butyltin Cation	22.3	22.3	100	10-186

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 09/23/21
Date Extracted: 09/14/21

Duplicate Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 739941

Lab Control Sample
KQ2117758-01

Duplicate Lab Control Sample
KQ2117758-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Di-n-butyltin Cation	0.191	0.383	50	0.209	0.383	55	10-200	9	30
n-Butyltin Cation	0.209	0.312	67	0.231	0.312	74	10-200	10	30
Tetra-n-butyltin	0.181	0.500	36	0.206	0.500	41	10-200	13	30
Tri-n-butyltin Cation	0.206	0.446	46	0.239	0.446	54	10-200	14	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 10/14/21
Date Extracted: 09/30/21

Duplicate Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 743385

Lab Control Sample
KQ2119331-01

Duplicate Lab Control Sample
KQ2119331-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Di-n-butyltin Cation	18.2	19.2	95	4.90	19.2	26	10-190	115 *	40
n-Butyltin Cation	13.8	15.6	88	4.35	15.6	28	10-200	104 *	40
Tetra-n-butyltin	24.3	25.0	97	6.46	25.0	26	10-194	116 *	40
Tri-n-butyltin Cation	21.2	22.3	95	5.92	22.3	27	10-186	113 *	40

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 9/9/21

Units: ug/Kg
Basis: Dry
Percent Solids: 78.8

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Tetra-n-butyltin	0.56	0.70	0.79	12	J	1	10/02/21 01:02
Tri-n-butyltin Cation	0.54	0.56	0.72	25	J	1	10/02/21 01:02

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: B-24
Lab Code: K2110479-008

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 9/9/21

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0077	0.014	0.016	13	J	1	09/23/21 12:43

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2117758-01

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.191	0.214	11		1	09/23/21 12:10
Tetra-n-butyltin	0.038	0.181	0.209	14		1	09/23/21 12:10
Tri-n-butyltin Cation	0.012	0.206	0.254	21		1	09/23/21 12:10
n-Butyltin Cation	0.029	0.209	0.269	25		1	09/23/21 12:10

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2117758-02

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.209	0.236	12		1	09/23/21 12:27
Tetra-n-butyltin	0.038	0.206	0.240	15		1	09/23/21 12:27
Tri-n-butyltin Cation	0.012	0.239	0.320	29		1	09/23/21 12:27
n-Butyltin Cation	0.029	0.231	0.282	20		1	09/23/21 12:27

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2117758-03

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.0098	0.012	20	J	1	09/23/21 11:54

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2117873-03

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	8.43	28.6	109	P	1	10/01/21 20:38
Tetra-n-butyltin	0.44	23.1	29.7	25		1	10/01/21 20:38
Tri-n-butyltin Cation	0.43	22.3	24.2	8		1	10/01/21 20:38
n-Butyltin Cation	0.26	7.37	11.0	40		1	10/01/21 20:38

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2119331-01

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	18.2	22.0	19		1	10/14/21 12:15
Tetra-n-butyltin	0.44	24.3	25.2	4		1	10/14/21 12:15
Tri-n-butyltin Cation	0.43	21.2	25.1	17		1	10/14/21 12:15
n-Butyltin Cation	0.26	13.8	17.4	23		1	10/14/21 12:15

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2119331-02

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	4.90	5.55	12		1	10/14/21 12:32
Tetra-n-butyltin	0.44	6.46	6.78	5		1	10/14/21 12:32
Tri-n-butyltin Cation	0.43	5.92	6.36	7		1	10/14/21 12:32
n-Butyltin Cation	0.26	4.35	4.52	4		1	10/14/21 12:32



Semi-Volatile Petroleum Products by GC/FID

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15
Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	30 J	32	2.3	1	09/28/21 19:04	9/21/21	
Residual Range Organics (C25 - C36 RRO)	120 J	130	5.0	1	09/28/21 19:04	9/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	93	50 - 150	09/28/21 19:04	
n-Triacontane	99	50 - 150	09/28/21 19:04	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	17 J	28	2.1	1	09/28/21 19:27	9/21/21	
Residual Range Organics (C25 - C36 RRO)	41 J	110	4.4	1	09/28/21 19:27	9/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	94	50 - 150	09/28/21 19:27	
n-Triacontane	100	50 - 150	09/28/21 19:27	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15

Sample Name: B-24
Lab Code: K2110479-008

Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	990 Z	250	11	1	10/27/21 23:19	9/20/21	
Residual Range Organics (C25 - C36 RRO)	1700 O	500	19	1	10/27/21 23:19	9/20/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	50	50 - 150	10/27/21 03:36	
n-Triacontane	57	50 - 150	10/27/21 03:36	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-24 (0-10)C	K2110479-003	93	99
B-24 (10-20)C	K2110479-007	94	100
Method Blank	KQ2117874-04	97	95
Lab Control Sample	KQ2117874-03	126	120

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-24	K2110479-008	50	57
Method Blank	KQ2118267-03	115	111
Lab Control Sample	KQ2118267-01	115	112
Duplicate Lab Control Sample	KQ2118267-02	110	105

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2117874-04

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	ND U	25	1.8	1	09/22/21 13:29	9/21/21	
Residual Range Organics (C25 - C36 RRO)	ND U	99	3.9	1	09/22/21 13:29	9/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	97	50 - 150	09/22/21 13:29	
n-Triacontane	95	50 - 150	09/22/21 13:29	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2118267-03

Service Request: K2110479
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	23 J	250	11	1	10/10/21 23:12	9/20/21	
Residual Range Organics (C25 - C36 RRO)	87 J	500	19	1	10/10/21 23:12	9/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	115	50 - 150	10/10/21 23:12	
n-Triacontane	111	50 - 150	10/10/21 23:12	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 09/22/21
Date Extracted: 09/21/21

Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Units: mg/Kg
Basis: Dry
Analysis Lot: 739772

Lab Control Sample
KQ2117874-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Diesel Range Organics (C12 - C25 DRO)	344	267	129	42-134
Residual Range Organics (C25 - C36 RRO)	131	133	98	48-141

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 10/10/21
Date Extracted: 09/20/21

Duplicate Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Units: ug/L
Basis: NA
Analysis Lot: 741956

Analyte Name	Lab Control Sample KQ2118267-01			Duplicate Lab Control Sample KQ2118267-02			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Diesel Range Organics (C12 - C25 DRO)	3660	3200	114	3520	3200	110	46-140	4	30
Residual Range Organics (C25 - C36 RRO)	1520	1600	95	1450	1600	90	45-159	5	30



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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15
Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	13	1.7	102.36	09/22/21 13:45	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	107	50 - 150	09/22/21 13:45	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15
Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	12	1.5	104.92	09/22/21 14:09	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	50 - 150	09/22/21 14:09	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15

Sample Name: B-24
Lab Code: K2110479-008

Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	28.2 J	250	12.0	1	09/20/21 20:25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	100	50 - 150	09/20/21 20:25	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene
		50-150
B-24 (0-10)C	K2110479-003	107
B-24 (10-20)C	K2110479-007	97
Method Blank	KQ2118614-06	102
Lab Control Sample	KQ2118614-07	91
Duplicate Lab Control Sample	KQ2118614-08	89

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	1,4-Difluorobenzene
		50-150
B-24	K2110479-008	100
Method Blank	KQ2119136-03	95
Lab Control Sample	KQ2119136-04	101
Duplicate Lab Control Sample	KQ2119136-05	100

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118614-06

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	09/22/21 11:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	50 - 150	09/22/21 11:54	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119136-03

Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	250	12.0	1	09/20/21 16:06	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	95	50 - 150	09/20/21 16:06	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 09/22/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: mg/Kg
Basis: Dry
Analysis Lot: 739731

Lab Control Sample
KQ2118614-07

Duplicate Lab Control Sample
KQ2118614-08

Analyte Name	Lab Control Sample KQ2118614-07			Duplicate Lab Control Sample KQ2118614-08			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Gasoline Range Organics (Toluene-Naphthalene GRO)	19.5	25.0	78	19.2	25.0	77	76-114	1	40

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 09/20/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 739363

Lab Control Sample
KQ2119136-04

Duplicate Lab Control Sample
KQ2119136-05

Analyte Name	Lab Control Sample KQ2119136-04			Duplicate Lab Control Sample KQ2119136-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Gasoline Range Organics (Toluene-Naphthalene GRO)	484	500	97	481	500	96	80-119	<1	30



Ultra Low Level Organochlorine Pesticides by GC/ECD

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15

Sample Name: B-24
Lab Code: K2110479-008

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND Ui	2.0	0.80	1	10/27/21 09:50	9/15/21	*
alpha-BHC	ND Ui	1.0	0.72	1	10/27/21 09:50	9/15/21	*
beta-BHC	ND U	1.0	0.17	1	10/27/21 09:50	9/15/21	*
delta-BHC	ND U	1.0	0.27	1	10/27/21 09:50	9/15/21	*
gamma-BHC (Lindane)	ND U	2.0	0.60	1	10/27/21 09:50	9/15/21	*
cis-Chlordane	ND U	1.0	0.36	1	10/27/21 09:50	9/15/21	*
trans-Chlordane	ND U	2.0	0.54	1	10/27/21 09:50	9/15/21	*
4,4'-DDD	ND U	2.0	0.57	1	10/27/21 09:50	9/15/21	*
4,4'-DDE	ND Ui	1.0	0.84	1	10/27/21 09:50	9/15/21	*
4,4'-DDT	ND Ui	16	16	1	10/27/21 09:50	9/15/21	*
Dieldrin	ND Ui	1.0	0.60	1	10/27/21 09:50	9/15/21	*
Endosulfan I	ND U	1.0	0.36	1	10/27/21 09:50	9/15/21	*
Endosulfan II	5.3 P	1.0	0.34	1	10/27/21 09:50	9/15/21	*
Endosulfan Sulfate	ND Ui	8.4	8.4	1	10/27/21 09:50	9/15/21	*
Endrin	ND U	1.0	0.42	1	10/27/21 09:50	9/15/21	*
Endrin Aldehyde	ND U	1.0	0.47	1	10/27/21 09:50	9/15/21	*
Endrin Ketone	ND U	2.0	0.70	1	10/27/21 09:50	9/15/21	*
Heptachlor	ND U	2.0	0.61	1	10/27/21 09:50	9/15/21	*
Heptachlor Epoxide	ND Ui	1.0	0.47	1	10/27/21 09:50	9/15/21	*
Methoxychlor	ND Ui	39	39	1	10/27/21 09:50	9/15/21	*
Toxaphene	ND U	100	49	1	10/27/21 09:50	9/15/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	58	10 - 139	10/27/21 09:50	
Tetrachloro-m-xylene	123	32 - 151	10/27/21 09:50	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Extraction Method: EPA 3511

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-139	32-151
B-24	K2110479-008	58	123
Method Blank	KQ2117906-07	82	60
Lab Control Sample	KQ2117906-01	85	69
Duplicate Lab Control Sample	KQ2117906-02	82	66
Lab Control Sample	KQ2117906-05	90	68
Duplicate Lab Control Sample	KQ2117906-06	87	59

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2117906-07

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.77	1	10/27/21 01:59	9/15/21	*
alpha-BHC	ND U	1.0	0.25	1	10/27/21 01:59	9/15/21	*
beta-BHC	ND U	1.0	0.17	1	10/27/21 01:59	9/15/21	*
delta-BHC	ND U	1.0	0.27	1	10/27/21 01:59	9/15/21	*
gamma-BHC (Lindane)	ND U	2.0	0.60	1	10/27/21 01:59	9/15/21	*
cis-Chlordane	ND U	1.0	0.36	1	10/27/21 01:59	9/15/21	*
trans-Chlordane	ND U	2.0	0.54	1	10/27/21 01:59	9/15/21	*
4,4'-DDD	ND U	2.0	0.57	1	10/27/21 01:59	9/15/21	*
4,4'-DDE	ND U	1.0	0.46	1	10/27/21 01:59	9/15/21	*
4,4'-DDT	ND U	2.0	0.75	1	10/27/21 01:59	9/15/21	*
Dieldrin	ND U	1.0	0.44	1	10/27/21 01:59	9/15/21	*
Endosulfan I	ND U	1.0	0.36	1	10/27/21 01:59	9/15/21	*
Endosulfan II	ND Ui	1.0	0.56	1	10/27/21 01:59	9/15/21	*
Endosulfan Sulfate	ND U	1.0	0.47	1	10/27/21 01:59	9/15/21	*
Endrin	ND U	1.0	0.42	1	10/27/21 01:59	9/15/21	*
Endrin Aldehyde	ND U	1.0	0.47	1	10/27/21 01:59	9/15/21	*
Endrin Ketone	ND U	2.0	0.70	1	10/27/21 01:59	9/15/21	*
Heptachlor	ND U	2.0	0.61	1	10/27/21 01:59	9/15/21	*
Heptachlor Epoxide	ND U	1.0	0.29	1	10/27/21 01:59	9/15/21	*
Methoxychlor	ND U	2.0	0.85	1	10/27/21 01:59	9/15/21	*
Toxaphene	ND U	100	49	1	10/27/21 01:59	9/15/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	82	10 - 139	10/27/21 01:59	
Tetrachloro-m-xylene	60	32 - 151	10/27/21 01:59	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 10/27/21
Date Extracted: 09/15/21

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 744618

Lab Control Sample
KQ2117906-01

Duplicate Lab Control Sample
KQ2117906-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec	RPD	RPD Limit
							Limits		
4,4'-DDD	28.9 P	25.0	115	28.2 P	25.0	113	35-158	2	30
4,4'-DDE	25.9	25.0	104	25.6	25.0	102	53-129	1	30
4,4'-DDT	26.3	25.0	105	24.9	25.0	99	43-164	6	30
Aldrin	21.1	25.0	84	21.3	25.0	85	37-135	<1	30
alpha-BHC	25.7	25.0	103	25.6	25.0	103	48-148	<1	30
beta-BHC	22.4	25.0	90	22.1	25.0	88	37-133	1	30
cis-Chlordane	26.3	25.0	105	25.3	25.0	101	54-127	4	30
delta-BHC	22.0	25.0	88	21.9	25.0	88	44-128	<1	30
Dieldrin	24.3	25.0	97	23.8	25.0	95	51-122	2	30
Endosulfan I	21.9	25.0	88	22.3	25.0	89	44-135	2	30
Endosulfan II	23.2	25.0	93	24.2	25.0	97	37-180	4	30
Endosulfan Sulfate	22.7	25.0	91	22.1	25.0	88	42-144	3	30
Endrin	25.6	25.0	102	25.2	25.0	101	52-133	1	30
Endrin Aldehyde	24.7	25.0	99	24.6	25.0	98	49-126	<1	30
Endrin Ketone	23.7	25.0	95	23.4	25.0	94	54-131	1	30
gamma-BHC (Lindane)	25.6	25.0	103	24.9	25.0	100	51-140	3	30
Heptachlor	21.9 P	25.0	87	22.2	25.0	89	33-161	1	30
Heptachlor Epoxide	24.7	25.0	99	24.6	25.0	98	51-125	<1	30
Methoxychlor	34.6 P	25.0	138	30.8	25.0	123	38-194	12	30
trans-Chlordane	25.9	25.0	103	25.1	25.0	101	54-126	3	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 10/27/21
Date Extracted: 09/15/21

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 744618

Lab Control Sample
KQ2117906-05

Duplicate Lab Control Sample
KQ2117906-06

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Toxaphene	1460	1000	146	1410	1000	141	44-190	3	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: B-24
Lab Code: K2110479-008

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 9/9/21

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Endosulfan II	0.34	5.3	8.0	41	P	1	10/27/21 09:50

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2117906-01

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	28.9	64.5	76	P	1	10/27/21 08:44
4,4'-DDE	0.46	25.9	26.9	4		1	10/27/21 08:44
4,4'-DDT	0.75	26.3	30.3	14		1	10/27/21 08:44
Aldrin	0.77	21.1	21.3	<1		1	10/27/21 08:44
Dieldrin	0.44	24.3	27.6	13		1	10/27/21 08:44
Endosulfan I	0.36	21.9	23.4	7		1	10/27/21 08:44
Endosulfan II	0.34	23.2	31.0	29		1	10/27/21 08:44
Endosulfan Sulfate	0.47	22.7	27.6	19		1	10/27/21 08:44
Endrin	0.42	25.6	28.0	9		1	10/27/21 08:44
Endrin Aldehyde	0.47	24.7	26.2	6		1	10/27/21 08:44
Endrin Ketone	0.70	23.7	26.5	11		1	10/27/21 08:44
Heptachlor	0.61	21.9	33.4	42	P	1	10/27/21 08:44
Heptachlor Epoxide	0.29	24.7	26.8	8		1	10/27/21 08:44
Methoxychlor	0.85	34.6	349	164	P	1	10/27/21 08:44
alpha-BHC	0.25	25.7	26.9	5		1	10/27/21 08:44
beta-BHC	0.17	22.4	30.3	30		1	10/27/21 08:44
cis-Chlordane	0.36	26.3	27.7	5		1	10/27/21 08:44
delta-BHC	0.27	22.0	24.7	12		1	10/27/21 08:44
gamma-BHC (Lindane)	0.60	25.6	28.4	10		1	10/27/21 08:44
trans-Chlordane	0.54	25.9	27.4	6		1	10/27/21 08:44

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2117906-02

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	28.2	62.2	75	P	1	10/27/21 09:20
4,4'-DDE	0.46	25.6	25.9	1		1	10/27/21 09:20
4,4'-DDT	0.75	24.9	29.5	17		1	10/27/21 09:20
Aldrin	0.77	21.3	21.5	<1		1	10/27/21 09:20
Dieldrin	0.44	23.8	25.6	7		1	10/27/21 09:20
Endosulfan I	0.36	22.3	23.5	5		1	10/27/21 09:20
Endosulfan II	0.34	24.2	24.8	2		1	10/27/21 09:20
Endosulfan Sulfate	0.47	22.1	24.1	9		1	10/27/21 09:20
Endrin	0.42	25.2	27.8	10		1	10/27/21 09:20
Endrin Aldehyde	0.47	24.6	25.7	4		1	10/27/21 09:20
Endrin Ketone	0.70	23.4	26.7	13		1	10/27/21 09:20
Heptachlor	0.61	22.2	31.0	33		1	10/27/21 09:20
Heptachlor Epoxide	0.29	24.6	26.3	7		1	10/27/21 09:20
Methoxychlor	0.85	30.8	37.9	21		1	10/27/21 09:20
alpha-BHC	0.25	25.6	26.1	2		1	10/27/21 09:20
beta-BHC	0.17	22.1	24.9	12		1	10/27/21 09:20
cis-Chlordane	0.36	25.3	27.7	9		1	10/27/21 09:20
delta-BHC	0.27	21.9	24.3	10		1	10/27/21 09:20
gamma-BHC (Lindane)	0.60	24.9	27.6	10		1	10/27/21 09:20
trans-Chlordane	0.54	25.1	27.5	9		1	10/27/21 09:20

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2117906-05

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1460	1480	1		1	10/27/21 02:33

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2117906-06

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1410	1420	<1		1	10/27/21 03:03

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Continuing Calibration Blank
Lab Code: KQ2121573-06

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: None

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Endosulfan II	0.34	0.60	1.6	91	J	1	10/27/21 07:02



Low Level Organochlorine Pesticides by GC

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.2	0.66	1	10/29/21 06:18	9/20/21	
alpha-BHC	ND U	1.1	0.33	1	10/29/21 06:18	9/20/21	
beta-BHC	ND U	1.1	0.31	1	10/29/21 06:18	9/20/21	
delta-BHC	ND U	1.1	0.32	1	10/29/21 06:18	9/20/21	
gamma-BHC (Lindane)	ND U	1.1	0.35	1	10/29/21 06:18	9/20/21	
cis-Chlordane	ND U	1.1	0.46	1	10/29/21 06:18	9/20/21	
trans-Chlordane	ND U	1.1	0.43	1	10/29/21 06:18	9/20/21	
4,4'-DDD	ND U	2.2	0.67	1	10/29/21 06:18	9/20/21	
4,4'-DDE	ND U	1.1	0.45	1	10/29/21 06:18	9/20/21	
4,4'-DDT	ND U	2.2	0.68	1	10/29/21 06:18	9/20/21	
Dieldrin	ND U	1.1	0.25	1	10/29/21 06:18	9/20/21	
Endosulfan I	ND U	1.1	0.42	1	10/29/21 06:18	9/20/21	
Endosulfan II	ND U	2.2	0.77	1	10/29/21 06:18	9/20/21	
Endosulfan Sulfate	ND U	2.2	1.2	1	10/29/21 06:18	9/20/21	
Endrin	ND U	1.1	0.36	1	10/29/21 06:18	9/20/21	
Endrin Aldehyde	ND U	2.2	1.0	1	10/29/21 06:18	9/20/21	
Endrin Ketone	ND U	1.1	0.51	1	10/29/21 06:18	9/20/21	
Heptachlor	ND Ui	1.1	0.48	1	10/29/21 06:18	9/20/21	
Heptachlor Epoxide	ND U	2.2	0.74	1	10/29/21 06:18	9/20/21	
Methoxychlor	ND Ui	2.2	2.1	1	10/29/21 06:18	9/20/21	
Toxaphene	ND U	110	38	1	10/29/21 06:18	9/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	66	10 - 134	10/29/21 06:18	
Tetrachloro-m-xylene	58	10 - 121	10/29/21 06:18	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15

Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.60	1	10/29/21 11:02	9/20/21	
alpha-BHC	ND U	1.0	0.30	1	10/29/21 11:02	9/20/21	
beta-BHC	ND U	1.0	0.28	1	10/29/21 11:02	9/20/21	
delta-BHC	ND U	1.0	0.29	1	10/29/21 11:02	9/20/21	
gamma-BHC (Lindane)	ND Ui	1.0	0.44	1	10/29/21 11:02	9/20/21	
cis-Chlordane	ND U	1.0	0.42	1	10/29/21 11:02	9/20/21	
trans-Chlordane	ND U	1.0	0.39	1	10/29/21 11:02	9/20/21	
4,4'-DDD	ND U	2.0	0.61	1	10/29/21 11:02	9/20/21	
4,4'-DDE	0.45 J	1.0	0.41	1	10/29/21 11:02	9/20/21	
4,4'-DDT	ND U	2.0	0.62	1	10/29/21 11:02	9/20/21	
Dieldrin	ND U	1.0	0.23	1	10/29/21 11:02	9/20/21	
Endosulfan I	ND Ui	1.0	0.47	1	10/29/21 11:02	9/20/21	
Endosulfan II	ND Ui	2.0	1.6	1	10/29/21 11:02	9/20/21	
Endosulfan Sulfate	ND U	2.0	1.0	1	10/29/21 11:02	9/20/21	
Endrin	ND U	1.0	0.33	1	10/29/21 11:02	9/20/21	
Endrin Aldehyde	ND U	2.0	0.90	1	10/29/21 11:02	9/20/21	
Endrin Ketone	ND U	1.0	0.46	1	10/29/21 11:02	9/20/21	
Heptachlor	ND Ui	1.0	0.84	1	10/29/21 11:02	9/20/21	
Heptachlor Epoxide	ND U	2.0	0.67	1	10/29/21 11:02	9/20/21	
Methoxychlor	ND Ui	2.0	0.95	1	10/29/21 11:02	9/20/21	
Toxaphene	ND U	100	35	1	10/29/21 11:02	9/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	67	10 - 134	10/29/21 11:02	
Tetrachloro-m-xylene	68	10 - 121	10/29/21 11:02	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-134	10-121
B-24 (0-10)C	K2110479-003	66	58
B-24 (10-20)C	K2110479-007	67	68
Method Blank	KQ2118278-03	71	63
Lab Control Sample	KQ2118278-04	69	63
Lab Control Sample	KQ2118278-10	65	60
B-24 (0-10)C	KQ2118278-01	58	56
B-24 (0-10)C	KQ2118278-02	66	65
B-24 (0-10)C	KQ2118278-07	63	55
B-24 (0-10)C	KQ2118278-08	60	55

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21
Date Received: 09/09/21
Date Analyzed: 10/29/21
Date Extracted: 09/20/21

Duplicate Matrix Spike Summary
Low Level Organochlorine Pesticides by GC

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003
Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2118278-01			Duplicate Matrix Spike KQ2118278-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Aldrin	ND U	15.6	26.2	60	21.5	31.1	69	18-89	32	40
alpha-BHC	ND U	16.2	26.2	62	22.9	31.1	73	16-96	34	40
beta-BHC	ND U	17.6	26.2	67	24.6	31.1	79	16-106	33	40
delta-BHC	ND U	15.9	26.2	61	22.4	31.1	72	20-95	34	40
gamma-BHC (Lindane)	ND U	16.0	26.2	61	22.4	31.1	72	17-97	33	40
cis-Chlordane	ND U	16.6	26.2	63	23.5	31.1	75	20-93	34	40
trans-Chlordane	ND U	16.4	26.2	63	23.1	31.1	74	10-103	34	40
4,4'-DDD	ND U	15.9	26.2	61	22.5	31.1	72	10-180	34	40
4,4'-DDE	ND U	16.2	26.2	62	21.1	31.1	68	17-94	26	40
4,4'-DDT	ND U	17.6	26.2	67	25.5	31.1	82	17-104	36	40
Dieldrin	ND U	15.3	26.2	58	21.5	31.1	69	19-88	34	40
Endosulfan I	ND U	12.8	26.2	49	17.7	31.1	57	16-87	32	40
Endosulfan II	ND U	14.8	26.2	57	21.4	31.1	69	15-117	37	40
Endosulfan Sulfate	ND U	15.0	26.2	57	20.8	31.1	67	17-98	32	40
Endrin	ND U	16.6	26.2	64	22.9	31.1	74	10-107	32	40
Endrin Aldehyde	ND U	16.3	26.2	62	23.0	31.1	74	21-94	34	40
Endrin Ketone	ND U	15.8	26.2	61	22.2	31.1	71	19-97	34	40
Heptachlor	ND Ui	16.5 P	26.2	63	22.9 P	31.1	74	13-111	32	40
Heptachlor Epoxide	ND U	15.9	26.2	61	22.3	31.1	72	18-92	34	40
Methoxychlor	ND Ui	24.8	26.2	95	35.0 P	31.1	112	17-122	34	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21
Date Received: 09/09/21
Date Analyzed: 10/29/21
Date Extracted: 09/20/21

Duplicate Matrix Spike Summary
Low Level Organochlorine Pesticides by GC

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003
Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2118278-07			Duplicate Matrix Spike KQ2118278-08			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Toxaphene	ND U	711	556	128 *	511 P	573	89	16-114	33	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118278-03

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.59	1	10/29/21 00:13	9/20/21	
alpha-BHC	ND U	1.0	0.29	1	10/29/21 00:13	9/20/21	
beta-BHC	ND Ui	1.0	0.31	1	10/29/21 00:13	9/20/21	
delta-BHC	ND U	1.0	0.28	1	10/29/21 00:13	9/20/21	
gamma-BHC (Lindane)	ND U	1.0	0.31	1	10/29/21 00:13	9/20/21	
cis-Chlordane	ND U	1.0	0.41	1	10/29/21 00:13	9/20/21	
trans-Chlordane	ND U	1.0	0.38	1	10/29/21 00:13	9/20/21	
4,4'-DDD	ND U	2.0	0.60	1	10/29/21 00:13	9/20/21	
4,4'-DDE	ND U	1.0	0.40	1	10/29/21 00:13	9/20/21	
4,4'-DDT	ND U	2.0	0.61	1	10/29/21 00:13	9/20/21	
Dieldrin	0.33 JP	0.82	0.22	1	10/29/21 00:13	9/20/21	
Endosulfan I	ND U	1.0	0.37	1	10/29/21 00:13	9/20/21	
Endosulfan II	ND Ui	2.1	2.1	1	10/29/21 00:13	9/20/21	
Endosulfan Sulfate	ND U	2.0	0.99	1	10/29/21 00:13	9/20/21	
Endrin	ND U	1.0	0.32	1	10/29/21 00:13	9/20/21	
Endrin Aldehyde	ND U	2.0	0.89	1	10/29/21 00:13	9/20/21	
Endrin Ketone	ND U	1.0	0.45	1	10/29/21 00:13	9/20/21	
Heptachlor	ND U	1.0	0.39	1	10/29/21 00:13	9/20/21	
Heptachlor Epoxide	ND U	2.0	0.66	1	10/29/21 00:13	9/20/21	
Methoxychlor	ND U	2.0	0.71	1	10/29/21 00:13	9/20/21	
Toxaphene	ND U	100	34	1	10/29/21 00:13	9/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	71	10 - 134	10/29/21 00:13	
Tetrachloro-m-xylene	63	10 - 121	10/29/21 00:13	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 10/29/21
Date Extracted: 09/20/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 744660

Lab Control Sample
KQ2118278-04

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
4,4'-DDD	18.3	25.0	73	10-180
4,4'-DDE	18.4	25.0	74	17-94
4,4'-DDT	20.8	25.0	83	17-104
Aldrin	16.8	25.0	67	18-89
alpha-BHC	18.3	25.0	73	16-96
beta-BHC	19.6	25.0	79	16-106
cis-Chlordane	18.9	25.0	76	20-93
delta-BHC	17.8	25.0	71	20-95
Dieldrin	17.6	25.0	71	19-88
Endosulfan I	14.7	25.0	59	16-87
Endosulfan II	18.7	25.0	75	15-117
Endosulfan Sulfate	17.3	25.0	69	17-98
Endrin	18.8	25.0	75	10-107
Endrin Aldehyde	19.0	25.0	76	21-94
Endrin Ketone	17.3	25.0	69	19-97
gamma-BHC (Lindane)	17.9	25.0	71	17-97
Heptachlor	18.4	25.0	74	13-111
Heptachlor Epoxide	18.5	25.0	74	18-92
Methoxychlor	24.4 P	25.0	97	17-122
trans-Chlordane	18.7	25.0	75	10-103

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 10/29/21
Date Extracted: 09/20/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 744660

Lab Control Sample
KQ2118278-10

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Toxaphene	625	500	125 *	16-114

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 9/9/21

Units: ug/Kg
Basis: Dry
Percent Solids: 89.8

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDE	0.41	0.45	0.51	12	J	1	10/29/21 11:02

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dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: KQ2118278-01

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 9/9/21

Units: ug/Kg
Basis: Dry
Percent Solids: 78.8

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.63	15.9	19.8	22		1	10/29/21 06:53
4,4'-DDE	0.42	16.2	16.8	4		1	10/29/21 06:53
4,4'-DDT	0.64	17.6	22.1	23		1	10/29/21 06:53
Aldrin	0.62	15.6	16.1	3		1	10/29/21 06:53
Dieldrin	0.24	15.3	15.9	4		1	10/29/21 06:53
Endosulfan I	0.39	12.8	13.5	5		1	10/29/21 06:53
Endosulfan II	0.73	14.8	18.7	23		1	10/29/21 06:53
Endosulfan Sulfate	1.1	15.0	16.4	9		1	10/29/21 06:53
Endrin	0.34	16.6	17.0	2		1	10/29/21 06:53
Endrin Aldehyde	0.94	16.3	17.9	9		1	10/29/21 06:53
Endrin Ketone	0.48	15.8	18.0	13		1	10/29/21 06:53
Heptachlor	0.41	16.5	30.5	60	P	1	10/29/21 06:53
Heptachlor Epoxide	0.70	15.9	16.9	6		1	10/29/21 06:53
Methoxychlor	0.75	24.8	37.1	40		1	10/29/21 06:53
alpha-BHC	0.31	16.2	16.7	3		1	10/29/21 06:53
beta-BHC	0.29	17.6	20.3	14		1	10/29/21 06:53
cis-Chlordane	0.43	16.6	17.4	5		1	10/29/21 06:53
delta-BHC	0.30	15.9	17.5	10		1	10/29/21 06:53
gamma-BHC (Lindane)	0.33	16.0	17.6	10		1	10/29/21 06:53
trans-Chlordane	0.40	16.4	16.5	<1		1	10/29/21 06:53

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dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: KQ2118278-02

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 9/9/21

Units: ug/Kg
Basis: Dry
Percent Solids: 78.8

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.75	22.5	29.0	25		1	10/29/21 07:27
4,4'-DDE	0.50	21.1	23.6	11		1	10/29/21 07:27
4,4'-DDT	0.77	25.5	28.6	11		1	10/29/21 07:27
Aldrin	0.74	21.5	21.6	<1		1	10/29/21 07:27
Dieldrin	0.28	21.5	22.9	6		1	10/29/21 07:27
Endosulfan I	0.47	17.7	19.2	8		1	10/29/21 07:27
Endosulfan II	0.86	21.4	25.4	17		1	10/29/21 07:27
Endosulfan Sulfate	1.3	20.8	22.4	7		1	10/29/21 07:27
Endrin	0.40	22.9	24.2	6		1	10/29/21 07:27
Endrin Aldehyde	1.2	23.0	24.7	7		1	10/29/21 07:27
Endrin Ketone	0.57	22.2	26.2	17		1	10/29/21 07:27
Heptachlor	0.49	22.9	36.7	46	P	1	10/29/21 07:27
Heptachlor Epoxide	0.83	22.3	24.0	7		1	10/29/21 07:27
Methoxychlor	0.89	35.0	62.1	56	P	1	10/29/21 07:27
alpha-BHC	0.37	22.9	23.1	<1		1	10/29/21 07:27
beta-BHC	0.34	24.6	28.9	16		1	10/29/21 07:27
cis-Chlordane	0.52	23.5	24.8	5		1	10/29/21 07:27
delta-BHC	0.35	22.4	24.6	9		1	10/29/21 07:27
gamma-BHC (Lindane)	0.39	22.4	25.0	11		1	10/29/21 07:27
trans-Chlordane	0.48	23.1	23.3	<1		1	10/29/21 07:27

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2118278-03

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Dieldrin	0.22	0.33	0.65	65	JP	1	10/29/21 00:13

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2118278-04

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.60	18.3	20.6	12		1	10/29/21 05:43
4,4'-DDE	0.40	18.4	19.4	5		1	10/29/21 05:43
4,4'-DDT	0.61	20.8	18.2	13		1	10/29/21 05:43
Aldrin	0.59	16.8	17.4	4		1	10/29/21 05:43
Dieldrin	0.22	17.6	18.5	5		1	10/29/21 05:43
Endosulfan I	0.37	14.7	15.1	3		1	10/29/21 05:43
Endosulfan II	0.69	18.7	21.2	13		1	10/29/21 05:43
Endosulfan Sulfate	0.99	17.3	20.7	18		1	10/29/21 05:43
Endrin	0.32	18.8	19.8	5		1	10/29/21 05:43
Endrin Aldehyde	0.89	19.0	19.2	1		1	10/29/21 05:43
Endrin Ketone	0.45	17.3	20.4	16		1	10/29/21 05:43
Heptachlor	0.39	18.4	25.8	33		1	10/29/21 05:43
Heptachlor Epoxide	0.66	18.5	18.8	2		1	10/29/21 05:43
Methoxychlor	0.71	24.4	232	162	P	1	10/29/21 05:43
alpha-BHC	0.29	18.3	18.5	1		1	10/29/21 05:43
beta-BHC	0.27	19.6	24.3	21		1	10/29/21 05:43
cis-Chlordane	0.41	18.9	19.4	3		1	10/29/21 05:43
delta-BHC	0.28	17.8	19.2	8		1	10/29/21 05:43
gamma-BHC (Lindane)	0.31	17.9	19.7	10		1	10/29/21 05:43
trans-Chlordane	0.38	18.7	18.7	<1		1	10/29/21 05:43

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: KQ2118278-07

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 9/9/21

Units: ug/Kg
Basis: Dry
Percent Solids: 78.8

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	38	711	1040	38		1	10/29/21 09:14

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: KQ2118278-08

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 9/9/21

Units: ug/Kg
Basis: Dry
Percent Solids: 78.8

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	39	511	773	41	P	1	10/29/21 09:50

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2118278-10

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	34	625	848	30		1	10/29/21 01:14



Polychlorinated Biphenyls (PCBs)

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: 09/08/2021
Date Received: 09/09/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-24
Lab Code: K2110479-008
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1221	ND	U	0.40	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1232	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1242	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1248	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1254	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1260	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	47	10-140	10/23/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG2102499-3
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1221	ND	U	0.40	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1232	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1242	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1248	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1254	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	
Aroclor 1260	ND	U	0.20	0.028	1	09/16/21	10/23/21	KWG2102499	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	76	10-140	10/23/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/2021
Date Received: 09/09/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	11	3.1	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1221	ND	U	21	3.1	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1232	ND	U	11	3.1	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1242	ND	U	11	3.1	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1248	ND	U	11	3.1	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1254	ND	U	11	3.1	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1260	ND	U	11	3.1	1	09/20/21	12/01/21	KWG2102563	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	117	20-155	12/01/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/2021
Date Received: 09/09/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-24 (10-20)C
Lab Code: K2110479-007
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	11	3.0	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1221	ND	U	21	3.0	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1232	ND	U	11	3.0	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1242	ND	U	11	3.0	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1248	ND	U	11	3.0	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1254	ND	U	11	3.0	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1260	ND	U	11	3.0	1	09/20/21	12/01/21	KWG2102563	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	115	20-155	12/01/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG2102563-4
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	2.9	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1221	ND	U	17	2.9	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1232	ND	U	10	2.9	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1242	ND	U	10	2.9	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1248	ND	U	10	2.9	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1254	ND	U	10	2.9	1	09/20/21	12/01/21	KWG2102563	
Aroclor 1260	ND	U	10	2.9	1	09/20/21	12/01/21	KWG2102563	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	108	20-155	12/01/21	Acceptable

Comments: _____

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479

**Surrogate Recovery Summary
 Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3511
Analysis Method: 8082A

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
B-24	K2110479-008	47
Method Blank	KWG2102499-3	76
Lab Control Sample	KWG2102499-1	79
Duplicate Lab Control Sample	KWG2102499-2	80

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 10-140

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479

**Surrogate Recovery Summary
 Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
B-24 (0-10)C	K2110479-003	117
B-24 (10-20)C	K2110479-007	115
Method Blank	KWG2102563-4	108
B-24 (0-10)CMS	KWG2102563-1	106
B-24 (0-10)CDMS	KWG2102563-2	116
Lab Control Sample	KWG2102563-3	104

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 20-155

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Extracted: 09/20/2021
Date Analyzed: 12/01/2021

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102563

Analyte Name	Sample Result	B-24 (0-10)CMS KWG2102563-1 Matrix Spike			B-24 (0-10)CDMS KWG2102563-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Aroclor 1016	ND	116	117	99	107	115	94	44-119	8	40
Aroclor 1260	ND	130	117	111	134	115	117	56-130	3	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Extracted: 09/16/2021
Date Analyzed: 10/23/2021

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG2102499

Analyte Name	Lab Control Sample KWG2102499-1 Lab Control Spike			Duplicate Lab Control Sample KWG2102499-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Aroclor 1016	2.40	2.50	96	2.42	2.50	97	31-164	1	30
Aroclor 1260	2.49	2.50	99	2.50	2.50	100	34-182	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Extracted: 09/20/2021
Date Analyzed: 12/01/2021

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102563

Lab Control Sample
 KWG2102563-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Aroclor 1016	98.6	100	99	44-119
Aroclor 1260	115	100	115	56-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Chlorinated Herbicides

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	63	5.1	1	10/24/21 04:34	9/22/21	
2,4,5-TP (Silvex)	ND U	63	3.1	1	10/24/21 04:34	9/22/21	
2,4-D	ND U	63	9.8	1	10/24/21 04:34	9/22/21	
2,4-DB	ND U	63	6.9	1	10/24/21 04:34	9/22/21	
Dalapon	ND U	63	7.0	1	10/24/21 04:34	9/22/21	
Dicamba	ND U	63	5.5	1	10/24/21 04:34	9/22/21	
Dichlorprop	ND U	63	4.3	1	10/24/21 04:34	9/22/21	*
Dinoseb	ND U	63	3.5	1	10/24/21 04:34	9/22/21	
MCPA	2600 JP	6300	410	1	10/24/21 04:34	9/22/21	
MCPP	ND U _i	8300	8300	1	10/24/21 04:34	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	89	26 - 127	10/24/21 04:34	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	55	4.5	1	10/24/21 04:58	9/22/21	
2,4,5-TP (Silvex)	ND U	55	2.7	1	10/24/21 04:58	9/22/21	
2,4-D	ND U	55	8.6	1	10/24/21 04:58	9/22/21	
2,4-DB	ND U	55	6.0	1	10/24/21 04:58	9/22/21	
Dalapon	ND U	55	6.2	1	10/24/21 04:58	9/22/21	
Dicamba	ND U	55	4.8	1	10/24/21 04:58	9/22/21	
Dichlorprop	ND U	55	3.8	1	10/24/21 04:58	9/22/21	*
Dinoseb	ND U	55	3.0	1	10/24/21 04:58	9/22/21	
MCPA	ND U	5500	360	1	10/24/21 04:58	9/22/21	
MCPP	ND U	5500	520	1	10/24/21 04:58	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	83	26 - 127	10/24/21 04:58	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-24
Lab Code: K2110479-008

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	10/23/21 14:16	9/27/21	*
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	10/23/21 14:16	9/27/21	*
2,4-D	ND U	0.38	0.036	1	10/23/21 14:16	9/27/21	*
2,4-DB	ND Ui	0.38	0.22	1	10/23/21 14:16	9/27/21	*
Dalapon	ND U	0.38	0.28	1	10/23/21 14:16	9/27/21	*
Dicamba	ND U	0.19	0.025	1	10/23/21 14:16	9/27/21	*
Dichlorprop	ND U	0.38	0.030	1	10/23/21 14:16	9/27/21	*
Dinoseb	ND Ui	0.19	0.043	1	10/23/21 14:16	9/27/21	*
MCPA	ND U	95	8.7	1	10/23/21 14:16	9/27/21	*
MCPP	ND U	95	14	1	10/23/21 14:16	9/27/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	30	17 - 113	10/23/21 14:16	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 26-127
B-24 (0-10)C	K2110479-003	89
B-24 (10-20)C	K2110479-007	83
Method Blank	KQ2118556-04	70
Lab Control Sample	KQ2118556-03	78

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 17-113
B-24	K2110479-008	30
Method Blank	KQ2118892-03	48
Lab Control Sample	KQ2118892-01	92
Duplicate Lab Control Sample	KQ2118892-02	84

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2118556-04

Service Request: K2110479
Date Collected: NA
Date Received: NA
Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	49	4.0	1	10/24/21 03:46	9/22/21	
2,4,5-TP (Silvex)	ND U	49	2.4	1	10/24/21 03:46	9/22/21	
2,4-D	ND U	49	7.7	1	10/24/21 03:46	9/22/21	
2,4-DB	ND U	49	5.4	1	10/24/21 03:46	9/22/21	
Dalapon	ND U	49	5.5	1	10/24/21 03:46	9/22/21	
Dicamba	ND U	49	4.3	1	10/24/21 03:46	9/22/21	
Dichlorprop	ND U	49	3.4	1	10/24/21 03:46	9/22/21	
Dinoseb	ND U	49	2.7	1	10/24/21 03:46	9/22/21	
MCPA	ND U	4900	320	1	10/24/21 03:46	9/22/21	
MCPP	ND U	4900	460	1	10/24/21 03:46	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	70	26 - 127	10/24/21 03:46	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2118892-03

Service Request: K2110479
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	10/01/21 22:18	9/27/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	10/01/21 22:18	9/27/21	
2,4-D	ND U	0.38	0.036	1	10/01/21 22:18	9/27/21	
2,4-DB	ND U	0.38	0.10	1	10/01/21 22:18	9/27/21	
Dalapon	ND U	0.38	0.28	1	10/01/21 22:18	9/27/21	
Dicamba	ND U	0.19	0.025	1	10/01/21 22:18	9/27/21	
Dichlorprop	ND U	0.38	0.030	1	10/01/21 22:18	9/27/21	
Dinoseb	ND U	0.19	0.015	1	10/01/21 22:18	9/27/21	
MCPA	ND U	94	8.7	1	10/01/21 22:18	9/27/21	
MCPP	ND U	94	14	1	10/01/21 22:18	9/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	48	17 - 113	10/01/21 22:18	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 10/24/21
Date Extracted: 09/22/21

Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 746581

Lab Control Sample
KQ2118556-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-T	135	167	81	44-125
2,4,5-TP (Silvex)	136	167	81	46-125
2,4-D	128	167	77	46-120
2,4-DB	160	167	96	30-126
Dalapon	96.5	167	58	13-100
Dicamba	150	167	90	43-119
Dichlorprop	136	167	82	47-108
Dinoseb	95.2	167	57	25-110
MCPA	13800	16700	83	40-128
MCPB	13700	16700	82	49-134

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 10/01/21
Date Extracted: 09/27/21

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/L
Basis: NA
Analysis Lot: 743669

Lab Control Sample
KQ2118892-01

Duplicate Lab Control Sample
KQ2118892-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-T	1.98	2.50	79	1.84	2.50	74	30-120	8	30
2,4,5-TP (Silvex)	1.92	2.50	77	1.79	2.50	72	37-114	7	30
2,4-D	1.84	2.50	73	1.68	2.50	67	35-110	9	30
2,4-DB	1.97	2.50	79	2.49 P	2.50	100	10-134	24	30
Dalapon	1.82	2.50	73	2.82 P	2.50	113 *	14-110	43 *	30
Dicamba	1.81	2.50	72	1.80	2.50	72	30-108	<1	30
Dichlorprop	1.69	2.50	68	1.63	2.50	65	29-104	4	30
Dinoseb	1.53	2.50	61	1.42	2.50	57	11-105	7	30
MCPA	200	250	80	190	250	76	21-117	5	30
MCPP	215 P	250	86	230	250	92	16-141	7	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 9/9/21

Units: ug/Kg
Basis: Dry
Percent Solids: 78.8

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
MCPA	410	2600	5800	76	JP	1	10/24/21 04:34

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2118556-03

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	4.0	135	140	4		1	10/24/21 04:10
2,4,5-TP (Silvex)	2.4	136	138	1		1	10/24/21 04:10
2,4-D	7.7	128	134	5		1	10/24/21 04:10
2,4-DB	5.4	160	236	38		1	10/24/21 04:10
Dalapon	5.5	96.5	119	21		1	10/24/21 04:10
Dicamba	4.3	150	176	16		1	10/24/21 04:10
Dichlorprop	3.4	136	145	6		1	10/24/21 04:10
Dinoseb	2.7	95.2	96.8	2		1	10/24/21 04:10
MCPA	320	13800	15800	14		1	10/24/21 04:10
MCPP	460	13700	14000	2		1	10/24/21 04:10

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2118892-01

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.98	2.02	2		1	10/01/21 22:44
2,4,5-TP (Silvex)	0.045	1.92	1.95	2		1	10/01/21 22:44
2,4-D	0.036	1.84	1.99	8		1	10/01/21 22:44
2,4-DB	0.10	1.97	2.61	28		1	10/01/21 22:44
Dalapon	0.28	1.82	1.31	33		1	10/01/21 22:44
Dicamba	0.025	1.81	1.91	5		1	10/01/21 22:44
Dichlorprop	0.030	1.69	1.80	6		1	10/01/21 22:44
Dinoseb	0.015	1.53	1.57	3		1	10/01/21 22:44
MCPA	8.7	200	143	33		1	10/01/21 22:44
MCPP	14	215	133	47	P	1	10/01/21 22:44

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2118892-02

Service Request: K2110479
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.84	1.91	4		1	10/01/21 23:07
2,4,5-TP (Silvex)	0.045	1.79	1.85	3		1	10/01/21 23:07
2,4-D	0.036	1.68	1.90	12		1	10/01/21 23:07
2,4-DB	0.10	2.49	1.35	59	P	1	10/01/21 23:07
Dalapon	0.28	2.82	1.41	67	P	1	10/01/21 23:07
Dicamba	0.025	1.80	1.98	10		1	10/01/21 23:07
Dichlorprop	0.030	1.63	1.66	2		1	10/01/21 23:07
Dinoseb	0.015	1.42	1.52	7		1	10/01/21 23:07
MCPA	8.7	190	160	17		1	10/01/21 23:07
MCPP	14	230	167	32		1	10/01/21 23:07



Volatile Organic Compounds

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15

Sample Name: B-24
Lab Code: K2110479-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	11 J	20	3.3	1	09/16/21 18:52	
Benzene	0.080 J	0.50	0.062	1	09/16/21 18:52	
Bromobenzene	ND U	2.0	0.12	1	09/16/21 18:52	
Bromochloromethane	ND U	0.50	0.16	1	09/16/21 18:52	
Bromodichloromethane	ND U	0.50	0.091	1	09/16/21 18:52	*
Bromoform	ND U	0.50	0.16	1	09/16/21 18:52	
Bromomethane	ND U	0.50	0.16	1	09/16/21 18:52	
2-Butanone (MEK)	ND U	20	1.9	1	09/16/21 18:52	
n-Butylbenzene	ND U	4.0	0.054	1	09/16/21 18:52	
sec-Butylbenzene	ND U	2.0	0.062	1	09/16/21 18:52	
tert-Butylbenzene	ND U	2.0	0.059	1	09/16/21 18:52	
Carbon Disulfide	0.33 J	0.50	0.069	1	09/16/21 18:52	*
Carbon Tetrachloride	ND U	0.50	0.096	1	09/16/21 18:52	
Chlorobenzene	ND U	0.50	0.11	1	09/16/21 18:52	
Chloroethane	ND U	0.50	0.16	1	09/16/21 18:52	
Chloroform	ND U	0.50	0.072	1	09/16/21 18:52	
Chloromethane	0.35 J	0.50	0.068	1	09/16/21 18:52	
2-Chlorotoluene	ND U	2.0	0.10	1	09/16/21 18:52	
4-Chlorotoluene	ND U	2.0	0.13	1	09/16/21 18:52	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	09/16/21 18:52	
Dibromochloromethane	ND U	0.50	0.14	1	09/16/21 18:52	*
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	09/16/21 18:52	
Dibromomethane	ND U	0.50	0.15	1	09/16/21 18:52	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	09/16/21 18:52	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	09/16/21 18:52	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	09/16/21 18:52	
Dichlorodifluoromethane	ND U	0.50	0.13	1	09/16/21 18:52	
1,1-Dichloroethane	ND U	0.50	0.077	1	09/16/21 18:52	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	09/16/21 18:52	
1,1-Dichloroethene	ND U	0.50	0.080	1	09/16/21 18:52	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	09/16/21 18:52	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	09/16/21 18:52	
1,2-Dichloropropane	ND U	0.50	0.095	1	09/16/21 18:52	
1,3-Dichloropropane	ND U	0.50	0.14	1	09/16/21 18:52	
2,2-Dichloropropane	ND U	0.50	0.065	1	09/16/21 18:52	
1,1-Dichloropropene	ND U	0.50	0.089	1	09/16/21 18:52	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	09/16/21 18:52	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	09/16/21 18:52	
Ethylbenzene	ND U	0.50	0.050	1	09/16/21 18:52	
Hexachlorobutadiene	ND U	2.0	0.11	1	09/16/21 18:52	
2-Hexanone	ND U	20	2.7	1	09/16/21 18:52	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15

Sample Name: B-24
Lab Code: K2110479-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	09/16/21 18:52	
4-Isopropyltoluene	ND U	2.0	0.060	1	09/16/21 18:52	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	09/16/21 18:52	
Methylene Chloride	ND U	2.0	0.10	1	09/16/21 18:52	
Naphthalene	ND U	2.0	0.088	1	09/16/21 18:52	*
n-Propylbenzene	ND U	2.0	0.054	1	09/16/21 18:52	
Styrene	ND U	0.50	0.089	1	09/16/21 18:52	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	09/16/21 18:52	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	09/16/21 18:52	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	09/16/21 18:52	
Toluene	0.090 J	0.50	0.054	1	09/16/21 18:52	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	09/16/21 18:52	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	09/16/21 18:52	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	09/16/21 18:52	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	09/16/21 18:52	
Trichloroethene (TCE)	ND U	0.50	0.10	1	09/16/21 18:52	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	09/16/21 18:52	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	09/16/21 18:52	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	09/16/21 18:52	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	09/16/21 18:52	
Vinyl Chloride	ND U	0.50	0.075	1	09/16/21 18:52	
o-Xylene	ND U	0.50	0.074	1	09/16/21 18:52	
m,p-Xylenes	ND U	0.50	0.11	1	09/16/21 18:52	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	86	68 - 117	09/16/21 18:52	
Dibromofluoromethane	107	73 - 122	09/16/21 18:52	
Toluene-d8	99	65 - 144	09/16/21 18:52	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
B-24	K2110479-008	86	107	99
Method Blank	KQ2119017-05	80	107	101
Lab Control Sample	KQ2119017-03	92	101	105
Duplicate Lab Control Sample	KQ2119017-04	92	98	103

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119017-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	ND U	20	3.3	1	09/16/21 13:07	
Benzene	ND U	0.50	0.062	1	09/16/21 13:07	
Bromobenzene	ND U	2.0	0.12	1	09/16/21 13:07	
Bromochloromethane	ND U	0.50	0.16	1	09/16/21 13:07	
Bromodichloromethane	ND U	0.50	0.091	1	09/16/21 13:07	
Bromoform	ND U	0.50	0.16	1	09/16/21 13:07	
Bromomethane	ND U	0.50	0.16	1	09/16/21 13:07	
2-Butanone (MEK)	ND U	20	1.9	1	09/16/21 13:07	
n-Butylbenzene	ND U	4.0	0.054	1	09/16/21 13:07	
sec-Butylbenzene	ND U	2.0	0.062	1	09/16/21 13:07	
tert-Butylbenzene	ND U	2.0	0.059	1	09/16/21 13:07	
Carbon Disulfide	0.12 J	0.50	0.069	1	09/16/21 13:07	
Carbon Tetrachloride	ND U	0.50	0.096	1	09/16/21 13:07	
Chlorobenzene	ND U	0.50	0.11	1	09/16/21 13:07	
Chloroethane	ND U	0.50	0.16	1	09/16/21 13:07	
Chloroform	ND U	0.50	0.072	1	09/16/21 13:07	
Chloromethane	ND U	0.50	0.068	1	09/16/21 13:07	
2-Chlorotoluene	ND U	2.0	0.10	1	09/16/21 13:07	
4-Chlorotoluene	ND U	2.0	0.13	1	09/16/21 13:07	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	09/16/21 13:07	
Dibromochloromethane	ND U	0.50	0.14	1	09/16/21 13:07	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	09/16/21 13:07	
Dibromomethane	ND U	0.50	0.15	1	09/16/21 13:07	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	09/16/21 13:07	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	09/16/21 13:07	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	09/16/21 13:07	
Dichlorodifluoromethane	ND U	0.50	0.13	1	09/16/21 13:07	
1,1-Dichloroethane	ND U	0.50	0.077	1	09/16/21 13:07	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	09/16/21 13:07	
1,1-Dichloroethene	ND U	0.50	0.080	1	09/16/21 13:07	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	09/16/21 13:07	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	09/16/21 13:07	
1,2-Dichloropropane	ND U	0.50	0.095	1	09/16/21 13:07	
1,3-Dichloropropane	ND U	0.50	0.14	1	09/16/21 13:07	
2,2-Dichloropropane	ND U	0.50	0.065	1	09/16/21 13:07	
1,1-Dichloropropene	ND U	0.50	0.089	1	09/16/21 13:07	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	09/16/21 13:07	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	09/16/21 13:07	
Ethylbenzene	ND U	0.50	0.050	1	09/16/21 13:07	
Hexachlorobutadiene	0.16 J	2.0	0.11	1	09/16/21 13:07	
2-Hexanone	ND U	20	2.7	1	09/16/21 13:07	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119017-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	09/16/21 13:07	
4-Isopropyltoluene	ND U	2.0	0.060	1	09/16/21 13:07	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	09/16/21 13:07	
Methylene Chloride	ND U	2.0	0.10	1	09/16/21 13:07	
Naphthalene	0.18 J	2.0	0.088	1	09/16/21 13:07	
n-Propylbenzene	ND U	2.0	0.054	1	09/16/21 13:07	
Styrene	ND U	0.50	0.089	1	09/16/21 13:07	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	09/16/21 13:07	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	09/16/21 13:07	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	09/16/21 13:07	
Toluene	ND U	0.50	0.054	1	09/16/21 13:07	
1,2,3-Trichlorobenzene	0.32 J	2.0	0.11	1	09/16/21 13:07	
1,2,4-Trichlorobenzene	0.14 J	2.0	0.096	1	09/16/21 13:07	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	09/16/21 13:07	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	09/16/21 13:07	
Trichloroethene (TCE)	ND U	0.50	0.10	1	09/16/21 13:07	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	09/16/21 13:07	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	09/16/21 13:07	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	09/16/21 13:07	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	09/16/21 13:07	
Vinyl Chloride	ND U	0.50	0.075	1	09/16/21 13:07	
o-Xylene	ND U	0.50	0.074	1	09/16/21 13:07	
m,p-Xylenes	ND U	0.50	0.11	1	09/16/21 13:07	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	80	68 - 117	09/16/21 13:07	
Dibromofluoromethane	107	73 - 122	09/16/21 13:07	
Toluene-d8	101	65 - 144	09/16/21 13:07	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 09/16/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 738979

Analyte Name	Lab Control Sample KQ2119017-03			Duplicate Lab Control Sample KQ2119017-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	10.8	10.0	108	10.7	10.0	107	66-124	1	30
1,1,1-Trichloroethane (TCA)	11.0	10.0	110	10.6	10.0	106	59-136	3	30
1,1,2,2-Tetrachloroethane	9.26	10.0	93	9.13	10.0	91	70-127	1	30
1,1,2-Trichloroethane	9.78	10.0	98	10.0	10.0	100	74-118	2	30
1,1-Dichloroethane	11.0	10.0	110	10.4	10.0	104	68-132	5	30
1,1-Dichloroethene	8.90	10.0	89	8.76	10.0	88	66-129	2	30
1,1-Dichloropropene	10.5	10.0	105	9.87	10.0	99	59-134	6	30
1,2,3-Trichlorobenzene	8.27	10.0	83	8.57	10.0	86	68-120	4	30
1,2,3-Trichloropropane	9.66	10.0	97	9.73	10.0	97	69-123	<1	30
1,2,4-Trichlorobenzene	8.40	10.0	84	8.35	10.0	84	58-126	<1	30
1,2,4-Trimethylbenzene	9.28	10.0	93	9.04	10.0	90	63-122	3	30
1,2-Dibromo-3-chloropropane	10.3	10.0	103	9.64	10.0	96	55-132	7	30
1,2-Dibromoethane (EDB)	9.80	10.0	98	9.73	10.0	97	74-118	<1	30
1,2-Dichlorobenzene	9.37	10.0	94	9.22	10.0	92	72-115	2	30
1,2-Dichloroethane (EDC)	10.6	10.0	106	10.4	10.0	104	56-142	1	30
1,2-Dichloropropane	10.6	10.0	106	10.1	10.0	101	67-126	4	30
1,3,5-Trimethylbenzene	9.12	10.0	91	8.86	10.0	89	62-126	3	30
1,3-Dichlorobenzene	9.33	10.0	93	9.12	10.0	91	70-116	2	30
1,3-Dichloropropane	9.73	10.0	97	9.79	10.0	98	75-116	<1	30
1,4-Dichlorobenzene	9.49	10.0	95	9.24	10.0	92	73-115	3	30
2,2-Dichloropropane	10.0	10.0	100	9.77	10.0	98	37-145	2	30
2-Butanone (MEK)	51.1	50.0	102	50.0	50.0	100	71-149	2	30
2-Chlorotoluene	9.37	10.0	94	9.21	10.0	92	55-131	2	30
2-Hexanone	45.4	50.0	91	45.4	50.0	91	59-131	<1	30
4-Chlorotoluene	9.55	10.0	96	9.33	10.0	93	66-121	2	30
4-Isopropyltoluene	9.39	10.0	94	9.08	10.0	91	61-128	3	30
4-Methyl-2-pentanone (MIBK)	51.6	50.0	103	51.8	50.0	104	64-134	<1	30
Acetone	53.2	50.0	106	51.0	50.0	102	68-135	4	30
Benzene	10.7	10.0	107	10.2	10.0	102	69-124	4	30
Bromobenzene	9.31	10.0	93	9.17	10.0	92	72-116	2	30
Bromochloromethane	11.0	10.0	110	10.8	10.0	108	75-131	2	30
Bromodichloromethane	11.9	10.0	119	11.1	10.0	111	63-129	7	30
Bromoform	11.1	10.0	111	11.1	10.0	111	52-144	<1	30
Bromomethane	7.57	10.0	76	7.23	10.0	72	35-113	5	30
Carbon Disulfide	16.4	20.0	82	15.7	20.0	78	46-144	4	30
Carbon Tetrachloride	11.7	10.0	117	11.1	10.0	111	55-140	5	30
Chlorobenzene	9.99	10.0	100	9.71	10.0	97	72-116	3	30
Chloroethane	10.2	10.0	102	9.60	10.0	96	58-134	6	30
Chloroform	10.7	10.0	107	10.4	10.0	104	70-129	3	30
Chloromethane	8.43	10.0	84	8.01	10.0	80	34-130	5	30
cis-1,2-Dichloroethene	10.3	10.0	103	10.0	10.0	100	71-118	3	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 09/16/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 738979

Analyte Name	Lab Control Sample KQ2119017-03			Duplicate Lab Control Sample KQ2119017-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	11.4	10.0	114	10.7	10.0	107	62-132	6	30
Dibromochloromethane	12.0	10.0	120	12.0	10.0	120	67-126	<1	30
Dibromomethane	10.1	10.0	101	10.2	10.0	102	69-128	1	30
Dichlorodifluoromethane	7.05	10.0	71	6.70	10.0	67	32-124	5	30
Ethylbenzene	9.27	10.0	93	9.15	10.0	92	67-121	1	30
Hexachlorobutadiene	10.2	10.0	102	9.95	10.0	100	57-119	3	30
Isopropylbenzene	9.25	10.0	93	9.07	10.0	91	67-129	2	30
m,p-Xylenes	18.7	20.0	93	18.6	20.0	93	69-121	<1	30
Methylene Chloride	10.7	10.0	107	10.6	10.0	106	71-122	1	30
Naphthalene	7.42	10.0	74	7.51	10.0	75	64-126	1	30
n-Butylbenzene	8.61	10.0	86	8.16	10.0	82	55-130	5	30
n-Propylbenzene	9.20	10.0	92	8.87	10.0	89	61-124	4	30
o-Xylene	9.32	10.0	93	9.02	10.0	90	71-119	3	30
sec-Butylbenzene	8.81	10.0	88	8.54	10.0	85	59-128	3	30
Styrene	9.57	10.0	96	9.49	10.0	95	74-121	<1	30
tert-Butylbenzene	8.90	10.0	89	8.51	10.0	85	61-127	4	30
Tetrachloroethene (PCE)	9.83	10.0	98	9.84	10.0	98	62-126	<1	30
Toluene	10.9	10.0	109	10.2	10.0	102	69-124	7	30
trans-1,2-Dichloroethene	10.8	10.0	108	10.4	10.0	104	67-125	4	30
trans-1,3-Dichloropropene	9.68	10.0	97	9.78	10.0	98	59-125	1	30
Trichloroethene (TCE)	10.5	10.0	105	10.3	10.0	103	67-128	3	30
Trichlorofluoromethane (CFC 11)	9.09	10.0	91	8.44	10.0	84	52-141	7	30
Vinyl Chloride	9.09	10.0	91	8.76	10.0	88	55-123	4	30



Volatile Organic Compounds by GC/MS, Unpreserved

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	6.0	0.14	1	10/04/21 21:43	*
1,1,1-Trichloroethane (TCA)	ND U	6.0	0.14	1	10/04/21 21:43	*
1,1,2,2-Tetrachloroethane	ND U	6.0	0.16	1	10/04/21 21:43	*
1,1,2-Trichloroethane	ND U	6.0	0.18	1	10/04/21 21:43	*
1,1-Dichloroethane	ND U	6.0	0.15	1	10/04/21 21:43	*
1,1-Dichloroethene	ND U	6.0	0.30	1	10/04/21 21:43	*
1,1-Dichloropropene	ND U	6.0	0.16	1	10/04/21 21:43	*
1,2,3-Trichlorobenzene	ND U	24	0.23	1	10/04/21 21:43	*
1,2,3-Trichloropropane	ND U	6.0	0.54	1	10/04/21 21:43	*
1,2,4-Trichlorobenzene	ND U	24	0.16	1	10/04/21 21:43	*
1,2,4-Trimethylbenzene	ND U	24	0.065	1	10/04/21 21:43	*
1,2-Dibromo-3-chloropropane	ND U	24	0.48	1	10/04/21 21:43	*
1,2-Dibromoethane (EDB)	ND U	24	0.12	1	10/04/21 21:43	*
1,2-Dichlorobenzene	ND U	6.0	0.092	1	10/04/21 21:43	*
1,2-Dichloroethane (EDC)	ND U	6.0	0.084	1	10/04/21 21:43	*
1,2-Dichloropropane	ND U	6.0	0.16	1	10/04/21 21:43	*
1,3,5-Trimethylbenzene	ND U	24	0.11	1	10/04/21 21:43	*
1,3-Dichlorobenzene	ND U	6.0	0.12	1	10/04/21 21:43	*
1,3-Dichloropropane	ND U	6.0	0.15	1	10/04/21 21:43	*
1,4-Dichlorobenzene	ND U	6.0	0.11	1	10/04/21 21:43	*
2,2-Dichloropropane	ND U	6.0	0.12	1	10/04/21 21:43	*
2-Butanone (MEK)	ND U	24	1.1	1	10/04/21 21:43	*
2-Chlorotoluene	ND U	24	0.15	1	10/04/21 21:43	*
2-Hexanone	ND U	24	1.2	1	10/04/21 21:43	*
4-Chlorotoluene	ND U	24	0.11	1	10/04/21 21:43	*
4-Isopropyltoluene	ND U	24	0.077	1	10/04/21 21:43	*
4-Methyl-2-pentanone (MIBK)	ND U	24	2.2	1	10/04/21 21:43	*
Acetone	13 J	24	3.5	1	10/04/21 21:43	*
Benzene	ND U	6.0	0.065	1	10/04/21 21:43	*
Bromobenzene	ND U	6.0	0.11	1	10/04/21 21:43	*
Bromochloromethane	ND U	6.0	0.29	1	10/04/21 21:43	*
Bromodichloromethane	ND U	6.0	0.20	1	10/04/21 21:43	*
Bromoform	ND U	6.0	0.17	1	10/04/21 21:43	*
Bromomethane	ND U	6.0	0.24	1	10/04/21 21:43	*
Carbon Disulfide	0.79 J	6.0	0.11	1	10/04/21 21:43	*
Carbon Tetrachloride	ND U	6.0	0.12	1	10/04/21 21:43	*
Chlorobenzene	ND U	6.0	0.078	1	10/04/21 21:43	*
Chloroethane	ND U	6.0	0.89	1	10/04/21 21:43	*
Chloroform	ND U	6.0	0.14	1	10/04/21 21:43	*
Chloromethane	ND U	6.0	0.22	1	10/04/21 21:43	*
Dibromochloromethane	ND U	6.0	0.22	1	10/04/21 21:43	*

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	6.0	0.34	1	10/04/21 21:43	*
Dichlorodifluoromethane	ND U	6.0	0.15	1	10/04/21 21:43	*
Ethylbenzene	ND U	6.0	0.12	1	10/04/21 21:43	*
Hexachlorobutadiene	ND U	24	0.48	1	10/04/21 21:43	*
Isopropylbenzene	ND U	24	0.097	1	10/04/21 21:43	*
Methylene Chloride	1.0 J	12	0.20	1	10/04/21 21:43	*
Naphthalene	ND U	24	0.16	1	10/04/21 21:43	*
Styrene	ND U	6.0	0.17	1	10/04/21 21:43	*
Tetrachloroethene (PCE)	ND U	6.0	0.20	1	10/04/21 21:43	*
Toluene	ND U	6.0	0.18	1	10/04/21 21:43	*
Trichloroethene (TCE)	ND U	6.0	0.18	1	10/04/21 21:43	*
Trichlorofluoromethane	ND U	6.0	0.11	1	10/04/21 21:43	*
Vinyl Chloride	ND U	6.0	0.22	1	10/04/21 21:43	*
cis-1,2-Dichloroethene	ND U	6.0	0.15	1	10/04/21 21:43	*
cis-1,3-Dichloropropene	ND U	6.0	0.16	1	10/04/21 21:43	*
m,p-Xylenes	ND U	6.0	0.12	1	10/04/21 21:43	*
n-Butylbenzene	ND U	24	0.083	1	10/04/21 21:43	*
n-Propylbenzene	ND U	24	0.16	1	10/04/21 21:43	*
o-Xylene	ND U	6.0	0.097	1	10/04/21 21:43	*
sec-Butylbenzene	ND U	24	0.089	1	10/04/21 21:43	*
tert-Butylbenzene	ND U	24	0.17	1	10/04/21 21:43	*
trans-1,2-Dichloroethene	ND U	6.0	0.15	1	10/04/21 21:43	*
trans-1,3-Dichloropropene	ND U	6.0	0.14	1	10/04/21 21:43	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	61 - 133	10/04/21 21:43	
Dibromofluoromethane	90	59 - 134	10/04/21 21:43	
Toluene-d8	105	77 - 122	10/04/21 21:43	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15

Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	4.9	0.11	1	09/16/21 19:11	*
1,1,1-Trichloroethane (TCA)	ND U	4.9	0.11	1	09/16/21 19:11	*
1,1,2,2-Tetrachloroethane	ND U	4.9	0.13	1	09/16/21 19:11	*
1,1,2-Trichloroethane	ND U	4.9	0.15	1	09/16/21 19:11	*
1,1-Dichloroethane	ND U	4.9	0.12	1	09/16/21 19:11	*
1,1-Dichloroethene	ND U	4.9	0.25	1	09/16/21 19:11	*
1,1-Dichloropropene	ND U	4.9	0.13	1	09/16/21 19:11	*
1,2,3-Trichlorobenzene	ND U	20	0.19	1	09/16/21 19:11	*
1,2,3-Trichloropropane	ND U	4.9	0.45	1	09/16/21 19:11	*
1,2,4-Trichlorobenzene	ND U	20	0.13	1	09/16/21 19:11	*
1,2,4-Trimethylbenzene	ND U	20	0.054	1	09/16/21 19:11	*
1,2-Dibromo-3-chloropropane	ND U	20	0.40	1	09/16/21 19:11	*
1,2-Dibromoethane (EDB)	ND U	20	0.094	1	09/16/21 19:11	*
1,2-Dichlorobenzene	ND U	4.9	0.077	1	09/16/21 19:11	*
1,2-Dichloroethane (EDC)	ND U	4.9	0.070	1	09/16/21 19:11	*
1,2-Dichloropropane	ND U	4.9	0.13	1	09/16/21 19:11	*
1,3,5-Trimethylbenzene	ND U	20	0.092	1	09/16/21 19:11	*
1,3-Dichlorobenzene	ND U	4.9	0.094	1	09/16/21 19:11	*
1,3-Dichloropropane	ND U	4.9	0.12	1	09/16/21 19:11	*
1,4-Dichlorobenzene	ND U	4.9	0.086	1	09/16/21 19:11	*
2,2-Dichloropropane	ND U	4.9	0.098	1	09/16/21 19:11	*
2-Butanone (MEK)	ND U	20	0.90	1	09/16/21 19:11	*
2-Chlorotoluene	ND U	20	0.12	1	09/16/21 19:11	*
2-Hexanone	ND U	20	0.93	1	09/16/21 19:11	*
4-Chlorotoluene	ND U	20	0.088	1	09/16/21 19:11	*
4-Isopropyltoluene	ND U	20	0.064	1	09/16/21 19:11	*
4-Methyl-2-pentanone (MIBK)	ND U	20	1.8	1	09/16/21 19:11	*
Acetone	5.6 J	20	2.9	1	09/16/21 19:11	*
Benzene	ND U	4.9	0.054	1	09/16/21 19:11	*
Bromobenzene	ND U	4.9	0.088	1	09/16/21 19:11	*
Bromochloromethane	ND U	4.9	0.24	1	09/16/21 19:11	*
Bromodichloromethane	ND U	4.9	0.16	1	09/16/21 19:11	*
Bromoform	ND U	4.9	0.14	1	09/16/21 19:11	*
Bromomethane	ND U	4.9	0.20	1	09/16/21 19:11	*
Carbon Disulfide	ND U	4.9	0.092	1	09/16/21 19:11	*
Carbon Tetrachloride	ND U	4.9	0.094	1	09/16/21 19:11	*
Chlorobenzene	ND U	4.9	0.065	1	09/16/21 19:11	*
Chloroethane	ND U	4.9	0.74	1	09/16/21 19:11	*
Chloroform	ND U	4.9	0.11	1	09/16/21 19:11	*
Chloromethane	ND U	4.9	0.18	1	09/16/21 19:11	*
Dibromochloromethane	ND U	4.9	0.18	1	09/16/21 19:11	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15

Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	4.9	0.28	1	09/16/21 19:11	*
Dichlorodifluoromethane	ND U	4.9	0.12	1	09/16/21 19:11	*
Ethylbenzene	ND U	4.9	0.094	1	09/16/21 19:11	*
Hexachlorobutadiene	ND U	20	0.40	1	09/16/21 19:11	*
Isopropylbenzene	ND U	20	0.081	1	09/16/21 19:11	*
Methylene Chloride	ND U	9.8	0.16	1	09/16/21 19:11	*
Naphthalene	ND U	20	0.13	1	09/16/21 19:11	*
Styrene	ND U	4.9	0.14	1	09/16/21 19:11	*
Tetrachloroethene (PCE)	ND U	4.9	0.16	1	09/16/21 19:11	*
Toluene	ND U	4.9	0.15	1	09/16/21 19:11	*
Trichloroethene (TCE)	ND U	4.9	0.15	1	09/16/21 19:11	*
Trichlorofluoromethane	ND U	4.9	0.085	1	09/16/21 19:11	*
Vinyl Chloride	ND U	4.9	0.18	1	09/16/21 19:11	*
cis-1,2-Dichloroethene	ND U	4.9	0.12	1	09/16/21 19:11	*
cis-1,3-Dichloropropene	ND U	4.9	0.13	1	09/16/21 19:11	*
m,p-Xylenes	ND U	4.9	0.10	1	09/16/21 19:11	*
n-Butylbenzene	ND U	20	0.069	1	09/16/21 19:11	*
n-Propylbenzene	ND U	20	0.13	1	09/16/21 19:11	*
o-Xylene	ND U	4.9	0.081	1	09/16/21 19:11	*
sec-Butylbenzene	ND U	20	0.074	1	09/16/21 19:11	*
tert-Butylbenzene	ND U	20	0.14	1	09/16/21 19:11	*
trans-1,2-Dichloroethene	ND U	4.9	0.12	1	09/16/21 19:11	*
trans-1,3-Dichloropropene	ND U	4.9	0.11	1	09/16/21 19:11	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	107	61 - 133	09/16/21 19:11	
Dibromofluoromethane	99	59 - 134	09/16/21 19:11	
Toluene-d8	104	77 - 122	09/16/21 19:11	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		61-133	59-134	77-122
B-24 (0-10)C	K2110479-003	95	90	105
B-24 (10-20)C	K2110479-007	107	99	104
Method Blank	KQ2119078-05	106	102	105
Method Blank	KQ2119719-05	101	100	109
Lab Control Sample	KQ2119078-03	87	102	101
Duplicate Lab Control Sample	KQ2119078-04	110	143*	106
Lab Control Sample	KQ2119719-03	103	99	110
Duplicate Lab Control Sample	KQ2119719-04	103	101	111

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119078-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.0	0.11	1	09/16/21 15:21	
1,1,1-Trichloroethane (TCA)	ND U	5.0	0.11	1	09/16/21 15:21	
1,1,2,2-Tetrachloroethane	ND U	5.0	0.13	1	09/16/21 15:21	
1,1,2-Trichloroethane	ND U	5.0	0.15	1	09/16/21 15:21	
1,1-Dichloroethane	ND U	5.0	0.12	1	09/16/21 15:21	
1,1-Dichloroethene	ND U	5.0	0.25	1	09/16/21 15:21	
1,1-Dichloropropene	ND U	5.0	0.13	1	09/16/21 15:21	
1,2,3-Trichlorobenzene	ND U	20	0.19	1	09/16/21 15:21	
1,2,3-Trichloropropane	ND U	5.0	0.45	1	09/16/21 15:21	
1,2,4-Trichlorobenzene	ND U	20	0.13	1	09/16/21 15:21	
1,2,4-Trimethylbenzene	ND U	20	0.054	1	09/16/21 15:21	
1,2-Dibromo-3-chloropropane	ND U	20	0.40	1	09/16/21 15:21	
1,2-Dibromoethane (EDB)	ND U	20	0.094	1	09/16/21 15:21	
1,2-Dichlorobenzene	ND U	5.0	0.077	1	09/16/21 15:21	
1,2-Dichloroethane (EDC)	ND U	5.0	0.070	1	09/16/21 15:21	
1,2-Dichloropropane	ND U	5.0	0.13	1	09/16/21 15:21	
1,3,5-Trimethylbenzene	ND U	20	0.092	1	09/16/21 15:21	
1,3-Dichlorobenzene	ND U	5.0	0.094	1	09/16/21 15:21	
1,3-Dichloropropane	ND U	5.0	0.12	1	09/16/21 15:21	
1,4-Dichlorobenzene	ND U	5.0	0.086	1	09/16/21 15:21	
2,2-Dichloropropane	ND U	5.0	0.098	1	09/16/21 15:21	
2-Butanone (MEK)	ND U	20	0.90	1	09/16/21 15:21	
2-Chlorotoluene	ND U	20	0.12	1	09/16/21 15:21	
2-Hexanone	ND U	20	0.93	1	09/16/21 15:21	
4-Chlorotoluene	ND U	20	0.088	1	09/16/21 15:21	
4-Isopropyltoluene	ND U	20	0.064	1	09/16/21 15:21	
4-Methyl-2-pentanone (MIBK)	ND U	20	1.8	1	09/16/21 15:21	
Acetone	7.5 J	20	2.9	1	09/16/21 15:21	
Benzene	ND U	5.0	0.054	1	09/16/21 15:21	
Bromobenzene	ND U	5.0	0.088	1	09/16/21 15:21	
Bromochloromethane	ND U	5.0	0.24	1	09/16/21 15:21	
Bromodichloromethane	ND U	5.0	0.16	1	09/16/21 15:21	
Bromoform	ND U	5.0	0.14	1	09/16/21 15:21	
Bromomethane	ND U	5.0	0.20	1	09/16/21 15:21	
Carbon Disulfide	ND U	5.0	0.092	1	09/16/21 15:21	
Carbon Tetrachloride	ND U	5.0	0.094	1	09/16/21 15:21	
Chlorobenzene	ND U	5.0	0.065	1	09/16/21 15:21	
Chloroethane	ND U	5.0	0.74	1	09/16/21 15:21	
Chloroform	ND U	5.0	0.11	1	09/16/21 15:21	
Chloromethane	ND U	5.0	0.18	1	09/16/21 15:21	
Dibromochloromethane	ND U	5.0	0.18	1	09/16/21 15:21	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119078-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.0	0.28	1	09/16/21 15:21	
Dichlorodifluoromethane	ND U	5.0	0.12	1	09/16/21 15:21	
Ethylbenzene	ND U	5.0	0.094	1	09/16/21 15:21	
Hexachlorobutadiene	ND U	20	0.40	1	09/16/21 15:21	
Isopropylbenzene	ND U	20	0.081	1	09/16/21 15:21	
Methylene Chloride	ND U	10	0.16	1	09/16/21 15:21	
Naphthalene	ND U	20	0.13	1	09/16/21 15:21	
Styrene	ND U	5.0	0.14	1	09/16/21 15:21	
Tetrachloroethene (PCE)	ND U	5.0	0.16	1	09/16/21 15:21	
Toluene	ND U	5.0	0.15	1	09/16/21 15:21	
Trichloroethene (TCE)	ND U	5.0	0.15	1	09/16/21 15:21	
Trichlorofluoromethane	ND U	5.0	0.085	1	09/16/21 15:21	
Vinyl Chloride	ND U	5.0	0.18	1	09/16/21 15:21	
cis-1,2-Dichloroethene	ND U	5.0	0.12	1	09/16/21 15:21	
cis-1,3-Dichloropropene	ND U	5.0	0.13	1	09/16/21 15:21	
m,p-Xylenes	ND U	5.0	0.10	1	09/16/21 15:21	
n-Butylbenzene	ND U	20	0.069	1	09/16/21 15:21	
n-Propylbenzene	ND U	20	0.13	1	09/16/21 15:21	
o-Xylene	ND U	5.0	0.081	1	09/16/21 15:21	
sec-Butylbenzene	ND U	20	0.074	1	09/16/21 15:21	
tert-Butylbenzene	ND U	20	0.14	1	09/16/21 15:21	
trans-1,2-Dichloroethene	ND U	5.0	0.12	1	09/16/21 15:21	
trans-1,3-Dichloropropene	ND U	5.0	0.11	1	09/16/21 15:21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	61 - 133	09/16/21 15:21	
Dibromofluoromethane	102	59 - 134	09/16/21 15:21	
Toluene-d8	105	77 - 122	09/16/21 15:21	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119719-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.0	0.11	1	10/04/21 19:38	
1,1,1-Trichloroethane (TCA)	ND U	5.0	0.11	1	10/04/21 19:38	
1,1,2,2-Tetrachloroethane	ND U	5.0	0.13	1	10/04/21 19:38	
1,1,2-Trichloroethane	ND U	5.0	0.15	1	10/04/21 19:38	
1,1-Dichloroethane	ND U	5.0	0.12	1	10/04/21 19:38	
1,1-Dichloroethene	ND U	5.0	0.25	1	10/04/21 19:38	
1,1-Dichloropropene	ND U	5.0	0.13	1	10/04/21 19:38	
1,2,3-Trichlorobenzene	1.3 J	20	0.19	1	10/04/21 19:38	
1,2,3-Trichloropropane	ND U	5.0	0.45	1	10/04/21 19:38	
1,2,4-Trichlorobenzene	1.2 J	20	0.13	1	10/04/21 19:38	
1,2,4-Trimethylbenzene	ND U	20	0.054	1	10/04/21 19:38	
1,2-Dibromo-3-chloropropane	ND U	20	0.40	1	10/04/21 19:38	
1,2-Dibromoethane (EDB)	ND U	20	0.094	1	10/04/21 19:38	
1,2-Dichlorobenzene	ND U	5.0	0.077	1	10/04/21 19:38	
1,2-Dichloroethane (EDC)	ND U	5.0	0.070	1	10/04/21 19:38	
1,2-Dichloropropane	ND U	5.0	0.13	1	10/04/21 19:38	
1,3,5-Trimethylbenzene	ND U	20	0.092	1	10/04/21 19:38	
1,3-Dichlorobenzene	ND U	5.0	0.094	1	10/04/21 19:38	
1,3-Dichloropropane	ND U	5.0	0.12	1	10/04/21 19:38	
1,4-Dichlorobenzene	ND U	5.0	0.086	1	10/04/21 19:38	
2,2-Dichloropropane	ND U	5.0	0.098	1	10/04/21 19:38	
2-Butanone (MEK)	ND U	20	0.90	1	10/04/21 19:38	
2-Chlorotoluene	ND U	20	0.12	1	10/04/21 19:38	
2-Hexanone	ND U	20	0.93	1	10/04/21 19:38	
4-Chlorotoluene	ND U	20	0.088	1	10/04/21 19:38	
4-Isopropyltoluene	ND U	20	0.064	1	10/04/21 19:38	
4-Methyl-2-pentanone (MIBK)	ND U	20	1.8	1	10/04/21 19:38	
Acetone	3.0 J	20	2.9	1	10/04/21 19:38	
Benzene	ND U	5.0	0.054	1	10/04/21 19:38	
Bromobenzene	ND U	5.0	0.088	1	10/04/21 19:38	
Bromochloromethane	ND U	5.0	0.24	1	10/04/21 19:38	
Bromodichloromethane	ND U	5.0	0.16	1	10/04/21 19:38	
Bromoform	ND U	5.0	0.14	1	10/04/21 19:38	
Bromomethane	ND U	5.0	0.20	1	10/04/21 19:38	
Carbon Disulfide	ND U	5.0	0.092	1	10/04/21 19:38	
Carbon Tetrachloride	ND U	5.0	0.094	1	10/04/21 19:38	
Chlorobenzene	ND U	5.0	0.065	1	10/04/21 19:38	
Chloroethane	ND U	5.0	0.74	1	10/04/21 19:38	
Chloroform	ND U	5.0	0.11	1	10/04/21 19:38	
Chloromethane	ND U	5.0	0.18	1	10/04/21 19:38	
Dibromochloromethane	ND U	5.0	0.18	1	10/04/21 19:38	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119719-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.0	0.28	1	10/04/21 19:38	
Dichlorodifluoromethane	ND U	5.0	0.12	1	10/04/21 19:38	
Ethylbenzene	ND U	5.0	0.094	1	10/04/21 19:38	
Hexachlorobutadiene	ND U	20	0.40	1	10/04/21 19:38	
Isopropylbenzene	ND U	20	0.081	1	10/04/21 19:38	
Methylene Chloride	ND U	10	0.16	1	10/04/21 19:38	
Naphthalene	1.5 J	20	0.13	1	10/04/21 19:38	
Styrene	ND U	5.0	0.14	1	10/04/21 19:38	
Tetrachloroethene (PCE)	ND U	5.0	0.16	1	10/04/21 19:38	
Toluene	ND U	5.0	0.15	1	10/04/21 19:38	
Trichloroethene (TCE)	ND U	5.0	0.15	1	10/04/21 19:38	
Trichlorofluoromethane	ND U	5.0	0.085	1	10/04/21 19:38	
Vinyl Chloride	ND U	5.0	0.18	1	10/04/21 19:38	
cis-1,2-Dichloroethene	ND U	5.0	0.12	1	10/04/21 19:38	
cis-1,3-Dichloropropene	ND U	5.0	0.13	1	10/04/21 19:38	
m,p-Xylenes	ND U	5.0	0.10	1	10/04/21 19:38	
n-Butylbenzene	0.43 J	20	0.069	1	10/04/21 19:38	
n-Propylbenzene	ND U	20	0.13	1	10/04/21 19:38	
o-Xylene	ND U	5.0	0.081	1	10/04/21 19:38	
sec-Butylbenzene	ND U	20	0.074	1	10/04/21 19:38	
tert-Butylbenzene	ND U	20	0.14	1	10/04/21 19:38	
trans-1,2-Dichloroethene	ND U	5.0	0.12	1	10/04/21 19:38	
trans-1,3-Dichloropropene	ND U	5.0	0.11	1	10/04/21 19:38	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	61 - 133	10/04/21 19:38	
Dibromofluoromethane	100	59 - 134	10/04/21 19:38	
Toluene-d8	109	77 - 122	10/04/21 19:38	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 09/16/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 739033

Analyte Name	Lab Control Sample KQ2119078-03			Duplicate Lab Control Sample KQ2119078-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	37.6	50.0	75	41.0	50.0	82	71-119	9	40
1,1,1-Trichloroethane (TCA)	40.4	50.0	81	53.6	50.0	107	59-146	28	40
1,1,2,2-Tetrachloroethane	38.9	50.0	78	40.2	50.0	80	60-128	3	40
1,1,2-Trichloroethane	41.8	50.0	84	42.1	50.0	84	72-118	<1	40
1,1-Dichloroethane	36.1	50.0	72	49.1	50.0	98	59-137	31	40
1,1-Dichloroethene	36.1	50.0	72	49.4	50.0	99	64-152	31	40
1,1-Dichloropropene	44.2	50.0	88	58.4	50.0	117	52-142	28	40
1,2,3-Trichlorobenzene	42.3	50.0	85	42.2	50.0	84	52-138	<1	40
1,2,3-Trichloropropane	37.9	50.0	76	37.8	50.0	76	53-134	<1	40
1,2,4-Trichlorobenzene	44.3	50.0	89	42.5	50.0	85	57-136	4	40
1,2,4-Trimethylbenzene	42.2	50.0	84	42.0	50.0	84	65-132	<1	40
1,2-Dibromo-3-chloropropane	32.6	50.0	65	34.4	50.0	69	55-127	5	40
1,2-Dibromoethane (EDB)	43.7	50.0	87	44.0	50.0	88	71-116	<1	40
1,2-Dichlorobenzene	44.4	50.0	89	44.0	50.0	88	67-124	<1	40
1,2-Dichloroethane (EDC)	40.3	50.0	81	42.9	50.0	86	65-121	6	40
1,2-Dichloropropane	41.8	50.0	84	41.4	50.0	83	71-121	<1	40
1,3,5-Trimethylbenzene	40.2	50.0	80	39.6	50.0	79	66-132	2	40
1,3-Dichlorobenzene	44.8	50.0	90	44.0	50.0	88	69-128	2	40
1,3-Dichloropropane	43.4	50.0	87	42.8	50.0	86	72-118	1	40
1,4-Dichlorobenzene	43.8	50.0	88	42.9	50.0	86	69-125	2	40
2,2-Dichloropropane	39.7	50.0	79	52.8	50.0	106	50-138	28	40
2-Butanone (MEK)	200	250	80	292	250	117 *	54-116	38	40
2-Chlorotoluene	42.0	50.0	84	41.1	50.0	82	65-129	2	40
2-Hexanone	222	250	89	220	250	88	67-121	<1	40
4-Chlorotoluene	41.0	50.0	82	40.1	50.0	80	51-134	2	40
4-Isopropyltoluene	44.0	50.0	88	43.0	50.0	86	61-132	2	40
4-Methyl-2-pentanone (MIBK)	205	250	82	212	250	85	69-126	3	40
Acetone	148	250	59	212	250	85	32-135	35	40
Benzene	43.9	50.0	88	58.2	50.0	116	68-122	28	40
Bromobenzene	41.0	50.0	82	40.8	50.0	82	71-124	<1	40
Bromochloromethane	42.7	50.0	85	60.1	50.0	120	65-131	34	40
Bromodichloromethane	38.3	50.0	77	38.2	50.0	76	61-143	<1	40
Bromoform	27.2	50.0	54 *	38.5	50.0	77	62-134	35	40
Bromomethane	33.3	50.0	67	44.1	50.0	88	22-180	28	40
Carbon Disulfide	63.6	100	64	85.0	100	85	55-141	29	40
Carbon Tetrachloride	39.8	50.0	80	53.2	50.0	106	51-135	29	40
Chlorobenzene	43.8	50.0	88	44.8	50.0	90	70-116	2	40
Chloroethane	33.1	50.0	66	44.2	50.0	88	51-122	29	40
Chloroform	43.4	50.0	87	58.2	50.0	116	61-137	29	40
Chloromethane	26.2	50.0	52	35.1	50.0	70	37-146	29	40
cis-1,2-Dichloroethene	42.2	50.0	84	58.0	50.0	116	62-138	32	40

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 09/16/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 739033

Analyte Name	Lab Control Sample KQ2119078-03			Duplicate Lab Control Sample KQ2119078-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	37.6	50.0	75	38.8	50.0	78	58-138	3	40
Dibromochloromethane	34.2	50.0	68 *	36.9	50.0	74	69-120	8	40
Dibromomethane	40.2	50.0	80	42.3	50.0	85	68-125	5	40
Dichlorodifluoromethane	25.8	50.0	52	33.9	50.0	68	38-160	27	40
Ethylbenzene	44.5	50.0	89	45.1	50.0	90	70-118	1	40
Hexachlorobutadiene	42.6	50.0	85	41.8	50.0	84	54-140	2	40
Isopropylbenzene	36.4	50.0	73	44.6	50.0	89	67-133	20	40
m,p-Xylenes	82.9	100	83	85.9	100	86	69-127	4	40
Methylene Chloride	33.7	50.0	67	46.8	50.0	94	65-122	32	40
Naphthalene	39.2	50.0	78	38.7	50.0	77	54-134	1	40
n-Butylbenzene	42.1	50.0	84	41.2	50.0	82	53-139	2	40
n-Propylbenzene	39.7	50.0	79	38.6	50.0	77	57-143	3	40
o-Xylene	35.1	50.0	70	44.2	50.0	88	69-124	23	40
sec-Butylbenzene	43.6	50.0	87	42.5	50.0	85	55-146	3	40
Styrene	37.5	50.0	75	45.8	50.0	92	62-135	20	40
tert-Butylbenzene	43.2	50.0	86	42.1	50.0	84	67-131	3	40
Tetrachloroethene (PCE)	43.0	50.0	86	41.9	50.0	84	66-126	3	40
Toluene	39.5	50.0	79	40.6	50.0	81	75-117	3	40
trans-1,2-Dichloroethene	35.8	50.0	72	49.3	50.0	99	63-127	32	40
trans-1,3-Dichloropropene	37.6	50.0	75	35.6	50.0	71	63-121	5	40
Trichloroethene (TCE)	42.4	50.0	85	42.0	50.0	84	67-126	<1	40
Trichlorofluoromethane	38.5	50.0	77	49.7	50.0	99	51-140	26	40
Vinyl Chloride	31.7	50.0	63	41.8	50.0	84	54-127	27	40

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 10/04/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 741533

Analyte Name	Lab Control Sample KQ2119719-03			Duplicate Lab Control Sample KQ2119719-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	37.8	50.0	76	38.6	50.0	77	71-119	2	40
1,1,1-Trichloroethane (TCA)	33.2	50.0	66	34.6	50.0	69	59-146	4	40
1,1,2,2-Tetrachloroethane	42.4	50.0	85	42.2	50.0	84	60-128	<1	40
1,1,2-Trichloroethane	36.8	50.0	74	38.1	50.0	76	72-118	3	40
1,1-Dichloroethane	33.5	50.0	67	31.8	50.0	64	59-137	5	40
1,1-Dichloroethene	32.7	50.0	65	33.6	50.0	67	64-152	3	40
1,1-Dichloropropene	38.3	50.0	77	39.2	50.0	78	52-142	2	40
1,2,3-Trichlorobenzene	31.6	50.0	63	31.7	50.0	63	52-138	<1	40
1,2,3-Trichloropropane	40.6	50.0	81	40.8	50.0	82	53-134	<1	40
1,2,4-Trichlorobenzene	34.1	50.0	68	34.6	50.0	69	57-136	1	40
1,2,4-Trimethylbenzene	42.8	50.0	86	43.8	50.0	88	65-132	2	40
1,2-Dibromo-3-chloropropane	30.7	50.0	61	31.0	50.0	62	55-127	<1	40
1,2-Dibromoethane (EDB)	40.0	50.0	80	41.0	50.0	82	71-116	2	40
1,2-Dichlorobenzene	40.5	50.0	81	40.7	50.0	81	67-124	<1	40
1,2-Dichloroethane (EDC)	34.9	50.0	70	36.2	50.0	72	65-121	4	40
1,2-Dichloropropane	38.8	50.0	78	39.8	50.0	80	71-121	2	40
1,3,5-Trimethylbenzene	41.1	50.0	82	42.0	50.0	84	66-132	2	40
1,3-Dichlorobenzene	41.3	50.0	83	41.8	50.0	84	69-128	1	40
1,3-Dichloropropane	39.3	50.0	79	41.4	50.0	83	72-118	5	40
1,4-Dichlorobenzene	40.4	50.0	81	40.2	50.0	80	69-125	<1	40
2,2-Dichloropropane	33.2	50.0	66	32.1	50.0	64	50-138	3	40
2-Butanone (MEK)	191	250	76	186	250	75	54-116	2	40
2-Chlorotoluene	43.3	50.0	87	44.2	50.0	88	65-129	2	40
2-Hexanone	188	250	75	194	250	78	67-121	3	40
4-Chlorotoluene	42.3	50.0	85	42.3	50.0	85	51-134	<1	40
4-Isopropyltoluene	42.8	50.0	86	43.8	50.0	88	61-132	2	40
4-Methyl-2-pentanone (MIBK)	193	250	77	200	250	80	69-126	3	40
Acetone	125	250	50	127	250	51	32-135	2	40
Benzene	40.0	50.0	80	40.5	50.0	81	68-122	1	40
Bromobenzene	40.7	50.0	81	40.8	50.0	82	71-124	<1	40
Bromochloromethane	39.8	50.0	80	40.3	50.0	81	65-131	1	40
Bromodichloromethane	36.6	50.0	73	38.1	50.0	76	61-143	4	40
Bromoform	32.9	50.0	66	34.3	50.0	69	62-134	4	40
Bromomethane	32.1	50.0	64	29.8	50.0	60	22-180	8	40
Carbon Disulfide	64.2	100	64	66.5	100	66	55-141	3	40
Carbon Tetrachloride	34.3	50.0	69	35.4	50.0	71	51-135	3	40
Chlorobenzene	40.8	50.0	82	41.6	50.0	83	70-116	2	40
Chloroethane	29.9	50.0	60	30.5	50.0	61	51-122	2	40
Chloroform	37.7	50.0	75	38.3	50.0	77	61-137	2	40
Chloromethane	29.6	50.0	59	30.6	50.0	61	37-146	3	40
cis-1,2-Dichloroethene	39.7	50.0	79	38.1	50.0	76	62-138	4	40

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 10/04/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 741533

Analyte Name	Lab Control Sample KQ2119719-03			Duplicate Lab Control Sample KQ2119719-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	36.4	50.0	73	37.1	50.0	74	58-138	2	40
Dibromochloromethane	34.5	50.0	69	36.5	50.0	73	69-120	6	40
Dibromomethane	38.5	50.0	77	39.3	50.0	79	68-125	2	40
Dichlorodifluoromethane	29.1	50.0	58	29.2	50.0	58	38-160	<1	40
Ethylbenzene	40.7	50.0	81	42.4	50.0	85	70-118	4	40
Hexachlorobutadiene	31.8	50.0	64	32.7	50.0	65	54-140	3	40
Isopropylbenzene	39.3	50.0	79	40.2	50.0	80	67-133	2	40
m,p-Xylenes	77.9	100	78	78.4	100	78	69-127	<1	40
Methylene Chloride	31.5	50.0	63 *	32.4	50.0	65	65-122	3	40
Naphthalene	29.7	50.0	59	30.4	50.0	61	54-134	2	40
n-Butylbenzene	41.0	50.0	82	41.7	50.0	83	53-139	2	40
n-Propylbenzene	40.4	50.0	81	41.0	50.0	82	57-143	1	40
o-Xylene	38.8	50.0	78	39.8	50.0	80	69-124	3	40
sec-Butylbenzene	42.8	50.0	86	43.7	50.0	87	55-146	2	40
Styrene	40.1	50.0	80	41.2	50.0	82	62-135	3	40
tert-Butylbenzene	42.8	50.0	86	43.4	50.0	87	67-131	1	40
Tetrachloroethene (PCE)	36.4	50.0	73	36.9	50.0	74	66-126	1	40
Toluene	38.8	50.0	78	39.5	50.0	79	75-117	2	40
trans-1,2-Dichloroethene	33.5	50.0	67	34.0	50.0	68	63-127	1	40
trans-1,3-Dichloropropene	31.3	50.0	63	32.3	50.0	65	63-121	3	40
Trichloroethene (TCE)	37.7	50.0	75	38.1	50.0	76	67-126	1	40
Trichlorofluoromethane	31.2	50.0	62	32.2	50.0	64	51-140	3	40
Vinyl Chloride	32.5	50.0	65	33.5	50.0	67	54-127	3	40



Polycyclic Aromatic Hydrocarbons by GC/MS SIM

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.74 J	6.0	0.45	1	09/25/21 18:58	9/20/21	
Acenaphthene	1.2 J	6.0	0.37	1	09/25/21 18:58	9/20/21	
Acenaphthylene	0.37 J	6.0	0.34	1	09/25/21 18:58	9/20/21	*
Anthracene	0.76 J	6.0	0.35	1	09/25/21 18:58	9/20/21	*
Benz(a)anthracene	2.2 J	6.0	0.28	1	09/25/21 18:58	9/20/21	
Benzo(a)pyrene	2.3 J	6.0	0.46	1	09/25/21 18:58	9/20/21	
Benzo(b)fluoranthene	4.1 J	6.0	0.46	1	09/25/21 18:58	9/20/21	
Benzo(g,h,i)perylene	3.3 J	6.0	0.49	1	09/25/21 18:58	9/20/21	
Benzo(k)fluoranthene	2.5 J	6.0	0.29	1	09/25/21 18:58	9/20/21	
Chrysene	8.8	6.0	0.38	1	09/25/21 18:58	9/20/21	
Dibenz(a,h)anthracene	1.7 J	6.0	0.28	1	09/25/21 18:58	9/20/21	
Dibenzofuran	ND U	6.0	0.73	1	09/25/21 18:58	9/20/21	
Fluoranthene	3.3 J	6.0	0.76	1	09/25/21 18:58	9/20/21	
Fluorene	ND U	6.0	0.69	1	09/25/21 18:58	9/20/21	
Indeno(1,2,3-cd)pyrene	3.5 J	6.0	0.44	1	09/25/21 18:58	9/20/21	
Naphthalene	1.8 J	6.0	0.57	1	09/25/21 18:58	9/20/21	*
Phenanthrene	1.8 J	6.0	0.71	1	09/25/21 18:58	9/20/21	
Pyrene	3.7 J	6.0	0.39	1	09/25/21 18:58	9/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	37	30 - 112	09/25/21 18:58	
Fluorene-d10	36	33 - 107	09/25/21 18:58	
Terphenyl-d14	36	35 - 124	09/25/21 18:58	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15
Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.59 J	5.3	0.40	1	09/25/21 19:23	9/20/21	
Acenaphthene	ND U	5.3	0.32	1	09/25/21 19:23	9/20/21	
Acenaphthylene	ND U	5.3	0.30	1	09/25/21 19:23	9/20/21	*
Anthracene	ND U	5.3	0.31	1	09/25/21 19:23	9/20/21	*
Benz(a)anthracene	0.60 J	5.3	0.25	1	09/25/21 19:23	9/20/21	
Benzo(a)pyrene	ND U	5.3	0.41	1	09/25/21 19:23	9/20/21	
Benzo(b)fluoranthene	0.43 J	5.3	0.41	1	09/25/21 19:23	9/20/21	
Benzo(g,h,i)perylene	0.53 J	5.3	0.43	1	09/25/21 19:23	9/20/21	
Benzo(k)fluoranthene	0.28 J	5.3	0.26	1	09/25/21 19:23	9/20/21	
Chrysene	ND U	5.3	0.33	1	09/25/21 19:23	9/20/21	
Dibenz(a,h)anthracene	0.41 J	5.3	0.25	1	09/25/21 19:23	9/20/21	
Dibenzofuran	ND U	5.3	0.64	1	09/25/21 19:23	9/20/21	
Fluoranthene	ND U	5.3	0.67	1	09/25/21 19:23	9/20/21	
Fluorene	ND U	5.3	0.61	1	09/25/21 19:23	9/20/21	
Indeno(1,2,3-cd)pyrene	0.53 J	5.3	0.39	1	09/25/21 19:23	9/20/21	
Naphthalene	1.5 J	5.3	0.50	1	09/25/21 19:23	9/20/21	*
Phenanthrene	ND U	5.3	0.63	1	09/25/21 19:23	9/20/21	
Pyrene	ND U	5.3	0.34	1	09/25/21 19:23	9/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	62	30 - 112	09/25/21 19:23	
Fluorene-d10	61	33 - 107	09/25/21 19:23	
Terphenyl-d14	63	35 - 124	09/25/21 19:23	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Extraction Method: EPA 3546

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		30-112	33-107	35-124
B-24 (0-10)C	K2110479-003	37	36	36
B-24 (10-20)C	K2110479-007	62	61	63
Method Blank	KQ2117835-04	86	84	84
Lab Control Sample	KQ2117835-03	77	72	78
B-24 (0-10)C	KQ2117835-01	52	49	52
B-24 (0-10)C	KQ2117835-02	52	49	52

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21
Date Received: 09/09/21
Date Analyzed: 09/25/21
Date Extracted: 09/20/21

Duplicate Matrix Spike Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003
Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2117835-01			Duplicate Matrix Spike KQ2117835-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2-Methylnaphthalene	0.74 J	382	632	60	338	596	57	28-98	12	40
Acenaphthene	1.2 J	396	632	63	350	596	58	30-101	13	40
Acenaphthylene	0.37 J	414	632	65	367	596	61	32-97	12	40
Anthracene	0.76 J	479	632	76	420	596	70	27-116	13	40
Benz(a)anthracene	2.2 J	422	632	66	369	596	62	27-127	13	40
Benzo(a)pyrene	2.3 J	445	632	70	391	596	65	25-129	13	40
Benzo(b)fluoranthene	4.1 J	415	632	65	371	596	61	21-130	11	40
Benzo(g,h,i)perylene	3.3 J	351	632	55	307	596	51	17-130	13	40
Benzo(k)fluoranthene	2.5 J	397	632	62	350	596	58	22-126	13	40
Chrysene	8.8	415	632	64	362	596	59	25-132	14	40
Dibenz(a,h)anthracene	1.7 J	366	632	58	314	596	52	32-116	15	40
Dibenzofuran	ND U	372	632	59	327	596	55	28-105	13	40
Fluoranthene	3.3 J	423	632	66	373	596	62	10-138	13	40
Fluorene	ND U	410	632	65	358	596	60	23-116	14	40
Indeno(1,2,3-cd)pyrene	3.5 J	394	632	62	343	596	57	17-138	14	40
Naphthalene	1.8 J	391	632	62	346	596	58	29-88	12	40
Phenanthrene	1.8 J	397	632	62	351	596	59	10-128	12	40
Pyrene	3.7 J	402	632	63	350	596	58	16-134	14	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2117835-04

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	1.1 J	4.7	0.37	1	09/25/21 17:17	9/20/21	
Acenaphthene	ND U	4.7	0.30	1	09/25/21 17:17	9/20/21	
Acenaphthylene	ND U	4.7	0.28	1	09/25/21 17:17	9/20/21	
Anthracene	ND U	4.7	0.29	1	09/25/21 17:17	9/20/21	
Benz(a)anthracene	0.39 J	4.7	0.23	1	09/25/21 17:17	9/20/21	
Benzo(a)pyrene	ND U	4.7	0.38	1	09/25/21 17:17	9/20/21	
Benzo(b)fluoranthene	ND U	4.7	0.38	1	09/25/21 17:17	9/20/21	
Benzo(g,h,i)perylene	ND U	4.7	0.40	1	09/25/21 17:17	9/20/21	
Benzo(k)fluoranthene	ND U	4.7	0.24	1	09/25/21 17:17	9/20/21	
Chrysene	ND U	4.7	0.31	1	09/25/21 17:17	9/20/21	
Dibenz(a,h)anthracene	ND U	4.7	0.23	1	09/25/21 17:17	9/20/21	
Dibenzofuran	ND U	4.7	0.60	1	09/25/21 17:17	9/20/21	
Fluoranthene	ND U	4.7	0.63	1	09/25/21 17:17	9/20/21	
Fluorene	ND U	4.7	0.57	1	09/25/21 17:17	9/20/21	
Indeno(1,2,3-cd)pyrene	ND U	4.7	0.36	1	09/25/21 17:17	9/20/21	
Naphthalene	3.8 J	4.7	0.47	1	09/25/21 17:17	9/20/21	
Phenanthrene	ND U	4.7	0.59	1	09/25/21 17:17	9/20/21	
Pyrene	ND U	4.7	0.32	1	09/25/21 17:17	9/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	86	30 - 112	09/25/21 17:17	
Fluorene-d10	84	33 - 107	09/25/21 17:17	
Terphenyl-d14	84	35 - 124	09/25/21 17:17	

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 09/25/21
Date Extracted: 09/20/21

Lab Control Sample Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 740177

Lab Control Sample
KQ2117835-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2-Methylnaphthalene	437	500	87	43-92
Acenaphthene	458	500	92	44-95
Acenaphthylene	475	500	95 *	44-93
Anthracene	549	500	110 *	46-100
Benz(a)anthracene	490	500	98	52-105
Benzo(a)pyrene	520	500	104	52-111
Benzo(b)fluoranthene	484	500	97	52-114
Benzo(g,h,i)perylene	404	500	81	45-107
Benzo(k)fluoranthene	456	500	91	52-112
Chrysene	481	500	96	51-110
Dibenz(a,h)anthracene	422	500	84	44-110
Dibenzofuran	426	500	85	44-96
Fluoranthene	481	500	96	49-102
Fluorene	465	500	93	45-98
Indeno(1,2,3-cd)pyrene	455	500	91	44-117
Naphthalene	447	500	89 *	42-88
Phenanthrene	451	500	90	41-99
Pyrene	455	500	91	48-104



Low Level Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	480	120	1	09/27/21 21:11	9/21/21	*
Bis(2-ethylhexyl) Phthalate	20 J	120	11	1	09/27/21 21:11	9/21/21	
Carbazole	ND U	12	4.6	1	09/27/21 21:11	9/21/21	
Di-n-butyl Phthalate	14 J	24	5.9	1	09/27/21 21:11	9/21/21	
Di-n-octyl Phthalate	ND U	24	3.9	1	09/27/21 21:11	9/21/21	
Dibenzofuran	ND U	12	4.2	1	09/27/21 21:11	9/21/21	
2,4-Dinitrotoluene	ND U	12	3.1	1	09/27/21 21:11	9/21/21	
2-Methylphenol	ND U	12	5.0	1	09/27/21 21:11	9/21/21	
4-Methylphenol	ND U	24	5.5	1	09/27/21 21:11	9/21/21	
Nitrobenzene	ND U	12	4.2	1	09/27/21 21:11	9/21/21	
Pentachlorophenol (PCP)	ND U	120	6.5	1	09/27/21 21:11	9/21/21	
Phenol	ND U	36	3.8	1	09/27/21 21:11	9/21/21	
Pyridine	ND U	240	61	1	09/27/21 21:11	9/21/21	
2,4,5-Trichlorophenol	ND U	12	3.7	1	09/27/21 21:11	9/21/21	
2,4,6-Trichlorophenol	ND U	12	3.7	1	09/27/21 21:11	9/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	39	35 - 105	09/27/21 21:11	
2-Fluorophenol	24	22 - 85	09/27/21 21:11	
Nitrobenzene-d5	36	10 - 84	09/27/21 21:11	
Phenol-d6	36	39 - 109	09/27/21 21:11	*
p-Terphenyl-d14	51	30 - 102	09/27/21 21:11	
2,4,6-Tribromophenol	44	10 - 124	09/27/21 21:11	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	440	110	1	09/27/21 21:39	9/21/21	*
Bis(2-ethylhexyl) Phthalate	25 J	110	9.9	1	09/27/21 21:39	9/21/21	
Carbazole	ND U	11	4.3	1	09/27/21 21:39	9/21/21	
Di-n-butyl Phthalate	8.0 J	22	5.4	1	09/27/21 21:39	9/21/21	
Di-n-octyl Phthalate	ND U	22	3.6	1	09/27/21 21:39	9/21/21	
Dibenzofuran	ND U	11	3.8	1	09/27/21 21:39	9/21/21	
2,4-Dinitrotoluene	ND U	11	2.8	1	09/27/21 21:39	9/21/21	
2-Methylphenol	ND U	11	4.6	1	09/27/21 21:39	9/21/21	
4-Methylphenol	ND U	22	5.0	1	09/27/21 21:39	9/21/21	
Nitrobenzene	ND U	11	3.8	1	09/27/21 21:39	9/21/21	
Pentachlorophenol (PCP)	ND U	110	5.9	1	09/27/21 21:39	9/21/21	
Phenol	ND U	33	3.5	1	09/27/21 21:39	9/21/21	
Pyridine	ND U	220	56	1	09/27/21 21:39	9/21/21	
2,4,5-Trichlorophenol	ND U	11	3.4	1	09/27/21 21:39	9/21/21	
2,4,6-Trichlorophenol	ND U	11	3.4	1	09/27/21 21:39	9/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	50	35 - 105	09/27/21 21:39	
2-Fluorophenol	42	22 - 85	09/27/21 21:39	
Nitrobenzene-d5	51	10 - 84	09/27/21 21:39	
Phenol-d6	49	39 - 109	09/27/21 21:39	
p-Terphenyl-d14	64	30 - 102	09/27/21 21:39	
2,4,6-Tribromophenol	47	10 - 124	09/27/21 21:39	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-24
Lab Code: K2110479-008

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15
Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	25	13	5.5	5	10/06/21 21:43	9/14/21	
Bis(2-ethylhexyl) Phthalate	0.98	0.50	0.13	1	10/13/21 02:44	9/14/21	*
Carbazole	ND U	0.10	0.018	1	10/13/21 02:44	9/14/21	*
Di-n-butyl Phthalate	0.16	0.10	0.023	1	10/13/21 02:44	9/14/21	*
Di-n-octyl Phthalate	ND U	0.20	0.033	1	10/13/21 02:44	9/14/21	
Dibenzofuran	ND U	0.10	0.018	1	10/13/21 02:44	9/14/21	*
2,4-Dinitrotoluene	ND U	0.10	0.018	1	10/13/21 02:44	9/14/21	*
2-Methylphenol	ND U	0.25	0.11	1	10/13/21 02:44	9/14/21	*
4-Methylphenol	ND U	0.25	0.12	1	10/13/21 02:44	9/14/21	*
Nitrobenzene	ND U	0.10	0.028	1	10/13/21 02:44	9/14/21	*
Pentachlorophenol (PCP)	ND U	0.50	0.34	1	10/13/21 02:44	9/14/21	*
Phenol	ND U	0.25	0.063	1	10/13/21 02:44	9/14/21	*
Pyridine	ND U	2.5	1.4	1	10/13/21 02:44	9/14/21	*
2,4,5-Trichlorophenol	ND U	0.25	0.031	1	10/13/21 02:44	9/14/21	*
2,4,6-Trichlorophenol	ND U	0.25	0.058	1	10/13/21 02:44	9/14/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	70	35 - 105	10/13/21 02:44	
2-Fluorophenol	80	34 - 118	10/13/21 02:44	
Nitrobenzene-d5	98	40 - 117	10/13/21 02:44	
Phenol-d6	92	39 - 109	10/13/21 02:44	
p-Terphenyl-d14	36	48 - 109	10/13/21 02:44	*
2,4,6-Tribromophenol	79	35 - 132	10/13/21 02:44	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2117838-04

Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	2.5	1.1	1	10/13/21 00:53	9/14/21	
Bis(2-ethylhexyl) Phthalate	0.18 J	0.49	0.13	1	10/13/21 00:53	9/14/21	
Carbazole	ND U	0.098	0.018	1	10/13/21 00:53	9/14/21	
Di-n-butyl Phthalate	0.034 J	0.098	0.023	1	10/13/21 00:53	9/14/21	
Di-n-octyl Phthalate	ND U	0.20	0.033	1	10/13/21 00:53	9/14/21	
Dibenzofuran	ND U	0.098	0.018	1	10/13/21 00:53	9/14/21	
2,4-Dinitrotoluene	ND U	0.098	0.018	1	10/13/21 00:53	9/14/21	
2-Methylphenol	ND U	0.25	0.11	1	10/13/21 00:53	9/14/21	
4-Methylphenol	ND U	0.25	0.12	1	10/13/21 00:53	9/14/21	
Nitrobenzene	ND U	0.098	0.028	1	10/13/21 00:53	9/14/21	
Pentachlorophenol (PCP)	ND U	0.49	0.34	1	10/13/21 00:53	9/14/21	
Phenol	ND U	0.25	0.063	1	10/13/21 00:53	9/14/21	
Pyridine	ND U	2.5	1.4	1	10/13/21 00:53	9/14/21	
2,4,5-Trichlorophenol	ND U	0.25	0.031	1	10/13/21 00:53	9/14/21	
2,4,6-Trichlorophenol	ND U	0.25	0.058	1	10/13/21 00:53	9/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	84	35 - 105	10/13/21 00:53	
2-Fluorophenol	79	34 - 118	10/13/21 00:53	
Nitrobenzene-d5	86	40 - 117	10/13/21 00:53	
Phenol-d6	82	39 - 109	10/13/21 00:53	
p-Terphenyl-d14	107	48 - 109	10/13/21 00:53	
2,4,6-Tribromophenol	71	35 - 132	10/13/21 00:53	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2118144-04

Service Request: K2110479
Date Collected: NA
Date Received: NA

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	380	96	1	09/27/21 16:26	9/21/21	
Bis(2-ethylhexyl) Phthalate	11 J	95	8.9	1	09/27/21 16:26	9/21/21	
Carbazole	ND U	9.5	3.8	1	09/27/21 16:26	9/21/21	
Di-n-butyl Phthalate	ND U	19	4.8	1	09/27/21 16:26	9/21/21	
Di-n-octyl Phthalate	ND U	19	3.2	1	09/27/21 16:26	9/21/21	
Dibenzofuran	ND U	9.5	3.4	1	09/27/21 16:26	9/21/21	
2,4-Dinitrotoluene	ND U	9.5	2.5	1	09/27/21 16:26	9/21/21	
2-Methylphenol	ND U	9.5	4.1	1	09/27/21 16:26	9/21/21	
4-Methylphenol	ND U	19	4.5	1	09/27/21 16:26	9/21/21	
Nitrobenzene	ND U	9.5	3.4	1	09/27/21 16:26	9/21/21	
Pentachlorophenol (PCP)	ND U	95	5.3	1	09/27/21 16:26	9/21/21	
Phenol	ND U	29	3.1	1	09/27/21 16:26	9/21/21	
Pyridine	ND U	190	50	1	09/27/21 16:26	9/21/21	
2,4,5-Trichlorophenol	ND U	9.5	3.0	1	09/27/21 16:26	9/21/21	
2,4,6-Trichlorophenol	ND U	9.5	3.0	1	09/27/21 16:26	9/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	58	35 - 105	09/27/21 16:26	
2-Fluorophenol	47	22 - 85	09/27/21 16:26	
Nitrobenzene-d5	58	10 - 84	09/27/21 16:26	
Phenol-d6	55	39 - 109	09/27/21 16:26	
p-Terphenyl-d14	71	30 - 102	09/27/21 16:26	
2,4,6-Tribromophenol	45	10 - 124	09/27/21 16:26	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	22-85	10-84
B-24 (0-10)C	K2110479-003	39	24	36
B-24 (10-20)C	K2110479-007	50	42	51
Method Blank	KQ2118144-04	58	47	58
Lab Control Sample	KQ2118144-05	61	50	63
Duplicate Lab Control Sample	KQ2118144-06	51	44	51

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	30-102	10-124
B-24 (0-10)C	K2110479-003	36*	51	44
B-24 (10-20)C	K2110479-007	49	64	47
Method Blank	KQ2118144-04	55	71	45
Lab Control Sample	KQ2118144-05	60	70	58
Duplicate Lab Control Sample	KQ2118144-06	50	63	53

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	34-118	40-117
B-24	K2110479-008	70	80	98
Method Blank	KQ2117838-04	84	79	86
Lab Control Sample	KQ2117838-03	66	65	70

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	48-109	35-132
B-24	K2110479-008	92	36*	79
Method Blank	KQ2117838-04	82	107	71
Lab Control Sample	KQ2117838-03	68	72	65

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 10/13/21
Date Extracted: 09/14/21

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 742554

Lab Control Sample
KQ2117838-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol	3.37	5.00	67	51-116
2,4,6-Trichlorophenol	3.65	5.00	73	51-114
2,4-Dinitrotoluene	3.88	5.00	78	56-120
2-Methylphenol	3.73	5.00	75	45-114
4-Methylphenol	3.93	5.00	79	44-120
Benzoic Acid	4.36	15.0	29	10-86
Bis(2-ethylhexyl) Phthalate	3.83	5.00	77	42-147
Carbazole	3.84	5.00	77	57-112
Dibenzofuran	3.52	5.00	70	51-102
Di-n-butyl Phthalate	4.01	5.00	80	61-121
Di-n-octyl Phthalate	4.38	5.00	88	50-125
Nitrobenzene	3.50	5.00	70	43-120
Pentachlorophenol (PCP)	2.74	5.00	55	27-112
Phenol	3.76	5.00	75	45-112
Pyridine	5.31	10.0	53	10-121

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 09/27/21
Date Extracted: 09/21/21

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry
Analysis Lot: 740455

Lab Control Sample
KQ2118144-05

Duplicate Lab Control Sample
KQ2118144-06

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-Trichlorophenol	161	250	64	128	250	51	32-81	23	40
2,4,6-Trichlorophenol	158	250	63	125	250	50	33-79	23	40
2,4-Dinitrotoluene	178	250	71	154	250	61	35-93	15	40
2-Methylphenol	164	250	65	132	250	53	27-74	21	40
4-Methylphenol	189	250	76	151	250	61	26-79	22	40
Benzoic Acid	612	750	82 *	484	750	65 *	10-34	23	40
Bis(2-ethylhexyl) Phthalate	207	250	83	191	250	76	39-113	8	40
Carbazole	183	250	73	165	250	66	37-95	11	40
Dibenzofuran	173	250	69	144	250	58	30-78	18	40
Di-n-butyl Phthalate	199	250	80	176	250	70	30-120	12	40
Di-n-octyl Phthalate	211	250	84	194	250	78	41-105	8	40
Nitrobenzene	168	250	67	134	250	54	28-78	22	40
Pentachlorophenol (PCP)	118	250	47	98.9 J	250	40	19-103	17	40
Phenol	166	250	67	131	250	52	27-75	24	40
Pyridine	154 J	500	31	163 J	500	33	10-54	5	40

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 09/27/21 16:55
Date Extracted: 09/21/21

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name: Lab Control Sample **Instrument ID:** K-MS-29
Lab Code: KQ2118144-05 **File ID:** J:\MS29\DATA\092721\0927F006.D\
Analysis Method: 8270D **Analysis Lot:** 740455
Prep Method: EPA 3541 **Extraction Lot:** 387576

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ2118144-04	J:\MS29\DATA\092721\0927F005.D\	09/27/21 16:26
Duplicate Lab Control Sample	KQ2118144-06	J:\MS29\DATA\092721\0927F007.D\	09/27/21 17:23
B-24 (0-10)C	K2110479-003	J:\MS29\DATA\092721\0927F015.D\	09/27/21 21:11
B-24 (10-20)C	K2110479-007	J:\MS29\DATA\092721\0927F016.D\	09/27/21 21:39



Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15

Sample Name: B-24
Lab Code: K2110479-008

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	40	3.4	0.41	1	10/04/21 19:28	9/14/21	
Acenaphthene	32	3.4	0.37	1	10/04/21 19:28	9/14/21	
Acenaphthylene	23	3.4	0.38	1	10/04/21 19:28	9/14/21	
Anthracene	19	3.4	0.30	1	10/04/21 19:28	9/14/21	
Benz(a)anthracene	30	3.4	0.35	1	10/04/21 19:28	9/14/21	
Benzo(a)pyrene	33	3.4	0.42	1	10/04/21 19:28	9/14/21	
Benzo(b)fluoranthene	37	3.4	0.26	1	10/04/21 19:28	9/14/21	
Benzo(g,h,i)perylene	21	3.4	0.37	1	10/04/21 19:28	9/14/21	
Benzo(k)fluoranthene	21	3.4	0.42	1	10/04/21 19:28	9/14/21	
Chrysene	33	3.4	0.66	1	10/04/21 19:28	9/14/21	
Dibenz(a,h)anthracene	4.2	3.4	0.46	1	10/04/21 19:28	9/14/21	
Dibenzofuran	22	3.4	0.43	1	10/04/21 19:28	9/14/21	
Fluoranthene	89	3.4	0.47	1	10/04/21 19:28	9/14/21	
Fluorene	24	3.4	0.43	1	10/04/21 19:28	9/14/21	
Indeno(1,2,3-cd)pyrene	20	3.4	0.45	1	10/04/21 19:28	9/14/21	
Naphthalene	46	3.4	0.72	1	10/04/21 19:28	9/14/21	
Phenanthrene	96	3.4	0.73	1	10/04/21 19:28	9/14/21	
Pyrene	94	3.4	0.79	1	10/04/21 19:28	9/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	29	39 - 123	10/04/21 19:28	*
Fluorene-d10	51	28 - 125	10/04/21 19:28	
Terphenyl-d14	18	22 - 127	10/04/21 19:28	*

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479

SURROGATE RECOVERY SUMMARY
Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		39-123	28-125	22-127
B-24	K2110479-008	29*	51	18*
Method Blank	KQ2117760-04	86	69	84
Lab Control Sample	KQ2117760-03	78	63	76

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2117760-04

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	3.3	0.40	1	10/04/21 12:06	9/14/21	
Acenaphthene	ND U	3.3	0.36	1	10/04/21 12:06	9/14/21	
Acenaphthylene	ND U	3.3	0.37	1	10/04/21 12:06	9/14/21	
Anthracene	ND U	3.3	0.29	1	10/04/21 12:06	9/14/21	
Benz(a)anthracene	0.49 J	3.3	0.34	1	10/04/21 12:06	9/14/21	
Benzo(a)pyrene	ND U	3.3	0.41	1	10/04/21 12:06	9/14/21	
Benzo(b)fluoranthene	ND U	3.3	0.25	1	10/04/21 12:06	9/14/21	
Benzo(g,h,i)perylene	ND U	3.3	0.36	1	10/04/21 12:06	9/14/21	
Benzo(k)fluoranthene	ND U	3.3	0.41	1	10/04/21 12:06	9/14/21	
Chrysene	ND U	3.3	0.65	1	10/04/21 12:06	9/14/21	
Dibenz(a,h)anthracene	ND U	3.3	0.45	1	10/04/21 12:06	9/14/21	
Dibenzofuran	ND U	3.3	0.42	1	10/04/21 12:06	9/14/21	
Fluoranthene	0.50 J	3.3	0.46	1	10/04/21 12:06	9/14/21	
Fluorene	ND U	3.3	0.42	1	10/04/21 12:06	9/14/21	
Indeno(1,2,3-cd)pyrene	ND U	3.3	0.44	1	10/04/21 12:06	9/14/21	
Naphthalene	ND U	3.3	0.71	1	10/04/21 12:06	9/14/21	
Phenanthrene	1.2 J	3.3	0.72	1	10/04/21 12:06	9/14/21	
Pyrene	ND U	3.3	0.78	1	10/04/21 12:06	9/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	86	39 - 123	10/04/21 12:06	
Fluorene-d10	69	28 - 125	10/04/21 12:06	
Terphenyl-d14	84	22 - 127	10/04/21 12:06	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 10/04/21
Date Extracted: 09/14/21

Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ng/L
Basis: NA
Analysis Lot: 741566

Lab Control Sample
KQ2117760-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2-Methylnaphthalene	331	500	66	42-108
Acenaphthene	333	500	67	58-98
Acenaphthylene	345	500	69	61-102
Anthracene	359	500	72	65-98
Benz(a)anthracene	389	500	78	67-96
Benzo(a)pyrene	419	500	84	68-107
Benzo(b)fluoranthene	428	500	86	69-104
Benzo(g,h,i)perylene	404	500	81	61-110
Benzo(k)fluoranthene	425	500	85	68-108
Chrysene	380	500	76	67-105
Dibenz(a,h)anthracene	418	500	84	54-118
Dibenzofuran	326	500	65	52-103
Fluoranthene	408	500	82	63-106
Fluorene	327	500	65	59-97
Indeno(1,2,3-cd)pyrene	439	500	88	61-115
Naphthalene	332	500	66	59-95
Phenanthrene	356	500	71	61-100
Pyrene	373	500	75	64-104



Subcontract Lab Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



October 27, 2021

Service Request No:K2110479

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

Laboratory Results for: EQRB

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory September 09, 2021
For your reference, these analyses have been assigned our service request number **K2110479**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental



Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client: Coles & Betts
Project: EQRB
Sample Matrix: S/W

Service Request No.: K2110479
Date Received: 9/22/21-10/08/21

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three samples were received for analysis at ALS Environmental in Houston on 09/22/21. Back-up volume for K2110479-008 was received on 10/08/21. B-24 was extracted three days outside of the 8290 hold time. The results are qualified with an asterisk (*). Note the method states: The holding times listed in this method are recommendations. PCDDs and PCDFs are very stable in a variety of matrices, and holding times under the conditions listed in this section may be as long as a year for certain matrices.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100572 & EQ2100594: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for these extraction batches. 1,2,3,4,7,8,9-HpCDF in EQ2100594 was recovered below QC limits; the associated compound be considered potentially bias low for the samples in this batch.

B flags – Method Blanks

The Method Blank EQ2100572-01 & EQ2100594-01 contained low levels of target D/F compounds above the EDL however below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with ‘B’ flags where the sample result is less than ten times the level detected in the method blank.

Y flags – Cleanup Standard

Select sample recoveries for the cleanup standard, 37Cl-2,3,7,8-TCDD are below control limits. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected, and is not used in quantitation of target analytes.

Y flags – Labeled Standards

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with ‘Y’ flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- Non-detected compounds are not included in the 'Total'

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319

Service Request:K2110479

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2110479-003	B-24 (0-10)C	9/8/2021	1510
K2110479-007	B-24 (10-20)C	9/8/2021	1700
K2110479-008	B-24	9/8/2021	1800

Service Request Summary

Folder #: K2110479
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA
Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: FADAIR
Date Received: 09/09/21
Internal Due Date: 9/29/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

20 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 10 40 ml-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
 4 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 10 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 2 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 16 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 -N/A N/A
 2 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
 1 250 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 2 2 oz-Glass Jar Glass WM CLEAR None
 1 125 mL-Plastic Bottle WM CLEAR HNO3 (Diss)
 1 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-DELILAH, K-JEZ-04, K-Disposed, SUBBED, SMO, EHRMS-WIC 8A, In Lab, K-PETUNIA-09, K-PETUNIA-03, K-MET LTS
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	KELSO					KELSO					HOUST ON	KELSO		KELSO	
				Hg D/7470A	Hg T/7470A	Hg/7471B	Metals D/6020A	Metals T/6020A	BUTYLINS/ALS SOP	HERB/8151A	NW_TPH/NWTPH-Dx	PCB/8082A	Pest OC LL/8081B	Pest OC ULL/8081B	PCDD PCDF/8290A	PAH SIM ULL/8270D	PAH SIM/8270D	SVO LL/8270D
K2110479-003	B-24 (0-10)C	Soil	09/08/21 1510															
K2110479-007	B-24 (10-20)C	Soil	09/08/21 1700															
K2110479-008	B-24	Water	09/08/21 1800															
K2110479-009	Trip Blank	Water	09/08/21 1800															

Folder Comments:

Composite 001 and 002 to make 003.
 Composite 004 and 005 to make 007.
 Reserve some from each discrete for future analysis.

KELSO		
NW_GAS/NWTPH-Gx	VOC FP/8260C	VOC Unp/8260C

Service Request Summary

Folder #: K2110479
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA
Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: FADAIR
Date Received: 09/09/21
Internal Due Date: 9/29/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

20 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 10 40 ml-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
 4 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 10 1000 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 2 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 16 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 -N/A N/A
 2 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
 1 250 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 2 2 oz-Glass Jar Glass WM CLEAR None
 1 125 mL-Plastic Bottle WM CLEAR HNO3 (Diss)
 1 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-DELILAH, K-JEZ-04, K-Disposed,
 SUBBED, SMO, EHRMS-WIC 8A, In Lab, K-
 PETUNIA-09, K-PETUNIA-03, K-MET LTS
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Metals	Metals T/6020A	3	As Ba Cd Cr Pb Se Ag
Metals	Metals D/6020A	1	As Ba Cd Cr Pb Se Ag
Semivoa GC	Pest OC ULL/8081B	1	See attached Form V for target list
Semivoa GC	Pest OC LL/8081B	2	See attached Form V for target list
Semivoa GCMS	SVO LL/8270D	6	See attached Form V for target list
Soils Prep	Composite/Composite	1	Canceled per Jill B. (Rocks). mdh. 9/14/21

Data Qualifiers

HRMS Qualifier Set

- B Indicates the associated analyte was found in the method blank at >1/10th the reported value.
- E Estimated value. The reported concentration is above the calibration range of the instrument.
- H Sample extracted and/or analyzed out of suggested holding time.
- J Estimated value. The reported concentration is below the MRL.
- K The ion abundance ratio between the primary and secondary ions were outside of theoretical acceptance limits. The concentration of this analyte should be considered as an estimate.
- P Chlorodiphenyl ether interference was present at the retention time of the target analyte. Reported result should be considered an estimate.
- Q Monitored lock-mass indicates matrix-interference. Reported result is estimated.
- S Signal saturated detector. Result reported from dilution.
- U Compound was analyzed for, but was not detected (ND).
- X See Case Narrative.
- Y Isotopically Labeled Standard recovery outside of acceptance limits. In all cases, the signal-to-nois ratios are greater than 10:1, making the recoveries acceptable.
 - i The MDL/MRL have been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCEntration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Conservation and Natural Resources	TX026932022-1	7/31/2022
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Conservation	04016-2021	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-27	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-28	5/1/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2110479

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date: 10/21/21 Analyst: [Signature] Samples: 003, 007

Second Level - Data Review – to be filled by person doing peer review

Date: 10/21/21 Analyst: [Signature] Samples: 003, 007

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID

K2110479

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:

10/27/21

Analyst:

[Signature]

Samples:

008

Second Level - Data Review – to be filled by person doing peer review

Date:

10/27/21

Analyst:

[Signature]

Samples:

008



Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Intra-Network Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

Project Name: EQRB
Project Number: 319
Project Manager: Jill Betts
Company: Coles and Betts Environmental Consulting, LLC
QAP: LAB QAP

PCDD PCDF
8290A

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
K2110479-003	B-24 (0-10)C	1	Soil	9/8/21	1510	9/9/21	HOUSTON	II
K2110479-007	B-24 (10-25)C	1	Soil	9/8/21	1700	9/9/21	HOUSTON	II
K2110479-008	B-24	2	Water	9/8/21	1800	9/9/21	HOUSTON	II

Special Instructions/Comments Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com. pH Checked _____	Turnaround Requirements <input type="checkbox"/> RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 <input checked="" type="checkbox"/> STANDARD Requested FAX Date: _____ Requested Report Date: 09/29/21	Report Requirements <input type="checkbox"/> I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data PQL/MDL/J <u> N </u> EDD <u> N </u>	Invoice Information <hr/> PO# 51K2110479 <hr/> Bill to
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------

Relinquished By: *[Signature]* 9/20/21 Received By: *[Signature]* 9/22/21 10:40 Airbill Number: _____
Page 190 of 233 *Col. 190 Temp 0.8°C 11231 CFS*

Intra-Network Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

Project Name: EQRB
Project Number: 319
Project Manager: Jill Betts
Company: Coles and Betts Environmental Consulting, LLC
QAP: LAB QAP

PCDD PCDF
8290A

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
K2110479-003	B-24 (0-10)C <i>10/6/21</i>	←	Soil	9/8/21	1510	9/9/21	HOUSTON	II
K2110479-007	B-24 (10-20)C <i>10/6/21</i>	←	Soil	9/8/21	1700	9/9/21	HOUSTON	II
K2110479-008	B-24	1	Water	9/8/21	1800	9/9/21	HOUSTON	II

Folder Comments:

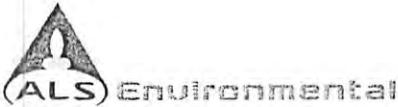
Composite 001 and 002 to make 003.
 Composite 004 and 005 to make 007.
 Reserve some from each discrete for future analysis.

<p>Special Instructions/Comments Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.</p> <p style="text-align: right; margin-right: 50px;"><i>Blue 7.7C (R3) CPU</i></p> <p>pH Checked _____</p>	<p style="text-align: center;">Turnaround Requirements</p> <p>_____ RUSH (Surcharges Apply)</p> <p style="text-align: center;">PLEASE CIRCLE WORK DAYS</p> <p style="text-align: center;">1 2 3 4 5</p> <p>_____ <input checked="" type="checkbox"/> STANDARD</p> <p>Requested FAX Date: _____</p> <p>Requested Report Date: <u>09/29/21</u></p>	<p style="text-align: center;">Report Requirements</p> <p>_____ I. Results Only</p> <p><input checked="" type="checkbox"/> II. Results + QC Summaries</p> <p>_____ III. Results + QC and Calibration Summaries</p> <p>_____ IV. Data Validation Report with Raw Data</p> <p>PQL/MDL/J <u>Y</u></p> <p>EDD <u>N</u></p>	<p style="text-align: center;">Invoice Information</p> <hr/> <p>PO# 51K2110479</p> <hr/> <p>Bill to</p>
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Relinquished By: *[Signature]* *10/6/21 1100*

Received By: *[Signature]* *10/6/21 10:00*

Airbill Number: _____



Cooler Receipt Form

Project Chemist

Client/Project ALS-H Thermometer ID 1231

Date/Time Received: 9/22/11 Initials: JM Date/Time Logged in: 9/22/11 Initials CB

1. Method of delivery: US Mail Fed Ex UPS DHL Courier Client

2. Samples received in: Cooler Box Envelope Other

3. Were custody seals on coolers? Yes No
 Were they intact? Yes No N/A
 Were they signed and dated? Yes No N/A

If yes, how many and where? 1-F

4. Packing Material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Sleeves Other

5. Foreign or Regulated Soil? Yes No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
9340 2500 6266		9/22/11	1040	JM	0.5	<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

- 6. Were custody papers properly filled out (ink, signed, dated, etc)? Yes No
- 7. Did all bottles arrive in good condition (not broken, no signs of leakage)? Yes No
- 8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? Yes No
- 9. Were appropriate bottles/containers and volumes received for the requested tests? Yes No
- 10. Did sample labels and tags agree with custody documents? Yes No

Notes, Discrepancies, & Resolutions:

Service request Label:



Cooler Receipt Form

Project Chemist CU

Client/Project AL4-4

Thermometer ID 1231

Date/Time Received: 10/8/21

Initials: PM

Date/Time Logged in: 10/8/21

Initials CU

1. Method of delivery: US Mail Fed Ex UPS DHL Courier Client

2. Samples received in: Cooler Box Envelope Other

3. Were custody seals on coolers? Yes No
 Were they intact? Yes No N/A
 Were they signed and dated? Yes No N/A

If yes, how many and where? 1 - F

4. Packing Material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Sleeves Other

5. Foreign or Regulated Soil? Yes No Location of Sampling: _____

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
9340 2901 1482		10/8/21	1000	PM	2.7	<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

- 6. Were custody papers properly filled out (ink, signed, dated, etc)? Yes No
- 7. Did all bottles arrive in good condition (not broken, no signs of leakage)? Yes No
- 8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? Yes No
- 9. Were appropriate bottles/containers and volumes received for the requested tests? Yes No
- 10. Did sample labels and tags agree with custody documents? Yes No

Notes, Discrepancies, & Resolutions:

Service request Label:



10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 388431
 Team: Semivoa GCMS/TWOODS

Prep Workflow: OrgExtDioxS(30)
 Prep Method: Method

Status: Prepped
 Prep Date/Time: 9/29/21 10:52

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2101017-001	3200672-001	.01	8290/PCDD PCDF			Soil	10.255g	wet sand brown
2	E2101017-002	3200672-002	.01	8290/PCDD PCDF			Soil	10.334g	wet sand brown
3	E2101047-001	3201777-001	.01	8290A/PCDD PCDF			Soil	10.261g	wet sand brown
4	E2101047-002	3201777-002	.01	8290A/PCDD PCDF			Soil	10.054g	wet sand brown
5	EQ2100572-01	MB		8290A/PCDD PCDF			Solid	10.114g	
6	EQ2100572-02	LCS		8290A/PCDD PCDF			Solid	10.046g	
7	EQ2100572-03	DLCS		8290A/PCDD PCDF			Solid	10.131g	
8	K2110022-006	Composite	.01	8290/PCDD PCDF			Paperboard	10.364g	
9	K2110479-003	B-24 (0-10)C	.02	8290A/PCDD PCDF			Soil	10.214g	Sample contains large rocks.
10	K2110479-007	B-24 (10-20)C	.01	8290A/PCDD PCDF			Soil	10.052g	
11	K2110832-003	B-26(0-10)C	.03	8290A/PCDD PCDF			Soil	10.196g	
12	K2110832-007	B-26(10-25)C	.01	8290A/PCDD PCDF			Soil	10.003g	
13	K2110938-003	B-25(10-25)C	.01	8290A/PCDD PCDF			Soil	10.000g	
14	K2110938-006	B-25(0-10)C	.03	8290A/PCDD PCDF			Soil	10.286g	
15	R2109845-002	Spent Carbon	.01	8290A/PCDD PCDF			Soil	10.213g	

Spiking Solutions

Name:	8290/1613B Cleanup Working Standard	Inventory ID	219262	Logbook Ref:	tw 219262 8ng/ml 9/16/21	Expires On:	02/18/2022
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E2101017-001	100.00µL	E2101017-002	100.00µL	E2101047-001	100.00µL	E2101047-002	100.00µL	EQ2100572-01	100.00µL	EQ2100572-01	100.00µL
EQ2100572-02	100.00µL	EQ2100572-02	100.00µL	EQ2100572-03	100.00µL	EQ2100572-03	100.00µL	K2110022-006	100.00µL	K2110479-003	100.00µL
K2110479-007	100.00µL	K2110832-003	100.00µL	K2110832-007	100.00µL	K2110938-003	100.00µL	K2110938-006	100.00µL	R2109845-002	100.00µL
R2109845-002.F	100.00µL										

Name:	1613B Matrix Working Standard	Inventory ID	219330	Logbook Ref:	tw 09/20/21 219330	Expires On:	03/19/2022
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EQ2100572-02	100.00µL	EQ2100572-02	100.00µL	EQ2100572-03	100.00µL	EQ2100572-03	100.00µL
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Name:	1613B Labeled Working Standard	Inventory ID	219477	Logbook Ref:	tw 219477 09/29/21	Expires On:	11/30/2021
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E2101017-001	1,000.00µL	E2101017-002	1,000.00µL	E2101047-001	1,000.00µL	E2101047-002	1,000.00µL	EQ2100572-01	1,000.00µL	EQ2100572-01	1,000.00µL
EQ2100572-02	1,000.00µL	EQ2100572-02	1,000.00µL	EQ2100572-03	1,000.00µL	EQ2100572-03	1,000.00µL	K2110022-006	1,000.00µL	K2110479-003	1,000.00µL
K2110479-007	1,000.00µL	K2110832-003	1,000.00µL	K2110832-007	1,000.00µL	K2110938-003	1,000.00µL	K2110938-006	1,000.00µL	R2109845-002	1,000.00µL
R2109845-002.F	1,000.00µL										

Preparation Information Benchsheet

Prep Run#: 388431
Team: Semivoa GCMS/TWOODS

Prep Workflow: OrgExtDioxS(30)
Prep Method: Method

Status: Prepped
Prep Date/Time: 9/29/21 10:52

Preparation Steps

Step: Extraction	Step: Acid Clean	Step: Silica Gel Clean	Step: Final Volume
Started: 9/29/21 10:52	Started: 10/6/21 10:00	Started: 10/6/21 13:00	Started: 10/7/21 12:00
Finished: 9/30/21 09:00	Finished: 10/6/21 11:00	Finished: 10/6/21 16:00	Finished: 10/7/21 15:00
By: TWOODS	By: TWOODS	By: TWOODS	By: TWOODS
Comments	Comments	Comments	Comments

Comments: _____

Reviewed By: TW Date: 10/7/21

Chain of Custody

Relinquished By: _____	Date: _____	<u>Extracts Examined</u>
Received By: _____	Date: _____	Yes No

Preparation Information Benchsheet

Prep Run#: 389246
Team: Semivoa GCMS/SHIVANI NAIDU

Prep Workflow: OrgExtDioxAq-30
Prep Method: Method

Status: Prepped
Prep Date/Time: 10/12/21 10:00

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	EQ2100594-01	MB		8290A/PCDD PCDF			Liquid	1000mL	
2	EQ2100594-02	LCS		8290A/PCDD PCDF			Liquid	1000mL	
3	EQ2100594-03	DLCS		8290A/PCDD PCDF			Liquid	1000mL	
4	K2110479-008	B-24	.12	8290A/PCDD PCDF			Water	1034mL	murky brown

Spiking Solutions

Name: 1613B Matrix Working Standard	Inventory ID: 219672	Logbook Ref: TW 10/7/21 219672	Expires On: 02/18/2022
--------------------------------------------	-----------------------------	---------------------------------------	-------------------------------

EQ2100594-02 100.00µL EQ2100594-03 100.00µL

Name: 1613B Labeled Working Standard	Inventory ID: 219673	Logbook Ref: TW 10/7/21 219673	Expires On: 11/30/2021
---------------------------------------------	-----------------------------	---------------------------------------	-------------------------------

EQ2100594-01 1,000.00µL EQ2100594-02 1,000.00µL EQ2100594-03 1,000.00µL K2110479-008 1,000.00µL

Name: 8290/1613B Cleanup Working Standard	Inventory ID: 219817	Logbook Ref: tw 10/15/21 219817	Expires On: 02/18/2022
--------------------------------------------------	-----------------------------	----------------------------------------	-------------------------------

EQ2100594-01 100.00µL EQ2100594-02 100.00µL EQ2100594-03 100.00µL K2110479-008 100.00µL

Preparation Materials

Carbon, High Purity	tw 08/09/21 carbon (218695)	Ethyl Acetate 99.9% Minimum EtOAc	TW 12/15/20 (214517)	Glass Wool	tw 7/8/21 glass wool (218851)
Hexanes 95%	tw 09/07/21 hexanes (219108)	Chlorine Test Strips	Chlorine test Strips (210298)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	tw 10/6/21 dcm (219683)
Sodium Hydroxide 1N NaOH	tw 08/10/21 (218694)	Sodium Sulfate Anhydrous Reagent Grade Na2SO4	tw 04/12/21 (217292)	Tridecane (n-Tridecane)	tw 04/ tridecane (216874)
ColorpHast pH-Indicator Strips	pH strips tw 21020 (206953)	Silica Gel	tw 06/01/21 silics g (217554)	sulfuric acid	8/12/21 tw (218912)
Toluene 99.9% Minimum	tw 09/09/21 toluene (219187)				

Preparation Steps

Step: Extraction	Step: Acid Clean	Step: Silica Gel Clean	Step: Final Volume
Started: 10/12/21 10:00	Started: 10/18/21 10:00	Started: 10/18/21 12:00	Started: 10/19/21 15:00
Finished: 10/12/21 16:00	Finished: 10/18/21 11:00	Finished: 10/18/21 15:00	Finished: 10/19/21 18:00
By: SHIVANI NAIDU	By: SHIVANI NAIDU	By: SHIVANI NAIDU	By: SHIVANI NAIDU
Comments:	Comments:	Comments:	Comments:

Comments: _____

Reviewed By: SN **Date:** 10/21/21

Preparation Information Benchsheet

Prep Run#: 389246
Team: Semivoa GCMS/SHIVANI NAIDU

Prep WorkFlow: OrgExtDioxAq-30
Prep Method: Method

Status: Prepped
Prep Date/Time: 10/12/21 10:00

Chain of Custody

Relinquished By: _____	Date: _____	<u>Extracts Examined</u>
Received By: _____	Date: _____	Yes No



Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.214g
Data File Name: P534801
ICAL Date: 07/10/21

Date Analyzed: 10/19/21 05:08
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534794

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.330	0.621			1
1,2,3,7,8-PeCDD	ND	U	0.0977	3.11			1
1,2,3,6,7,8-HxCDD	ND	U	0.103	3.11			1
1,2,3,4,7,8-HxCDD	ND	U	0.113	3.11			1
1,2,3,7,8,9-HxCDD	ND	U	0.103	3.11			1
1,2,3,4,6,7,8-HpCDD	1.54J		0.0722	3.11	0.92	1.000	1
OCDD	10.3		0.204	6.21	0.78	1.000	1
2,3,7,8-TCDF	ND	U	0.181	0.621			1
1,2,3,7,8-PeCDF	ND	U	0.105	3.11			1
2,3,4,7,8-PeCDF	ND	U	0.117	3.11			1
1,2,3,6,7,8-HxCDF	ND	U	0.0640	3.11			1
1,2,3,7,8,9-HxCDF	ND	U	0.0757	3.11			1
1,2,3,4,7,8-HxCDF	ND	U	0.0584	3.11			1
2,3,4,6,7,8-HxCDF	ND	U	0.0633	3.11			1
1,2,3,4,6,7,8-HpCDF	0.274BJK		0.140	3.11	1.61	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.120	3.11			1
OCDF	0.607JK		0.189	6.21	1.18	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2110479
Project:	EQRB/319	Date Collected:	09/08/21 15:10
Sample Matrix:	Soil	Date Received:	09/09/21 12:15
Sample Name:	B-24 (0-10)C	Units:	ng/Kg
Lab Code:	K2110479-003	Basis:	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	10/19/21 05:08
Prep Method:	Method	Date Extracted:	9/29/21
Sample Amount:	10.214g	Instrument Name:	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P534801	Blank File Name:	P534730
ICAL Date:	07/10/21	Cal Ver. File Name:	P534794

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.330	0.621			1
Total Penta-Dioxins	ND	U	0.0977	3.11			1
Total Hexa-Dioxins	0.235J		0.106	3.11	1.25		1
Total Hepta-Dioxins	1.54J		0.0722	3.11	0.92		1
Total Tetra-Furans	ND	U	0.181	0.621			1
Total Penta-Furans	ND	U	0.110	3.11			1
Total Hexa-Furans	ND	U	0.0650	3.11			1
Total Hepta-Furans	0.422J		0.128	3.11	0.95		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15

Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.214g

Date Analyzed: 10/19/21 05:08
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534794

Data File Name: P534801
ICAL Date: 07/10/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	909.920	45		40-135	0.76	1.022
13C-1,2,3,7,8-PeCDD	2000	1112.059	56		40-135	1.56	1.194
13C-1,2,3,4,7,8-HxCDD	2000	1170.163	59		40-135	1.31	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1058.400	53		40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	938.724	47		40-135	1.05	1.066
13C-OCDD	4000	1487.560	37	Y	40-135	0.89	1.139
13C-2,3,7,8-TCDF	2000	727.962	36	Y	40-135	0.78	0.993
13C-1,2,3,7,8-PeCDF	2000	1039.497	52		40-135	1.57	1.149
13C-2,3,4,7,8-PeCDF	2000	898.510	45		40-135	1.57	1.183
13C-1,2,3,4,7,8-HxCDF	2000	960.489	48		40-135	0.52	0.970
13C-1,2,3,6,7,8-HxCDF	2000	756.755	38	Y	40-135	0.50	0.974
13C-1,2,3,7,8,9-HxCDF	2000	864.761	43		40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	859.915	43		40-135	0.52	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	754.750	38	Y	40-135	0.42	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1170.143	59		40-135	0.43	1.079
37Cl-2,3,7,8-TCDD	800	398.578	50		40-135	NA	1.023

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (0-10)C
Lab Code: K2110479-003

Service Request: K2110479
Date Collected: 09/08/21 15:10
Date Received: 09/09/21 12:15

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.330	0.621	1	1	
1,2,3,7,8-PeCDD	ND	0.0977	3.11	1	1	
1,2,3,6,7,8-HxCDD	ND	0.103	3.11	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.113	3.11	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.103	3.11	1	0.1	
1,2,3,4,6,7,8-HpCDD	1.54	0.0722	3.11	1	0.01	0.0154
OCDD	10.3	0.204	6.21	1	0.0003	0.00309
2,3,7,8-TCDF	ND	0.181	0.621	1	0.1	
1,2,3,7,8-PeCDF	ND	0.105	3.11	1	0.03	
2,3,4,7,8-PeCDF	ND	0.117	3.11	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.0640	3.11	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0757	3.11	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.0584	3.11	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0633	3.11	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.274	0.140	3.11	1	0.01	0.00274
1,2,3,4,7,8,9-HpCDF	ND	0.120	3.11	1	0.01	
OCDF	0.607	0.189	6.21	1	0.0003	0.000182
Total TEQ						0.0214

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.052g
Data File Name: P534802
ICAL Date: 07/10/21

Date Analyzed: 10/19/21 05:56
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534794

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.791	0.791			1
1,2,3,7,8-PeCDD	0.593JK		0.148	2.77	1.12	1.001	1
1,2,3,6,7,8-HxCDD	0.507JK		0.0897	2.77	0.97	1.000	1
1,2,3,4,7,8-HxCDD	0.476J		0.101	2.77	1.18	1.000	1
1,2,3,7,8,9-HxCDD	0.408JK		0.0906	2.77	0.94	1.006	1
1,2,3,4,6,7,8-HpCDD	1.07J		0.0691	2.77	0.91	1.000	1
OCDD	7.36		0.196	5.54	0.98	1.000	1
2,3,7,8-TCDF	ND	U	0.596	0.596			1
1,2,3,7,8-PeCDF	0.599JK		0.209	2.77	1.25	1.001	1
2,3,4,7,8-PeCDF	0.567J		0.206	2.77	1.51	1.001	1
1,2,3,6,7,8-HxCDF	0.496JK		0.0788	2.77	1.50	1.000	1
1,2,3,7,8,9-HxCDF	0.549BJK		0.0847	2.77	1.01	1.000	1
1,2,3,4,7,8-HxCDF	0.447JK		0.0726	2.77	0.98	1.000	1
2,3,4,6,7,8-HxCDF	0.493JK		0.0722	2.77	0.76	1.000	1
1,2,3,4,6,7,8-HpCDF	0.671BJK		0.0737	2.77	1.28	1.001	1
1,2,3,4,7,8,9-HpCDF	0.410JK		0.0574	2.77	0.78	1.000	1
OCDF	1.58J		0.156	5.54	0.84	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.052g
Data File Name: P534802
ICAL Date: 07/10/21

Date Analyzed: 10/19/21 05:56
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534794

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.791	0.791			1
Total Penta-Dioxins	ND	U	0.148	2.77			1
Total Hexa-Dioxins	0.476J		0.0932	2.77	1.18		1
Total Hepta-Dioxins	1.07J		0.0691	2.77	0.91		1
Total Tetra-Furans	ND	U	0.596	0.596			1
Total Penta-Furans	0.567J		0.208	2.77	1.51		1
Total Hexa-Furans	ND	U	0.0769	2.77			1
Total Hepta-Furans	0.151J		0.0642	2.77	0.92		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15
Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.052g
Data File Name: P534802
ICAL Date: 07/10/21

Date Analyzed: 10/19/21 05:56
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534794

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	370.996	19	Y	40-135	0.78	1.022
13C-1,2,3,7,8-PeCDD	2000	833.760	42		40-135	1.58	1.194
13C-1,2,3,4,7,8-HxCDD	2000	998.033	50		40-135	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	931.920	47		40-135	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	883.439	44		40-135	1.06	1.066
13C-OCDD	4000	1414.928	35	Y	40-135	0.90	1.139
13C-2,3,7,8-TCDF	2000	281.925	14	Y	40-135	0.79	0.993
13C-1,2,3,7,8-PeCDF	2000	690.114	35	Y	40-135	1.55	1.149
13C-2,3,4,7,8-PeCDF	2000	684.400	34	Y	40-135	1.56	1.183
13C-1,2,3,4,7,8-HxCDF	2000	791.105	40		40-135	0.50	0.970
13C-1,2,3,6,7,8-HxCDF	2000	623.463	31	Y	40-135	0.51	0.974
13C-1,2,3,7,8,9-HxCDF	2000	793.738	40		40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	777.632	39	Y	40-135	0.50	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	672.436	34	Y	40-135	0.42	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1123.175	56		40-135	0.44	1.079
37Cl-2,3,7,8-TCDD	800	161.528	20	Y	40-135	NA	1.023

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Sample Name: B-24 (10-20)C
Lab Code: K2110479-007

Service Request: K2110479
Date Collected: 09/08/21 17:00
Date Received: 09/09/21 12:15

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.791	0.791	1	1	
1,2,3,7,8-PeCDD	0.593	0.148	2.77	1	1	0.593
1,2,3,6,7,8-HxCDD	0.507	0.0897	2.77	1	0.1	0.0507
1,2,3,4,7,8-HxCDD	0.476	0.101	2.77	1	0.1	0.0476
1,2,3,7,8,9-HxCDD	0.408	0.0906	2.77	1	0.1	0.0408
1,2,3,4,6,7,8-HpCDD	1.07	0.0691	2.77	1	0.01	0.0107
OCDD	7.36	0.196	5.54	1	0.0003	0.00221
2,3,7,8-TCDF	ND	0.596	0.596	1	0.1	
1,2,3,7,8-PeCDF	0.599	0.209	2.77	1	0.03	0.0180
2,3,4,7,8-PeCDF	0.567	0.206	2.77	1	0.3	0.170
1,2,3,6,7,8-HxCDF	0.496	0.0788	2.77	1	0.1	0.0496
1,2,3,7,8,9-HxCDF	0.549	0.0847	2.77	1	0.1	0.0549
1,2,3,4,7,8-HxCDF	0.447	0.0726	2.77	1	0.1	0.0447
2,3,4,6,7,8-HxCDF	0.493	0.0722	2.77	1	0.1	0.0493
1,2,3,4,6,7,8-HpCDF	0.671	0.0737	2.77	1	0.01	0.00671
1,2,3,4,7,8,9-HpCDF	0.410	0.0574	2.77	1	0.01	0.00410
OCDF	1.58	0.156	5.54	1	0.0003	0.000474
Total TEQ						1.14

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-24
Lab Code: K2110479-008

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1034mL
Data File Name: P534949
ICAL Date: 07/10/21

Date Analyzed: 10/25/21 21:32
Date Extracted: 10/12/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P534941

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U*	2.77	4.84			1
1,2,3,7,8-PeCDD	ND	U*	0.499	24.2			1
1,2,3,6,7,8-HxCDD	ND	U*	0.840	24.2			1
1,2,3,4,7,8-HxCDD	ND	U*	1.02	24.2			1
1,2,3,7,8,9-HxCDD	ND	U*	0.892	24.2			1
1,2,3,4,6,7,8-HpCDD	5.79	BJK*	0.623	24.2	0.77	1.000	1
OCDD	40.5	BJ*	1.16	48.4	0.87	1.000	1
2,3,7,8-TCDF	ND	U*	2.11	4.84			1
1,2,3,7,8-PeCDF	ND	U*	0.706	24.2			1
2,3,4,7,8-PeCDF	ND	U*	0.773	24.2			1
1,2,3,6,7,8-HxCDF	ND	U*	0.397	24.2			1
1,2,3,7,8,9-HxCDF	0.749	BJK*	0.461	24.2	1.71	1.001	1
1,2,3,4,7,8-HxCDF	ND	U*	0.376	24.2			1
2,3,4,6,7,8-HxCDF	ND	U*	0.397	24.2			1
1,2,3,4,6,7,8-HpCDF	2.30	BJK*	0.0494	24.2	0.78	1.000	1
1,2,3,4,7,8,9-HpCDF	0.591	BJK*	0.0407	24.2	0.86	1.001	1
OCDF	14.3	BJK*	1.20	48.4	0.64	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-24
Lab Code: K2110479-008

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1034mL
Data File Name: P534949
ICAL Date: 07/10/21

Date Analyzed: 10/25/21 21:32
Date Extracted: 10/12/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P534941

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U*	2.77	4.84			1
Total Penta-Dioxins	ND	U*	0.499	24.2			1
Total Hexa-Dioxins	ND	U*	0.909	24.2			1
Total Hepta-Dioxins	6.69J*		0.623	24.2	1.02		1
Total Tetra-Furans	ND	U*	2.11	4.84			1
Total Penta-Furans	ND	U*	0.736	24.2			1
Total Hexa-Furans	ND	U*	0.407	24.2			1
Total Hepta-Furans	2.61J*		0.0436	24.2	0.90		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Sample Name: B-24
Lab Code: K2110479-008

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1034mL

Data File Name: P534949
ICAL Date: 07/10/21

Date Analyzed: 10/25/21 21:32
Date Extracted: 10/12/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P534941

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1085.961	54		40-135	0.77	1.022
13C-1,2,3,7,8-PeCDD	2000	1472.186	74		40-135	1.59	1.196
13C-1,2,3,4,7,8-HxCDD	2000	1345.633	67		40-135	1.30	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1427.800	71		40-135	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1336.290	67		40-135	1.07	1.066
13C-OCDD	4000	2037.152	51		40-135	0.91	1.139
13C-2,3,7,8-TCDF	2000	1005.792	50		40-135	0.79	0.993
13C-1,2,3,7,8-PeCDF	2000	1657.974	83		40-135	1.58	1.151
13C-2,3,4,7,8-PeCDF	2000	1407.798	70		40-135	1.56	1.185
13C-1,2,3,4,7,8-HxCDF	2000	1429.614	71		40-135	0.49	0.970
13C-1,2,3,6,7,8-HxCDF	2000	1224.612	61		40-135	0.51	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1533.075	77		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1372.964	69		40-135	0.51	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1242.025	62		40-135	0.42	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	2159.517	108		40-135	0.43	1.079
37Cl-2,3,7,8-TCDD	800	543.017	68		40-135	NA	1.024

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-24
Lab Code: K2110479-008

Service Request: K2110479
Date Collected: 09/08/21 18:00
Date Received: 09/09/21 12:15

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	2.77	4.84	1	1	
1,2,3,7,8-PeCDD	ND	0.499	24.2	1	1	
1,2,3,6,7,8-HxCDD	ND	0.840	24.2	1	0.1	
1,2,3,4,7,8-HxCDD	ND	1.02	24.2	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.892	24.2	1	0.1	
1,2,3,4,6,7,8-HpCDD	5.79	0.623	24.2	1	0.01	0.0579
OCDD	40.5	1.16	48.4	1	0.0003	0.0122
2,3,7,8-TCDF	ND	2.11	4.84	1	0.1	
1,2,3,7,8-PeCDF	ND	0.706	24.2	1	0.03	
2,3,4,7,8-PeCDF	ND	0.773	24.2	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.397	24.2	1	0.1	
1,2,3,7,8,9-HxCDF	0.749	0.461	24.2	1	0.1	0.0749
1,2,3,4,7,8-HxCDF	ND	0.376	24.2	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.397	24.2	1	0.1	
1,2,3,4,6,7,8-HpCDF	2.30	0.0494	24.2	1	0.01	0.0230
1,2,3,4,7,8,9-HpCDF	0.591	0.0407	24.2	1	0.01	0.00591
OCDF	14.3	1.20	48.4	1	0.0003	0.00429
Total TEQ						0.178

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100572-01

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.114g

Date Analyzed: 10/15/21 20:20
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534725

Data File Name: P534730
ICAL Date: 07/10/21

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.482	0.494			1
1,2,3,7,8-PeCDD	ND	U	0.0963	2.47			1
1,2,3,6,7,8-HxCDD	ND	U	0.0627	2.47			1
1,2,3,4,7,8-HxCDD	ND	U	0.0711	2.47			1
1,2,3,7,8,9-HxCDD	ND	U	0.0637	2.47			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.0703	2.47			1
OCDD	0.137JK		0.0472	4.94	1.26	1.000	1
2,3,7,8-TCDF	ND	U	0.392	0.494			1
1,2,3,7,8-PeCDF	ND	U	0.0945	2.47			1
2,3,4,7,8-PeCDF	ND	U	0.104	2.47			1
1,2,3,6,7,8-HxCDF	ND	U	0.0395	2.47			1
1,2,3,7,8,9-HxCDF	0.127J		0.0476	2.47	1.23	1.001	1
1,2,3,4,7,8-HxCDF	ND	U	0.0365	2.47			1
2,3,4,6,7,8-HxCDF	ND	U	0.0377	2.47			1
1,2,3,4,6,7,8-HpCDF	0.0769J		0.0157	2.47	1.00	1.001	1
1,2,3,4,7,8,9-HpCDF	0.0267JK		0.0142	2.47	1.88	1.000	1
OCDF	ND	U	0.155	4.94			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100572-01

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.114g

Data File Name: P534730
ICAL Date: 07/10/21

Date Analyzed: 10/15/21 20:20
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534725

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.482	0.494			1
Total Penta-Dioxins	ND	U	0.0963	2.47			1
Total Hexa-Dioxins	ND	U	0.0656	2.47			1
Total Hepta-Dioxins	ND	U	0.0703	2.47			1
Total Tetra-Furans	ND	U	0.392	0.494			1
Total Penta-Furans	ND	U	0.0987	2.47			1
Total Hexa-Furans	0.127J		0.0400	2.47	1.23		1
Total Hepta-Furans	0.0769J		0.0149	2.47	1.00		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100572-01

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.114g

Date Analyzed: 10/15/21 20:20
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534725

Data File Name: P534730
ICAL Date: 07/10/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	820.993	41		40-135	0.80	1.022
13C-1,2,3,7,8-PeCDD	2000	1349.358	67		40-135	1.58	1.193
13C-1,2,3,4,7,8-HxCDD	2000	1621.577	81		40-135	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1556.849	78		40-135	1.28	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1431.105	72		40-135	1.08	1.066
13C-OCDD	4000	2735.163	68		40-135	0.88	1.139
13C-2,3,7,8-TCDF	2000	594.630	30	Y	40-135	0.80	0.993
13C-1,2,3,7,8-PeCDF	2000	1232.071	62		40-135	1.57	1.149
13C-2,3,4,7,8-PeCDF	2000	1108.766	55		40-135	1.56	1.183
13C-1,2,3,4,7,8-HxCDF	2000	1449.566	72		40-135	0.49	0.970
13C-1,2,3,6,7,8-HxCDF	2000	1165.742	58		40-135	0.50	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1306.956	65		40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1365.442	68		40-135	0.51	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1295.371	65		40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1793.127	90		40-135	0.43	1.079
37Cl-2,3,7,8-TCDD	800	313.217	39	Y	40-135	NA	1.023

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: EQ2100594-01

Service Request: K2110479
Date Collected: NA
Date Received: NA
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL
Data File Name: P534943
ICAL Date: 07/10/21

Date Analyzed: 10/25/21 16:42
Date Extracted: 10/12/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P534941

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	3.55	5.00			1
1,2,3,7,8-PeCDD	1.08JK		0.694	25.0	1.99	1.001	1
1,2,3,6,7,8-HxCDD	ND	U	0.918	25.0			1
1,2,3,4,7,8-HxCDD	ND	U	1.14	25.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.988	25.0			1
1,2,3,4,6,7,8-HpCDD	4.68J		1.09	25.0	0.98	1.000	1
OCDD	17.9JK		1.12	50.0	1.16	1.000	1
2,3,7,8-TCDF	ND	U	4.75	5.00			1
1,2,3,7,8-PeCDF	ND	U	1.93	25.0			1
2,3,4,7,8-PeCDF	ND	U	1.96	25.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.657	25.0			1
1,2,3,7,8,9-HxCDF	2.07JK		0.741	25.0	1.02	1.000	1
1,2,3,4,7,8-HxCDF	ND	U	0.592	25.0			1
2,3,4,6,7,8-HxCDF	1.35J		0.614	25.0	1.05	1.000	1
1,2,3,4,6,7,8-HpCDF	2.79JK		0.299	25.0	0.87	1.000	1
1,2,3,4,7,8,9-HpCDF	1.63J		0.274	25.0	1.04	1.000	1
OCDF	29.1JK		2.63	50.0	0.75	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: EQ2100594-01

Service Request: K2110479
Date Collected: NA
Date Received: NA
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL
Data File Name: P534943
ICAL Date: 07/10/21

Date Analyzed: 10/25/21 16:42
Date Extracted: 10/12/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P534941

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	3.55	5.00			1
Total Penta-Dioxins	ND	U	0.694	25.0			1
Total Hexa-Dioxins	ND	U	1.01	25.0			1
Total Hepta-Dioxins	4.68J		1.09	25.0	0.98		1
Total Tetra-Furans	ND	U	4.75	5.00			1
Total Penta-Furans	ND	U	1.94	25.0			1
Total Hexa-Furans	ND	U	0.649	25.0			1
Total Hepta-Furans	3.11J		0.285	25.0	0.93		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: EQ2100594-01

Service Request: K2110479
Date Collected: NA
Date Received: NA

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P534943
ICAL Date: 07/10/21

Date Analyzed: 10/25/21 16:42
Date Extracted: 10/12/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P534941

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	779.647	39	Y	40-135	0.77	1.023
13C-1,2,3,7,8-PeCDD	2000	1121.092	56		40-135	1.62	1.196
13C-1,2,3,4,7,8-HxCDD	2000	1210.088	61		40-135	1.31	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1360.208	68		40-135	1.35	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1171.209	59		40-135	1.06	1.067
13C-OCDD	4000	1935.293	48		40-135	0.93	1.139
13C-2,3,7,8-TCDF	2000	693.833	35	Y	40-135	0.79	0.993
13C-1,2,3,7,8-PeCDF	2000	1114.184	56		40-135	1.58	1.152
13C-2,3,4,7,8-PeCDF	2000	1049.024	52		40-135	1.59	1.186
13C-1,2,3,4,7,8-HxCDF	2000	1296.079	65		40-135	0.51	0.970
13C-1,2,3,6,7,8-HxCDF	2000	1125.473	56		40-135	0.51	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1429.413	71		40-135	0.51	1.009
13C-2,3,4,6,7,8-HxCDF	2000	1289.109	64		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1171.649	59		40-135	0.43	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1815.080	91		40-135	0.42	1.079
37Cl-2,3,7,8-TCDD	800	368.514	46		40-135	NA	1.024



Accuracy & Precision

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Analyzed: 10/20/21 - 10/16/21
Date Extracted: 09/29/21

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: ng/Kg
Basis: Dry
Analysis Lot: 743346

Lab Control Sample
EQ2100572-02

Duplicate Lab Control Sample
EQ2100572-03

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,3,4,6,7,8-HpCDD	86.9	99.5	87	90.2	98.7	91	70-130	4	25
1,2,3,4,7,8-HxCDD	92.6	99.5	93	96.4	98.7	98	70-130	4	25
1,2,3,6,7,8-HxCDD	75.6	99.5	76	77.6	98.7	79	70-130	3	25
1,2,3,7,8,9-HxCDD	84.9	99.5	85	88.4	98.7	90	70-130	4	25
1,2,3,7,8-PeCDD	88.0	99.5	88	85.7	98.7	87	70-130	3	25
2,3,7,8-TCDD	15.6	19.9	78	16.4	19.7	83	70-130	5	25
OCDD	178	199	90	176	197	89	70-130	<1	25
1,2,3,4,6,7,8-HpCDF	93.3	99.5	94	85.0	98.7	86	70-130	9	25
1,2,3,4,7,8,9-HpCDF	75.7	99.5	76	72.5	98.7	73	70-130	4	25
1,2,3,4,7,8-HxCDF	85.7	99.5	86	88.1	98.7	89	70-130	3	25
1,2,3,6,7,8-HxCDF	95.5	99.5	96	94.1	98.7	95	70-130	1	25
1,2,3,7,8,9-HxCDF	94.1	99.5	95	89.6	98.7	91	70-130	5	25
1,2,3,7,8-PeCDF	73.5	99.5	74	73.4	98.7	74	70-130	<1	25
2,3,4,6,7,8-HxCDF	87.3	99.5	88	87.6	98.7	89	70-130	<1	25
2,3,4,7,8-PeCDF	86.7	99.5	87	90.0	98.7	91	70-130	4	25
2,3,7,8-TCDF	16.0	19.9	81	16.7	19.7	84	70-130	4	25
OCDF	157	199	79	175	197	89	70-130	11	25

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100572-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.046g

Data File Name: P534828
ICAL Date: 07/10/21

Date Analyzed: 10/20/21 04:11
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534819

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	15.6		0.130	0.498	0.76	1.001	1
1,2,3,7,8-PeCDD	88.0		0.0249	2.49	1.58	1.001	1
1,2,3,6,7,8-HxCDD	75.6		0.0390	2.49	1.19	1.000	1
1,2,3,4,7,8-HxCDD	92.6		0.0456	2.49	1.32	1.000	1
1,2,3,7,8,9-HxCDD	84.9		0.0402	2.49	1.30	1.007	1
1,2,3,4,6,7,8-HpCDD	86.9		0.0264	2.49	1.03	1.000	1
OCDD	178		0.370	4.98	0.86	1.000	1
2,3,7,8-TCDF	16.0		0.122	0.498	0.71	1.001	1
1,2,3,7,8-PeCDF	73.5		0.0559	2.49	1.43	1.001	1
2,3,4,7,8-PeCDF	86.7		0.0608	2.49	1.43	1.001	1
1,2,3,6,7,8-HxCDF	95.5		0.0279	2.49	1.17	1.000	1
1,2,3,7,8,9-HxCDF	94.1		0.0309	2.49	1.13	1.000	1
1,2,3,4,7,8-HxCDF	85.7		0.0252	2.49	1.17	1.000	1
2,3,4,6,7,8-HxCDF	87.3		0.0253	2.49	1.16	1.000	1
1,2,3,4,6,7,8-HpCDF	93.3		0.0555	2.49	0.97	1.000	1
1,2,3,4,7,8,9-HpCDF	75.7		0.0502	2.49	0.99	1.000	1
OCDF	157		0.146	4.98	0.86	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100572-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.046g

Data File Name: P534828
ICAL Date: 07/10/21

Date Analyzed: 10/20/21 04:11
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534819

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	15.6		0.130	0.498	0.76		1
Total Penta-Dioxins	88.0		0.0249	2.49	1.58		1
Total Hexa-Dioxins	253		0.0414	2.49	1.32		1
Total Hepta-Dioxins	86.9		0.0264	2.49	1.03		1
Total Tetra-Furans	16.0		0.122	0.498	0.71		1
Total Penta-Furans	160		0.0581	2.49	1.43		1
Total Hexa-Furans	363		0.0272	2.49	1.17		1
Total Hepta-Furans	159		0.0526	2.49	0.97		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100572-02

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.046g

Date Analyzed: 10/20/21 04:11
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534819

Data File Name: P534828
ICAL Date: 07/10/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1440.808	72		40-135	0.78	1.022
13C-1,2,3,7,8-PeCDD	2000	1760.985	88		40-135	1.58	1.194
13C-1,2,3,4,7,8-HxCDD	2000	1689.864	84		40-135	1.29	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1714.523	86		40-135	1.29	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1595.962	80		40-135	1.08	1.066
13C-OCDD	4000	3149.351	79		40-135	0.87	1.139
13C-2,3,7,8-TCDF	2000	1166.168	58		40-135	0.78	0.993
13C-1,2,3,7,8-PeCDF	2000	1660.999	83		40-135	1.54	1.150
13C-2,3,4,7,8-PeCDF	2000	1440.260	72		40-135	1.56	1.184
13C-1,2,3,4,7,8-HxCDF	2000	1544.052	77		40-135	0.51	0.970
13C-1,2,3,6,7,8-HxCDF	2000	1205.786	60		40-135	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1470.601	74		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1447.939	72		40-135	0.50	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1345.240	67		40-135	0.43	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1964.463	98		40-135	0.44	1.079
37Cl-2,3,7,8-TCDD	800	564.842	71		40-135	NA	1.023

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100572-03

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.131g

Data File Name: P627807
ICAL Date: 10/14/21

Date Analyzed: 10/16/21 22:34
Date Extracted: 9/29/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P627796

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	16.4		0.710	0.710	0.78	1.001	1
1,2,3,7,8-PeCDD	85.7		0.419	2.47	1.69	1.001	1
1,2,3,6,7,8-HxCDD	77.6		0.192	2.47	1.26	1.000	1
1,2,3,4,7,8-HxCDD	96.4		0.237	2.47	1.37	1.000	1
1,2,3,7,8,9-HxCDD	88.4		0.196	2.47	1.27	1.007	1
1,2,3,4,6,7,8-HpCDD	90.2		0.426	2.47	1.04	1.000	1
OCDD	176		1.17	4.94	0.86	1.000	1
2,3,7,8-TCDF	16.7		0.684	0.684	0.67	1.001	1
1,2,3,7,8-PeCDF	73.4		0.349	2.47	1.64	1.001	1
2,3,4,7,8-PeCDF	90.0		0.395	2.47	1.54	1.001	1
1,2,3,6,7,8-HxCDF	94.1		0.175	2.47	1.23	1.000	1
1,2,3,7,8,9-HxCDF	89.6		0.199	2.47	1.31	1.000	1
1,2,3,4,7,8-HxCDF	88.1		0.165	2.47	1.22	1.000	1
2,3,4,6,7,8-HxCDF	87.6		0.159	2.47	1.22	1.000	1
1,2,3,4,6,7,8-HpCDF	85.0		0.403	2.47	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	72.5		0.396	2.47	0.97	1.000	1
OCDF	175		0.821	4.94	0.94	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100572-03

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.131g

Date Analyzed: 10/16/21 22:34
Date Extracted: 9/29/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P627796

Data File Name: P627807
ICAL Date: 10/14/21

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	16.4		0.710	0.710	0.78		1
Total Penta-Dioxins	87.4		0.419	2.47	1.69		1
Total Hexa-Dioxins	262		0.207	2.47	1.37		1
Total Hepta-Dioxins	90.2		0.426	2.47	1.04		1
Total Tetra-Furans	16.7		0.684	0.684	0.67		1
Total Penta-Furans	163		0.370	2.47	1.64		1
Total Hexa-Furans	361		0.173	2.47	1.22		1
Total Hepta-Furans	148		0.399	2.47	1.05		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100572-03

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.131g

Date Analyzed: 10/16/21 22:34
Date Extracted: 9/29/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P627796

Data File Name: P627807
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1003.951	50		40-135	0.81	1.022
13C-1,2,3,7,8-PeCDD	2000	1099.441	55		40-135	1.66	1.194
13C-1,2,3,4,7,8-HxCDD	2000	1071.997	54		40-135	1.29	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1341.378	67		40-135	1.23	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1032.260	52		40-135	1.00	1.067
13C-OCDD	4000	1866.339	47		40-135	0.93	1.140
13C-2,3,7,8-TCDF	2000	891.085	45		40-135	0.75	0.992
13C-1,2,3,7,8-PeCDF	2000	1284.820	64		40-135	1.62	1.150
13C-2,3,4,7,8-PeCDF	2000	1082.060	54		40-135	1.63	1.184
13C-1,2,3,4,7,8-HxCDF	2000	1209.580	60		40-135	0.53	0.970
13C-1,2,3,6,7,8-HxCDF	2000	1090.106	55		40-135	0.55	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1074.149	54		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1218.920	61		40-135	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1137.048	57		40-135	0.45	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1363.860	68		40-135	0.44	1.079
37Cl-2,3,7,8-TCDD	800	398.261	50		40-135	NA	1.023

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Analyzed: 10/26/21
Date Extracted: 10/12/21

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: pg/L
Basis: NA
Analysis Lot: 744056

Lab Control Sample
EQ2100594-02

Duplicate Lab Control Sample
EQ2100594-03

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,3,4,6,7,8-HpCDD	873	1000	87	894	1000	89	70-130	2	25
1,2,3,4,7,8-HxCDD	1030	1000	103	969	1000	97	70-130	6	25
1,2,3,6,7,8-HxCDD	897	1000	90	862	1000	86	70-130	4	25
1,2,3,7,8,9-HxCDD	953	1000	95	838	1000	84	70-130	13	25
1,2,3,7,8-PeCDD	975	1000	97	902	1000	90	70-130	8	25
2,3,7,8-TCDD	186	200	93	167	200	83	70-130	11	25
OCDD	1920	2000	96	1850	2000	92	70-130	4	25
1,2,3,4,6,7,8-HpCDF	867	1000	87	838	1000	84	70-130	3	25
1,2,3,4,7,8,9-HpCDF	628	1000	63 *	612	1000	61 *	70-130	3	25
1,2,3,4,7,8-HxCDF	858	1000	86	825	1000	83	70-130	4	25
1,2,3,6,7,8-HxCDF	928	1000	93	894	1000	89	70-130	4	25
1,2,3,7,8,9-HxCDF	889	1000	89	857	1000	86	70-130	4	25
1,2,3,7,8-PeCDF	795	1000	79	729	1000	73	70-130	9	25
2,3,4,6,7,8-HxCDF	873	1000	87	845	1000	84	70-130	3	25
2,3,4,7,8-PeCDF	899	1000	90	844	1000	84	70-130	6	25
2,3,7,8-TCDF	177	200	89	167	200	83	70-130	6	25
OCDF	2110	2000	106	1800	2000	90	70-130	16	25

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100594-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628009
ICAL Date: 10/14/21

Date Analyzed: 10/26/21 22:15
Date Extracted: 10/12/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P627999

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	186		1.40	5.00	0.78	1.001	1
1,2,3,7,8-PeCDD	975		0.923	25.0	1.58	1.000	1
1,2,3,6,7,8-HxCDD	897		0.463	25.0	1.25	1.000	1
1,2,3,4,7,8-HxCDD	1030		0.544	25.0	1.24	1.000	1
1,2,3,7,8,9-HxCDD	953		0.461	25.0	1.24	1.007	1
1,2,3,4,6,7,8-HpCDD	873		0.707	25.0	1.04	1.000	1
OCDD	1920		1.74	50.0	0.87	1.000	1
2,3,7,8-TCDF	177		1.30	5.00	0.78	1.001	1
1,2,3,7,8-PeCDF	795		0.601	25.0	1.65	1.001	1
2,3,4,7,8-PeCDF	899		0.633	25.0	1.57	1.000	1
1,2,3,6,7,8-HxCDF	928		0.405	25.0	1.24	1.000	1
1,2,3,7,8,9-HxCDF	889		0.561	25.0	1.26	1.000	1
1,2,3,4,7,8-HxCDF	858		0.386	25.0	1.26	1.000	1
2,3,4,6,7,8-HxCDF	873		0.401	25.0	1.25	1.000	1
1,2,3,4,6,7,8-HpCDF	867		1.48	25.0	1.04	1.000	1
1,2,3,4,7,8,9-HpCDF	628		1.49	25.0	1.07	1.000	1
OCDF	2110		1.97	50.0	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100594-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628009
ICAL Date: 10/14/21

Date Analyzed: 10/26/21 22:15
Date Extracted: 10/12/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P627999

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	186		1.40	5.00	0.78		1
Total Penta-Dioxins	975		0.923	25.0	1.58		1
Total Hexa-Dioxins	2880		0.485	25.0	1.24		1
Total Hepta-Dioxins	876		0.707	25.0	1.19		1
Total Tetra-Furans	181		1.30	5.00	0.66		1
Total Penta-Furans	1690		0.616	25.0	1.65		1
Total Hexa-Furans	3550		0.432	25.0	1.26		1
Total Hepta-Furans	1500		1.48	25.0	1.04		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100594-02

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Date Analyzed: 10/26/21 22:15
Date Extracted: 10/12/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P627999

Data File Name: P628009
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	993.105	50		40-135	0.76	1.018
13C-1,2,3,7,8-PeCDD	2000	1179.531	59		40-135	1.55	1.167
13C-1,2,3,4,7,8-HxCDD	2000	1175.526	59		40-135	1.27	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1579.680	79		40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1121.549	56		40-135	1.09	1.066
13C-OCDD	4000	1430.949	36	Y	40-135	0.92	1.143
13C-2,3,7,8-TCDF	2000	927.725	46		40-135	0.81	0.994
13C-1,2,3,7,8-PeCDF	2000	1360.306	68		40-135	1.60	1.128
13C-2,3,4,7,8-PeCDF	2000	1227.211	61		40-135	1.61	1.158
13C-1,2,3,4,7,8-HxCDF	2000	1391.511	70		40-135	0.53	0.973
13C-1,2,3,6,7,8-HxCDF	2000	1370.257	69		40-135	0.52	0.976
13C-1,2,3,7,8,9-HxCDF	2000	1197.932	60		40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1413.270	71		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1224.300	61		40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1511.864	76		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	469.847	59		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100594-03

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628010
ICAL Date: 10/14/21

Date Analyzed: 10/26/21 23:05
Date Extracted: 10/12/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P627999

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	167		3.67	5.00	0.77	1.001	1
1,2,3,7,8-PeCDD	902		1.14	25.0	1.64	1.000	1
1,2,3,6,7,8-HxCDD	862		1.17	25.0	1.24	1.000	1
1,2,3,4,7,8-HxCDD	969		1.37	25.0	1.21	1.000	1
1,2,3,7,8,9-HxCDD	838		1.16	25.0	1.28	1.007	1
1,2,3,4,6,7,8-HpCDD	894		1.91	25.0	1.05	1.000	1
OCDD	1850		2.99	50.0	0.88	1.000	1
2,3,7,8-TCDF	167		1.73	5.00	0.69	1.001	1
1,2,3,7,8-PeCDF	729		0.924	25.0	1.56	1.001	1
2,3,4,7,8-PeCDF	844		0.960	25.0	1.57	1.000	1
1,2,3,6,7,8-HxCDF	894		1.06	25.0	1.26	1.000	1
1,2,3,7,8,9-HxCDF	857		1.46	25.0	1.28	1.000	1
1,2,3,4,7,8-HxCDF	825		1.04	25.0	1.26	1.000	1
2,3,4,6,7,8-HxCDF	845		1.04	25.0	1.19	1.000	1
1,2,3,4,6,7,8-HpCDF	838		1.80	25.0	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	612		1.77	25.0	1.01	1.000	1
OCDF	1800		2.60	50.0	0.87	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100594-03

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628010
ICAL Date: 10/14/21

Date Analyzed: 10/26/21 23:05
Date Extracted: 10/12/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P627999

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	167		3.67	5.00	0.77		1
Total Penta-Dioxins	902		1.14	25.0	1.64		1
Total Hexa-Dioxins	2670		1.23	25.0	1.21		1
Total Hepta-Dioxins	894		1.91	25.0	1.05		1
Total Tetra-Furans	167		1.73	5.00	0.67		1
Total Penta-Furans	1590		0.941	25.0	1.76		1
Total Hexa-Furans	3430		1.14	25.0	1.26		1
Total Hepta-Furans	1450		1.78	25.0	1.05		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110479
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100594-03

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628010
ICAL Date: 10/14/21

Date Analyzed: 10/26/21 23:05
Date Extracted: 10/12/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534943
Cal Ver. File Name: P627999

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	739.171	37	Y	40-135	0.79	1.019
13C-1,2,3,7,8-PeCDD	2000	1082.746	54		40-135	1.57	1.167
13C-1,2,3,4,7,8-HxCDD	2000	1279.399	64		40-135	1.25	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1588.945	79		40-135	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1191.790	60		40-135	1.05	1.066
13C-OCDD	4000	1802.821	45		40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	662.817	33	Y	40-135	0.81	0.994
13C-1,2,3,7,8-PeCDF	2000	1194.847	60		40-135	1.63	1.128
13C-2,3,4,7,8-PeCDF	2000	1077.022	54		40-135	1.56	1.158
13C-1,2,3,4,7,8-HxCDF	2000	1358.832	68		40-135	0.54	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1384.885	69		40-135	0.53	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1210.255	61		40-135	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1386.945	69		40-135	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1264.856	63		40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1576.322	79		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	345.249	43		40-135	NA	1.019



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November 24, 2021

Revised Analytical Report for Service Request No: K2110832.01

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

RE: EQRB / 319

Dear Jill,

Enclosed is the revised report of the sample(s) submitted to our laboratory September 16, 2021. For your reference, these analyses have been assigned our service request number **K2110832**. All results have been reported to the MDL.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

We apologized for any inconvenience this may have created.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals
Butyltins
Semi-Volatile Petroleum Products by GCFID
Semi-Volatile Petroleum Products by GCFID
Low Level Organochlorine Pesticides
Polychlorinated Biphenyls (PCBs)
Chlorinated Herbicides by GC
Volatile Organic Compounds
Low Level Semivolatile Organic Compounds by GCMS
Polycyclic Aromatic Hydrocarbons
Subcontract Lab Results

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB
Sample Matrix: Soil

Service Request: K2110832
Date Received: 09/16/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Two soil samples were received for analysis at ALS Environmental on 09/16/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 09/28/2021: The upper control criterion was exceeded for Pyridine and/or 2-Methylphenol in replicate Laboratory Control Sample (LCS) KQ2118214-03/-04. The analyte in question were not detected in the associated field samples. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method 8270D, 09/28/2021: The upper control criterion was exceeded for 4-Methylphenol in Duplicate Laboratory Control Sample (DLCS) KQ2118214-04. The analyte in question was detected in the associated field sample B-26(0-10)C. The error associated with elevated recovery indicated a potential slight high bias. The sample data was not significantly affected. No further corrective action was taken.

Method 8270D SIM PAH, 09/29/2021: Benzo(a)pyrene was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D SIM PAH, 09/29/2021: The upper control criterion was exceeded for a few analytes in replicate Laboratory Control Sample (LCS) KQ2118219-03. The analyte in question were detected in the associated field samples. The error associated with elevated recovery indicated a slight high bias. The sample data was not significantly affected. No further corrective action was appropriate.

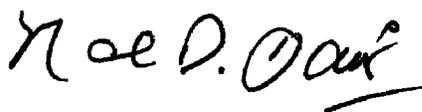
Semivolatile GC:

Method 8081B, 10/31/2021: Due to low bias on column XLB from the continuing calibration verification, 4,4'-DDT was reported from the 35MS column. An interference peak is shown on the reporting column that is seen in the method blank, instrument blank, and quality control samples. The peak is not present within the 4,4'-DDT retention time criteria on the low bias column. The MRL was raised due to this interference peak.

Method 8081B, 10/31/2021: The upper control criterion was exceeded for Toxaphene in Laboratory Control Sample (LCS) KQ2118213-10. The analyte in question was not detected in the associated field samples. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method 8082A: The analysis of 8082A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for Aroclor 1221 and 1242. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 10/24/2021: The analysis of 8151A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This

Approved by 

Date 12/02/2021

criteria was met on one column for Dichlorprop and 2,4-D. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 10/24/2021: The upper control criterion was exceeded for MCPA in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method ALS SOP Butyltins, 10/27/2021: The control criterion was exceeded for Tri-n-propyltin in the Method Blank KQ2118210-04, even after rederivatization. Since the problem may indicate a potential bias in the analytical batch, all associated field samples were re-extracted and re-analyzed past the recommended hold time. The Method Blank met control criteria for the reanalysis. Note the results for the field samples were comparable for both determinations, which indicated the problem with the initial analysis was restricted to the Method Blank. Per the project chemist, the reanalysis was reported. The data was flagged to indicate the problem.

Method ALS SOP Butyltins, 10/27/2021: The analysis of ALS SOP Butyltins requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Tri-n-propyltin. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method ALS SOP Butyltins, 10/27/2021: The Relative Percent Difference (RPD) for analytes in the replicate matrix spike analyses of sample B-26(0-10)C was outside control criteria. In general, the RPD was relatively high for all spiked compounds, which indicated a bias in the Matrix Spike (MS)/Matrix Spike Duplicate (MSD). All spike recoveries in the MS, DMS, and associated Laboratory Control Sample (LCS) were within acceptance limits, indicating the analytical batch was in control. No further corrective action was appropriate.

Method NWTPH-Dx, 10/14/2021: The upper control criterion was exceeded for Diesel Range Organics (C12 - C25 DRO) and n-Triacontane in Continuing Calibration Verifications (CCVs). The field samples analyzed in this sequence did not contain the target analytes in question or were reran in a passing bracket. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Metals:

Method 6020A, 10/06/2021: The Relative Percent Difference (RPD) for the replicate analysis of Chromium in sample B-26(0-10)C was outside the normal ALS control limits. The variability in the results was attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

Subcontracted Analytical Parameters:

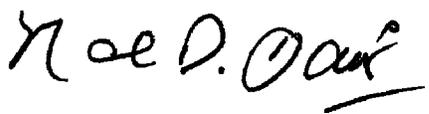
Dioxins and Furans by EPA Method 8290

The analysis for Dioxins and Furans was performed at ALS Houston, Texas Laboratory. The data for this analysis is included in the corresponding section of this report.

Volatiles by GC/MS:

Method 8260C, 09/21/2021: Samples were received with insufficient holding time remaining. The analysis was performed as soon as possible after receipt by the laboratory. The data was flagged to indicate the holding time violation.

Method 8260C, 09/16/2021: Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not

Approved by 

Date 12/02/2021



Chain of Custody

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K2110832

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835				Laboratory ALS Labs Lab Project No. _____				CHAIN OF CUSTODY Chain of Custody No. _____													
Project Manager: <u>Jill Betts</u> Project No.: <u>319</u> Project Name: <u>EQRB</u> Collected by: <u>Jake Munsey</u>				Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____				Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>													
Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. -see composite notes below. Coordinate analysis with Jill Betts				Matrix Soil _____ Water _____ Other _____ Number of Containers _____				Analyses to be Performed NWTPH-Gx _____ NWTPH-Dx _____ VOCs by EPA Method 8260B _____ PAHs by EPA Method 8270SIM _____ Low Level SVOCs by EPA Method 8270D _____ Low Level Organochlorine Pesticides by EPA Method 8081B _____ PCBs by EPA Method 8082A _____ PCDD and PCDFs by EPA Method 8290A _____ Butyltins _____ Total RCRA 8 Metals by EPA Method 200/6020A/7471B _____ RUSH _____				Remarks									
Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH	Remarks	
		9/15/21	0820	B-26 (0-5)	X			4	X	X	X	X	X	X	X	X	X	X	X		Hold
		9/15/21	0830	B-26 (5-10)	X			4	X	X	X	X	X	X	X	X	X	X	X		Hold
		9/15/21	0840	B-26 (10-15)	X			4	X	X	X	X	X	X	X	X	X	X	X		Hold
		9/15/21	0850	B-26 (15-20)	X			4	X	X	X	X	X	X	X	X	X	X	X		Hold
		9/15/21	0900	B-26 (20-25)	X			4	X	X	X	X	X	X	X	X	X	X	X		Hold
		9/14/21																			Coordinate analysis with Jill Betts
		9/15/21																			
		9/15/21		B-26(0-5) + B-26(5-10)	X				X	X	X	X	X	X	X	X	X	X	X		
		9/15/21		B-26(10-15) + B-26(15-20) + B-26(20-25)	X				X	X	X	X	X	X	X	X	X	X	X		
Relinquished by	Company	Date	Time	Received by	Company	Date	Time	Received by	Company	Date	Time	Received by	Company	Date	Time	Received by	Company	Date	Time	Received by	Company
Jake Munsey	Apex Companies	9/15/21		Jane ALS	ALS	9/16/21	9:45	Jane ALS	ALS	9/16/21	12pm	Jane ALS	ALS	9/16/21	12pm	Jane ALS	ALS	9/16/21	12pm	Jane ALS	ALS
Lauren Bellinger	Apex Companies	9/16/21		Jane ALS	ALS	9/16/21	12pm	Jane ALS	ALS	9/16/21	12pm	Jane ALS	ALS	9/16/21	12pm	Jane ALS	ALS	9/16/21	12pm	Jane ALS	ALS

Cooler Receipt and Preservation Form

Client Apex Co./Coles & Betts Service Request K21 10832
 Received: 9/16/21 Opened: 9/16/21 By: [Signature] Unloaded: 9/16/21 By: [Signature]

- Samples were received via? **USPS** **Fed Ex** **UPS** **DHL** **PDX** **Courier** **Hand Delivered**
 - Samples were received in: (circle) **Cooler** **Box** **Envelope** **Other** **NA**
 - Were custody seals on coolers? **NA** **Y** **N** If yes, how many and where? _____
 If present, were custody seals intact? **Y** **N** If present, were they signed and dated? **Y** **N**
 - Was a Temperature Blank present in cooler? **NA** **Y** **N** If yes, notate the temperature in the appropriate column below:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - Were samples received within the method specified temperature ranges? **NA** **Y** **N**
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. **NA** **Y** **N**
- If applicable, tissue samples were received: **Frozen** **Partially Thawed** **Thawed**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number	NA	Filed
5.6		IR01						

- Packing material: **Inserts** **Baggies** **Bubble Wrap** **Gel Packs** **Wet Ice** **Dry Ice** **Sleeves** **Box**
- Were custody papers properly filled out (ink, signed, etc.)? **NA** **Y** **N**
- Were samples received in good condition (unbroken) **NA** **Y** **N**
- Were all sample labels complete (ie, analysis, preservation, etc.)? **NA** **Y** **N**
- Did all sample labels and tags agree with custody papers? **NA** **Y** **N**
- Were appropriate bottles/containers and volumes received for the tests indicated? **NA** **Y** **N**
- Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below **NA** **Y** **N**
- Were VOA vials received without headspace? Indicate in the table below. **NA** **Y** **N**
- Was C12/Res negative? **NA** **Y** **N**

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Total Solids

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Analysis Method: 160.3 Modified
Prep Method: None

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Units: Percent
Basis: As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
B-26(0-10)C	K2110832-003	75.5	-	1	09/17/21 14:48	
B-26(10-25)C	K2110832-007	79.7	-	1	09/17/21 14:48	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 09/17/21

Replicate Sample Summary

Inorganic Parameters

Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Units: Percent
Basis: As Received

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2110832-003DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total	160.3 Modified	-	75.5	73.4	74.5	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.69	mg/Kg	0.63	0.08	5	10/06/21 12:32	09/22/21	
Barium	6020A	93.8	mg/Kg	0.063	0.025	5	10/06/21 12:32	09/22/21	
Cadmium	6020A	0.086	mg/Kg	0.025	0.009	5	10/06/21 12:32	09/22/21	
Chromium	6020A	18.3	mg/Kg	0.25	0.08	5	10/06/21 12:32	09/22/21	
Lead	6020A	7.96	mg/Kg	0.063	0.025	5	10/06/21 12:32	09/22/21	
Mercury	7471B	0.041	mg/Kg	0.025	0.003	1	09/23/21 12:59	09/22/21	
Selenium	6020A	ND U	mg/Kg	1.3	0.1	5	10/06/21 12:32	09/22/21	
Silver	6020A	0.063	mg/Kg	0.025	0.005	5	10/06/21 12:32	09/22/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.30	mg/Kg	0.47	0.06	5	10/06/21 12:43	09/22/21	
Barium	6020A	85.3	mg/Kg	0.047	0.019	5	10/06/21 12:43	09/22/21	
Cadmium	6020A	0.066	mg/Kg	0.019	0.007	5	10/06/21 12:43	09/22/21	
Chromium	6020A	15.4	mg/Kg	0.19	0.06	5	10/06/21 12:43	09/22/21	
Lead	6020A	8.78	mg/Kg	0.047	0.019	5	10/06/21 12:43	09/22/21	
Mercury	7471B	0.071	mg/Kg	0.025	0.002	1	09/23/21 13:09	09/22/21	
Selenium	6020A	0.13 J	mg/Kg	0.94	0.08	5	10/06/21 12:43	09/22/21	
Silver	6020A	0.038	mg/Kg	0.019	0.004	5	10/06/21 12:43	09/22/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2118644-03

Service Request: K2110832
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	mg/Kg	0.5	0.06	5	10/06/21 12:27	09/22/21	
Barium	6020A	ND U	mg/Kg	0.05	0.020	5	10/06/21 12:27	09/22/21	
Cadmium	6020A	ND U	mg/Kg	0.020	0.007	5	10/06/21 12:27	09/22/21	
Chromium	6020A	0.06 J	mg/Kg	0.20	0.06	5	10/06/21 12:27	09/22/21	
Lead	6020A	ND U	mg/Kg	0.05	0.020	5	10/06/21 12:27	09/22/21	
Selenium	6020A	ND U	mg/Kg	1.0	0.09	5	10/06/21 12:27	09/22/21	
Silver	6020A	0.010 J	mg/Kg	0.020	0.004	5	10/06/21 12:27	09/22/21	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2118211-03

Service Request: K2110832
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7471B	ND U	mg/Kg	0.02	0.002	1	09/23/21 12:56	09/22/21	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 10/06/21

Replicate Sample Summary
Total Metals

Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2118644-02 Result			
Arsenic	6020A	0.65	0.08	2.69	2.88	2.79	7	20
Barium	6020A	0.065	0.026	93.8	97.3	95.6	4	20
Cadmium	6020A	0.026	0.009	0.086	0.090	0.088	5	20
Chromium	6020A	0.26	0.08	18.3	35.0	26.7	63 *	20
Lead	6020A	0.065	0.026	7.96	8.75	8.36	9	20
Selenium	6020A	1.3	0.1	ND U	ND U	ND	-	20
Silver	6020A	0.026	0.005	0.063	0.090	0.077	34 #	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 09/23/21

Replicate Sample Summary

Total Metals

Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2118211-01 Result			
Mercury	7471B	0.025	0.003	0.041	0.040	0.041	3	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 10/6/21
Date Extracted: 09/22/21

Matrix Spike Summary
Total Metals

Sample Name: B-26(0-10)C
Lab Code: K2110832-003
Analysis Method: 6020A
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2118644-01

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	2.69	121	120	98	75-125
Barium	93.8	349	240	106	75-125
Cadmium	0.086	12.5	12.0	103	75-125
Chromium	18.3	77.6	47.9	124	75-125
Lead	7.96	139	120	109	75-125
Selenium	ND U	121	120	101	75-125
Silver	0.063	12.0	12.0	100	75-125

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Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 09/23/21
Date Extracted: 09/22/21

Matrix Spike Summary
Total Metals

Sample Name: B-26(0-10)C
Lab Code: K2110832-003
Analysis Method: 7471B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2118211-02

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	0.041	0.723	0.587	116	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 10/06/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2118644-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	99.7	100	100	80-120
Barium	6020A	213	200	107	80-120
Cadmium	6020A	10.6	10.0	106	80-120
Chromium	6020A	41.5	40.0	104	80-120
Lead	6020A	108	100	108	80-120
Selenium	6020A	108	100	108	80-120
Silver	6020A	10.6	10.0	106	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 09/23/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2118211-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7471B	0.542	0.500	108	80-120



Butyltins

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00

Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.3	0.34	1	11/19/21 00:43	11/16/21	*
Di-n-butyltin Cation	ND U	1.3	0.25	1	11/19/21 00:43	11/16/21	*
Tri-n-butyltin Cation	ND U	1.3	0.56	1	11/19/21 00:43	11/16/21	*
Tetra-n-butyltin	ND U	1.3	0.58	1	11/19/21 00:43	11/16/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	54	10 - 152	11/19/21 00:43	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00

Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	0.38 J	1.2	0.33	1	11/19/21 02:05	11/16/21	*
Di-n-butyltin Cation	0.31 J	1.2	0.24	1	11/19/21 02:05	11/16/21	*
Tri-n-butyltin Cation	ND U	1.2	0.54	1	11/19/21 02:05	11/16/21	*
Tetra-n-butyltin	ND U	1.2	0.55	1	11/19/21 02:05	11/16/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	107	10 - 152	11/19/21 02:05	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: Method

Sample Name	Lab Code	Tri-n-propyltin
		10-152
B-26(0-10)C	K2110832-003	54
B-26(10-25)C	K2110832-007	107
Method Blank	KQ2122493-04	107
Lab Control Sample	KQ2122493-03	71
B-26(0-10)C	KQ2122493-01	113
B-26(0-10)C	KQ2122493-02	62

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 11/19/21
Date Extracted: 11/16/21

Duplicate Matrix Spike Summary
Butyltins

Sample Name: B-26(0-10)C
Lab Code: K2110832-003
Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike KQ2122493-01		Duplicate Matrix Spike KQ2122493-02		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
n-Butyltin Cation	ND U	16.0	20.4	78	9.24	20.6	45	10-200	53*	40
Di-n-butyltin Cation	ND U	26.3	25.2	105	14.4	25.4	57	10-190	59*	40
Tri-n-butyltin Cation	ND U	29.5	29.2	101	17.1	29.5	58	10-186	53*	40
Tetra-n-butyltin	ND U	35.4	32.8	108	19.3	33.1	58	10-194	59*	40

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2122493-04

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.98	0.26	1	11/19/21 00:11	11/16/21	
Di-n-butyltin Cation	0.25 J	0.98	0.19	1	11/19/21 00:11	11/16/21	
Tri-n-butyltin Cation	0.48 J	0.98	0.43	1	11/19/21 00:11	11/16/21	
Tetra-n-butyltin	ND U	0.98	0.44	1	11/19/21 00:11	11/16/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	107	10 - 152	11/19/21 00:11	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 11/19/21
Date Extracted: 11/16/21

Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 746910

Lab Control Sample
KQ2122493-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Di-n-butyltin Cation	9.91	19.2	52	10-190
n-Butyltin Cation	12.0	15.6	77	10-200
Tetra-n-butyltin	16.7	25.0	67	10-194
Tri-n-butyltin Cation	13.9	22.3	62	10-186

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 79.7

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.24	0.31	0.37	18	J	1	11/19/21 02:05
n-Butyltin Cation	0.33	0.38	0.45	17	J	1	11/19/21 02:05

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: KQ2122493-01

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 75.5

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.25	26.3	31.5	18		1	11/19/21 01:00
Tetra-n-butyltin	0.58	35.4	40.1	12		1	11/19/21 01:00
Tri-n-butyltin Cation	0.57	29.5	38.6	27		1	11/19/21 01:00
n-Butyltin Cation	0.35	16.0	18.6	15		1	11/19/21 01:00

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: KQ2122493-02

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 75.5

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.26	14.4	17.6	20		1	11/19/21 01:16
Tetra-n-butyltin	0.59	19.3	21.9	13		1	11/19/21 01:16
Tri-n-butyltin Cation	0.57	17.1	20.7	19		1	11/19/21 01:16
n-Butyltin Cation	0.35	9.24	11.5	22		1	11/19/21 01:16

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2122493-03

Service Request: K2110832
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	9.91	11.6	16		1	11/19/21 00:27
Tetra-n-butyltin	0.44	16.7	18.0	7		1	11/19/21 00:27
Tri-n-butyltin Cation	0.43	13.9	17.1	21		1	11/19/21 00:27
n-Butyltin Cation	0.26	12.0	13.8	14		1	11/19/21 00:27

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2122493-04

Service Request: K2110832
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	0.25	0.28	11	J	1	11/19/21 00:11
Tri-n-butyltin Cation	0.43	0.48	0.59	21	J	1	11/19/21 00:11



Semi-Volatile Petroleum Products by GC/FID

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	76 Z	33	2.4	1	10/13/21 07:21	9/28/21	
Residual Range Organics (C25 - C36 RRO)	110 J	130	5.2	1	10/13/21 07:21	9/28/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	120	50 - 150	10/13/21 07:21	
n-Triacontane	112	50 - 150	10/13/21 07:21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	44 Y	31	2.3	1	10/13/21 05:55	9/28/21	
Residual Range Organics (C25 - C36 RRO)	63 J	130	4.9	1	10/13/21 05:55	9/28/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	100	50 - 150	10/13/21 05:55	
n-Triacontane	106	50 - 150	10/13/21 05:55	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-26(0-10)C	K2110832-003	120	112
B-26(10-25)C	K2110832-007	100	106
Method Blank	KQ2119112-04	91	86
Lab Control Sample	KQ2119112-03	121	113

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119112-04

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	ND U	25	1.8	1	10/06/21 16:13	9/28/21	
Residual Range Organics (C25 - C36 RRO)	6.2 J	98	3.9	1	10/06/21 16:13	9/28/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	91	50 - 150	10/06/21 16:13	
n-Triacontane	86	50 - 150	10/06/21 16:13	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 10/06/21
Date Extracted: 09/28/21

Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Units: mg/Kg
Basis: Dry
Analysis Lot: 741512

Lab Control Sample
KQ2119112-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Diesel Range Organics (C12 - C25 DRO)	323	267	121	42-134
Residual Range Organics (C25 - C36 RRO)	131	133	98	48-141



Volatile Petroleum Products by GC/FID

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	2.8 J	14	1.8	106.93	09/22/21 14:56	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	50 - 150	09/22/21 14:56	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	14	1.8	109.53	09/22/21 15:20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	3	50 - 150	09/22/21 15:20	*

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene
		50-150
B-26(0-10)C	K2110832-003	104
B-26(10-25)C	K2110832-007	3*
B-26(10-25)C	KQ2118614-03	22*
Method Blank	KQ2118614-06	102
Lab Control Sample	KQ2118614-07	91
Duplicate Lab Control Sample	KQ2118614-08	89

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 09/22/21

Replicate Sample Summary
Volatile Petroleum Products by GC/FID

Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2118614-03 Result			
Gasoline Range Organics (Toluene-Naphthalene GRO)	NWTPH-Gx	14	1.8	ND U	2.8 J	NC	NC	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118614-06

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	09/22/21 11:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	50 - 150	09/22/21 11:54	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 09/22/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: mg/Kg
Basis: Dry
Analysis Lot: 739731

Lab Control Sample
KQ2118614-07

Duplicate Lab Control Sample
KQ2118614-08

Analyte Name	Lab Control Sample KQ2118614-07			Duplicate Lab Control Sample KQ2118614-08			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Gasoline Range Organics (Toluene-Naphthalene GRO)	19.5	25.0	78	19.2	25.0	77	76-114	1	40



Low Level Organochlorine Pesticides

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00

Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.5	0.75	1	10/31/21 07:43	9/22/21	
alpha-BHC	ND U	1.3	0.37	1	10/31/21 07:43	9/22/21	
beta-BHC	ND U	1.3	0.35	1	10/31/21 07:43	9/22/21	
delta-BHC	ND U	1.3	0.36	1	10/31/21 07:43	9/22/21	
gamma-BHC (Lindane)	0.45 J	1.3	0.40	1	10/31/21 07:43	9/22/21	
cis-Chlordane	ND U	1.3	0.52	1	10/31/21 07:43	9/22/21	
trans-Chlordane	ND U	1.3	0.49	1	10/31/21 07:43	9/22/21	
4,4'-DDD	ND U	2.5	0.76	1	10/31/21 07:43	9/22/21	
4,4'-DDE	ND U	1.3	0.51	1	10/31/21 07:43	9/22/21	
4,4'-DDT	ND U	2.5	0.78	1	10/31/21 07:43	9/22/21	
Dieldrin	ND U	1.3	0.28	1	10/31/21 07:43	9/22/21	
Endosulfan I	ND U	1.3	0.47	1	10/31/21 07:43	9/22/21	
Endosulfan II	ND U	2.5	0.88	1	10/31/21 07:43	9/22/21	
Endosulfan Sulfate	ND U	2.5	1.3	1	10/31/21 07:43	9/22/21	
Endrin	ND U	1.3	0.41	1	10/31/21 07:43	9/22/21	
Endrin Aldehyde	ND U	2.5	1.2	1	10/31/21 07:43	9/22/21	
Endrin Ketone	ND U	1.3	0.57	1	10/31/21 07:43	9/22/21	
Heptachlor	17	1.3	0.50	1	10/31/21 07:43	9/22/21	
Heptachlor Epoxide	ND U	2.5	0.84	1	10/31/21 07:43	9/22/21	
Methoxychlor	ND U	2.5	0.90	1	10/31/21 07:43	9/22/21	
Toxaphene	ND U	130	44	1	10/31/21 07:43	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	66	10 - 134	10/31/21 07:43	
Tetrachloro-m-xylene	59	10 - 121	10/31/21 07:43	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00

Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.4	0.71	1	10/31/21 11:25	9/22/21	
alpha-BHC	ND U	1.2	0.35	1	10/31/21 11:25	9/22/21	
beta-BHC	ND U	1.2	0.33	1	10/31/21 11:25	9/22/21	
delta-BHC	ND U	1.2	0.34	1	10/31/21 11:25	9/22/21	
gamma-BHC (Lindane)	ND U	1.2	0.37	1	10/31/21 11:25	9/22/21	
cis-Chlordane	ND U	1.2	0.49	1	10/31/21 11:25	9/22/21	
trans-Chlordane	ND U	1.2	0.46	1	10/31/21 11:25	9/22/21	
4,4'-DDD	ND U	2.4	0.72	1	10/31/21 11:25	9/22/21	
4,4'-DDE	ND U	1.2	0.48	1	10/31/21 11:25	9/22/21	
4,4'-DDT	ND Ui	2.4	0.73	1	10/31/21 11:25	9/22/21	*
Dieldrin	ND U	1.2	0.27	1	10/31/21 11:25	9/22/21	
Endosulfan I	ND U	1.2	0.45	1	10/31/21 11:25	9/22/21	
Endosulfan II	3.2	2.4	0.83	1	10/31/21 11:25	9/22/21	
Endosulfan Sulfate	ND U	2.4	1.2	1	10/31/21 11:25	9/22/21	
Endrin	ND U	1.2	0.39	1	10/31/21 11:25	9/22/21	
Endrin Aldehyde	ND U	2.4	1.1	1	10/31/21 11:25	9/22/21	
Endrin Ketone	ND U	1.2	0.54	1	10/31/21 11:25	9/22/21	
Heptachlor	ND Ui	3.3	3.3	1	10/31/21 11:25	9/22/21	
Heptachlor Epoxide	ND U	2.4	0.79	1	10/31/21 11:25	9/22/21	
Methoxychlor	ND Ui	2.4	1.3	1	10/31/21 11:25	9/22/21	
Toxaphene	ND U	120	41	1	10/31/21 11:25	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	57	10 - 134	10/31/21 11:25	
Tetrachloro-m-xylene	56	10 - 121	10/31/21 11:25	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832

SURROGATE RECOVERY SUMMARY
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-134	10-121
B-26(0-10)C	K2110832-003	66	59
B-26(10-25)C	K2110832-007	57	56
Method Blank	KQ2118213-08	58	46
Lab Control Sample	KQ2118213-07	59	45
Lab Control Sample	KQ2118213-10	42	42
B-26(0-10)C	KQ2118213-01	63	61
B-26(0-10)C	KQ2118213-02	60	55
B-26(0-10)C	KQ2118213-05	62	57
B-26(0-10)C	KQ2118213-06	64	62

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 10/31/21
Date Extracted: 09/22/21

Duplicate Matrix Spike Summary
Low Level Organochlorine Pesticides by GC

Sample Name: B-26(0-10)C
Lab Code: K2110832-003
Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2118213-01			Duplicate Matrix Spike KQ2118213-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Aldrin	ND U	9.77	15.6	63	9.72	15.9	61	18-89	<1	40
alpha-BHC	ND U	9.45	15.6	61	9.17	15.9	58	16-96	3	40
beta-BHC	ND U	10.8	15.6	70	11.3	15.9	71	16-106	4	40
delta-BHC	ND U	10.1	15.6	65	10.3	15.9	65	20-95	2	40
gamma-BHC (Lindane)	0.45 J	10.1	15.6	62	10.1	15.9	61	17-97	<1	40
cis-Chlordane	ND U	10.7	15.6	69	10.3	15.9	65	20-93	3	40
trans-Chlordane	ND U	4.82 P	15.6	31	9.16	15.9	57	10-103	62*	40
4,4'-DDD	ND U	10.4 P	15.6	67	10.2	15.9	64	10-180	1	40
4,4'-DDE	ND U	10.4	15.6	67	9.63	15.9	60	17-94	8	40
4,4'-DDT	ND U	13.7	15.6	88	12.0	15.9	75	17-104	13	40
Dieldrin	ND U	9.68	15.6	62	9.83	15.9	62	19-88	1	40
Endosulfan I	ND U	7.99	15.6	51	7.80	15.9	49	16-87	2	40
Endosulfan II	ND U	12.6	15.6	81	9.97	15.9	63	15-117	24	40
Endosulfan Sulfate	ND U	9.36	15.6	60	9.98	15.9	63	17-98	6	40
Endrin	ND U	10.5	15.6	67	10.2	15.9	64	10-107	3	40
Endrin Aldehyde	ND U	10.7	15.6	69	9.97	15.9	63	21-94	7	40
Endrin Ketone	ND U	10.5	15.6	67	10.2	15.9	64	19-97	3	40
Heptachlor	17	21.0 P	15.6	25	26.1 P	15.9	56	13-111	22	40
Heptachlor Epoxide	ND U	10.2	15.6	66	9.95	15.9	62	18-92	2	40
Methoxychlor	ND U	15.8 P	15.6	102	14.2 P	15.9	89	17-122	11	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 10/31/21
Date Extracted: 09/22/21

Duplicate Matrix Spike Summary
Low Level Organochlorine Pesticides by GC

Sample Name: B-26(0-10)C
Lab Code: K2110832-003
Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2118213-05			Duplicate Matrix Spike KQ2118213-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Toxaphene	ND U	1110 P	1300	86	1270	1210	105	16-114	13	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118213-08

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.59	1	10/31/21 01:53	9/22/21	
alpha-BHC	ND U	1.0	0.29	1	10/31/21 01:53	9/22/21	
beta-BHC	ND Ui	1.0	0.37	1	10/31/21 01:53	9/22/21	
delta-BHC	ND U	1.0	0.28	1	10/31/21 01:53	9/22/21	
gamma-BHC (Lindane)	ND U	1.0	0.31	1	10/31/21 01:53	9/22/21	
cis-Chlordane	ND U	1.0	0.41	1	10/31/21 01:53	9/22/21	
trans-Chlordane	ND U	1.0	0.38	1	10/31/21 01:53	9/22/21	
4,4'-DDD	ND U	2.0	0.60	1	10/31/21 01:53	9/22/21	
4,4'-DDE	ND U	1.0	0.40	1	10/31/21 01:53	9/22/21	
4,4'-DDT	ND Ui	2.0	0.61	1	10/31/21 01:53	9/22/21	
Dieldrin	ND U	0.91	0.22	1	10/31/21 01:53	9/22/21	
Endosulfan I	ND U	1.0	0.37	1	10/31/21 01:53	9/22/21	
Endosulfan II	ND U	2.0	0.69	1	10/31/21 01:53	9/22/21	
Endosulfan Sulfate	ND U	2.0	0.99	1	10/31/21 01:53	9/22/21	
Endrin	ND U	1.0	0.32	1	10/31/21 01:53	9/22/21	
Endrin Aldehyde	ND U	2.0	0.89	1	10/31/21 01:53	9/22/21	
Endrin Ketone	ND Ui	1.0	0.58	1	10/31/21 01:53	9/22/21	
Heptachlor	ND U	1.0	0.39	1	10/31/21 01:53	9/22/21	
Heptachlor Epoxide	ND U	2.0	0.66	1	10/31/21 01:53	9/22/21	
Methoxychlor	ND U	2.0	0.71	1	10/31/21 01:53	9/22/21	
Toxaphene	ND U	100	34	1	10/31/21 01:53	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	58	10 - 134	10/31/21 01:53	
Tetrachloro-m-xylene	46	10 - 121	10/31/21 01:53	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 10/31/21
Date Extracted: 09/22/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 745427

Lab Control Sample
KQ2118213-07

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
4,4'-DDD	8.77	12.5	70	10-180
4,4'-DDE	9.01	12.5	72	17-94
4,4'-DDT	9.79	12.5	78	17-104
Aldrin	8.30	12.5	66	18-89
alpha-BHC	7.96	12.5	64	16-96
beta-BHC	8.61	12.5	69	16-106
cis-Chlordane	8.69	12.5	70	20-93
delta-BHC	8.88	12.5	71	20-95
Dieldrin	8.45	12.5	68	19-88
Endosulfan I	6.42	12.5	51	16-87
Endosulfan II	7.97	12.5	64	15-117
Endosulfan Sulfate	8.26	12.5	66	17-98
Endrin	8.81	12.5	70	10-107
Endrin Aldehyde	8.96	12.5	72	21-94
Endrin Ketone	8.88	12.5	71	19-97
gamma-BHC (Lindane)	8.61	12.5	69	17-97
Heptachlor	9.50 P	12.5	76	13-111
Heptachlor Epoxide	8.54	12.5	68	18-92
Methoxychlor	11.0	12.5	88	17-122
trans-Chlordane	8.31	12.5	66	10-103

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 10/31/21
Date Extracted: 09/22/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 745427

Lab Control Sample
KQ2118213-10

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Toxaphene	1270	1000	127 *	16-114

ALS Group USA, Corp.
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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 75.5

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Heptachlor	0.50	17	23	30		1	10/31/21 07:43
gamma-BHC (Lindane)	0.40	0.45	0.52	14	J	1	10/31/21 07:43

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 79.7

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Endosulfan II	0.83	3.2	3.8	17		1	10/31/21 11:25

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: KQ2118213-01

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 75.5

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.75	10.4	18.4	56	P	1	10/31/21 08:14
4,4'-DDE	0.50	10.4	11.5	10		1	10/31/21 08:14
4,4'-DDT	0.76	13.7	12.0	13		1	10/31/21 08:14
Aldrin	0.74	9.77	10.5	7		1	10/31/21 08:14
Dieldrin	0.28	9.68	13.2	31		1	10/31/21 08:14
Endosulfan I	0.47	7.99	8.52	6		1	10/31/21 08:14
Endosulfan II	0.86	12.6	13.8	9		1	10/31/21 08:14
Endosulfan Sulfate	1.3	9.36	12.4	28		1	10/31/21 08:14
Endrin	0.40	10.5	11.3	7		1	10/31/21 08:14
Endrin Aldehyde	1.2	10.7	11.8	10		1	10/31/21 08:14
Endrin Ketone	0.57	10.5	11.9	13		1	10/31/21 08:14
Heptachlor	0.49	21.0	33.4	46	P	1	10/31/21 08:14
Heptachlor Epoxide	0.83	10.2	11.0	8		1	10/31/21 08:14
Methoxychlor	0.89	15.8	201	171	P	1	10/31/21 08:14
alpha-BHC	0.37	9.45	9.92	5		1	10/31/21 08:14
beta-BHC	0.34	10.8	13.9	25		1	10/31/21 08:14
cis-Chlordane	0.52	10.7	13.0	19		1	10/31/21 08:14
delta-BHC	0.35	10.1	10.1	<1		1	10/31/21 08:14
gamma-BHC (Lindane)	0.39	10.1	11.9	16		1	10/31/21 08:14
trans-Chlordane	0.48	4.82	15.0	103	P	1	10/31/21 08:14

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: KQ2118213-02

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 75.5

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.77	10.2	11.1	8		1	10/31/21 08:44
4,4'-DDE	0.52	9.63	11.0	13		1	10/31/21 08:44
4,4'-DDT	0.78	12.0	12.1	<1		1	10/31/21 08:44
Aldrin	0.76	9.72	9.74	<1		1	10/31/21 08:44
Dieldrin	0.29	9.83	11.4	15		1	10/31/21 08:44
Endosulfan I	0.48	7.80	8.44	8		1	10/31/21 08:44
Endosulfan II	0.89	9.97	12.2	20		1	10/31/21 08:44
Endosulfan Sulfate	1.3	9.98	10.5	5		1	10/31/21 08:44
Endrin	0.41	10.2	10.7	5		1	10/31/21 08:44
Endrin Aldehyde	1.2	9.97	12.8	25		1	10/31/21 08:44
Endrin Ketone	0.58	10.2	10.6	4		1	10/31/21 08:44
Heptachlor	0.50	26.1	46.0	55	P	1	10/31/21 08:44
Heptachlor Epoxide	0.85	9.95	10.1	1		1	10/31/21 08:44
Methoxychlor	0.91	14.2	96.8	149	P	1	10/31/21 08:44
alpha-BHC	0.37	9.17	9.77	6		1	10/31/21 08:44
beta-BHC	0.35	11.3	12.0	6		1	10/31/21 08:44
cis-Chlordane	0.53	10.3	12.3	18		1	10/31/21 08:44
delta-BHC	0.36	10.3	10.6	3		1	10/31/21 08:44
gamma-BHC (Lindane)	0.40	10.1	10.6	5		1	10/31/21 08:44
trans-Chlordane	0.49	9.16	11.4	22		1	10/31/21 08:44

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: KQ2118213-05

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 75.5

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	45	1110	1720	43	P	1	10/31/21 10:20

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: KQ2118213-06

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 75.5

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	42	1270	1320	4		1	10/31/21 10:53

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2118213-07

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.60	8.77	9.96	13		1	10/31/21 02:25
4,4'-DDE	0.40	9.01	9.26	3		1	10/31/21 02:25
4,4'-DDT	0.61	9.79	9.54	3		1	10/31/21 02:25
Aldrin	0.59	8.30	8.33	<1		1	10/31/21 02:25
Dieldrin	0.22	8.45	8.51	<1		1	10/31/21 02:25
Endosulfan I	0.37	6.42	6.67	4		1	10/31/21 02:25
Endosulfan II	0.69	7.97	11.0	32		1	10/31/21 02:25
Endosulfan Sulfate	0.99	8.26	8.88	7		1	10/31/21 02:25
Endrin	0.32	8.81	9.03	2		1	10/31/21 02:25
Endrin Aldehyde	0.89	8.96	9.18	2		1	10/31/21 02:25
Endrin Ketone	0.45	8.88	9.21	4		1	10/31/21 02:25
Heptachlor	0.39	9.50	25.3	91	P	1	10/31/21 02:25
Heptachlor Epoxide	0.66	8.54	8.82	3		1	10/31/21 02:25
Methoxychlor	0.71	11.0	11.1	<1		1	10/31/21 02:25
alpha-BHC	0.29	7.96	8.27	4		1	10/31/21 02:25
beta-BHC	0.27	8.61	9.32	8		1	10/31/21 02:25
cis-Chlordane	0.41	8.69	9.16	5		1	10/31/21 02:25
delta-BHC	0.28	8.88	9.41	6		1	10/31/21 02:25
gamma-BHC (Lindane)	0.31	8.61	9.04	5		1	10/31/21 02:25
trans-Chlordane	0.38	8.31	9.28	11		1	10/31/21 02:25

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2118213-10

Service Request: K2110832
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	34	1270	1380	8		1	10/31/21 07:12



Polychlorinated Biphenyls (PCBs)

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/2021
Date Received: 09/16/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-26(0-10)C
Lab Code: K2110832-003
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	13	3.7	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1221	ND	U	26	3.7	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1232	ND	U	13	3.7	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1242	ND	U	13	3.7	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1248	ND	U	13	3.7	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1254	ND	U	13	3.7	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1260	ND	U	13	3.7	1	09/22/21	11/03/21	KWG2102565	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	81	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/2021
Date Received: 09/16/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-26(10-25)C
Lab Code: K2110832-007
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	12	3.5	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1221	ND	U	24	3.5	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1232	ND	U	12	3.5	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1242	ND	U	12	3.5	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1248	ND	U	12	3.5	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1254	ND	U	12	3.5	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1260	ND	U	12	3.5	1	09/22/21	11/03/21	KWG2102565	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	88	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG2102565-4
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	2.9	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1221	ND	U	19	2.9	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1232	ND	U	10	2.9	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1242	ND	U	10	2.9	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1248	ND	U	10	2.9	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1254	ND	U	10	2.9	1	09/22/21	11/03/21	KWG2102565	
Aroclor 1260	ND	U	10	2.9	1	09/22/21	11/03/21	KWG2102565	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	75	20-155	11/03/21	Acceptable

Comments: _____

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832

**Surrogate Recovery Summary
 Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
B-26(0-10)C	K2110832-003	81
B-26(10-25)C	K2110832-007	88
Method Blank	KWG2102565-4	75
B-26(0-10)CMS	KWG2102565-1	74
B-26(0-10)CDMS	KWG2102565-2	75
Lab Control Sample	KWG2102565-3	80

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 20-155

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Extracted: 09/22/2021
Date Analyzed: 11/03/2021

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name: B-26(0-10)C
Lab Code: K2110832-003
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102565

Analyte Name	Sample Result	B-26(0-10)CMS KWG2102565-1 Matrix Spike			B-26(0-10)CDMS KWG2102565-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Aroclor 1016	ND	135	130	104	124	126	98	44-119	9	40
Aroclor 1260	ND	146	130	112	129	126	102	56-130	12	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Extracted: 09/22/2021
Date Analyzed: 11/03/2021

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102565

Lab Control Sample
 KWG2102565-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Aroclor 1016	89.5	100	90	44-119
Aroclor 1260	94.3	100	94	56-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Chlorinated Herbicides by GC

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	65	5.3	1	10/24/21 06:33	9/22/21	
2,4,5-TP (Silvex)	ND U	65	3.2	1	10/24/21 06:33	9/22/21	
2,4-D	ND Ui	65	26	1	10/24/21 06:33	9/22/21	
2,4-DB	ND U	65	7.1	1	10/24/21 06:33	9/22/21	
Dalapon	ND U	65	7.2	1	10/24/21 06:33	9/22/21	
Dicamba	ND U	65	5.7	1	10/24/21 06:33	9/22/21	
Dichlorprop	ND U	65	4.5	1	10/24/21 06:33	9/22/21	
Dinoseb	ND U	65	3.6	1	10/24/21 06:33	9/22/21	
MCPA	ND Ui	6500	420	1	10/24/21 06:33	9/22/21	*
MCP	3400 JP	6500	610	1	10/24/21 06:33	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	94	26 - 127	10/24/21 06:33	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	63	5.1	1	10/24/21 05:21	9/22/21	
2,4,5-TP (Silvex)	ND U	63	3.1	1	10/24/21 05:21	9/22/21	
2,4-D	ND Ui	63	25	1	10/24/21 05:21	9/22/21	
2,4-DB	ND U	63	6.8	1	10/24/21 05:21	9/22/21	
Dalapon	ND U	63	6.9	1	10/24/21 05:21	9/22/21	
Dicamba	ND U	63	5.4	1	10/24/21 05:21	9/22/21	
Dichlorprop	ND U	63	4.3	1	10/24/21 05:21	9/22/21	
Dinoseb	ND U	63	3.4	1	10/24/21 05:21	9/22/21	
MCPA	ND Ui	6300	410	1	10/24/21 05:21	9/22/21	
MCPP	1700 JP	6300	580	1	10/24/21 05:21	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	88	26 - 127	10/24/21 05:21	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 26-127
B-26(0-10)C	K2110832-003	94
B-26(10-25)C	K2110832-007	88
Method Blank	KQ2118556-04	70
Lab Control Sample	KQ2118556-03	78
B-26(0-10)C	KQ2118556-01	93
B-26(0-10)C	KQ2118556-02	92

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 10/24/21
Date Extracted: 09/22/21

Duplicate Matrix Spike Summary
Chlorinated Herbicides by GC

Sample Name: B-26(0-10)C
Lab Code: K2110832-003
Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2118556-01			Duplicate Matrix Spike KQ2118556-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-T	ND U	232	217	107	245	219	112	21-137	5	40
2,4,5-TP (Silvex)	ND U	218	217	100	221	219	101	34-129	1	40
2,4-D	ND Ui	212	217	97	219	219	100	35-129	3	40
2,4-DB	ND U	244	217	113	259	219	118	20-131	6	40
Dalapon	ND U	147	217	68	160	219	73	14-100	8	40
Dicamba	ND U	216	217	100	217	219	99	32-129	<1	40
Dichlorprop	ND U	197	217	91	209	219	96	23-140	6	40
Dinoseb	ND U	31.2 J	217	14	110	219	50	10-121	112*	40
MCPA	ND Ui	21600	21700	99	22700	21900	104	13-130	5	40
MCPP	3400 J	25900	21700	104	27900	21900	112	10-169	7	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2118556-04

Service Request: K2110832
Date Collected: NA
Date Received: NA
Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	49	4.0	1	10/24/21 03:46	9/22/21	
2,4,5-TP (Silvex)	ND U	49	2.4	1	10/24/21 03:46	9/22/21	
2,4-D	ND U	49	7.7	1	10/24/21 03:46	9/22/21	
2,4-DB	ND U	49	5.4	1	10/24/21 03:46	9/22/21	
Dalapon	ND U	49	5.5	1	10/24/21 03:46	9/22/21	
Dicamba	ND U	49	4.3	1	10/24/21 03:46	9/22/21	
Dichlorprop	ND U	49	3.4	1	10/24/21 03:46	9/22/21	
Dinoseb	ND U	49	2.7	1	10/24/21 03:46	9/22/21	
MCPA	ND U	4900	320	1	10/24/21 03:46	9/22/21	
MCPP	ND U	4900	460	1	10/24/21 03:46	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	70	26 - 127	10/24/21 03:46	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 10/24/21
Date Extracted: 09/22/21

Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 746581

Lab Control Sample
KQ2118556-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-T	135	167	81	44-125
2,4,5-TP (Silvex)	136	167	81	46-125
2,4-D	128	167	77	46-120
2,4-DB	160	167	96	30-126
Dalapon	96.5	167	58	13-100
Dicamba	150	167	90	43-119
Dichlorprop	136	167	82	47-108
Dinoseb	95.2	167	57	25-110
MCPA	13800	16700	83	40-128
MCPB	13700	16700	82	49-134

ALS Group USA, Corp.
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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 75.5

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
MCP	610	3400	8500	86	JP	1	10/24/21 06:33

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 79.7

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
MCP	580	1700	4500	90	JP	1	10/24/21 05:21

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: KQ2118556-01

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 75.5

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.3	232	245	5		1	10/24/21 06:57
2,4,5-TP (Silvex)	3.2	218	222	2		1	10/24/21 06:57
2,4-D	11	212	241	13		1	10/24/21 06:57
2,4-DB	7.1	244	281	14		1	10/24/21 06:57
Dalapon	7.2	147	204	32		1	10/24/21 06:57
Dicamba	5.7	216	227	5		1	10/24/21 06:57
Dichlorprop	4.5	197	220	11		1	10/24/21 06:57
Dinoseb	3.6	31.2	44.5	35	J	1	10/24/21 06:57
MCPA	420	21600	23100	7		1	10/24/21 06:57
MCPP	600	25900	28800	11		1	10/24/21 06:57

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: KQ2118556-02

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 9/16/21

Units: ug/Kg
Basis: Dry
Percent Solids: 75.5

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.3	245	249	2		1	10/24/21 07:20
2,4,5-TP (Silvex)	3.2	221	224	1		1	10/24/21 07:20
2,4-D	11	219	222	1		1	10/24/21 07:20
2,4-DB	7.1	259	287	10		1	10/24/21 07:20
Dalapon	7.3	160	217	30		1	10/24/21 07:20
Dicamba	5.7	217	231	6		1	10/24/21 07:20
Dichlorprop	4.5	209	224	7		1	10/24/21 07:20
Dinoseb	3.6	110	123	11		1	10/24/21 07:20
MCPA	430	22700	23000	1		1	10/24/21 07:20
MCPP	610	27900	28700	3		1	10/24/21 07:20

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2118556-03

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	4.0	135	140	4		1	10/24/21 04:10
2,4,5-TP (Silvex)	2.4	136	138	1		1	10/24/21 04:10
2,4-D	7.7	128	134	5		1	10/24/21 04:10
2,4-DB	5.4	160	236	38		1	10/24/21 04:10
Dalapon	5.5	96.5	119	21		1	10/24/21 04:10
Dicamba	4.3	150	176	16		1	10/24/21 04:10
Dichlorprop	3.4	136	145	6		1	10/24/21 04:10
Dinoseb	2.7	95.2	96.8	2		1	10/24/21 04:10
MCPA	320	13800	15800	14		1	10/24/21 04:10
MCPP	460	13700	14000	2		1	10/24/21 04:10



Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00

Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	6.8	0.15	1	09/21/21 19:00	*
1,1,1-Trichloroethane (TCA)	ND U	6.8	0.15	1	09/21/21 19:00	*
1,1,2,2-Tetrachloroethane	ND U	6.8	0.18	1	09/21/21 19:00	*
1,1,2-Trichloroethane	ND U	6.8	0.21	1	09/21/21 19:00	*
1,1-Dichloroethane	ND U	6.8	0.17	1	09/21/21 19:00	*
1,1-Dichloroethene	ND U	6.8	0.35	1	09/21/21 19:00	*
1,1-Dichloropropene	ND U	6.8	0.18	1	09/21/21 19:00	*
1,2,3-Trichlorobenzene	ND U	27	0.26	1	09/21/21 19:00	*
1,2,3-Trichloropropane	ND U	6.8	0.62	1	09/21/21 19:00	*
1,2,4-Trichlorobenzene	ND U	27	0.18	1	09/21/21 19:00	*
1,2,4-Trimethylbenzene	ND U	27	0.074	1	09/21/21 19:00	*
1,2-Dibromo-3-chloropropane	ND U	27	0.55	1	09/21/21 19:00	*
1,2-Dibromoethane (EDB)	ND U	27	0.13	1	09/21/21 19:00	*
1,2-Dichlorobenzene	ND U	6.8	0.11	1	09/21/21 19:00	*
1,2-Dichloroethane (EDC)	ND U	6.8	0.096	1	09/21/21 19:00	*
1,2-Dichloropropane	ND U	6.8	0.18	1	09/21/21 19:00	*
1,3,5-Trimethylbenzene	ND U	27	0.13	1	09/21/21 19:00	*
1,3-Dichlorobenzene	ND U	6.8	0.13	1	09/21/21 19:00	*
1,3-Dichloropropane	ND U	6.8	0.17	1	09/21/21 19:00	*
1,4-Dichlorobenzene	ND U	6.8	0.12	1	09/21/21 19:00	*
2,2-Dichloropropane	ND U	6.8	0.14	1	09/21/21 19:00	*
2-Butanone (MEK)	ND U	27	1.3	1	09/21/21 19:00	*
2-Chlorotoluene	ND U	27	0.17	1	09/21/21 19:00	*
2-Hexanone	ND U	27	1.3	1	09/21/21 19:00	*
4-Chlorotoluene	ND U	27	0.12	1	09/21/21 19:00	*
4-Isopropyltoluene	78	27	0.088	1	09/21/21 19:00	*
4-Methyl-2-pentanone (MIBK)	ND U	27	2.5	1	09/21/21 19:00	*
Acetone	85	27	4.0	1	09/21/21 19:00	*
Benzene	ND U	6.8	0.074	1	09/21/21 19:00	*
Bromobenzene	ND U	6.8	0.12	1	09/21/21 19:00	*
Bromochloromethane	ND U	6.8	0.33	1	09/21/21 19:00	*
Bromodichloromethane	ND U	6.8	0.22	1	09/21/21 19:00	*
Bromoform	ND U	6.8	0.20	1	09/21/21 19:00	*
Bromomethane	ND U	6.8	0.28	1	09/21/21 19:00	*
Carbon Disulfide	ND U	6.8	0.13	1	09/21/21 19:00	*
Carbon Tetrachloride	ND U	6.8	0.13	1	09/21/21 19:00	*
Chlorobenzene	ND U	6.8	0.089	1	09/21/21 19:00	*
Chloroethane	ND U	6.8	1.1	1	09/21/21 19:00	*
Chloroform	ND U	6.8	0.15	1	09/21/21 19:00	*
Chloromethane	ND U	6.8	0.25	1	09/21/21 19:00	*
Dibromochloromethane	ND U	6.8	0.25	1	09/21/21 19:00	*

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00

Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	6.8	0.39	1	09/21/21 19:00	*
Dichlorodifluoromethane	ND U	6.8	0.17	1	09/21/21 19:00	*
Ethylbenzene	ND U	6.8	0.13	1	09/21/21 19:00	*
Hexachlorobutadiene	ND U	27	0.55	1	09/21/21 19:00	*
Isopropylbenzene	9.7 J	27	0.12	1	09/21/21 19:00	*
Methylene Chloride	ND U	14	0.22	1	09/21/21 19:00	*
Naphthalene	2.7 J	27	0.18	1	09/21/21 19:00	*
Styrene	ND U	6.8	0.20	1	09/21/21 19:00	*
Tetrachloroethene (PCE)	ND U	6.8	0.22	1	09/21/21 19:00	*
Toluene	ND U	6.8	0.21	1	09/21/21 19:00	*
Trichloroethene (TCE)	ND U	6.8	0.21	1	09/21/21 19:00	*
Trichlorofluoromethane	ND U	6.8	0.12	1	09/21/21 19:00	*
Vinyl Chloride	ND U	6.8	0.25	1	09/21/21 19:00	*
cis-1,2-Dichloroethene	ND U	6.8	0.17	1	09/21/21 19:00	*
cis-1,3-Dichloropropene	ND U	6.8	0.18	1	09/21/21 19:00	*
m,p-Xylenes	ND U	6.8	0.14	1	09/21/21 19:00	*
n-Butylbenzene	ND U	27	0.094	1	09/21/21 19:00	*
n-Propylbenzene	ND U	27	0.18	1	09/21/21 19:00	*
o-Xylene	ND U	6.8	0.12	1	09/21/21 19:00	*
sec-Butylbenzene	ND U	27	0.11	1	09/21/21 19:00	*
tert-Butylbenzene	ND U	27	0.20	1	09/21/21 19:00	*
trans-1,2-Dichloroethene	ND U	6.8	0.17	1	09/21/21 19:00	*
trans-1,3-Dichloropropene	ND U	6.8	0.15	1	09/21/21 19:00	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	61 - 133	09/21/21 19:00	
Dibromofluoromethane	100	59 - 134	09/21/21 19:00	
Toluene-d8	101	77 - 122	09/21/21 19:00	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00

Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.4	0.12	1	09/21/21 19:21	*
1,1,1-Trichloroethane (TCA)	ND U	5.4	0.12	1	09/21/21 19:21	*
1,1,2,2-Tetrachloroethane	ND U	5.4	0.14	1	09/21/21 19:21	*
1,1,2-Trichloroethane	ND U	5.4	0.17	1	09/21/21 19:21	*
1,1-Dichloroethane	ND U	5.4	0.13	1	09/21/21 19:21	*
1,1-Dichloroethene	ND U	5.4	0.27	1	09/21/21 19:21	*
1,1-Dichloropropene	ND U	5.4	0.14	1	09/21/21 19:21	*
1,2,3-Trichlorobenzene	ND U	21	0.21	1	09/21/21 19:21	*
1,2,3-Trichloropropane	ND U	5.4	0.49	1	09/21/21 19:21	*
1,2,4-Trichlorobenzene	ND U	21	0.14	1	09/21/21 19:21	*
1,2,4-Trimethylbenzene	ND U	21	0.058	1	09/21/21 19:21	*
1,2-Dibromo-3-chloropropane	ND U	21	0.43	1	09/21/21 19:21	*
1,2-Dibromoethane (EDB)	ND U	21	0.11	1	09/21/21 19:21	*
1,2-Dichlorobenzene	ND U	5.4	0.083	1	09/21/21 19:21	*
1,2-Dichloroethane (EDC)	ND U	5.4	0.076	1	09/21/21 19:21	*
1,2-Dichloropropane	ND U	5.4	0.14	1	09/21/21 19:21	*
1,3,5-Trimethylbenzene	ND U	21	0.099	1	09/21/21 19:21	*
1,3-Dichlorobenzene	ND U	5.4	0.11	1	09/21/21 19:21	*
1,3-Dichloropropane	ND U	5.4	0.13	1	09/21/21 19:21	*
1,4-Dichlorobenzene	ND U	5.4	0.093	1	09/21/21 19:21	*
2,2-Dichloropropane	ND U	5.4	0.11	1	09/21/21 19:21	*
2-Butanone (MEK)	ND U	21	0.97	1	09/21/21 19:21	*
2-Chlorotoluene	ND U	21	0.13	1	09/21/21 19:21	*
2-Hexanone	ND U	21	1.0	1	09/21/21 19:21	*
4-Chlorotoluene	ND U	21	0.095	1	09/21/21 19:21	*
4-Isopropyltoluene	6.6 J	21	0.069	1	09/21/21 19:21	*
4-Methyl-2-pentanone (MIBK)	ND U	21	2.0	1	09/21/21 19:21	*
Acetone	33	21	3.2	1	09/21/21 19:21	*
Benzene	ND U	5.4	0.058	1	09/21/21 19:21	*
Bromobenzene	ND U	5.4	0.095	1	09/21/21 19:21	*
Bromochloromethane	ND U	5.4	0.26	1	09/21/21 19:21	*
Bromodichloromethane	ND U	5.4	0.18	1	09/21/21 19:21	*
Bromoform	ND U	5.4	0.16	1	09/21/21 19:21	*
Bromomethane	ND U	5.4	0.22	1	09/21/21 19:21	*
Carbon Disulfide	ND U	5.4	0.099	1	09/21/21 19:21	*
Carbon Tetrachloride	ND U	5.4	0.11	1	09/21/21 19:21	*
Chlorobenzene	ND U	5.4	0.070	1	09/21/21 19:21	*
Chloroethane	ND U	5.4	0.80	1	09/21/21 19:21	*
Chloroform	ND U	5.4	0.12	1	09/21/21 19:21	*
Chloromethane	ND U	5.4	0.20	1	09/21/21 19:21	*
Dibromochloromethane	ND U	5.4	0.20	1	09/21/21 19:21	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00

Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.4	0.31	1	09/21/21 19:21	*
Dichlorodifluoromethane	ND U	5.4	0.13	1	09/21/21 19:21	*
Ethylbenzene	ND U	5.4	0.11	1	09/21/21 19:21	*
Hexachlorobutadiene	ND U	21	0.43	1	09/21/21 19:21	*
Isopropylbenzene	ND U	21	0.087	1	09/21/21 19:21	*
Methylene Chloride	ND U	11	0.18	1	09/21/21 19:21	*
Naphthalene	0.90 J	21	0.14	1	09/21/21 19:21	*
Styrene	ND U	5.4	0.16	1	09/21/21 19:21	*
Tetrachloroethene (PCE)	ND U	5.4	0.18	1	09/21/21 19:21	*
Toluene	ND U	5.4	0.17	1	09/21/21 19:21	*
Trichloroethene (TCE)	ND U	5.4	0.17	1	09/21/21 19:21	*
Trichlorofluoromethane	ND U	5.4	0.092	1	09/21/21 19:21	*
Vinyl Chloride	ND U	5.4	0.20	1	09/21/21 19:21	*
cis-1,2-Dichloroethene	ND U	5.4	0.13	1	09/21/21 19:21	*
cis-1,3-Dichloropropene	ND U	5.4	0.14	1	09/21/21 19:21	*
m,p-Xylenes	ND U	5.4	0.11	1	09/21/21 19:21	*
n-Butylbenzene	ND U	21	0.074	1	09/21/21 19:21	*
n-Propylbenzene	ND U	21	0.14	1	09/21/21 19:21	*
o-Xylene	ND U	5.4	0.087	1	09/21/21 19:21	*
sec-Butylbenzene	ND U	21	0.080	1	09/21/21 19:21	*
tert-Butylbenzene	ND U	21	0.16	1	09/21/21 19:21	*
trans-1,2-Dichloroethene	ND U	5.4	0.13	1	09/21/21 19:21	*
trans-1,3-Dichloropropene	ND U	5.4	0.12	1	09/21/21 19:21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	61 - 133	09/21/21 19:21	
Dibromofluoromethane	115	59 - 134	09/21/21 19:21	
Toluene-d8	103	77 - 122	09/21/21 19:21	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		61-133	59-134	77-122
B-26(0-10)C	K2110832-003	105	100	101
B-26(10-25)C	K2110832-007	98	115	103
Method Blank	KQ2118652-07	101	97	102
Lab Control Sample	KQ2118652-05	101	103	103
Duplicate Lab Control Sample	KQ2118652-06	101	104	104

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118652-07

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.0	0.11	1	09/21/21 12:46	
1,1,1-Trichloroethane (TCA)	ND U	5.0	0.11	1	09/21/21 12:46	
1,1,2,2-Tetrachloroethane	ND U	5.0	0.13	1	09/21/21 12:46	
1,1,2-Trichloroethane	ND U	5.0	0.15	1	09/21/21 12:46	
1,1-Dichloroethane	ND U	5.0	0.12	1	09/21/21 12:46	
1,1-Dichloroethene	ND U	5.0	0.25	1	09/21/21 12:46	
1,1-Dichloropropene	ND U	5.0	0.13	1	09/21/21 12:46	
1,2,3-Trichlorobenzene	ND U	20	0.19	1	09/21/21 12:46	
1,2,3-Trichloropropane	ND U	5.0	0.45	1	09/21/21 12:46	
1,2,4-Trichlorobenzene	ND U	20	0.13	1	09/21/21 12:46	
1,2,4-Trimethylbenzene	ND U	20	0.054	1	09/21/21 12:46	
1,2-Dibromo-3-chloropropane	ND U	20	0.40	1	09/21/21 12:46	
1,2-Dibromoethane (EDB)	ND U	20	0.094	1	09/21/21 12:46	
1,2-Dichlorobenzene	ND U	5.0	0.077	1	09/21/21 12:46	
1,2-Dichloroethane (EDC)	ND U	5.0	0.070	1	09/21/21 12:46	
1,2-Dichloropropane	ND U	5.0	0.13	1	09/21/21 12:46	
1,3,5-Trimethylbenzene	ND U	20	0.092	1	09/21/21 12:46	
1,3-Dichlorobenzene	ND U	5.0	0.094	1	09/21/21 12:46	
1,3-Dichloropropane	ND U	5.0	0.12	1	09/21/21 12:46	
1,4-Dichlorobenzene	ND U	5.0	0.086	1	09/21/21 12:46	
2,2-Dichloropropane	ND U	5.0	0.098	1	09/21/21 12:46	
2-Butanone (MEK)	ND U	20	0.90	1	09/21/21 12:46	
2-Chlorotoluene	ND U	20	0.12	1	09/21/21 12:46	
2-Hexanone	ND U	20	0.93	1	09/21/21 12:46	
4-Chlorotoluene	ND U	20	0.088	1	09/21/21 12:46	
4-Isopropyltoluene	ND U	20	0.064	1	09/21/21 12:46	
4-Methyl-2-pentanone (MIBK)	ND U	20	1.8	1	09/21/21 12:46	
Acetone	12 J	20	2.9	1	09/21/21 12:46	
Benzene	ND U	5.0	0.054	1	09/21/21 12:46	
Bromobenzene	ND U	5.0	0.088	1	09/21/21 12:46	
Bromochloromethane	ND U	5.0	0.24	1	09/21/21 12:46	
Bromodichloromethane	ND U	5.0	0.16	1	09/21/21 12:46	
Bromoform	ND U	5.0	0.14	1	09/21/21 12:46	
Bromomethane	ND U	5.0	0.20	1	09/21/21 12:46	
Carbon Disulfide	ND U	5.0	0.092	1	09/21/21 12:46	
Carbon Tetrachloride	ND U	5.0	0.094	1	09/21/21 12:46	
Chlorobenzene	ND U	5.0	0.065	1	09/21/21 12:46	
Chloroethane	ND U	5.0	0.74	1	09/21/21 12:46	
Chloroform	ND U	5.0	0.11	1	09/21/21 12:46	
Chloromethane	ND U	5.0	0.18	1	09/21/21 12:46	
Dibromochloromethane	ND U	5.0	0.18	1	09/21/21 12:46	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118652-07

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.0	0.28	1	09/21/21 12:46	
Dichlorodifluoromethane	ND U	5.0	0.12	1	09/21/21 12:46	
Ethylbenzene	ND U	5.0	0.094	1	09/21/21 12:46	
Hexachlorobutadiene	ND U	20	0.40	1	09/21/21 12:46	
Isopropylbenzene	ND U	20	0.081	1	09/21/21 12:46	
Methylene Chloride	ND U	10	0.16	1	09/21/21 12:46	
Naphthalene	ND U	20	0.13	1	09/21/21 12:46	
Styrene	ND U	5.0	0.14	1	09/21/21 12:46	
Tetrachloroethene (PCE)	ND U	5.0	0.16	1	09/21/21 12:46	
Toluene	ND U	5.0	0.15	1	09/21/21 12:46	
Trichloroethene (TCE)	ND U	5.0	0.15	1	09/21/21 12:46	
Trichlorofluoromethane	ND U	5.0	0.085	1	09/21/21 12:46	
Vinyl Chloride	ND U	5.0	0.18	1	09/21/21 12:46	
cis-1,2-Dichloroethene	ND U	5.0	0.12	1	09/21/21 12:46	
cis-1,3-Dichloropropene	ND U	5.0	0.13	1	09/21/21 12:46	
m,p-Xylenes	ND U	5.0	0.10	1	09/21/21 12:46	
n-Butylbenzene	ND U	20	0.069	1	09/21/21 12:46	
n-Propylbenzene	ND U	20	0.13	1	09/21/21 12:46	
o-Xylene	ND U	5.0	0.081	1	09/21/21 12:46	
sec-Butylbenzene	ND U	20	0.074	1	09/21/21 12:46	
tert-Butylbenzene	ND U	20	0.14	1	09/21/21 12:46	
trans-1,2-Dichloroethene	ND U	5.0	0.12	1	09/21/21 12:46	
trans-1,3-Dichloropropene	ND U	5.0	0.11	1	09/21/21 12:46	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	61 - 133	09/21/21 12:46	
Dibromofluoromethane	97	59 - 134	09/21/21 12:46	
Toluene-d8	102	77 - 122	09/21/21 12:46	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 09/21/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 739480

Analyte Name	Lab Control Sample KQ2118652-05			Duplicate Lab Control Sample KQ2118652-06			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	38.1	50.0	76	38.0	50.0	76	71-119	<1	40
1,1,1-Trichloroethane (TCA)	39.1	50.0	78	39.1	50.0	78	59-146	<1	40
1,1,2,2-Tetrachloroethane	39.0	50.0	78	38.6	50.0	77	60-128	1	40
1,1,2-Trichloroethane	38.9	50.0	78	37.6	50.0	75	72-118	3	40
1,1-Dichloroethane	40.0	50.0	80	35.0	50.0	70	59-137	13	40
1,1-Dichloroethene	40.9	50.0	82	41.1	50.0	82	64-152	<1	40
1,1-Dichloropropene	42.9	50.0	86	43.5	50.0	87	52-142	1	40
1,2,3-Trichlorobenzene	36.6	50.0	73	35.3	50.0	71	52-138	4	40
1,2,3-Trichloropropane	37.1	50.0	74	38.0	50.0	76	53-134	2	40
1,2,4-Trichlorobenzene	39.8	50.0	80	37.6	50.0	75	57-136	6	40
1,2,4-Trimethylbenzene	44.0	50.0	88	43.1	50.0	86	65-132	2	40
1,2-Dibromo-3-chloropropane	31.9	50.0	64	32.0	50.0	64	55-127	<1	40
1,2-Dibromoethane (EDB)	39.5	50.0	79	39.9	50.0	80	71-116	1	40
1,2-Dichlorobenzene	42.0	50.0	84	40.2	50.0	80	67-124	5	40
1,2-Dichloroethane (EDC)	39.7	50.0	79	40.6	50.0	81	65-121	2	40
1,2-Dichloropropane	39.4	50.0	79	39.8	50.0	80	71-121	<1	40
1,3,5-Trimethylbenzene	42.9	50.0	86	41.4	50.0	83	66-132	3	40
1,3-Dichlorobenzene	43.7	50.0	87	42.7	50.0	85	69-128	3	40
1,3-Dichloropropane	39.2	50.0	78	39.4	50.0	79	72-118	<1	40
1,4-Dichlorobenzene	43.0	50.0	86	41.1	50.0	82	69-125	5	40
2,2-Dichloropropane	37.1	50.0	74	37.6	50.0	75	50-138	1	40
2-Butanone (MEK)	245	250	98	261	250	104	54-116	6	40
2-Chlorotoluene	45.4	50.0	91	43.3	50.0	87	65-129	5	40
2-Hexanone	250	250	100	268	250	107	67-121	7	40
4-Chlorotoluene	43.3	50.0	87	41.0	50.0	82	51-134	6	40
4-Isopropyltoluene	46.0	50.0	92	43.6	50.0	87	61-132	5	40
4-Methyl-2-pentanone (MIBK)	256	250	102	272	250	109	69-126	6	40
Acetone	228	250	91	244	250	98	32-135	7	40
Benzene	41.8	50.0	84	42.2	50.0	84	68-122	<1	40
Bromobenzene	41.7	50.0	83	40.4	50.0	81	71-124	3	40
Bromochloromethane	39.5	50.0	79	40.8	50.0	82	65-131	3	40
Bromodichloromethane	38.6	50.0	77	38.8	50.0	78	61-143	<1	40
Bromoform	32.5	50.0	65	34.1	50.0	68	62-134	5	40
Bromomethane	39.1	50.0	78	39.1	50.0	78	22-180	<1	40
Carbon Disulfide	93.3	100	93	93.6	100	94	55-141	<1	40
Carbon Tetrachloride	40.0	50.0	80	40.0	50.0	80	51-135	<1	40
Chlorobenzene	42.0	50.0	84	41.1	50.0	82	70-116	2	40
Chloroethane	37.8	50.0	76	38.6	50.0	77	51-122	2	40
Chloroform	41.2	50.0	82	42.5	50.0	85	61-137	3	40
Chloromethane	36.5	50.0	73	37.6	50.0	75	37-146	3	40
cis-1,2-Dichloroethene	38.8	50.0	78	39.5	50.0	79	62-138	2	40

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 09/21/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 739480

Analyte Name	Lab Control Sample KQ2118652-05			Duplicate Lab Control Sample KQ2118652-06			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	35.9	50.0	72	35.8	50.0	72	58-138	<1	40
Dibromochloromethane	35.6	50.0	71	36.0	50.0	72	69-120	1	40
Dibromomethane	38.3	50.0	77	40.3	50.0	81	68-125	5	40
Dichlorodifluoromethane	41.8	50.0	84	41.9	50.0	84	38-160	<1	40
Ethylbenzene	42.8	50.0	86	41.9	50.0	84	70-118	2	40
Hexachlorobutadiene	38.7	50.0	77	37.2	50.0	74	54-140	4	40
Isopropylbenzene	43.0	50.0	86	42.0	50.0	84	67-133	2	40
m,p-Xylenes	82.5	100	82	81.0	100	81	69-127	2	40
Methylene Chloride	38.0	50.0	76	38.5	50.0	77	65-122	1	40
Naphthalene	33.0	50.0	66	31.8	50.0	64	54-134	4	40
n-Butylbenzene	44.5	50.0	89	42.3	50.0	85	53-139	5	40
n-Propylbenzene	42.1	50.0	84	40.0	50.0	80	57-143	5	40
o-Xylene	41.1	50.0	82	40.0	50.0	80	69-124	3	40
sec-Butylbenzene	45.8	50.0	92	43.8	50.0	88	55-146	5	40
Styrene	43.5	50.0	87	41.0	50.0	82	62-135	6	40
tert-Butylbenzene	45.1	50.0	90	42.8	50.0	86	67-131	5	40
Tetrachloroethene (PCE)	40.9	50.0	82	40.4	50.0	81	66-126	1	40
Toluene	38.4	50.0	77	38.9	50.0	78	75-117	1	40
trans-1,2-Dichloroethene	40.7	50.0	81	41.1	50.0	82	63-127	1	40
trans-1,3-Dichloropropene	33.3	50.0	67	32.9	50.0	66	63-121	1	40
Trichloroethene (TCE)	40.3	50.0	81	40.0	50.0	80	67-126	<1	40
Trichlorofluoromethane	44.6	50.0	89	44.6	50.0	89	51-140	<1	40
Vinyl Chloride	40.8	50.0	82	41.5	50.0	83	54-127	2	40



Low Level Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	520	130	1	09/28/21 09:26	9/22/21	
Bis(2-ethylhexyl) Phthalate	ND U	130	12	1	09/28/21 09:26	9/22/21	
Carbazole	ND U	13	5.0	1	09/28/21 09:26	9/22/21	
Di-n-butyl Phthalate	ND U	26	6.3	1	09/28/21 09:26	9/22/21	
Di-n-octyl Phthalate	ND U	26	4.2	1	09/28/21 09:26	9/22/21	
Dibenzofuran	17	13	4.5	1	09/28/21 09:26	9/22/21	
2,4-Dinitrotoluene	ND U	13	3.3	1	09/28/21 09:26	9/22/21	
2-Methylphenol	ND U	13	5.4	1	09/28/21 09:26	9/22/21	*
4-Methylphenol	31	26	5.9	1	09/28/21 09:26	9/22/21	*
Nitrobenzene	ND U	13	4.5	1	09/28/21 09:26	9/22/21	
Pentachlorophenol (PCP)	ND U	130	7.0	1	09/28/21 09:26	9/22/21	
Phenol	ND U	39	4.1	1	09/28/21 09:26	9/22/21	
Pyridine	ND U	260	66	1	09/28/21 09:26	9/22/21	*
2,4,5-Trichlorophenol	ND U	13	4.0	1	09/28/21 09:26	9/22/21	
2,4,6-Trichlorophenol	ND U	13	4.0	1	09/28/21 09:26	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	63	35 - 105	09/28/21 09:26	
2-Fluorophenol	57	22 - 85	09/28/21 09:26	
Nitrobenzene-d5	63	10 - 84	09/28/21 09:26	
Phenol-d6	61	39 - 109	09/28/21 09:26	
p-Terphenyl-d14	77	30 - 102	09/28/21 09:26	
2,4,6-Tribromophenol	68	10 - 124	09/28/21 09:26	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00

Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	500	120	1	09/28/21 09:54	9/22/21	
Bis(2-ethylhexyl) Phthalate	19 J	120	12	1	09/28/21 09:54	9/22/21	
Carbazole	6.1 J	12	4.8	1	09/28/21 09:54	9/22/21	
Di-n-butyl Phthalate	ND U	25	6.0	1	09/28/21 09:54	9/22/21	
Di-n-octyl Phthalate	ND U	25	4.0	1	09/28/21 09:54	9/22/21	
Dibenzofuran	9.8 J	12	4.3	1	09/28/21 09:54	9/22/21	
2,4-Dinitrotoluene	ND U	12	3.1	1	09/28/21 09:54	9/22/21	
2-Methylphenol	ND U	12	5.1	1	09/28/21 09:54	9/22/21	*
4-Methylphenol	18 J	25	5.6	1	09/28/21 09:54	9/22/21	*
Nitrobenzene	ND U	12	4.3	1	09/28/21 09:54	9/22/21	
Pentachlorophenol (PCP)	ND U	120	6.6	1	09/28/21 09:54	9/22/21	
Phenol	ND U	37	3.9	1	09/28/21 09:54	9/22/21	
Pyridine	ND U	250	62	1	09/28/21 09:54	9/22/21	*
2,4,5-Trichlorophenol	ND U	12	3.8	1	09/28/21 09:54	9/22/21	
2,4,6-Trichlorophenol	ND U	12	3.8	1	09/28/21 09:54	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	66	35 - 105	09/28/21 09:54	
2-Fluorophenol	59	22 - 85	09/28/21 09:54	
Nitrobenzene-d5	67	10 - 84	09/28/21 09:54	
Phenol-d6	64	39 - 109	09/28/21 09:54	
p-Terphenyl-d14	78	30 - 102	09/28/21 09:54	
2,4,6-Tribromophenol	62	10 - 124	09/28/21 09:54	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	22-85	10-84
B-26(0-10)C	K2110832-003	63	57	63
B-26(10-25)C	K2110832-007	66	59	67
Method Blank	KQ2118214-05	71	61	72
Lab Control Sample	KQ2118214-03	67	63	69
Duplicate Lab Control Sample	KQ2118214-04	74	69	77
B-26(0-10)C	KQ2118214-01	64	61	67
B-26(0-10)C	KQ2118214-02	66	64	71

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	30-102	10-124
B-26(0-10)C	K2110832-003	61	77	68
B-26(10-25)C	K2110832-007	64	78	62
Method Blank	KQ2118214-05	69	73	58
Lab Control Sample	KQ2118214-03	67	82	64
Duplicate Lab Control Sample	KQ2118214-04	75	93	71
B-26(0-10)C	KQ2118214-01	65	75	65
B-26(0-10)C	KQ2118214-02	68	78	70

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 09/28/21
Date Extracted: 09/22/21

Duplicate Matrix Spike Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name: B-26(0-10)C
Lab Code: K2110832-003
Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2118214-01			Duplicate Matrix Spike KQ2118214-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Benzoic Acid	ND U	326 J	981	33	408 J	980	42	10-125	23	40
Bis(2-ethylhexyl) Phthalate	ND U	222	327	68	230	327	70	23-123	3	40
Carbazole	ND U	245	327	75	246	327	75	10-136	<1	40
Di-n-butyl Phthalate	ND U	242	327	74	243	327	74	16-130	<1	40
Di-n-octyl Phthalate	ND U	250	327	77	264	327	81	25-120	5	40
Dibenzofuran	17	234	327	66	247	327	70	15-96	5	40
2,4-Dinitrotoluene	ND U	186	327	57	200	327	61	10-131	8	40
2-Methylphenol	ND U	221	327	68	236	327	72	10-94	6	40
4-Methylphenol	31	277	327	75	295	327	81	10-103	6	40
Nitrobenzene	ND U	174	327	53	186	327	57	10-95	7	40
Pentachlorophenol (PCP)	ND U	231	327	71	248	327	76	10-134	7	40
Phenol	ND U	224	327	69	239	327	73	10-93	6	40
Pyridine	ND U	ND U	654	0 *	ND U	654	0 *	10-54	NC	40
2,4,5-Trichlorophenol	ND U	222	327	68	231	327	71	29-88	4	40
2,4,6-Trichlorophenol	ND U	222	327	68	232	327	71	20-96	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118214-05

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	380	96	1	09/28/21 05:39	9/22/21	
Bis(2-ethylhexyl) Phthalate	12 J	96	8.9	1	09/28/21 05:39	9/22/21	
Carbazole	ND U	9.6	3.8	1	09/28/21 05:39	9/22/21	
Di-n-butyl Phthalate	ND U	19	4.8	1	09/28/21 05:39	9/22/21	
Di-n-octyl Phthalate	ND U	19	3.2	1	09/28/21 05:39	9/22/21	
Dibenzofuran	ND U	9.6	3.4	1	09/28/21 05:39	9/22/21	
2,4-Dinitrotoluene	ND U	9.6	2.5	1	09/28/21 05:39	9/22/21	
2-Methylphenol	ND U	9.6	4.1	1	09/28/21 05:39	9/22/21	
4-Methylphenol	ND U	19	4.5	1	09/28/21 05:39	9/22/21	
Nitrobenzene	ND U	9.6	3.4	1	09/28/21 05:39	9/22/21	
Pentachlorophenol (PCP)	ND U	96	5.3	1	09/28/21 05:39	9/22/21	
Phenol	ND U	29	3.1	1	09/28/21 05:39	9/22/21	
Pyridine	ND U	190	50	1	09/28/21 05:39	9/22/21	
2,4,5-Trichlorophenol	ND U	9.6	3.0	1	09/28/21 05:39	9/22/21	
2,4,6-Trichlorophenol	ND U	9.6	3.0	1	09/28/21 05:39	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	71	35 - 105	09/28/21 05:39	
2-Fluorophenol	61	22 - 85	09/28/21 05:39	
Nitrobenzene-d5	72	10 - 84	09/28/21 05:39	
Phenol-d6	69	39 - 109	09/28/21 05:39	
p-Terphenyl-d14	73	30 - 102	09/28/21 05:39	
2,4,6-Tribromophenol	58	10 - 124	09/28/21 05:39	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 09/28/21
Date Extracted: 09/22/21

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry
Analysis Lot: 741010

Lab Control Sample
KQ2118214-03

Duplicate Lab Control Sample
KQ2118214-04

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-Trichlorophenol	172	250	69	184	250	74	32-81	7	40
2,4,6-Trichlorophenol	172	250	69	189	250	76	33-79	10	40
2,4-Dinitrotoluene	150	250	60	165	250	66	35-93	10	40
2-Methylphenol	181	250	72	197	250	79 *	27-74	9	40
4-Methylphenol	193	250	77	218	250	87 *	26-79	12	40
Benzoic Acid	173 J	750	23	138 J	750	18	10-34	22	40
Bis(2-ethylhexyl) Phthalate	145	250	58	168	250	67	39-113	15	40
Carbazole	194	250	78	200	250	80	37-95	3	40
Dibenzofuran	178	250	71	195	250	78	30-78	9	40
Di-n-butyl Phthalate	161	250	64	168	250	67	30-120	4	40
Di-n-octyl Phthalate	185	250	74	205	250	82	41-105	10	40
Nitrobenzene	141	250	56	155	250	62	28-78	9	40
Pentachlorophenol (PCP)	145	250	58	154	250	61	19-103	6	40
Phenol	168	250	67	186	250	75	27-75	10	40
Pyridine	300	500	60 *	350	500	70 *	10-54	15	40



Polycyclic Aromatic Hydrocarbons by GC/MS SIM

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	94	6.5	0.49	1	09/29/21 15:46	9/22/21	
Acenaphthene	130	6.5	0.40	1	09/29/21 15:46	9/22/21	
Acenaphthylene	72	6.5	0.37	1	09/29/21 15:46	9/22/21	*
Anthracene	170	6.5	0.38	1	09/29/21 15:46	9/22/21	*
Benz(a)anthracene	280	6.5	0.31	1	09/29/21 15:46	9/22/21	
Benzo(a)pyrene	330	6.5	0.50	1	09/29/21 15:46	9/22/21	*
Benzo(b)fluoranthene	270	6.5	0.50	1	09/29/21 15:46	9/22/21	
Benzo(g,h,i)perylene	160	6.5	0.53	1	09/29/21 15:46	9/22/21	
Benzo(k)fluoranthene	99	6.5	0.32	1	09/29/21 15:46	9/22/21	
Chrysene	280	6.5	0.41	1	09/29/21 15:46	9/22/21	
Dibenz(a,h)anthracene	28	6.5	0.31	1	09/29/21 15:46	9/22/21	
Dibenzofuran	38	6.5	0.79	1	09/29/21 15:46	9/22/21	
Fluoranthene	660	6.5	0.83	1	09/29/21 15:46	9/22/21	
Fluorene	130	6.5	0.75	1	09/29/21 15:46	9/22/21	
Indeno(1,2,3-cd)pyrene	170	6.5	0.48	1	09/29/21 15:46	9/22/21	
Naphthalene	210	6.5	0.62	1	09/29/21 15:46	9/22/21	*
Phenanthrene	810	6.5	0.78	1	09/29/21 15:46	9/22/21	
Pyrene	720	6.5	0.42	1	09/29/21 15:46	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	83	30 - 112	09/29/21 15:46	
Fluorene-d10	80	33 - 107	09/29/21 15:46	
Terphenyl-d14	85	35 - 124	09/29/21 15:46	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	38	6.0	0.45	1	09/29/21 16:11	9/22/21	
Acenaphthene	43	6.0	0.37	1	09/29/21 16:11	9/22/21	
Acenaphthylene	16	6.0	0.34	1	09/29/21 16:11	9/22/21	*
Anthracene	53	6.0	0.35	1	09/29/21 16:11	9/22/21	*
Benz(a)anthracene	61	6.0	0.28	1	09/29/21 16:11	9/22/21	
Benzo(a)pyrene	63	6.0	0.46	1	09/29/21 16:11	9/22/21	*
Benzo(b)fluoranthene	58	6.0	0.46	1	09/29/21 16:11	9/22/21	
Benzo(g,h,i)perylene	32	6.0	0.49	1	09/29/21 16:11	9/22/21	
Benzo(k)fluoranthene	21	6.0	0.29	1	09/29/21 16:11	9/22/21	
Chrysene	62	6.0	0.38	1	09/29/21 16:11	9/22/21	
Dibenz(a,h)anthracene	5.4 J	6.0	0.28	1	09/29/21 16:11	9/22/21	
Dibenzofuran	15	6.0	0.73	1	09/29/21 16:11	9/22/21	
Fluoranthene	160	6.0	0.76	1	09/29/21 16:11	9/22/21	
Fluorene	44	6.0	0.69	1	09/29/21 16:11	9/22/21	
Indeno(1,2,3-cd)pyrene	32	6.0	0.44	1	09/29/21 16:11	9/22/21	
Naphthalene	74	6.0	0.57	1	09/29/21 16:11	9/22/21	*
Phenanthrene	250	6.0	0.72	1	09/29/21 16:11	9/22/21	
Pyrene	180	6.0	0.39	1	09/29/21 16:11	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	69	30 - 112	09/29/21 16:11	
Fluorene-d10	71	33 - 107	09/29/21 16:11	
Terphenyl-d14	69	35 - 124	09/29/21 16:11	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832

SURROGATE RECOVERY SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Extraction Method: EPA 3546

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		30-112	33-107	35-124
B-26(0-10)C	K2110832-003	83	80	85
B-26(10-25)C	K2110832-007	69	71	69
Method Blank	KQ2118219-04	75	75	75
Lab Control Sample	KQ2118219-03	82	77	83
B-26(0-10)C	KQ2118219-01	72	66	74
B-26(0-10)C	KQ2118219-02	98	94	103

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21
Date Received: 09/16/21
Date Analyzed: 09/29/21
Date Extracted: 09/22/21

Duplicate Matrix Spike Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Sample Name: B-26(0-10)C
Lab Code: K2110832-003
Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike KQ2118219-01		Duplicate Matrix Spike KQ2118219-02		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
2-Methylnaphthalene	94	575	659	73	741	656	99 *	28-98	25	40
Acenaphthene	130	685	659	85	838	656	108 *	30-101	20	40
Acenaphthylene	72	610	659	82	768	656	106 *	32-97	23	40
Anthracene	170	812	659	98	1020	656	131 *	27-116	23	40
Benz(a)anthracene	280	1010	659	111	1070	656	119	27-127	5	40
Benzo(a)pyrene	330	1120	659	120	1140	656	124	25-129	2	40
Benzo(b)fluoranthene	270	956	659	104	1010	656	113	21-130	5	40
Benzo(g,h,i)perylene	160	676	659	79	787	656	96	17-130	15	40
Benzo(k)fluoranthene	99	692	659	90	826	656	111	22-126	18	40
Chrysene	280	1040	659	116	1060	656	119	25-132	2	40
Dibenz(a,h)anthracene	28	521	659	75	636	656	93	32-116	20	40
Dibenzofuran	38	503	659	71	680	656	98	28-105	30	40
Fluoranthene	660	1420	659	115	1440	656	118	10-138	1	40
Fluorene	130	678	659	83	853	656	110	23-116	23	40
Indeno(1,2,3-cd)pyrene	170	776	659	92	886	656	109	17-138	13	40
Naphthalene	210	642	659	66	827	656	95 *	29-88	25	40
Phenanthrene	810	1380	659	86	1530	656	109	10-128	11	40
Pyrene	720	1500	659	119	1450	656	111	16-134	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118219-04

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	4.8	0.37	1	09/29/21 14:05	9/22/21	
Acenaphthene	ND U	4.8	0.30	1	09/29/21 14:05	9/22/21	
Acenaphthylene	ND U	4.8	0.28	1	09/29/21 14:05	9/22/21	
Anthracene	ND U	4.8	0.29	1	09/29/21 14:05	9/22/21	
Benz(a)anthracene	0.48 J	4.8	0.23	1	09/29/21 14:05	9/22/21	
Benzo(a)pyrene	ND U	4.8	0.38	1	09/29/21 14:05	9/22/21	
Benzo(b)fluoranthene	ND U	4.8	0.38	1	09/29/21 14:05	9/22/21	
Benzo(g,h,i)perylene	ND U	4.8	0.40	1	09/29/21 14:05	9/22/21	
Benzo(k)fluoranthene	ND U	4.8	0.24	1	09/29/21 14:05	9/22/21	
Chrysene	ND U	4.8	0.31	1	09/29/21 14:05	9/22/21	
Dibenz(a,h)anthracene	ND U	4.8	0.23	1	09/29/21 14:05	9/22/21	
Dibenzofuran	ND U	4.8	0.60	1	09/29/21 14:05	9/22/21	
Fluoranthene	ND U	4.8	0.63	1	09/29/21 14:05	9/22/21	
Fluorene	ND U	4.8	0.57	1	09/29/21 14:05	9/22/21	
Indeno(1,2,3-cd)pyrene	ND U	4.8	0.36	1	09/29/21 14:05	9/22/21	
Naphthalene	0.68 J	4.8	0.47	1	09/29/21 14:05	9/22/21	
Phenanthrene	ND U	4.8	0.59	1	09/29/21 14:05	9/22/21	
Pyrene	ND U	4.8	0.32	1	09/29/21 14:05	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	75	30 - 112	09/29/21 14:05	
Fluorene-d10	75	33 - 107	09/29/21 14:05	
Terphenyl-d14	75	35 - 124	09/29/21 14:05	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 09/29/21
Date Extracted: 09/22/21

Lab Control Sample Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 740477

Lab Control Sample
KQ2118219-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2-Methylnaphthalene	443	500	89	43-92
Acenaphthene	466	500	93	44-95
Acenaphthylene	484	500	97 *	44-93
Anthracene	572	500	114 *	46-100
Benz(a)anthracene	521	500	104	52-105
Benzo(a)pyrene	566	500	113 *	52-111
Benzo(b)fluoranthene	522	500	104	52-114
Benzo(g,h,i)perylene	444	500	89	45-107
Benzo(k)fluoranthene	493	500	99	52-112
Chrysene	512	500	102	51-110
Dibenz(a,h)anthracene	461	500	92	44-110
Dibenzofuran	431	500	86	44-96
Fluoranthene	497	500	99	49-102
Fluorene	478	500	96	45-98
Indeno(1,2,3-cd)pyrene	518	500	104	44-117
Naphthalene	450	500	90 *	42-88
Phenanthrene	466	500	93	41-99
Pyrene	479	500	96	48-104



Subcontract Lab Results

ALS Environmental—Kelso Laboratory
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October 25, 2021

Service Request No:K2110832

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

Laboratory Results for: EQRB

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory September 16, 2021
For your reference, these analyses have been assigned our service request number **K2110832**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental



Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client: Coles & Betts
Project: EQRB
Sample Matrix: S

Service Request No.: K2100832
Date Received: 09/22/21

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Two samples were received for analysis at ALS Environmental in Houston on 09/22/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100572: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The LCS and DLCS recoveries are within QC limits.

B flags – Method Blanks

The Method Blank EQ2100572-01 contained low levels of 1,2,3,7,8,9-HxCDF, 1,2,3,4,6,7,8-HpCDF, 1,2,3,4,7,8,9-HpCDF and OCDD below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

Y flags – Cleanup Standard

The recoveries for the cleanup standard, 37Cl-2,3,7,8-TCDD are below control limits in K2110832-007 and in the MBLK. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected, and is not used in quantitation of target analytes.

Y flags – Labeled Standards

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with 'Y' flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- Non-detected compounds are not included in the 'Total'

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319

Service Request:K2110832

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2110832-003	B-26(0-10)C	9/15/2021	0820
K2110832-007	B-26(10-25)C	9/15/2021	0840

Service Request Summary

Folder #: K2110832
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA

Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: CGRAVES
Date Received: 09/16/21
Internal Due Date: 10/6/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

20 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 4 16 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 2 oz-Glass Jar Glass WM CLEAR None
 2 -N/A N/A
Location: K-DELILAH, K-Disposed, SUBBED, K-PETUNIA-03, K-NOT CREATED
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	KELSO			KELSO						KELSO	HOUSTON	KELSO	KELSO	
				Hg/7471B	Metals T/6010C	Metals T/6020A	BUTYLINS/ALS SOP	HERB/8151A	NW_TPH/NWTPH-Dx	PCB/8082A	Pest OC LL/8081B	PAH SIM/8270D	SVO LL/8270D	PCDD PCDF/8290A	TS/160.3 Modified	NW_GAS/NWTPH-Gx	VOC Unp/8260C
K2110832-003	B-26(0-10)C	Soil	09/15/21 0820														
K2110832-007	B-26(10-25)C	Soil	09/15/21 0840														

Folder Comments:

Composite 001 and 002 to make 003.
 Composite 004,005 and 006 to make 007.
 Reserve some from each discrete for future analysis.

Service Request Summary

Folder #: K2110832
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213
USA

Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: CGRAVES
Date Received: 09/16/21
Internal Due Date: 10/6/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

20 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
4 16 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
2 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
2 2 oz-Glass Jar Glass WM CLEAR None
2 -N/A N/A
Location: K-DELILAH, K-Disposed, SUBBED, K-PETUNIA-03, K-NOT CREATED
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Metals	Metals T/6020A	2	As,Ba,Cd,Cr,Pb,Se,Ag
Metals	Metals T/6010C	2	As,Ba,Cd,Cr,Pb,Se,Ag
Semivoa GC	Pest OC LL/8081B	2	See attached Form V for target list. Include 'green' and 'yellow' compounds.
Semivoa GCMS	SVO LL/8270D	2	See attached Form V for target list. Include 'green' and 'yellow' compounds.
Soils Prep	Sub Sample/Subsample	2	20-30 grams for dioxins
Soils Prep	Composite/Composite	3	Composite -004 and 006 to create -007
Soils Prep	Composite/Composite	2	Composite -001 & -002 to create -003

Data Qualifiers

Lab Standard

- + Possible Tedlar bag artifact.
- A TIC is a suspected aldol-condensation product
- B Analyte found in the associated method blank as well as in the sample.
- BC Reported results are not blank corrected.
- BH The back section of the tube yielded higher results than the front.
- BT Results indicated possible breakthrough; back section $\geq 10\%$ front section.
- C Result identification confirmed.
- D Compound identified in an analysis at a secondary dilution factor
- D Spike was diluted out
- DE Reported results are corrected for desorption efficiency.
- E Estimated value. Concentration above calibration range
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- H1 Sample analysis performed past holding time. See case narrative.
- H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
- H3 Sample was received and analyzed past holding time.
- H4 Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
- I Internal standard not within the specified limits. See case narrative.
- J Estimated Value. Concentration found below MRL.
- K A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
- K Analyte was detected above the method reporting limit prior to normalization.
- K The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- L1 Laboratory control sample recovery outside the specified limits; results may be biased high.
- L2 Laboratory control sample recovery outside the specified limits; results may be biased low.
- L3 Laboratory control sample recovery outside the specified limits.
- M Matrix interference; results may be biased high.
- M The duplicate injection precision not met.
- M1 Matrix interference due to coelution with a non-target compound; results may be biased high.
- N Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- P Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
- P Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
- Q Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
- R Duplicate Precision not met.
- R1 Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
- S Surrogate recovery not within specified limits.
- S The reported value was determined by the Method of Standard Additions (MSA).
- T Analyte is a tentatively identified compound, result is estimated.
- U Compound was analyzed for, but was not detected (ND).
- V1 The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
- V2 The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
- W Result quantified, but the corresponding peak was detected outside the generated retention time window.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- X See case narrative.
- Y Recovery outside limits
- Y The chromatogram resembles a petroleum product but does not match the calibration standard.
- Z The chromatogram does not resemble a petroleum product.
- i The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCEntration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Conservation and Natural Resources	TX026932022-1	7/31/2022
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Conservation	04016-2021	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-27	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-28	5/1/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2110832

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date: 10/21/21 Analyst: *[Signature]* Samples: 003,007

Second Level - Data Review – to be filled by person doing peer review

Date: 10/21/21 Analyst: *[Signature]* Samples: 003,007



Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Intra-Network Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

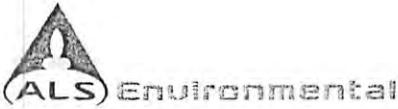
Project Name: EQRB
Project Number: 319
Project Manager: Jill Betts
Company: Coles and Betts Environmental Consulting, LLC
QAP: LAB QAP

PCDD PCDF
8290A

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
K2110832-003	B-26(0-10)C	↓	Soil	9/15/21	0820	9/16/21	HOUSTON	II
K2110832-007	B-26(10-25)C	↓	Soil	9/15/21	0840	9/16/21	HOUSTON	II

Special Instructions/Comments Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com. pH Checked _____	Turnaround Requirements _____ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 ✓ STANDARD Requested FAX Date: _____ Requested Report Date: <u>10/06/21</u>	Report Requirements _____ I. Results Only ✓ II. Results + QC Summaries _____ III. Results + QC and Calibration Summaries _____ IV. Data Validation Report with Raw Data PQL/MDL/J <u>N</u> EDD <u>N</u>	Invoice Information PO# 51K2110832 Bill to
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------

Relinquished By: *A. Pedersen 9/20/21* Received By: *J. Page 127 of 152 9/22/21 10:40* Airbill Number: _____
Cooler - Red Temp 0.8°C 11231 CFO



Cooler Receipt Form

Project Chemist

Client/Project ALS-H Thermometer ID 1731

Date/Time Received: 9/22/11 Initials: JM Date/Time Logged in: 9/22/11 Initials CB

1. Method of delivery: US Mail Fed Ex UPS DHL Courier Client

2. Samples received in: Cooler Box Envelope Other

3. Were custody seals on coolers? Yes No
Were they intact? Yes No N/A
Were they signed and dated? Yes No N/A
If yes, how many and where? 1-F

4. Packing Material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Sleeves Other

5. Foreign or Regulated Soil? Yes No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
9390 2500 6266		9/22/11	1440	JM	0.5	<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

- 6. Were custody papers properly filled out (ink, signed, dated, etc)? Yes No
- 7. Did all bottles arrive in good condition (not broken, no signs of leakage)? Yes No
- 8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? Yes No
- 9. Were appropriate bottles/containers and volumes received for the requested tests? Yes No
- 10. Did sample labels and tags agree with custody documents? Yes No

Notes, Discrepancies, & Resolutions:

Service request Label:



10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 388431
 Team: Semivoa GCMS/TWOODS

Prep Workflow: OrgExtDioxS(30)
 Prep Method: Method

Status: Prepped
 Prep Date/Time: 9/29/21 10:52

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2101017-001	3200672-001	.01	8290/PCDD PCDF			Soil	10.255g	wet sand brown
2	E2101017-002	3200672-002	.01	8290/PCDD PCDF			Soil	10.334g	wet sand brown
3	E2101047-001	3201777-001	.01	8290A/PCDD PCDF			Soil	10.261g	wet sand brown
4	E2101047-002	3201777-002	.01	8290A/PCDD PCDF			Soil	10.054g	wet sand brown
5	EQ2100572-01	MB		8290A/PCDD PCDF			Solid	10.114g	
6	EQ2100572-02	LCS		8290A/PCDD PCDF			Solid	10.046g	
7	EQ2100572-03	DLCS		8290A/PCDD PCDF			Solid	10.131g	
8	K2110022-006	Composite	.01	8290/PCDD PCDF			Paperboard	10.364g	
9	K2110479-003	B-24 (0-10)C	.02	8290A/PCDD PCDF			Soil	10.214g	Sample contains large rocks.
10	K2110479-007	B-24 (10-20)C	.01	8290A/PCDD PCDF			Soil	10.052g	
11	K2110832-003	B-26(0-10)C	.03	8290A/PCDD PCDF			Soil	10.196g	
12	K2110832-007	B-26(10-25)C	.01	8290A/PCDD PCDF			Soil	10.003g	
13	K2110938-003	B-25(10-25)C	.01	8290A/PCDD PCDF			Soil	10.000g	
14	K2110938-006	B-25(0-10)C	.03	8290A/PCDD PCDF			Soil	10.286g	
15	R2109845-002	Spent Carbon	.01	8290A/PCDD PCDF			Soil	10.213g	

Spiking Solutions

Name: 8290/1613B Cleanup Working Standard	Inventory ID 219262	Logbook Ref: tw 219262 8ng/ml 9/16/21	Expires On: 02/18/2022
-------------------------------------------	---------------------	---------------------------------------	------------------------

E2101017-001 100.00µL	E2101017-002 100.00µL	E2101047-001 100.00µL	E2101047-002 100.00µL	EQ2100572-01 100.00µL	EQ2100572-01 100.00µL
EQ2100572-02 100.00µL	EQ2100572-02 100.00µL	EQ2100572-03 100.00µL	EQ2100572-03 100.00µL	K2110022-006 100.00µL	K2110479-003 100.00µL
K2110479-007 100.00µL	K2110832-003 100.00µL	K2110832-007 100.00µL	K2110938-003 100.00µL	K2110938-006 100.00µL	R2109845-002 100.00µL
R2109845-002.F 100.00µL					

Name: 1613B Matrix Working Standard	Inventory ID 219330	Logbook Ref: tw 09/20/21 219330	Expires On: 03/19/2022
-------------------------------------	---------------------	---------------------------------	------------------------

EQ2100572-02 100.00µL	EQ2100572-02 100.00µL	EQ2100572-03 100.00µL	EQ2100572-03 100.00µL
-----------------------	-----------------------	-----------------------	-----------------------

Name: 1613B Labeled Working Standard	Inventory ID 219477	Logbook Ref: tw 219477 09/29/21	Expires On: 11/30/2021
--------------------------------------	---------------------	---------------------------------	------------------------

E2101017-001 1,000.00µL	E2101017-002 1,000.00µL	E2101047-001 1,000.00µL	E2101047-002 1,000.00µL	EQ2100572-01 1,000.00µL	EQ2100572-01 1,000.00µL
EQ2100572-02 1,000.00µL	EQ2100572-02 1,000.00µL	EQ2100572-03 1,000.00µL	EQ2100572-03 1,000.00µL	K2110022-006 1,000.00µL	K2110479-003 1,000.00µL
K2110479-007 1,000.00µL	K2110832-003 1,000.00µL	K2110832-007 1,000.00µL	K2110938-003 1,000.00µL	K2110938-006 1,000.00µL	R2109845-002 1,000.00µL
R2109845-002.F 1,000.00µL					

Preparation Information Benchsheet

Prep Run#: 388431
Team: Semivoa GCMS/TWOODS

Prep Workflow: OrgExtDioxS(30)
Prep Method: Method

Status: Prepped
Prep Date/Time: 9/29/21 10:52

Preparation Steps

Step: Extraction	Step: Acid Clean	Step: Silica Gel Clean	Step: Final Volume
Started: 9/29/21 10:52	Started: 10/6/21 10:00	Started: 10/6/21 13:00	Started: 10/7/21 12:00
Finished: 9/30/21 09:00	Finished: 10/6/21 11:00	Finished: 10/6/21 16:00	Finished: 10/7/21 15:00
By: TWOODS	By: TWOODS	By: TWOODS	By: TWOODS
Comments	Comments	Comments	Comments

Comments: _____

Reviewed By: TW Date: 10/7/21

Chain of Custody

Relinquished By: _____	Date: _____	Extracts Examined
Received By: _____	Date: _____	Yes No



Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.196g
Data File Name: P534803
ICAL Date: 07/10/21

Date Analyzed: 10/19/21 06:44
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534794

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.283	0.650			1
1,2,3,7,8-PeCDD	ND	U	0.118	3.25			1
1,2,3,6,7,8-HxCDD	ND	U	0.112	3.25			1
1,2,3,4,7,8-HxCDD	ND	U	0.123	3.25			1
1,2,3,7,8,9-HxCDD	ND	U	0.112	3.25			1
1,2,3,4,6,7,8-HpCDD	2.70 JK		0.0884	3.25	0.84	1.000	1
OCDD	30.9		0.222	6.50	0.92	1.000	1
2,3,7,8-TCDF	ND	U	0.187	0.650			1
1,2,3,7,8-PeCDF	ND	U	0.122	3.25			1
2,3,4,7,8-PeCDF	ND	U	0.138	3.25			1
1,2,3,6,7,8-HxCDF	0.0772 JK		0.0723	3.25	0.66	1.000	1
1,2,3,7,8,9-HxCDF	0.177 BJK		0.0688	3.25	0.92	1.000	1
1,2,3,4,7,8-HxCDF	0.0734 JK		0.0649	3.25	0.91	1.000	1
2,3,4,6,7,8-HxCDF	ND	U	0.0689	3.25			1
1,2,3,4,6,7,8-HpCDF	0.986 J		0.0540	3.25	0.94	1.000	1
1,2,3,4,7,8,9-HpCDF	0.0583 BJK		0.0427	3.25	0.51	1.001	1
OCDF	2.32 J		0.219	6.50	0.78	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Service Request: K2110832
Date Collected: 09/15/21 08:20
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Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.196g
Data File Name: P534803
ICAL Date: 07/10/21

Date Analyzed: 10/19/21 06:44
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534794

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.283	0.650			1
Total Penta-Dioxins	ND	U	0.118	3.25			1
Total Hexa-Dioxins	0.494J		0.115	3.25	1.15		1
Total Hepta-Dioxins	3.63		0.0884	3.25	1.07		1
Total Tetra-Furans	ND	U	0.187	0.650			1
Total Penta-Furans	ND	U	0.129	3.25			1
Total Hexa-Furans	1.05J		0.0688	3.25	1.26		1
Total Hepta-Furans	2.16J		0.0473	3.25	0.94		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00

Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.196g

Data File Name: P534803
ICAL Date: 07/10/21

Date Analyzed: 10/19/21 06:44
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534794

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1088.239	54		40-135	0.76	1.022
13C-1,2,3,7,8-PeCDD	2000	1245.901	62		40-135	1.59	1.194
13C-1,2,3,4,7,8-HxCDD	2000	1155.555	58		40-135	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1063.548	53		40-135	1.28	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	898.356	45		40-135	1.08	1.066
13C-OCDD	4000	1428.596	36	Y	40-135	0.90	1.138
13C-2,3,7,8-TCDF	2000	874.298	44		40-135	0.78	0.993
13C-1,2,3,7,8-PeCDF	2000	1212.966	61		40-135	1.57	1.149
13C-2,3,4,7,8-PeCDF	2000	1018.084	51		40-135	1.57	1.183
13C-1,2,3,4,7,8-HxCDF	2000	1011.839	51		40-135	0.51	0.970
13C-1,2,3,6,7,8-HxCDF	2000	780.751	39	Y	40-135	0.51	0.973
13C-1,2,3,7,8,9-HxCDF	2000	1013.379	51		40-135	0.50	1.009
13C-2,3,4,6,7,8-HxCDF	2000	899.223	45		40-135	0.51	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	732.255	37	Y	40-135	0.42	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1223.680	61		40-135	0.42	1.078
37Cl-2,3,7,8-TCDD	800	450.059	56		40-135	NA	1.023

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(0-10)C
Lab Code: K2110832-003

Service Request: K2110832
Date Collected: 09/15/21 08:20
Date Received: 09/16/21 12:00
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.283	0.650	1	1	
1,2,3,7,8-PeCDD	ND	0.118	3.25	1	1	
1,2,3,6,7,8-HxCDD	ND	0.112	3.25	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.123	3.25	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.112	3.25	1	0.1	
1,2,3,4,6,7,8-HpCDD	2.70	0.0884	3.25	1	0.01	0.0270
OCDD	30.9	0.222	6.50	1	0.0003	0.00927
2,3,7,8-TCDF	ND	0.187	0.650	1	0.1	
1,2,3,7,8-PeCDF	ND	0.122	3.25	1	0.03	
2,3,4,7,8-PeCDF	ND	0.138	3.25	1	0.3	
1,2,3,6,7,8-HxCDF	0.0772	0.0723	3.25	1	0.1	0.00772
1,2,3,7,8,9-HxCDF	0.177	0.0688	3.25	1	0.1	0.0177
1,2,3,4,7,8-HxCDF	0.0734	0.0649	3.25	1	0.1	0.00734
2,3,4,6,7,8-HxCDF	ND	0.0689	3.25	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.986	0.0540	3.25	1	0.01	0.00986
1,2,3,4,7,8,9-HpCDF	0.0583	0.0427	3.25	1	0.01	0.000583
OCDF	2.32	0.219	6.50	1	0.0003	0.000696
Total TEQ						0.0802

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.003g
Data File Name: P534804
ICAL Date: 07/10/21

Date Analyzed: 10/19/21 07:33
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534794

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.564	0.627			1
1,2,3,7,8-PeCDD	0.170JK		0.0870	3.14	2.40	1.001	1
1,2,3,6,7,8-HxCDD	ND	U	0.111	3.14			1
1,2,3,4,7,8-HxCDD	ND	U	0.126	3.14			1
1,2,3,7,8,9-HxCDD	ND	U	0.113	3.14			1
1,2,3,4,6,7,8-HpCDD	0.734J		0.0521	3.14	0.97	1.000	1
OCDD	6.02J		0.191	6.27	0.91	1.000	1
2,3,7,8-TCDF	ND	U	0.635	0.635			1
1,2,3,7,8-PeCDF	ND	U	0.200	3.14			1
2,3,4,7,8-PeCDF	ND	U	0.206	3.14			1
1,2,3,6,7,8-HxCDF	0.131J		0.0664	3.14	1.42	1.000	1
1,2,3,7,8,9-HxCDF	0.227BJK		0.0728	3.14	1.46	1.000	1
1,2,3,4,7,8-HxCDF	0.239JK		0.0611	3.14	0.88	1.000	1
2,3,4,6,7,8-HxCDF	ND	U	0.0644	3.14			1
1,2,3,4,6,7,8-HpCDF	0.419BJ		0.102	3.14	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0727	3.14			1
OCDF	0.901JK		0.180	6.27	0.48	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.003g
Data File Name: P534804
ICAL Date: 07/10/21

Date Analyzed: 10/19/21 07:33
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534794

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.564	0.627			1
Total Penta-Dioxins	ND	U	0.0870	3.14			1
Total Hexa-Dioxins	ND	U	0.116	3.14			1
Total Hepta-Dioxins	1.53J		0.0521	3.14	0.89		1
Total Tetra-Furans	ND	U	0.635	0.635			1
Total Penta-Furans	ND	U	0.203	3.14			1
Total Hexa-Furans	0.131J		0.0660	3.14	1.42		1
Total Hepta-Furans	0.419J		0.0841	3.14	1.05		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.003g

Data File Name: P534804
ICAL Date: 07/10/21

Date Analyzed: 10/19/21 07:33
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534794

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	485.241	24	Y	40-135	0.76	1.022
13C-1,2,3,7,8-PeCDD	2000	798.085	40		40-135	1.59	1.194
13C-1,2,3,4,7,8-HxCDD	2000	915.075	46		40-135	1.30	0.991
13C-1,2,3,6,7,8-HxCDD	2000	860.950	43		40-135	1.23	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	744.325	37	Y	40-135	1.05	1.067
13C-OCDD	4000	1079.073	27	Y	40-135	0.90	1.139
13C-2,3,7,8-TCDF	2000	364.648	18	Y	40-135	0.78	0.993
13C-1,2,3,7,8-PeCDF	2000	703.707	35	Y	40-135	1.59	1.150
13C-2,3,4,7,8-PeCDF	2000	644.330	32	Y	40-135	1.55	1.184
13C-1,2,3,4,7,8-HxCDF	2000	751.393	38	Y	40-135	0.51	0.970
13C-1,2,3,6,7,8-HxCDF	2000	594.618	30	Y	40-135	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	742.661	37	Y	40-135	0.51	1.009
13C-2,3,4,6,7,8-HxCDF	2000	703.731	35	Y	40-135	0.49	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	571.432	29	Y	40-135	0.43	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1026.336	51		40-135	0.42	1.079
37Cl-2,3,7,8-TCDD	800	218.570	27	Y	40-135	NA	1.023

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-26(10-25)C
Lab Code: K2110832-007

Service Request: K2110832
Date Collected: 09/15/21 08:40
Date Received: 09/16/21 12:00
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.564	0.627	1	1	
1,2,3,7,8-PeCDD	0.170	0.0870	3.14	1	1	0.170
1,2,3,6,7,8-HxCDD	ND	0.111	3.14	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.126	3.14	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.113	3.14	1	0.1	
1,2,3,4,6,7,8-HpCDD	0.734	0.0521	3.14	1	0.01	0.00734
OCDD	6.02	0.191	6.27	1	0.0003	0.00181
2,3,7,8-TCDF	ND	0.635	0.635	1	0.1	
1,2,3,7,8-PeCDF	ND	0.200	3.14	1	0.03	
2,3,4,7,8-PeCDF	ND	0.206	3.14	1	0.3	
1,2,3,6,7,8-HxCDF	0.131	0.0664	3.14	1	0.1	0.0131
1,2,3,7,8,9-HxCDF	0.227	0.0728	3.14	1	0.1	0.0227
1,2,3,4,7,8-HxCDF	0.239	0.0611	3.14	1	0.1	0.0239
2,3,4,6,7,8-HxCDF	ND	0.0644	3.14	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.419	0.102	3.14	1	0.01	0.00419
1,2,3,4,7,8,9-HpCDF	ND	0.0727	3.14	1	0.01	
OCDF	0.901	0.180	6.27	1	0.0003	0.000270
Total TEQ						0.243

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100572-01

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.114g

Data File Name: P534730
ICAL Date: 07/10/21

Date Analyzed: 10/15/21 20:20
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534725

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.482	0.494			1
1,2,3,7,8-PeCDD	ND	U	0.0963	2.47			1
1,2,3,6,7,8-HxCDD	ND	U	0.0627	2.47			1
1,2,3,4,7,8-HxCDD	ND	U	0.0711	2.47			1
1,2,3,7,8,9-HxCDD	ND	U	0.0637	2.47			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.0703	2.47			1
OCDD	0.137JK		0.0472	4.94	1.26	1.000	1
2,3,7,8-TCDF	ND	U	0.392	0.494			1
1,2,3,7,8-PeCDF	ND	U	0.0945	2.47			1
2,3,4,7,8-PeCDF	ND	U	0.104	2.47			1
1,2,3,6,7,8-HxCDF	ND	U	0.0395	2.47			1
1,2,3,7,8,9-HxCDF	0.127J		0.0476	2.47	1.23	1.001	1
1,2,3,4,7,8-HxCDF	ND	U	0.0365	2.47			1
2,3,4,6,7,8-HxCDF	ND	U	0.0377	2.47			1
1,2,3,4,6,7,8-HpCDF	0.0769J		0.0157	2.47	1.00	1.001	1
1,2,3,4,7,8,9-HpCDF	0.0267JK		0.0142	2.47	1.88	1.000	1
OCDF	ND	U	0.155	4.94			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100572-01

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.114g

Data File Name: P534730
ICAL Date: 07/10/21

Date Analyzed: 10/15/21 20:20
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534725

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.482	0.494			1
Total Penta-Dioxins	ND	U	0.0963	2.47			1
Total Hexa-Dioxins	ND	U	0.0656	2.47			1
Total Hepta-Dioxins	ND	U	0.0703	2.47			1
Total Tetra-Furans	ND	U	0.392	0.494			1
Total Penta-Furans	ND	U	0.0987	2.47			1
Total Hexa-Furans	0.127J		0.0400	2.47	1.23		1
Total Hepta-Furans	0.0769J		0.0149	2.47	1.00		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100572-01

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.114g

Data File Name: P534730
ICAL Date: 07/10/21

Date Analyzed: 10/15/21 20:20
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534725

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	820.993	41		40-135	0.80	1.022
13C-1,2,3,7,8-PeCDD	2000	1349.358	67		40-135	1.58	1.193
13C-1,2,3,4,7,8-HxCDD	2000	1621.577	81		40-135	1.28	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1556.849	78		40-135	1.28	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1431.105	72		40-135	1.08	1.066
13C-OCDD	4000	2735.163	68		40-135	0.88	1.139
13C-2,3,7,8-TCDF	2000	594.630	30	Y	40-135	0.80	0.993
13C-1,2,3,7,8-PeCDF	2000	1232.071	62		40-135	1.57	1.149
13C-2,3,4,7,8-PeCDF	2000	1108.766	55		40-135	1.56	1.183
13C-1,2,3,4,7,8-HxCDF	2000	1449.566	72		40-135	0.49	0.970
13C-1,2,3,6,7,8-HxCDF	2000	1165.742	58		40-135	0.50	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1306.956	65		40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1365.442	68		40-135	0.51	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1295.371	65		40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1793.127	90		40-135	0.43	1.079
37Cl-2,3,7,8-TCDD	800	313.217	39	Y	40-135	NA	1.023



Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Analyzed: 10/20/21 - 10/16/21
Date Extracted: 09/29/21

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: ng/Kg
Basis: Dry
Analysis Lot: 743346

Lab Control Sample
EQ2100572-02

Duplicate Lab Control Sample
EQ2100572-03

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,3,4,6,7,8-HpCDD	86.9	99.5	87	90.2	98.7	91	70-130	4	25
1,2,3,4,7,8-HxCDD	92.6	99.5	93	96.4	98.7	98	70-130	4	25
1,2,3,6,7,8-HxCDD	75.6	99.5	76	77.6	98.7	79	70-130	3	25
1,2,3,7,8,9-HxCDD	84.9	99.5	85	88.4	98.7	90	70-130	4	25
1,2,3,7,8-PeCDD	88.0	99.5	88	85.7	98.7	87	70-130	3	25
2,3,7,8-TCDD	15.6	19.9	78	16.4	19.7	83	70-130	5	25
OCDD	178	199	90	176	197	89	70-130	<1	25
1,2,3,4,6,7,8-HpCDF	93.3	99.5	94	85.0	98.7	86	70-130	9	25
1,2,3,4,7,8,9-HpCDF	75.7	99.5	76	72.5	98.7	73	70-130	4	25
1,2,3,4,7,8-HxCDF	85.7	99.5	86	88.1	98.7	89	70-130	3	25
1,2,3,6,7,8-HxCDF	95.5	99.5	96	94.1	98.7	95	70-130	1	25
1,2,3,7,8,9-HxCDF	94.1	99.5	95	89.6	98.7	91	70-130	5	25
1,2,3,7,8-PeCDF	73.5	99.5	74	73.4	98.7	74	70-130	<1	25
2,3,4,6,7,8-HxCDF	87.3	99.5	88	87.6	98.7	89	70-130	<1	25
2,3,4,7,8-PeCDF	86.7	99.5	87	90.0	98.7	91	70-130	4	25
2,3,7,8-TCDF	16.0	19.9	81	16.7	19.7	84	70-130	4	25
OCDF	157	199	79	175	197	89	70-130	11	25

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100572-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.046g

Data File Name: P534828
ICAL Date: 07/10/21

Date Analyzed: 10/20/21 04:11
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534819

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	15.6		0.130	0.498	0.76	1.001	1
1,2,3,7,8-PeCDD	88.0		0.0249	2.49	1.58	1.001	1
1,2,3,6,7,8-HxCDD	75.6		0.0390	2.49	1.19	1.000	1
1,2,3,4,7,8-HxCDD	92.6		0.0456	2.49	1.32	1.000	1
1,2,3,7,8,9-HxCDD	84.9		0.0402	2.49	1.30	1.007	1
1,2,3,4,6,7,8-HpCDD	86.9		0.0264	2.49	1.03	1.000	1
OCDD	178		0.370	4.98	0.86	1.000	1
2,3,7,8-TCDF	16.0		0.122	0.498	0.71	1.001	1
1,2,3,7,8-PeCDF	73.5		0.0559	2.49	1.43	1.001	1
2,3,4,7,8-PeCDF	86.7		0.0608	2.49	1.43	1.001	1
1,2,3,6,7,8-HxCDF	95.5		0.0279	2.49	1.17	1.000	1
1,2,3,7,8,9-HxCDF	94.1		0.0309	2.49	1.13	1.000	1
1,2,3,4,7,8-HxCDF	85.7		0.0252	2.49	1.17	1.000	1
2,3,4,6,7,8-HxCDF	87.3		0.0253	2.49	1.16	1.000	1
1,2,3,4,6,7,8-HpCDF	93.3		0.0555	2.49	0.97	1.000	1
1,2,3,4,7,8,9-HpCDF	75.7		0.0502	2.49	0.99	1.000	1
OCDF	157		0.146	4.98	0.86	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100572-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.046g

Data File Name: P534828
ICAL Date: 07/10/21

Date Analyzed: 10/20/21 04:11
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534819

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	15.6		0.130	0.498	0.76		1
Total Penta-Dioxins	88.0		0.0249	2.49	1.58		1
Total Hexa-Dioxins	253		0.0414	2.49	1.32		1
Total Hepta-Dioxins	86.9		0.0264	2.49	1.03		1
Total Tetra-Furans	16.0		0.122	0.498	0.71		1
Total Penta-Furans	160		0.0581	2.49	1.43		1
Total Hexa-Furans	363		0.0272	2.49	1.17		1
Total Hepta-Furans	159		0.0526	2.49	0.97		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100572-02

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.046g

Data File Name: P534828
ICAL Date: 07/10/21

Date Analyzed: 10/20/21 04:11
Date Extracted: 9/29/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P534819

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1440.808	72		40-135	0.78	1.022
13C-1,2,3,7,8-PeCDD	2000	1760.985	88		40-135	1.58	1.194
13C-1,2,3,4,7,8-HxCDD	2000	1689.864	84		40-135	1.29	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1714.523	86		40-135	1.29	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1595.962	80		40-135	1.08	1.066
13C-OCDD	4000	3149.351	79		40-135	0.87	1.139
13C-2,3,7,8-TCDF	2000	1166.168	58		40-135	0.78	0.993
13C-1,2,3,7,8-PeCDF	2000	1660.999	83		40-135	1.54	1.150
13C-2,3,4,7,8-PeCDF	2000	1440.260	72		40-135	1.56	1.184
13C-1,2,3,4,7,8-HxCDF	2000	1544.052	77		40-135	0.51	0.970
13C-1,2,3,6,7,8-HxCDF	2000	1205.786	60		40-135	0.52	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1470.601	74		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1447.939	72		40-135	0.50	0.987
13C-1,2,3,4,6,7,8-HpCDF	2000	1345.240	67		40-135	0.43	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1964.463	98		40-135	0.44	1.079
37Cl-2,3,7,8-TCDD	800	564.842	71		40-135	NA	1.023

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100572-03

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.131g

Data File Name: P627807
ICAL Date: 10/14/21

Date Analyzed: 10/16/21 22:34
Date Extracted: 9/29/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P627796

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	16.4		0.710	0.710	0.78	1.001	1
1,2,3,7,8-PeCDD	85.7		0.419	2.47	1.69	1.001	1
1,2,3,6,7,8-HxCDD	77.6		0.192	2.47	1.26	1.000	1
1,2,3,4,7,8-HxCDD	96.4		0.237	2.47	1.37	1.000	1
1,2,3,7,8,9-HxCDD	88.4		0.196	2.47	1.27	1.007	1
1,2,3,4,6,7,8-HpCDD	90.2		0.426	2.47	1.04	1.000	1
OCDD	176		1.17	4.94	0.86	1.000	1
2,3,7,8-TCDF	16.7		0.684	0.684	0.67	1.001	1
1,2,3,7,8-PeCDF	73.4		0.349	2.47	1.64	1.001	1
2,3,4,7,8-PeCDF	90.0		0.395	2.47	1.54	1.001	1
1,2,3,6,7,8-HxCDF	94.1		0.175	2.47	1.23	1.000	1
1,2,3,7,8,9-HxCDF	89.6		0.199	2.47	1.31	1.000	1
1,2,3,4,7,8-HxCDF	88.1		0.165	2.47	1.22	1.000	1
2,3,4,6,7,8-HxCDF	87.6		0.159	2.47	1.22	1.000	1
1,2,3,4,6,7,8-HpCDF	85.0		0.403	2.47	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	72.5		0.396	2.47	0.97	1.000	1
OCDF	175		0.821	4.94	0.94	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100572-03

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.131g

Date Analyzed: 10/16/21 22:34
Date Extracted: 9/29/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P627796

Data File Name: P627807
ICAL Date: 10/14/21

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	16.4		0.710	0.710	0.78		1
Total Penta-Dioxins	87.4		0.419	2.47	1.69		1
Total Hexa-Dioxins	262		0.207	2.47	1.37		1
Total Hepta-Dioxins	90.2		0.426	2.47	1.04		1
Total Tetra-Furans	16.7		0.684	0.684	0.67		1
Total Penta-Furans	163		0.370	2.47	1.64		1
Total Hexa-Furans	361		0.173	2.47	1.22		1
Total Hepta-Furans	148		0.399	2.47	1.05		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110832
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100572-03

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.131g

Date Analyzed: 10/16/21 22:34
Date Extracted: 9/29/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P534730
Cal Ver. File Name: P627796

Data File Name: P627807
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1003.951	50		40-135	0.81	1.022
13C-1,2,3,7,8-PeCDD	2000	1099.441	55		40-135	1.66	1.194
13C-1,2,3,4,7,8-HxCDD	2000	1071.997	54		40-135	1.29	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1341.378	67		40-135	1.23	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1032.260	52		40-135	1.00	1.067
13C-OCDD	4000	1866.339	47		40-135	0.93	1.140
13C-2,3,7,8-TCDF	2000	891.085	45		40-135	0.75	0.992
13C-1,2,3,7,8-PeCDF	2000	1284.820	64		40-135	1.62	1.150
13C-2,3,4,7,8-PeCDF	2000	1082.060	54		40-135	1.63	1.184
13C-1,2,3,4,7,8-HxCDF	2000	1209.580	60		40-135	0.53	0.970
13C-1,2,3,6,7,8-HxCDF	2000	1090.106	55		40-135	0.55	0.974
13C-1,2,3,7,8,9-HxCDF	2000	1074.149	54		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1218.920	61		40-135	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1137.048	57		40-135	0.45	1.042
13C-1,2,3,4,7,8,9-HpCDF	2000	1363.860	68		40-135	0.44	1.079
37Cl-2,3,7,8-TCDD	800	398.261	50		40-135	NA	1.023



December 17, 2021

Revised Service Request No:K2110938.01

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

Laboratory Results for: EQRB

Dear Jill,

Enclosed is the revised report of the sample(s) submitted to our laboratory September 20, 2021.

For your reference, these analyses have been assigned our service request number **K2110938**. The PAH results for sample B-25 are now included.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

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www.alsglobal.com



Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB
Sample Matrix: Soil, Water

Service Request: K2110938
Date Received: 09/20/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Six soil, water samples were received for analysis at ALS Environmental on 09/20/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 10/12/2021:A couple of analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 10/12/2021:The recovery of Benzoic Acid is flagged as outside the lower control criterion in the replicate Laboratory Control Samples (LCS/DLCS) KQ2118619-03. A peak was detected in the LCS for the analyte in question, but resulted in a final concentration below the Method Reporting Limit (MRL). The percent recovery could not be calculated by the software; hand calculation gives a result of 31% recovery, which is within control criteria. No further corrective action was required.

Method 8270D, 10/12/2021:Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

Method 8270D, 10/06/2021:Anthracene and Benzo(a)pyrene were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 10/06/2021:The upper control criterion was exceeded for Anthracene in Duplicate Laboratory Control Sample (DLCS). The analyte in question not detected in the associated field samples above the MRL. The error associated with elevated recovery indicated a slight high bias. The sample data was not significantly affected and the LCS was in control. No further corrective action was taken.

Semivola GC:

Method 8081B, 11/14/2021:The upper control criterion was exceeded for most analytes in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte in question above the MRL. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8081B, 11/14/2021:The upper control criterion was exceeded for Heptachlor Epoxide and Endrin Ketone in Laboratory

Approved by _____

Date 12/03/2021



SAMPLE DETECTION SUMMARY

CLIENT ID: B-25(10-25)C		Lab ID: K2110938-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	2.34		0.05	0.43	mg/Kg	6020A
Barium	68.9		0.017	0.043	mg/Kg	6020A
Cadmium	0.059		0.006	0.017	mg/Kg	6020A
Chromium	12.6		0.05	0.17	mg/Kg	6020A
Lead	2.32		0.017	0.043	mg/Kg	6020A
Mercury	0.026		0.002	0.021	mg/Kg	7471B
Selenium	0.14	J	0.08	0.86	mg/Kg	6020A
Silver	0.025		0.003	0.017	mg/Kg	6020A
Acetone	9.8	J	3.4	23	ug/Kg	8260C
Methylene Chloride	0.97	J	0.19	12	ug/Kg	8260C
Acenaphthene	0.42	J	0.34	5.5	ug/Kg	8270D
Benz(a)anthracene	0.55	J	0.26	5.5	ug/Kg	8270D
Bis(2-ethylhexyl) Phthalate	20	J	11	110	ug/Kg	8270D
Naphthalene	0.69	J	0.53	5.5	ug/Kg	8270D
Phenanthrene	0.90	J	0.66	5.5	ug/Kg	8270D
Di-n-butyl Phthalate	8.2	J	5.5	23	ug/Kg	8270D
Diesel Range Organics (C12 - C25 DRO)	2.9	J	2.1	29	mg/Kg	NWTPH-Dx
Residual Range Organics (C25 - C36 RRO)	15	J	4.5	110	mg/Kg	NWTPH-Dx
Solids, Total	86.3				Percent	160.3 Modified

CLIENT ID: B-25		Lab ID: K2110938-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	1.42		0.09	0.50	ug/L	6020A
Barium, Dissolved	42.8		0.020	0.050	ug/L	6020A
Cadmium, Dissolved	0.011	J	0.008	0.020	ug/L	6020A
Chromium, Dissolved	0.30		0.03	0.20	ug/L	6020A
Lead, Dissolved	0.078		0.006	0.020	ug/L	6020A
Arsenic	3.26		0.09	0.50	ug/L	6020A
Barium	172		0.020	0.050	ug/L	6020A
Cadmium	0.087		0.008	0.020	ug/L	6020A
Chromium	28.1		0.03	0.20	ug/L	6020A
Lead	8.76		0.006	0.020	ug/L	6020A
Mercury	0.009	J	0.008	0.20	ug/L	7470A
Silver	0.035		0.009	0.020	ug/L	6020A
Gasoline Range Organics (Toluene-Naphthalene GRO)	34.9	J	12.0	250	ug/L	NWTPH-Gx
4-Isopropyltoluene	0.14	J	0.060	2.0	ug/L	8260C
2-Methylnaphthalene	6.7		0.40	3.3	ng/L	8270D
Acenaphthene	14		0.36	3.3	ng/L	8270D
Acenaphthylene	16		0.37	3.3	ng/L	8270D
Anthracene	2.5	J	0.29	3.3	ng/L	8270D
Benz(a)anthracene	2.2	J	0.34	3.3	ng/L	8270D



SAMPLE DETECTION SUMMARY

CLIENT ID: B-25 **Lab ID: K2110938-004**

Analyte	Results	Flag	MDL	MRL	Units	Method
Benzo(a)pyrene	3.9		0.41	3.3	ng/L	8270D
Benzo(g,h,i)perylene	3.4		0.36	3.3	ng/L	8270D
Chrysene	4.3		0.65	3.3	ng/L	8270D
Dibenzofuran	4.2		0.42	3.3	ng/L	8270D
Fluoranthene	12		0.46	3.3	ng/L	8270D
Fluorene	7.1		0.42	3.3	ng/L	8270D
Indeno(1,2,3-cd)pyrene	2.8	J	0.44	3.3	ng/L	8270D
Naphthalene	23		0.71	3.3	ng/L	8270D
Phenanthrene	25		0.72	3.3	ng/L	8270D
Benzoic Acid	2.1	J	1.1	5.0	ug/L	8270D
Pyrene	13		0.78	3.3	ng/L	8270D
Bis(2-ethylhexyl) Phthalate	0.81	J	0.13	1.0	ug/L	8270D
Di-n-butyl Phthalate	0.079	J	0.023	0.20	ug/L	8270D
cis-Chlordane	0.60	J	0.36	1.0	ng/L	8081B
trans-Chlordane	0.62	J	0.54	2.0	ng/L	8081B
MCPA	42	JP	8.7	98	ug/L	8151A
Diesel Range Organics (C12 - C25 DRO)	170	J	12	270	ug/L	NWTPH-Dx
Residual Range Organics (C25 - C36 RRO)	320	J	21	530	ug/L	NWTPH-Dx

CLIENT ID: B-25(0-10)C **Lab ID: K2110938-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	2.85		0.05	0.43	mg/Kg	6020A
Barium	137		0.017	0.043	mg/Kg	6020A
Cadmium	0.049		0.006	0.017	mg/Kg	6020A
Chromium	12.2		0.05	0.17	mg/Kg	6020A
Lead	2.95		0.017	0.043	mg/Kg	6020A
Mercury	0.008	J	0.002	0.021	mg/Kg	7471B
Selenium	0.08	J	0.08	0.85	mg/Kg	6020A
Silver	0.021		0.003	0.017	mg/Kg	6020A
Acetone	13	J	3.3	22	ug/Kg	8260C
Carbon Disulfide	1.0	J	0.11	5.6	ug/Kg	8260C
4-Isopropyltoluene	0.64	J	0.072	22	ug/Kg	8260C
Methylene Chloride	1.2	J	0.18	11	ug/Kg	8260C
2-Methylnaphthalene	0.51	J	0.42	5.6	ug/Kg	8270D
Acenaphthene	0.89	J	0.34	5.6	ug/Kg	8270D
Benz(a)anthracene	0.93	J	0.26	5.6	ug/Kg	8270D
Benzo(a)pyrene	0.66	J	0.43	5.6	ug/Kg	8270D
Benzo(b)fluoranthene	0.78	J	0.43	5.6	ug/Kg	8270D
Benzo(g,h,i)perylene	0.51	J	0.45	5.6	ug/Kg	8270D
Benzo(k)fluoranthene	0.36	J	0.27	5.6	ug/Kg	8270D
Chrysene	0.64	J	0.35	5.6	ug/Kg	8270D
Bis(2-ethylhexyl) Phthalate	22	J	11	110	ug/Kg	8270D



SAMPLE DETECTION SUMMARY

CLIENT ID: B-25(0-10)C **Lab ID: K2110938-006**

Analyte	Results	Flag	MDL	MRL	Units	Method
Fluoranthene	1.2	J	0.71	5.6	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	0.48	J	0.41	5.6	ug/Kg	8270D
Naphthalene	1.5	J	0.53	5.6	ug/Kg	8270D
Phenanthrene	2.1	J	0.67	5.6	ug/Kg	8270D
Di-n-butyl Phthalate	15	J	5.5	23	ug/Kg	8270D
MCPP	1000	J	540	5800	ug/Kg	8151A
Dieldrin	0.37	JP	0.22	0.96	ug/Kg	8081B
Diesel Range Organics (C12 - C25 DRO)	11	J	2.1	29	mg/Kg	NWTPH-Dx
Residual Range Organics (C25 - C36 RRO)	29	J	4.5	110	mg/Kg	NWTPH-Dx
Solids, Total	86.1				Percent	160.3 Modified



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319

Service Request:K2110938

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2110938-003	B-25(10-25)C	9/20/2021	1235
K2110938-004	B-25	9/20/2021	1145
K2110938-006	B-25(0-10)C	9/20/2021	1235



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319

Service Request: K2110938

Sample Name: B-25(10-25)C
Lab Code: K2110938-003
Sample Matrix: Soil

Date Collected: 09/20/21
Date Received: 09/20/21

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		AMOORE
6020A	CWESTENHAVER	JCHAN
7471B	JHINSON	JHINSON
8081B	ZSHARPE	CFARMAN
8082A	ZSHARPE	SANDREWS
8151A	VWILSON	BBRIGHT
8260C		TGLENN
8270D	ZSHARPE	EBRUNO
8270D	HKEIMIG	LMCKOWN
8290A	TWOODS	GCRUZ
ALS SOP	GTRIGG	SANDREWS
NWTPH-Dx	WVANDERHOFF	SSMITH
NWTPH-Gx		TGLENN

Sample Name: B-25
Lab Code: K2110938-004
Sample Matrix: Water

Date Collected: 09/20/21
Date Received: 09/20/21

Analysis Method	Extracted/Digested By	Analyzed By
6020A	ABOYER	RMOORE
7470A	JHINSON	JHINSON
8081B	WSTRUBLE	CFARMAN
8082A	WSTRUBLE	SANDREWS
8151A	BGREER	BBRIGHT
8260C		MKANALY
8270D	ZSHARPE	LMCKOWN
8270D	HKEIMIG	CDEGNER
8290A	SHIVANI NAIDU	LLUONG
ALS SOP	VWILSON	SANDREWS
NWTPH-Dx	WVANDERHOFF	TPOTTSCHMIDT
NWTPH-Gx		TGLENN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319

Service Request: K2110938

Sample Name: B-25
Lab Code: K2110938-004.R01
Sample Matrix: Water

Date Collected: 09/20/21
Date Received: 09/20/21

Analysis Method	Extracted/Digested By	Analyzed By
NWTPH-Dx	WVANDERHOFF	SSMITH

Sample Name: B-25(0-10)C
Lab Code: K2110938-006
Sample Matrix: Soil

Date Collected: 09/20/21
Date Received: 09/20/21

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		AMOORE
6020A	CWESTENHAVER	JCHAN
7471B	JHINSON	JHINSON
8081B	ZSHARPE	CFARMAN
8082A	ZSHARPE	SANDREWS
8151A	VWILSON	BBRIGHT
8260C		TGLENN
8270D	ZSHARPE	EBRUNO
8270D	HKEIMIG	LMCKOWN
8290A	TWOODS	LLUONG
ALS SOP	GTRIGG	SANDREWS
NWTPH-Dx	WVANDERHOFF	SSMITH
NWTPH-Gx		TGLENN

Sample Name: B-25(0-10)C
Lab Code: K2110938-006.R01
Sample Matrix: Soil

Date Collected: 09/20/21
Date Received: 09/20/21

Analysis Method	Extracted/Digested By	Analyzed By
ALS SOP	GTRIGG	SANDREWS



Sample Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Sample Name: B-25(10-25)C
Lab Code: K2110938-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	9.8 J	23	3.4	1	10/04/21 22:04	*
Benzene	ND U	5.8	0.063	1	10/04/21 22:04	
Bromobenzene	ND U	5.8	0.11	1	10/04/21 22:04	
Bromochloromethane	ND U	5.8	0.28	1	10/04/21 22:04	
Bromodichloromethane	ND U	5.8	0.19	1	10/04/21 22:04	
Bromoform	ND U	5.8	0.17	1	10/04/21 22:04	
Bromomethane	ND U	5.8	0.24	1	10/04/21 22:04	
2-Butanone (MEK)	ND U	23	1.1	1	10/04/21 22:04	
n-Butylbenzene	ND U	23	0.080	1	10/04/21 22:04	
sec-Butylbenzene	ND U	23	0.086	1	10/04/21 22:04	
tert-Butylbenzene	ND U	23	0.17	1	10/04/21 22:04	
Carbon Disulfide	ND U	5.8	0.11	1	10/04/21 22:04	
Carbon Tetrachloride	ND U	5.8	0.11	1	10/04/21 22:04	
Chlorobenzene	ND U	5.8	0.075	1	10/04/21 22:04	
Chloroethane	ND U	5.8	0.86	1	10/04/21 22:04	
Chloroform	ND U	5.8	0.13	1	10/04/21 22:04	
Chloromethane	ND U	5.8	0.21	1	10/04/21 22:04	
2-Chlorotoluene	ND U	23	0.14	1	10/04/21 22:04	
4-Chlorotoluene	ND U	23	0.11	1	10/04/21 22:04	
1,2-Dibromo-3-chloropropane	ND U	23	0.47	1	10/04/21 22:04	
Dibromochloromethane	ND U	5.8	0.21	1	10/04/21 22:04	
1,2-Dibromoethane (EDB)	ND U	23	0.11	1	10/04/21 22:04	
Dibromomethane	ND U	5.8	0.33	1	10/04/21 22:04	
1,2-Dichlorobenzene	ND U	5.8	0.089	1	10/04/21 22:04	
1,3-Dichlorobenzene	ND U	5.8	0.11	1	10/04/21 22:04	
1,4-Dichlorobenzene	ND U	5.8	0.10	1	10/04/21 22:04	
Dichlorodifluoromethane	ND U	5.8	0.14	1	10/04/21 22:04	
1,1-Dichloroethane	ND U	5.8	0.14	1	10/04/21 22:04	
1,2-Dichloroethane (EDC)	ND U	5.8	0.081	1	10/04/21 22:04	
1,1-Dichloroethene	ND U	5.8	0.29	1	10/04/21 22:04	*
cis-1,2-Dichloroethene	ND U	5.8	0.14	1	10/04/21 22:04	
trans-1,2-Dichloroethene	ND U	5.8	0.14	1	10/04/21 22:04	
1,2-Dichloropropane	ND U	5.8	0.15	1	10/04/21 22:04	
1,3-Dichloropropane	ND U	5.8	0.14	1	10/04/21 22:04	
2,2-Dichloropropane	ND U	5.8	0.12	1	10/04/21 22:04	
1,1-Dichloropropene	ND U	5.8	0.15	1	10/04/21 22:04	
cis-1,3-Dichloropropene	ND U	5.8	0.15	1	10/04/21 22:04	
trans-1,3-Dichloropropene	ND U	5.8	0.13	1	10/04/21 22:04	
Ethylbenzene	ND U	5.8	0.11	1	10/04/21 22:04	
Hexachlorobutadiene	ND U	23	0.47	1	10/04/21 22:04	*
2-Hexanone	ND U	23	1.1	1	10/04/21 22:04	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Sample Name: B-25(10-25)C
Lab Code: K2110938-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	23	0.094	1	10/04/21 22:04	
4-Isopropyltoluene	ND U	23	0.074	1	10/04/21 22:04	
4-Methyl-2-pentanone (MIBK)	ND U	23	2.1	1	10/04/21 22:04	
Methylene Chloride	0.97 J	12	0.19	1	10/04/21 22:04	*
Naphthalene	ND U	23	0.15	1	10/04/21 22:04	*
n-Propylbenzene	ND U	23	0.15	1	10/04/21 22:04	
Styrene	ND U	5.8	0.17	1	10/04/21 22:04	
1,1,1,2-Tetrachloroethane	ND U	5.8	0.13	1	10/04/21 22:04	
1,1,2,2-Tetrachloroethane	ND U	5.8	0.15	1	10/04/21 22:04	
Tetrachloroethene (PCE)	ND U	5.8	0.19	1	10/04/21 22:04	
Toluene	ND U	5.8	0.18	1	10/04/21 22:04	
1,2,3-Trichlorobenzene	ND U	23	0.22	1	10/04/21 22:04	
1,2,4-Trichlorobenzene	ND U	23	0.15	1	10/04/21 22:04	
1,1,2-Trichloroethane	ND U	5.8	0.18	1	10/04/21 22:04	
1,1,1-Trichloroethane (TCA)	ND U	5.8	0.13	1	10/04/21 22:04	
Trichloroethene (TCE)	ND U	5.8	0.18	1	10/04/21 22:04	
Trichlorofluoromethane (CFC 11)	ND U	5.8	0.098	1	10/04/21 22:04	
1,2,3-Trichloropropane	ND U	5.8	0.52	1	10/04/21 22:04	
1,2,4-Trimethylbenzene	ND U	23	0.063	1	10/04/21 22:04	
1,3,5-Trimethylbenzene	ND U	23	0.11	1	10/04/21 22:04	
Vinyl Chloride	ND U	5.8	0.21	1	10/04/21 22:04	
o-Xylene	ND U	5.8	0.094	1	10/04/21 22:04	
m,p-Xylenes	ND U	5.8	0.12	1	10/04/21 22:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	61 - 133	10/04/21 22:04	
Dibromofluoromethane	97	59 - 134	10/04/21 22:04	
Toluene-d8	108	77 - 122	10/04/21 22:04	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 09/20/21 14:15

Sample Name: B-25
Lab Code: K2110938-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	ND U	20	3.3	1	09/29/21 19:44	
Benzene	ND U	0.50	0.062	1	09/29/21 19:44	
Bromobenzene	ND U	2.0	0.12	1	09/29/21 19:44	
Bromochloromethane	ND U	0.50	0.16	1	09/29/21 19:44	
Bromodichloromethane	ND U	0.50	0.091	1	09/29/21 19:44	
Bromoform	ND U	0.50	0.16	1	09/29/21 19:44	
Bromomethane	ND U	0.50	0.16	1	09/29/21 19:44	
2-Butanone (MEK)	ND U	20	1.9	1	09/29/21 19:44	*
n-Butylbenzene	ND U	4.0	0.054	1	09/29/21 19:44	
sec-Butylbenzene	ND U	2.0	0.062	1	09/29/21 19:44	
tert-Butylbenzene	ND U	2.0	0.059	1	09/29/21 19:44	
Carbon Disulfide	ND U	0.50	0.069	1	09/29/21 19:44	
Carbon Tetrachloride	ND U	0.50	0.096	1	09/29/21 19:44	
Chlorobenzene	ND U	0.50	0.11	1	09/29/21 19:44	
Chloroethane	ND U	0.50	0.16	1	09/29/21 19:44	
Chloroform	ND U	0.50	0.072	1	09/29/21 19:44	
Chloromethane	ND U	0.50	0.068	1	09/29/21 19:44	
2-Chlorotoluene	ND U	2.0	0.10	1	09/29/21 19:44	
4-Chlorotoluene	ND U	2.0	0.13	1	09/29/21 19:44	*
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	09/29/21 19:44	
Dibromochloromethane	ND U	0.50	0.14	1	09/29/21 19:44	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	09/29/21 19:44	
Dibromomethane	ND U	0.50	0.15	1	09/29/21 19:44	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	09/29/21 19:44	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	09/29/21 19:44	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	09/29/21 19:44	
Dichlorodifluoromethane	ND U	0.50	0.13	1	09/29/21 19:44	*
1,1-Dichloroethane	ND U	0.50	0.077	1	09/29/21 19:44	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	09/29/21 19:44	
1,1-Dichloroethene	ND U	0.50	0.080	1	09/29/21 19:44	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	09/29/21 19:44	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	09/29/21 19:44	
1,2-Dichloropropane	ND U	0.50	0.095	1	09/29/21 19:44	
1,3-Dichloropropane	ND U	0.50	0.14	1	09/29/21 19:44	
2,2-Dichloropropane	ND U	0.50	0.065	1	09/29/21 19:44	
1,1-Dichloropropene	ND U	0.50	0.089	1	09/29/21 19:44	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	09/29/21 19:44	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	09/29/21 19:44	
Ethylbenzene	ND U	0.50	0.050	1	09/29/21 19:44	
Hexachlorobutadiene	ND U	2.0	0.11	1	09/29/21 19:44	
2-Hexanone	ND U	20	2.7	1	09/29/21 19:44	*

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 09/20/21 14:15

Sample Name: B-25
Lab Code: K2110938-004

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	09/29/21 19:44	
4-Isopropyltoluene	0.14 J	2.0	0.060	1	09/29/21 19:44	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	09/29/21 19:44	*
Methylene Chloride	ND U	2.0	0.10	1	09/29/21 19:44	
Naphthalene	ND U	2.0	0.088	1	09/29/21 19:44	
n-Propylbenzene	ND U	2.0	0.054	1	09/29/21 19:44	
Styrene	ND U	0.50	0.089	1	09/29/21 19:44	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	09/29/21 19:44	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	09/29/21 19:44	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	09/29/21 19:44	
Toluene	ND U	0.50	0.054	1	09/29/21 19:44	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	09/29/21 19:44	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	09/29/21 19:44	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	09/29/21 19:44	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	09/29/21 19:44	
Trichloroethene (TCE)	ND U	0.50	0.10	1	09/29/21 19:44	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	09/29/21 19:44	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	09/29/21 19:44	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	09/29/21 19:44	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	09/29/21 19:44	
Vinyl Chloride	ND U	0.50	0.075	1	09/29/21 19:44	
o-Xylene	ND U	0.50	0.074	1	09/29/21 19:44	
m,p-Xylenes	ND U	0.50	0.11	1	09/29/21 19:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	86	68 - 117	09/29/21 19:44	
Dibromofluoromethane	104	73 - 122	09/29/21 19:44	
Toluene-d8	96	65 - 144	09/29/21 19:44	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	13 J	22	3.3	1	10/04/21 22:25	*
Benzene	ND U	5.6	0.061	1	10/04/21 22:25	
Bromobenzene	ND U	5.6	0.099	1	10/04/21 22:25	
Bromochloromethane	ND U	5.6	0.27	1	10/04/21 22:25	
Bromodichloromethane	ND U	5.6	0.18	1	10/04/21 22:25	
Bromoform	ND U	5.6	0.16	1	10/04/21 22:25	
Bromomethane	ND U	5.6	0.23	1	10/04/21 22:25	
2-Butanone (MEK)	ND U	22	1.1	1	10/04/21 22:25	
n-Butylbenzene	ND U	22	0.077	1	10/04/21 22:25	
sec-Butylbenzene	ND U	22	0.083	1	10/04/21 22:25	
tert-Butylbenzene	ND U	22	0.16	1	10/04/21 22:25	
Carbon Disulfide	1.0 J	5.6	0.11	1	10/04/21 22:25	
Carbon Tetrachloride	ND U	5.6	0.11	1	10/04/21 22:25	
Chlorobenzene	ND U	5.6	0.073	1	10/04/21 22:25	
Chloroethane	ND U	5.6	0.83	1	10/04/21 22:25	
Chloroform	ND U	5.6	0.13	1	10/04/21 22:25	
Chloromethane	ND U	5.6	0.21	1	10/04/21 22:25	
2-Chlorotoluene	ND U	22	0.14	1	10/04/21 22:25	
4-Chlorotoluene	ND U	22	0.099	1	10/04/21 22:25	
1,2-Dibromo-3-chloropropane	ND U	22	0.45	1	10/04/21 22:25	
Dibromochloromethane	ND U	5.6	0.21	1	10/04/21 22:25	
1,2-Dibromoethane (EDB)	ND U	22	0.11	1	10/04/21 22:25	
Dibromomethane	ND U	5.6	0.32	1	10/04/21 22:25	
1,2-Dichlorobenzene	ND U	5.6	0.086	1	10/04/21 22:25	
1,3-Dichlorobenzene	ND U	5.6	0.11	1	10/04/21 22:25	
1,4-Dichlorobenzene	ND U	5.6	0.096	1	10/04/21 22:25	
Dichlorodifluoromethane	ND U	5.6	0.14	1	10/04/21 22:25	
1,1-Dichloroethane	ND U	5.6	0.14	1	10/04/21 22:25	
1,2-Dichloroethane (EDC)	ND U	5.6	0.079	1	10/04/21 22:25	
1,1-Dichloroethene	ND U	5.6	0.28	1	10/04/21 22:25	*
cis-1,2-Dichloroethene	ND U	5.6	0.14	1	10/04/21 22:25	
trans-1,2-Dichloroethene	ND U	5.6	0.14	1	10/04/21 22:25	
1,2-Dichloropropane	ND U	5.6	0.15	1	10/04/21 22:25	
1,3-Dichloropropane	ND U	5.6	0.14	1	10/04/21 22:25	
2,2-Dichloropropane	ND U	5.6	0.11	1	10/04/21 22:25	
1,1-Dichloropropene	ND U	5.6	0.15	1	10/04/21 22:25	
cis-1,3-Dichloropropene	ND U	5.6	0.15	1	10/04/21 22:25	
trans-1,3-Dichloropropene	ND U	5.6	0.13	1	10/04/21 22:25	
Ethylbenzene	ND U	5.6	0.11	1	10/04/21 22:25	
Hexachlorobutadiene	ND U	22	0.45	1	10/04/21 22:25	*
2-Hexanone	ND U	22	1.1	1	10/04/21 22:25	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	22	0.091	1	10/04/21 22:25	
4-Isopropyltoluene	0.64 J	22	0.072	1	10/04/21 22:25	
4-Methyl-2-pentanone (MIBK)	ND U	22	2.1	1	10/04/21 22:25	
Methylene Chloride	1.2 J	11	0.18	1	10/04/21 22:25	*
Naphthalene	ND U	22	0.15	1	10/04/21 22:25	*
n-Propylbenzene	ND U	22	0.15	1	10/04/21 22:25	
Styrene	ND U	5.6	0.16	1	10/04/21 22:25	
1,1,1,2-Tetrachloroethane	ND U	5.6	0.13	1	10/04/21 22:25	
1,1,2,2-Tetrachloroethane	ND U	5.6	0.15	1	10/04/21 22:25	
Tetrachloroethene (PCE)	ND U	5.6	0.18	1	10/04/21 22:25	
Toluene	ND U	5.6	0.17	1	10/04/21 22:25	
1,2,3-Trichlorobenzene	ND U	22	0.22	1	10/04/21 22:25	
1,2,4-Trichlorobenzene	ND U	22	0.15	1	10/04/21 22:25	
1,1,2-Trichloroethane	ND U	5.6	0.17	1	10/04/21 22:25	
1,1,1-Trichloroethane (TCA)	ND U	5.6	0.13	1	10/04/21 22:25	
Trichloroethene (TCE)	ND U	5.6	0.17	1	10/04/21 22:25	
Trichlorofluoromethane (CFC 11)	ND U	5.6	0.095	1	10/04/21 22:25	
1,2,3-Trichloropropane	ND U	5.6	0.51	1	10/04/21 22:25	
1,2,4-Trimethylbenzene	ND U	22	0.061	1	10/04/21 22:25	
1,3,5-Trimethylbenzene	ND U	22	0.11	1	10/04/21 22:25	
Vinyl Chloride	ND U	5.6	0.21	1	10/04/21 22:25	
o-Xylene	ND U	5.6	0.091	1	10/04/21 22:25	
m,p-Xylenes	ND U	5.6	0.12	1	10/04/21 22:25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	61 - 133	10/04/21 22:25	
Dibromofluoromethane	97	59 - 134	10/04/21 22:25	
Toluene-d8	108	77 - 122	10/04/21 22:25	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(10-25)C
Lab Code: K2110938-003

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15
Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	12	1.5	101.53	09/22/21 16:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	50 - 150	09/22/21 16:53	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-25
Lab Code: K2110938-004

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 09/20/21 14:15
Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	34.9 J	250	12.0	1	09/29/21 18:01	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	94	50 - 150	09/29/21 18:01	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15
Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	12	1.5	103.12	09/22/21 17:17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	50 - 150	09/22/21 17:17	



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(10-25)C
Lab Code: K2110938-003

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15
Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	5.5	0.42	1	10/06/21 13:03	9/28/21	
Acenaphthene	0.42 J	5.5	0.34	1	10/06/21 13:03	9/28/21	
Acenaphthylene	ND U	5.5	0.32	1	10/06/21 13:03	9/28/21	
Anthracene	ND U	5.5	0.33	1	10/06/21 13:03	9/28/21	*
Benz(a)anthracene	0.55 J	5.5	0.26	1	10/06/21 13:03	9/28/21	
Benzo(a)pyrene	ND U	5.5	0.43	1	10/06/21 13:03	9/28/21	*
Benzo(b)fluoranthene	ND U	5.5	0.43	1	10/06/21 13:03	9/28/21	
Benzo(g,h,i)perylene	ND U	5.5	0.45	1	10/06/21 13:03	9/28/21	
Benzo(k)fluoranthene	ND U	5.5	0.27	1	10/06/21 13:03	9/28/21	
Chrysene	ND U	5.5	0.35	1	10/06/21 13:03	9/28/21	
Dibenz(a,h)anthracene	ND U	5.5	0.26	1	10/06/21 13:03	9/28/21	
Dibenzofuran	ND U	5.5	0.67	1	10/06/21 13:03	9/28/21	
Fluoranthene	ND U	5.5	0.70	1	10/06/21 13:03	9/28/21	
Fluorene	ND U	5.5	0.64	1	10/06/21 13:03	9/28/21	
Indeno(1,2,3-cd)pyrene	ND U	5.5	0.40	1	10/06/21 13:03	9/28/21	
Naphthalene	0.69 J	5.5	0.53	1	10/06/21 13:03	9/28/21	
Phenanthrene	0.90 J	5.5	0.66	1	10/06/21 13:03	9/28/21	
Pyrene	ND U	5.5	0.36	1	10/06/21 13:03	9/28/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	85	30 - 112	10/06/21 13:03	
Fluorene-d10	83	33 - 107	10/06/21 13:03	
Terphenyl-d14	81	35 - 124	10/06/21 13:03	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15
Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.51 J	5.6	0.42	1	10/06/21 13:30	9/28/21	
Acenaphthene	0.89 J	5.6	0.34	1	10/06/21 13:30	9/28/21	
Acenaphthylene	ND U	5.6	0.32	1	10/06/21 13:30	9/28/21	
Anthracene	ND U	5.6	0.33	1	10/06/21 13:30	9/28/21	*
Benz(a)anthracene	0.93 J	5.6	0.26	1	10/06/21 13:30	9/28/21	
Benzo(a)pyrene	0.66 J	5.6	0.43	1	10/06/21 13:30	9/28/21	*
Benzo(b)fluoranthene	0.78 J	5.6	0.43	1	10/06/21 13:30	9/28/21	
Benzo(g,h,i)perylene	0.51 J	5.6	0.45	1	10/06/21 13:30	9/28/21	
Benzo(k)fluoranthene	0.36 J	5.6	0.27	1	10/06/21 13:30	9/28/21	
Chrysene	0.64 J	5.6	0.35	1	10/06/21 13:30	9/28/21	
Dibenz(a,h)anthracene	ND U	5.6	0.26	1	10/06/21 13:30	9/28/21	
Dibenzofuran	ND U	5.6	0.68	1	10/06/21 13:30	9/28/21	
Fluoranthene	1.2 J	5.6	0.71	1	10/06/21 13:30	9/28/21	
Fluorene	ND U	5.6	0.64	1	10/06/21 13:30	9/28/21	
Indeno(1,2,3-cd)pyrene	0.48 J	5.6	0.41	1	10/06/21 13:30	9/28/21	
Naphthalene	1.5 J	5.6	0.53	1	10/06/21 13:30	9/28/21	
Phenanthrene	2.1 J	5.6	0.67	1	10/06/21 13:30	9/28/21	
Pyrene	ND U	5.6	0.36	1	10/06/21 13:30	9/28/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	89	30 - 112	10/06/21 13:30	
Fluorene-d10	77	33 - 107	10/06/21 13:30	
Terphenyl-d14	78	35 - 124	10/06/21 13:30	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 09/20/21 14:15

Sample Name: B-25
Lab Code: K2110938-004

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	6.7	3.3	0.40	1	10/12/21 16:39	9/24/21	
Acenaphthene	14	3.3	0.36	1	10/12/21 16:39	9/24/21	
Acenaphthylene	16	3.3	0.37	1	10/12/21 16:39	9/24/21	
Anthracene	2.5 J	3.3	0.29	1	10/12/21 16:39	9/24/21	
Benz(a)anthracene	2.2 J	3.3	0.34	1	10/12/21 16:39	9/24/21	
Benzo(a)pyrene	3.9	3.3	0.41	1	10/12/21 16:39	9/24/21	
Benzo(b)fluoranthene	ND U	3.3	0.25	1	10/12/21 16:39	9/24/21	
Benzo(g,h,i)perylene	3.4	3.3	0.36	1	10/12/21 16:39	9/24/21	
Benzo(k)fluoranthene	ND U	3.3	0.41	1	10/12/21 16:39	9/24/21	
Chrysene	4.3	3.3	0.65	1	10/12/21 16:39	9/24/21	
Dibenz(a,h)anthracene	ND U	3.3	0.45	1	10/12/21 16:39	9/24/21	
Dibenzofuran	4.2	3.3	0.42	1	10/12/21 16:39	9/24/21	
Fluoranthene	12	3.3	0.46	1	10/12/21 16:39	9/24/21	
Fluorene	7.1	3.3	0.42	1	10/12/21 16:39	9/24/21	
Indeno(1,2,3-cd)pyrene	2.8 J	3.3	0.44	1	10/12/21 16:39	9/24/21	
Naphthalene	23	3.3	0.71	1	10/12/21 16:39	9/24/21	
Phenanthrene	25	3.3	0.72	1	10/12/21 16:39	9/24/21	
Pyrene	13	3.3	0.78	1	10/12/21 16:39	9/24/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	54	39 - 123	10/12/21 16:39	
Fluorene-d10	71	28 - 125	10/12/21 16:39	
Terphenyl-d14	41	22 - 127	10/12/21 16:39	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(10-25)C
Lab Code: K2110938-003

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15
Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	450	110	1	10/12/21 23:56	9/23/21	*
Bis(2-ethylhexyl) Phthalate	20 J	110	11	1	10/12/21 23:56	9/23/21	
Carbazole	ND U	11	4.4	1	10/12/21 23:56	9/23/21	
Di-n-butyl Phthalate	8.2 J	23	5.5	1	10/12/21 23:56	9/23/21	
Di-n-octyl Phthalate	ND U	23	3.7	1	10/12/21 23:56	9/23/21	
Dibenzofuran	ND U	11	3.9	1	10/12/21 23:56	9/23/21	
2,4-Dinitrotoluene	ND U	11	2.9	1	10/12/21 23:56	9/23/21	
2-Methylphenol	ND U	11	4.7	1	10/12/21 23:56	9/23/21	
4-Methylphenol	ND U	23	5.2	1	10/12/21 23:56	9/23/21	
Nitrobenzene	ND U	11	3.9	1	10/12/21 23:56	9/23/21	
Pentachlorophenol (PCP)	ND U	110	6.1	1	10/12/21 23:56	9/23/21	*
Phenol	ND U	34	3.6	1	10/12/21 23:56	9/23/21	
Pyridine	ND U	230	57	1	10/12/21 23:56	9/23/21	
2,4,5-Trichlorophenol	ND U	11	3.5	1	10/12/21 23:56	9/23/21	
2,4,6-Trichlorophenol	ND U	11	3.5	1	10/12/21 23:56	9/23/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	53	35 - 105	10/12/21 23:56	
2-Fluorophenol	49	22 - 85	10/12/21 23:56	
Nitrobenzene-d5	54	10 - 84	10/12/21 23:56	
Phenol-d6	54	39 - 109	10/12/21 23:56	
p-Terphenyl-d14	68	30 - 102	10/12/21 23:56	
2,4,6-Tribromophenol	51	10 - 124	10/12/21 23:56	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-25
Lab Code: K2110938-004

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 09/20/21 14:15
Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	2.1 J	5.0	1.1	1	10/13/21 04:36	9/24/21	*
Bis(2-ethylhexyl) Phthalate	0.81 J	1.0	0.13	1	10/13/21 04:36	9/24/21	
Carbazole	ND U	0.20	0.018	1	10/13/21 04:36	9/24/21	
Di-n-butyl Phthalate	0.079 J	0.20	0.023	1	10/13/21 04:36	9/24/21	
Di-n-octyl Phthalate	ND U	0.40	0.033	1	10/13/21 04:36	9/24/21	
Dibenzofuran	ND U	0.20	0.018	1	10/13/21 04:36	9/24/21	
2,4-Dinitrotoluene	ND U	0.20	0.018	1	10/13/21 04:36	9/24/21	
2-Methylphenol	ND U	0.50	0.11	1	10/13/21 04:36	9/24/21	
4-Methylphenol	ND U	0.50	0.12	1	10/13/21 04:36	9/24/21	
Nitrobenzene	ND U	0.20	0.028	1	10/13/21 04:36	9/24/21	
Pentachlorophenol (PCP)	ND U	1.0	0.34	1	10/13/21 04:36	9/24/21	*
Phenol	ND U	0.50	0.063	1	10/13/21 04:36	9/24/21	
Pyridine	ND U	5.0	1.4	1	10/13/21 04:36	9/24/21	
2,4,5-Trichlorophenol	ND U	0.50	0.031	1	10/13/21 04:36	9/24/21	
2,4,6-Trichlorophenol	ND U	0.50	0.058	1	10/13/21 04:36	9/24/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	76	35 - 105	10/13/21 04:36	
2-Fluorophenol	73	34 - 118	10/13/21 04:36	
Nitrobenzene-d5	79	40 - 117	10/13/21 04:36	
Phenol-d6	86	39 - 109	10/13/21 04:36	
p-Terphenyl-d14	56	48 - 109	10/13/21 04:36	
2,4,6-Tribromophenol	76	35 - 132	10/13/21 04:36	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	450	110	1	10/13/21 00:24	9/23/21	*
Bis(2-ethylhexyl) Phthalate	22 J	110	11	1	10/13/21 00:24	9/23/21	
Carbazole	ND U	11	4.4	1	10/13/21 00:24	9/23/21	
Di-n-butyl Phthalate	15 J	23	5.5	1	10/13/21 00:24	9/23/21	
Di-n-octyl Phthalate	ND U	23	3.7	1	10/13/21 00:24	9/23/21	
Dibenzofuran	ND U	11	3.9	1	10/13/21 00:24	9/23/21	
2,4-Dinitrotoluene	ND U	11	2.9	1	10/13/21 00:24	9/23/21	
2-Methylphenol	ND U	11	4.7	1	10/13/21 00:24	9/23/21	
4-Methylphenol	ND U	23	5.2	1	10/13/21 00:24	9/23/21	
Nitrobenzene	ND U	11	3.9	1	10/13/21 00:24	9/23/21	
Pentachlorophenol (PCP)	ND U	110	6.1	1	10/13/21 00:24	9/23/21	*
Phenol	ND U	34	3.6	1	10/13/21 00:24	9/23/21	
Pyridine	ND U	230	57	1	10/13/21 00:24	9/23/21	
2,4,5-Trichlorophenol	ND U	11	3.5	1	10/13/21 00:24	9/23/21	
2,4,6-Trichlorophenol	ND U	11	3.5	1	10/13/21 00:24	9/23/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	56	35 - 105	10/13/21 00:24	
2-Fluorophenol	51	22 - 85	10/13/21 00:24	
Nitrobenzene-d5	58	10 - 84	10/13/21 00:24	
Phenol-d6	57	39 - 109	10/13/21 00:24	
p-Terphenyl-d14	74	30 - 102	10/13/21 00:24	
2,4,6-Tribromophenol	61	10 - 124	10/13/21 00:24	



Semivolatile Organic Compounds by GC

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Sample Name: B-25(10-25)C
Lab Code: K2110938-003

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.2	0.64	1	11/14/21 10:15	9/22/21	*
alpha-BHC	ND U	1.1	0.32	1	11/14/21 10:15	9/22/21	
beta-BHC	ND Ui	1.1	0.36	1	11/14/21 10:15	9/22/21	
delta-BHC	ND U	1.1	0.31	1	11/14/21 10:15	9/22/21	*
gamma-BHC (Lindane)	ND Ui	1.1	0.43	1	11/14/21 10:15	9/22/21	*
cis-Chlordane	ND U	1.1	0.45	1	11/14/21 10:15	9/22/21	*
trans-Chlordane	ND U	1.1	0.42	1	11/14/21 10:15	9/22/21	*
4,4'-DDD	ND Ui	23	23	1	11/14/21 10:15	9/22/21	*
4,4'-DDE	ND U	1.1	0.44	1	11/14/21 10:15	9/22/21	*
4,4'-DDT	ND Ui	2.2	2.1	1	11/14/21 10:15	9/22/21	*
Dieldrin	ND U	1.1	0.24	1	11/14/21 10:15	9/22/21	*
Endosulfan I	ND Ui	1.5	1.5	1	11/14/21 10:15	9/22/21	*
Endosulfan II	ND U	2.2	0.75	1	11/14/21 10:15	9/22/21	*
Endosulfan Sulfate	ND U	2.2	1.1	1	11/14/21 10:15	9/22/21	*
Endrin	ND Ui	2.9	2.9	1	11/14/21 10:15	9/22/21	*
Endrin Aldehyde	ND U	2.2	0.97	1	11/14/21 10:15	9/22/21	*
Endrin Ketone	ND U	1.1	0.49	1	11/14/21 10:15	9/22/21	*
Heptachlor	ND Ui	1.2	1.2	1	11/14/21 10:15	9/22/21	*
Heptachlor Epoxide	ND U	2.2	0.72	1	11/14/21 10:15	9/22/21	*
Methoxychlor	ND U	2.2	0.77	1	11/14/21 10:15	9/22/21	*
Toxaphene	ND U	110	37	1	11/14/21 10:15	9/22/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	83	10 - 134	11/14/21 10:15	
Tetrachloro-m-xylene	55	10 - 121	11/14/21 10:15	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.59	1	11/14/21 10:54	9/22/21	*
alpha-BHC	ND U	1.0	0.29	1	11/14/21 10:54	9/22/21	
beta-BHC	ND U	1.0	0.27	1	11/14/21 10:54	9/22/21	
delta-BHC	ND U	1.0	0.28	1	11/14/21 10:54	9/22/21	*
gamma-BHC (Lindane)	ND U	1.0	0.31	1	11/14/21 10:54	9/22/21	*
cis-Chlordane	ND U	1.0	0.41	1	11/14/21 10:54	9/22/21	*
trans-Chlordane	ND U	1.0	0.38	1	11/14/21 10:54	9/22/21	*
4,4'-DDD	ND Ui	24	24	1	11/14/21 10:54	9/22/21	*
4,4'-DDE	ND Ui	1.0	0.49	1	11/14/21 10:54	9/22/21	*
4,4'-DDT	ND U	2.0	0.61	1	11/14/21 10:54	9/22/21	*
Dieldrin	0.37 JP	0.96	0.22	1	11/14/21 10:54	9/22/21	*
Endosulfan I	ND Ui	1.0	0.59	1	11/14/21 10:54	9/22/21	*
Endosulfan II	ND Ui	2.0	0.80	1	11/14/21 10:54	9/22/21	*
Endosulfan Sulfate	ND U	2.0	0.99	1	11/14/21 10:54	9/22/21	*
Endrin	ND U	1.0	0.32	1	11/14/21 10:54	9/22/21	*
Endrin Aldehyde	ND U	2.0	0.89	1	11/14/21 10:54	9/22/21	*
Endrin Ketone	ND U	1.0	0.45	1	11/14/21 10:54	9/22/21	*
Heptachlor	ND Ui	1.2	1.2	1	11/14/21 10:54	9/22/21	*
Heptachlor Epoxide	ND Ui	2.0	0.83	1	11/14/21 10:54	9/22/21	*
Methoxychlor	ND U	2.0	0.71	1	11/14/21 10:54	9/22/21	*
Toxaphene	ND U	100	34	1	11/14/21 10:54	9/22/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	81	10 - 134	11/14/21 10:54	
Tetrachloro-m-xylene	50	10 - 121	11/14/21 10:54	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 09/20/21 14:15

Sample Name: B-25
Lab Code: K2110938-004

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.77	1	11/01/21 07:09	9/24/21	
alpha-BHC	ND U	1.0	0.25	1	11/01/21 07:09	9/24/21	
beta-BHC	ND U	1.0	0.17	1	11/01/21 07:09	9/24/21	
delta-BHC	ND U	1.0	0.27	1	11/01/21 07:09	9/24/21	
gamma-BHC (Lindane)	ND U	2.0	0.60	1	11/01/21 07:09	9/24/21	
cis-Chlordane	0.60 J	1.0	0.36	1	11/01/21 07:09	9/24/21	
trans-Chlordane	0.62 J	2.0	0.54	1	11/01/21 07:09	9/24/21	
4,4'-DDD	ND U	2.0	0.57	1	11/01/21 07:09	9/24/21	
4,4'-DDE	ND Ui	1.0	0.53	1	11/01/21 07:09	9/24/21	
4,4'-DDT	ND Ui	2.9	2.9	1	11/01/21 07:09	9/24/21	
Dieldrin	ND U	1.0	0.44	1	11/01/21 07:09	9/24/21	
Endosulfan I	ND U	1.0	0.36	1	11/01/21 07:09	9/24/21	
Endosulfan II	ND Ui	1.9	1.9	1	11/01/21 07:09	9/24/21	
Endosulfan Sulfate	ND U	1.0	0.47	1	11/01/21 07:09	9/24/21	
Endrin	ND U	1.0	0.42	1	11/01/21 07:09	9/24/21	
Endrin Aldehyde	ND U	1.0	0.47	1	11/01/21 07:09	9/24/21	
Endrin Ketone	ND Ui	2.0	1.1	1	11/01/21 07:09	9/24/21	
Heptachlor	ND U	2.0	0.61	1	11/01/21 07:09	9/24/21	
Heptachlor Epoxide	ND Ui	1.0	0.37	1	11/01/21 07:09	9/24/21	
Methoxychlor	ND Ui	4.0	4.0	1	11/01/21 07:09	9/24/21	
Toxaphene	ND U	100	49	1	11/01/21 07:09	9/24/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	16	10 - 139	11/01/21 07:09	
Tetrachloro-m-xylene	59	32 - 151	11/01/21 07:09	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(10-25)C
Lab Code: K2110938-003

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	57	4.6	1	11/20/21 16:33	10/11/21	*
2,4,5-TP (Silvex)	ND U	57	2.8	1	11/20/21 16:33	10/11/21	*
2,4-D	ND U	57	8.8	1	11/20/21 16:33	10/11/21	*
2,4-DB	ND U	57	6.2	1	11/20/21 16:33	10/11/21	*
Dalapon	ND U	57	6.3	1	11/20/21 16:33	10/11/21	*
Dicamba	ND U	57	5.0	1	11/20/21 16:33	10/11/21	*
Dichlorprop	ND U	57	3.9	1	11/20/21 16:33	10/11/21	*
Dinoseb	ND Ui	57	3.7	1	11/20/21 16:33	10/11/21	*
MCPA	ND U	5700	370	1	11/20/21 16:33	10/11/21	*
MCP	ND U	5700	530	1	11/20/21 16:33	10/11/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	90	26 - 127	11/20/21 16:33	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 09/20/21 14:15

Sample Name: B-25
Lab Code: K2110938-004

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.20	0.033	1	10/23/21 14:40	9/27/21	
2,4,5-TP (Silvex)	ND U	0.20	0.045	1	10/23/21 14:40	9/27/21	
2,4-D	ND U	0.39	0.036	1	10/23/21 14:40	9/27/21	*
2,4-DB	ND U	0.39	0.10	1	10/23/21 14:40	9/27/21	
Dalapon	ND U	0.39	0.28	1	10/23/21 14:40	9/27/21	*
Dicamba	ND U _i	0.20	0.049	1	10/23/21 14:40	9/27/21	
Dichlorprop	ND U	0.39	0.030	1	10/23/21 14:40	9/27/21	
Dinoseb	ND U	0.20	0.015	1	10/23/21 14:40	9/27/21	
MCPA	42 JP	98	8.7	1	10/23/21 14:40	9/27/21	
MCPP	ND U	98	14	1	10/23/21 14:40	9/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	64	17 - 113	10/23/21 14:40	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	58	4.7	1	10/25/21 02:51	10/11/21	*
2,4,5-TP (Silvex)	ND U	58	2.8	1	10/25/21 02:51	10/11/21	*
2,4-D	ND Ui	58	9.8	1	10/25/21 02:51	10/11/21	*
2,4-DB	ND U	58	6.3	1	10/25/21 02:51	10/11/21	*
Dalapon	ND U	58	6.4	1	10/25/21 02:51	10/11/21	*
Dicamba	ND U	58	5.0	1	10/25/21 02:51	10/11/21	*
Dichlorprop	ND U	58	4.0	1	10/25/21 02:51	10/11/21	*
Dinoseb	ND U	58	3.2	1	10/25/21 02:51	10/11/21	*
MCPA	ND U	5800	370	1	10/25/21 02:51	10/11/21	*
MCP	1000 J	5800	540	1	10/25/21 02:51	10/11/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	48	26 - 127	10/25/21 02:51	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Sample Name: B-25(10-25)C
Lab Code: K2110938-003

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.1	0.30	1	10/22/21 22:52	10/11/21	
Di-n-butyltin Cation	ND U	1.1	0.22	1	10/22/21 22:52	10/11/21	
Tri-n-butyltin Cation	ND U	1.1	0.49	1	10/22/21 22:52	10/11/21	
Tetra-n-butyltin	ND U	1.1	0.50	1	10/22/21 22:52	10/11/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	103	10 - 152	10/22/21 22:52	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 09/20/21 14:15

Sample Name: B-25
Lab Code: K2110938-004

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.059	0.035	1	10/27/21 11:38	9/27/21	
Di-n-butyltin Cation	ND U	0.059	0.0086	1	10/27/21 11:38	9/27/21	
Tri-n-butyltin Cation	ND U	0.059	0.015	1	10/27/21 11:38	9/27/21	
Tetra-n-butyltin	ND U	0.059	0.045	1	10/27/21 11:38	9/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	86	10 - 195	10/27/21 11:38	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.2	0.31	1	10/28/21 00:59	10/11/21	
Di-n-butyltin Cation	ND U	1.2	0.22	1	10/28/21 00:59	10/11/21	
Tri-n-butyltin Cation	ND U	1.2	0.50	1	10/28/21 00:59	10/11/21	
Tetra-n-butyltin	ND U	1.2	0.51	1	10/28/21 00:59	10/11/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	135	10 - 152	10/28/21 00:59	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(10-25)C
Lab Code: K2110938-003

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15
Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	2.9 J	29	2.1	1	10/10/21 16:30	10/4/21	*
Residual Range Organics (C25 - C36 RRO)	15 J	110	4.5	1	10/10/21 16:30	10/4/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	96	50 - 150	10/10/21 16:30	
n-Triacontane	93	50 - 150	10/10/21 16:30	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-25
Lab Code: K2110938-004

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 09/20/21 14:15
Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	170 J	270	12	1	10/25/21 20:18	9/27/21	*
Residual Range Organics (C25 - C36 RRO)	320 J	530	21	1	10/17/21 01:45	9/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	76	50 - 150	10/17/21 01:45	
n-Triacontane	115	50 - 150	10/25/21 20:18	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	11 J	29	2.1	1	10/10/21 16:53	10/4/21	*
Residual Range Organics (C25 - C36 RRO)	29 J	110	4.5	1	10/10/21 16:53	10/4/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	101	50 - 150	10/10/21 16:53	
n-Triacontane	98	50 - 150	10/10/21 16:53	



Metals

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(10-25)C
Lab Code: K2110938-003

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.34	mg/Kg	0.43	0.05	5	10/06/21 13:05	09/23/21	
Barium	6020A	68.9	mg/Kg	0.043	0.017	5	10/06/21 13:05	09/23/21	
Cadmium	6020A	0.059	mg/Kg	0.017	0.006	5	10/06/21 13:05	09/23/21	
Chromium	6020A	12.6	mg/Kg	0.17	0.05	5	10/06/21 13:05	09/23/21	
Lead	6020A	2.32	mg/Kg	0.043	0.017	5	10/06/21 13:05	09/23/21	
Mercury	7471B	0.026	mg/Kg	0.021	0.002	1	09/27/21 17:39	09/23/21	
Selenium	6020A	0.14 J	mg/Kg	0.86	0.08	5	10/06/21 13:05	09/23/21	
Silver	6020A	0.025	mg/Kg	0.017	0.003	5	10/06/21 13:05	09/23/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-25
Lab Code: K2110938-004

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 09/20/21 14:15
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	1.42	ug/L	0.50	0.09	1	10/05/21 14:26	09/29/21	
Barium	6020A	42.8	ug/L	0.050	0.020	1	10/05/21 14:26	09/29/21	
Cadmium	6020A	0.011 J	ug/L	0.020	0.008	1	10/05/21 14:26	09/29/21	
Chromium	6020A	0.30	ug/L	0.20	0.03	1	10/05/21 14:26	09/29/21	
Lead	6020A	0.078	ug/L	0.020	0.006	1	10/05/21 14:26	09/29/21	
Mercury	7470A	ND U	ug/L	0.20	0.008	1	09/30/21 12:48	09/29/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/05/21 14:26	09/29/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/05/21 14:26	09/29/21	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-25
Lab Code: K2110938-004

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 09/20/21 14:15
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	3.26	ug/L	0.50	0.09	1	10/05/21 14:23	09/29/21	
Barium	6020A	172	ug/L	0.050	0.020	1	10/05/21 14:23	09/29/21	
Cadmium	6020A	0.087	ug/L	0.020	0.008	1	10/05/21 14:23	09/29/21	
Chromium	6020A	28.1	ug/L	0.20	0.03	1	10/05/21 14:23	09/29/21	
Lead	6020A	8.76	ug/L	0.020	0.006	1	10/05/21 14:23	09/29/21	
Mercury	7470A	0.009 J	ug/L	0.20	0.008	1	09/30/21 12:46	09/29/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/05/21 14:23	09/29/21	
Silver	6020A	0.035	ug/L	0.020	0.009	1	10/05/21 14:23	09/29/21	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.85	mg/Kg	0.43	0.05	5	10/06/21 12:54	09/23/21	
Barium	6020A	137	mg/Kg	0.043	0.017	5	10/06/21 12:54	09/23/21	
Cadmium	6020A	0.049	mg/Kg	0.017	0.006	5	10/06/21 12:54	09/23/21	
Chromium	6020A	12.2	mg/Kg	0.17	0.05	5	10/06/21 12:54	09/23/21	
Lead	6020A	2.95	mg/Kg	0.043	0.017	5	10/06/21 12:54	09/23/21	
Mercury	7471B	0.008 J	mg/Kg	0.021	0.002	1	09/27/21 17:40	09/23/21	
Selenium	6020A	0.08 J	mg/Kg	0.85	0.08	5	10/06/21 12:54	09/23/21	
Silver	6020A	0.021	mg/Kg	0.017	0.003	5	10/06/21 12:54	09/23/21	



General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(10-25)C
Lab Code: K2110938-003

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15
Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	86.3	Percent	-	1	09/22/21 15:29	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 09/20/21 14:15
Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	86.1	Percent	-	1	09/22/21 15:29	



QC Summary Forms

ALS Environmental—Kelso Laboratory
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Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		61-133	59-134	77-122
B-25(10-25)C	K2110938-003	102	97	108
B-25(0-10)C	K2110938-006	101	97	108
Method Blank	KQ2119719-05	101	100	109
Lab Control Sample	KQ2119719-03	103	99	110
Duplicate Lab Control Sample	KQ2119719-04	103	101	111
B-25(0-10)C	KQ2119719-06	103	100	111
B-25(0-10)C	KQ2119719-07	102	100	110

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
B-25	K2110938-004	86	104	96
Method Blank	KQ2120518-05	85	98	99
Lab Control Sample	KQ2120518-03	97	101	103
Duplicate Lab Control Sample	KQ2120518-04	99	101	104

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 10/4/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: B-25(0-10)C
Lab Code: K2110938-006
Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2119719-06			Duplicate Matrix Spike KQ2119719-07			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Acetone	13 J	123	261	42	134	268	45	18-117	8	40
Benzene	ND U	37.9	52.1	73	42.4	53.6	79	30-137	11	40
Bromobenzene	ND U	33.4	52.1	64	41.4	53.6	77	13-134	21	40
Bromochloromethane	ND U	36.6	52.1	70	40.8	53.6	76	34-132	11	40
Bromodichloromethane	ND U	33.5	52.1	64	37.2	53.6	69	14-146	11	40
Bromoform	ND U	28.0	52.1	54	32.4	53.6	60	10-139	15	40
Bromomethane	ND U	27.7	52.1	53	28.7	53.6	54	10-160	3	40
2-Butanone (MEK)	ND U	154	261	59	161	268	60	27-113	4	40
n-Butylbenzene	ND U	24.7	52.1	47	34.8	53.6	65	10-125	34	40
sec-Butylbenzene	ND U	28.2	52.1	54	38.3	53.6	71	10-141	30	40
tert-Butylbenzene	ND U	30.1	52.1	58	39.3	53.6	73	10-152	26	40
Carbon Disulfide	1.0 J	60.7	104	57	68.2	107	63	18-140	12	40
Carbon Tetrachloride	ND U	31.7	52.1	61	35.8	53.6	67	10-144	12	40
Chlorobenzene	ND U	37.0	52.1	71	42.5	53.6	79	15-124	14	40
Chloroethane	ND U	28.8	52.1	55	31.3	53.6	58	15-149	8	40
Chloroform	ND U	35.8	52.1	69	39.4	53.6	74	43-133	10	40
Chloromethane	ND U	29.0	52.1	56	31.7	53.6	59	30-133	9	40
2-Chlorotoluene	ND U	34.4	52.1	66	43.4	53.6	81	10-140	23	40
4-Chlorotoluene	ND U	32.6	52.1	63	41.5	53.6	77	10-134	24	40
1,2-Dibromo-3-chloropropane	ND U	26.6	52.1	51	31.4	53.6	59	10-146	17	40
Dibromochloromethane	ND U	30.3	52.1	58	34.9	53.6	65	21-132	14	40
1,2-Dibromoethane (EDB)	ND U	37.0	52.1	71	41.0	53.6	77	26-131	10	40
Dibromomethane	ND U	35.1	52.1	67	38.5	53.6	72	41-127	9	40
1,2-Dichlorobenzene	ND U	29.8	52.1	57	37.5	53.6	70	10-124	23	40
1,3-Dichlorobenzene	ND U	30.5	52.1	59	39.4	53.6	74	10-126	25	40
1,4-Dichlorobenzene	ND U	29.8	52.1	57	38.2	53.6	71	10-123	25	40
Dichlorodifluoromethane	ND U	29.8	52.1	57	31.7	53.6	59	14-158	6	40
1,1-Dichloroethane	ND U	32.7	52.1	63	33.3	53.6	62	31-135	2	40
1,2-Dichloroethane (EDC)	ND U	32.7	52.1	63	36.4	53.6	68	32-134	11	40
1,1-Dichloroethene	ND U	32.0	52.1	61	35.5	53.6	66	31-153	10	40
cis-1,2-Dichloroethene	ND U	35.3	52.1	68	38.8	53.6	72	32-137	10	40
trans-1,2-Dichloroethene	ND U	32.0	52.1	61	35.7	53.6	67	29-139	11	40
1,2-Dichloropropane	ND U	36.3	52.1	70	40.7	53.6	76	31-132	11	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 10/4/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name: B-25(0-10)C
Lab Code: K2110938-006
Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2119719-06			Duplicate Matrix Spike KQ2119719-07			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,3-Dichloropropane	ND U	37.4	52.1	72	41.6	53.6	78	32-133	11	40
2,2-Dichloropropane	ND U	28.5	52.1	55	31.6	53.6	59	34-140	10	40
1,1-Dichloropropene	ND U	36.4	52.1	70	40.8	53.6	76	25-143	11	40
cis-1,3-Dichloropropene	ND U	31.6	52.1	61	35.6	53.6	66	20-132	12	40
trans-1,3-Dichloropropene	ND U	27.6	52.1	53	31.8	53.6	59	19-125	14	40
Ethylbenzene	ND U	36.0	52.1	69	42.2	53.6	79	13-128	16	40
Hexachlorobutadiene	ND U	13.3 J	52.1	26	20.5 J	53.6	38	10-114	42*	40
2-Hexanone	ND U	164	261	63	171	268	64	15-162	4	40
Isopropylbenzene	ND U	31.5	52.1	60	39.2	53.6	73	10-153	22	40
4-Isopropyltoluene	0.64 J	28.8	52.1	54	38.5	53.6	71	10-126	29	40
4-Methyl-2-pentanone (MIBK)	ND U	177	261	68	192	268	72	30-129	8	40
Methylene Chloride	1.2 J	30.4	52.1	56	33.4	53.6	60	36-123	9	40
Naphthalene	ND U	18.5 J	52.1	36	24.4	53.6	46	10-127	27	40
n-Propylbenzene	ND U	30.4	52.1	58	39.7	53.6	74	10-145	26	40
Styrene	ND U	22.9	52.1	44	25.0	53.6	47	10-130	9	40
1,1,1,2-Tetrachloroethane	ND U	32.6	52.1	63	38.3	53.6	71	16-131	16	40
1,1,2,2-Tetrachloroethane	ND U	36.7	52.1	70	42.7	53.6	80	10-153	15	40
Tetrachloroethene (PCE)	ND U	32.1	52.1	62	37.9	53.6	71	10-132	17	40
Toluene	ND U	35.5	52.1	68	40.9	53.6	76	24-142	14	40
1,2,3-Trichlorobenzene	ND U	17.4 J	52.1	33	23.3	53.6	44	10-118	29	40
1,2,4-Trichlorobenzene	ND U	19.2 J	52.1	37	26.4	53.6	49	10-121	32	40
1,1,2-Trichloroethane	ND U	35.2	52.1	67	39.1	53.6	73	35-130	11	40
1,1,1-Trichloroethane (TCA)	ND U	31.7	52.1	61	35.8	53.6	67	26-144	12	40
Trichloroethene (TCE)	ND U	34.9	52.1	67	39.6	53.6	74	18-145	13	40
Trichlorofluoromethane (CFC 11)	ND U	31.0	52.1	59	34.4	53.6	64	20-137	10	40
1,2,3-Trichloropropane	ND U	35.7	52.1	69	41.0	53.6	76	23-149	14	40
1,2,4-Trimethylbenzene	ND U	31.5	52.1	60	40.5	53.6	76	10-142	25	40
1,3,5-Trimethylbenzene	ND U	30.6	52.1	59	39.4	53.6	73	10-160	25	40
Vinyl Chloride	ND U	32.9	52.1	63	35.3	53.6	66	31-140	7	40
o-Xylene	ND U	33.8	52.1	65	39.9	53.6	74	10-146	17	40
m,p-Xylenes	ND U	67.3	104	65	79.0	107	74	10-139	16	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119719-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	3.0 J	20	2.9	1	10/04/21 19:38	
Benzene	ND U	5.0	0.054	1	10/04/21 19:38	
Bromobenzene	ND U	5.0	0.088	1	10/04/21 19:38	
Bromochloromethane	ND U	5.0	0.24	1	10/04/21 19:38	
Bromodichloromethane	ND U	5.0	0.16	1	10/04/21 19:38	
Bromoform	ND U	5.0	0.14	1	10/04/21 19:38	
Bromomethane	ND U	5.0	0.20	1	10/04/21 19:38	
2-Butanone (MEK)	ND U	20	0.90	1	10/04/21 19:38	
n-Butylbenzene	0.43 J	20	0.069	1	10/04/21 19:38	
sec-Butylbenzene	ND U	20	0.074	1	10/04/21 19:38	
tert-Butylbenzene	ND U	20	0.14	1	10/04/21 19:38	
Carbon Disulfide	ND U	5.0	0.092	1	10/04/21 19:38	
Carbon Tetrachloride	ND U	5.0	0.094	1	10/04/21 19:38	
Chlorobenzene	ND U	5.0	0.065	1	10/04/21 19:38	
Chloroethane	ND U	5.0	0.74	1	10/04/21 19:38	
Chloroform	ND U	5.0	0.11	1	10/04/21 19:38	
Chloromethane	ND U	5.0	0.18	1	10/04/21 19:38	
2-Chlorotoluene	ND U	20	0.12	1	10/04/21 19:38	
4-Chlorotoluene	ND U	20	0.088	1	10/04/21 19:38	
1,2-Dibromo-3-chloropropane	ND U	20	0.40	1	10/04/21 19:38	
Dibromochloromethane	ND U	5.0	0.18	1	10/04/21 19:38	
1,2-Dibromoethane (EDB)	ND U	20	0.094	1	10/04/21 19:38	
Dibromomethane	ND U	5.0	0.28	1	10/04/21 19:38	
1,2-Dichlorobenzene	ND U	5.0	0.077	1	10/04/21 19:38	
1,3-Dichlorobenzene	ND U	5.0	0.094	1	10/04/21 19:38	
1,4-Dichlorobenzene	ND U	5.0	0.086	1	10/04/21 19:38	
Dichlorodifluoromethane	ND U	5.0	0.12	1	10/04/21 19:38	
1,1-Dichloroethane	ND U	5.0	0.12	1	10/04/21 19:38	
1,2-Dichloroethane (EDC)	ND U	5.0	0.070	1	10/04/21 19:38	
1,1-Dichloroethene	ND U	5.0	0.25	1	10/04/21 19:38	
cis-1,2-Dichloroethene	ND U	5.0	0.12	1	10/04/21 19:38	
trans-1,2-Dichloroethene	ND U	5.0	0.12	1	10/04/21 19:38	
1,2-Dichloropropane	ND U	5.0	0.13	1	10/04/21 19:38	
1,3-Dichloropropane	ND U	5.0	0.12	1	10/04/21 19:38	
2,2-Dichloropropane	ND U	5.0	0.098	1	10/04/21 19:38	
1,1-Dichloropropene	ND U	5.0	0.13	1	10/04/21 19:38	
cis-1,3-Dichloropropene	ND U	5.0	0.13	1	10/04/21 19:38	
trans-1,3-Dichloropropene	ND U	5.0	0.11	1	10/04/21 19:38	
Ethylbenzene	ND U	5.0	0.094	1	10/04/21 19:38	
Hexachlorobutadiene	ND U	20	0.40	1	10/04/21 19:38	
2-Hexanone	ND U	20	0.93	1	10/04/21 19:38	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119719-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	20	0.081	1	10/04/21 19:38	
4-Isopropyltoluene	ND U	20	0.064	1	10/04/21 19:38	
4-Methyl-2-pentanone (MIBK)	ND U	20	1.8	1	10/04/21 19:38	
Methylene Chloride	ND U	10	0.16	1	10/04/21 19:38	
Naphthalene	1.5 J	20	0.13	1	10/04/21 19:38	
n-Propylbenzene	ND U	20	0.13	1	10/04/21 19:38	
Styrene	ND U	5.0	0.14	1	10/04/21 19:38	
1,1,1,2-Tetrachloroethane	ND U	5.0	0.11	1	10/04/21 19:38	
1,1,2,2-Tetrachloroethane	ND U	5.0	0.13	1	10/04/21 19:38	
Tetrachloroethene (PCE)	ND U	5.0	0.16	1	10/04/21 19:38	
Toluene	ND U	5.0	0.15	1	10/04/21 19:38	
1,2,3-Trichlorobenzene	1.3 J	20	0.19	1	10/04/21 19:38	
1,2,4-Trichlorobenzene	1.2 J	20	0.13	1	10/04/21 19:38	
1,1,2-Trichloroethane	ND U	5.0	0.15	1	10/04/21 19:38	
1,1,1-Trichloroethane (TCA)	ND U	5.0	0.11	1	10/04/21 19:38	
Trichloroethene (TCE)	ND U	5.0	0.15	1	10/04/21 19:38	
Trichlorofluoromethane (CFC 11)	ND U	5.0	0.085	1	10/04/21 19:38	
1,2,3-Trichloropropane	ND U	5.0	0.45	1	10/04/21 19:38	
1,2,4-Trimethylbenzene	ND U	20	0.054	1	10/04/21 19:38	
1,3,5-Trimethylbenzene	ND U	20	0.092	1	10/04/21 19:38	
Vinyl Chloride	ND U	5.0	0.18	1	10/04/21 19:38	
o-Xylene	ND U	5.0	0.081	1	10/04/21 19:38	
m,p-Xylenes	ND U	5.0	0.10	1	10/04/21 19:38	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	61 - 133	10/04/21 19:38	
Dibromofluoromethane	100	59 - 134	10/04/21 19:38	
Toluene-d8	109	77 - 122	10/04/21 19:38	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120518-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	ND U	20	3.3	1	09/29/21 12:08	
Benzene	ND U	0.50	0.062	1	09/29/21 12:08	
Bromobenzene	ND U	2.0	0.12	1	09/29/21 12:08	
Bromochloromethane	ND U	0.50	0.16	1	09/29/21 12:08	
Bromodichloromethane	ND U	0.50	0.091	1	09/29/21 12:08	
Bromoform	ND U	0.50	0.16	1	09/29/21 12:08	
Bromomethane	ND U	0.50	0.16	1	09/29/21 12:08	
2-Butanone (MEK)	ND U	20	1.9	1	09/29/21 12:08	
n-Butylbenzene	ND U	4.0	0.054	1	09/29/21 12:08	
sec-Butylbenzene	ND U	2.0	0.062	1	09/29/21 12:08	
tert-Butylbenzene	ND U	2.0	0.059	1	09/29/21 12:08	
Carbon Disulfide	ND U	0.50	0.069	1	09/29/21 12:08	
Carbon Tetrachloride	ND U	0.50	0.096	1	09/29/21 12:08	
Chlorobenzene	ND U	0.50	0.11	1	09/29/21 12:08	
Chloroethane	ND U	0.50	0.16	1	09/29/21 12:08	
Chloroform	ND U	0.50	0.072	1	09/29/21 12:08	
Chloromethane	ND U	0.50	0.068	1	09/29/21 12:08	
2-Chlorotoluene	ND U	2.0	0.10	1	09/29/21 12:08	
4-Chlorotoluene	ND U	2.0	0.13	1	09/29/21 12:08	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	09/29/21 12:08	
Dibromochloromethane	ND U	0.50	0.14	1	09/29/21 12:08	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	09/29/21 12:08	
Dibromomethane	ND U	0.50	0.15	1	09/29/21 12:08	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	09/29/21 12:08	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	09/29/21 12:08	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	09/29/21 12:08	
Dichlorodifluoromethane	ND U	0.50	0.13	1	09/29/21 12:08	
1,1-Dichloroethane	ND U	0.50	0.077	1	09/29/21 12:08	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	09/29/21 12:08	
1,1-Dichloroethene	ND U	0.50	0.080	1	09/29/21 12:08	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	09/29/21 12:08	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	09/29/21 12:08	
1,2-Dichloropropane	ND U	0.50	0.095	1	09/29/21 12:08	
1,3-Dichloropropane	ND U	0.50	0.14	1	09/29/21 12:08	
2,2-Dichloropropane	ND U	0.50	0.065	1	09/29/21 12:08	
1,1-Dichloropropene	ND U	0.50	0.089	1	09/29/21 12:08	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	09/29/21 12:08	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	09/29/21 12:08	
Ethylbenzene	ND U	0.50	0.050	1	09/29/21 12:08	
Hexachlorobutadiene	ND U	2.0	0.11	1	09/29/21 12:08	
2-Hexanone	ND U	20	2.7	1	09/29/21 12:08	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120518-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	09/29/21 12:08	
4-Isopropyltoluene	ND U	2.0	0.060	1	09/29/21 12:08	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	09/29/21 12:08	
Methylene Chloride	0.16 J	2.0	0.10	1	09/29/21 12:08	
Naphthalene	ND U	2.0	0.088	1	09/29/21 12:08	
n-Propylbenzene	ND U	2.0	0.054	1	09/29/21 12:08	
Styrene	ND U	0.50	0.089	1	09/29/21 12:08	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	09/29/21 12:08	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	09/29/21 12:08	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	09/29/21 12:08	
Toluene	ND U	0.50	0.054	1	09/29/21 12:08	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	09/29/21 12:08	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	09/29/21 12:08	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	09/29/21 12:08	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	09/29/21 12:08	
Trichloroethene (TCE)	ND U	0.50	0.10	1	09/29/21 12:08	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	09/29/21 12:08	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	09/29/21 12:08	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	09/29/21 12:08	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	09/29/21 12:08	
Vinyl Chloride	ND U	0.50	0.075	1	09/29/21 12:08	
o-Xylene	ND U	0.50	0.074	1	09/29/21 12:08	
m,p-Xylenes	ND U	0.50	0.11	1	09/29/21 12:08	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	85	68 - 117	09/29/21 12:08	
Dibromofluoromethane	98	73 - 122	09/29/21 12:08	
Toluene-d8	99	65 - 144	09/29/21 12:08	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 10/04/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 741533

Analyte Name	Lab Control Sample KQ2119719-03			Duplicate Lab Control Sample KQ2119719-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	37.8	50.0	76	38.6	50.0	77	71-119	2	40
1,1,1-Trichloroethane (TCA)	33.2	50.0	66	34.6	50.0	69	59-146	4	40
1,1,2,2-Tetrachloroethane	42.4	50.0	85	42.2	50.0	84	60-128	<1	40
1,1,2-Trichloroethane	36.8	50.0	74	38.1	50.0	76	72-118	3	40
1,1-Dichloroethane	33.5	50.0	67	31.8	50.0	64	59-137	5	40
1,1-Dichloroethene	32.7	50.0	65	33.6	50.0	67	64-152	3	40
1,1-Dichloropropene	38.3	50.0	77	39.2	50.0	78	52-142	2	40
1,2,3-Trichlorobenzene	31.6	50.0	63	31.7	50.0	63	52-138	<1	40
1,2,3-Trichloropropane	40.6	50.0	81	40.8	50.0	82	53-134	<1	40
1,2,4-Trichlorobenzene	34.1	50.0	68	34.6	50.0	69	57-136	1	40
1,2,4-Trimethylbenzene	42.8	50.0	86	43.8	50.0	88	65-132	2	40
1,2-Dibromo-3-chloropropane	30.7	50.0	61	31.0	50.0	62	55-127	<1	40
1,2-Dibromoethane (EDB)	40.0	50.0	80	41.0	50.0	82	71-116	2	40
1,2-Dichlorobenzene	40.5	50.0	81	40.7	50.0	81	67-124	<1	40
1,2-Dichloroethane (EDC)	34.9	50.0	70	36.2	50.0	72	65-121	4	40
1,2-Dichloropropane	38.8	50.0	78	39.8	50.0	80	71-121	2	40
1,3,5-Trimethylbenzene	41.1	50.0	82	42.0	50.0	84	66-132	2	40
1,3-Dichlorobenzene	41.3	50.0	83	41.8	50.0	84	69-128	1	40
1,3-Dichloropropane	39.3	50.0	79	41.4	50.0	83	72-118	5	40
1,4-Dichlorobenzene	40.4	50.0	81	40.2	50.0	80	69-125	<1	40
2,2-Dichloropropane	33.2	50.0	66	32.1	50.0	64	50-138	3	40
2-Butanone (MEK)	191	250	76	186	250	75	54-116	2	40
2-Chlorotoluene	43.3	50.0	87	44.2	50.0	88	65-129	2	40
2-Hexanone	188	250	75	194	250	78	67-121	3	40
4-Chlorotoluene	42.3	50.0	85	42.3	50.0	85	51-134	<1	40
4-Isopropyltoluene	42.8	50.0	86	43.8	50.0	88	61-132	2	40
4-Methyl-2-pentanone (MIBK)	193	250	77	200	250	80	69-126	3	40
Acetone	125	250	50	127	250	51	32-135	2	40
Benzene	40.0	50.0	80	40.5	50.0	81	68-122	1	40
Bromobenzene	40.7	50.0	81	40.8	50.0	82	71-124	<1	40
Bromochloromethane	39.8	50.0	80	40.3	50.0	81	65-131	1	40
Bromodichloromethane	36.6	50.0	73	38.1	50.0	76	61-143	4	40
Bromoform	32.9	50.0	66	34.3	50.0	69	62-134	4	40
Bromomethane	32.1	50.0	64	29.8	50.0	60	22-180	8	40
Carbon Disulfide	64.2	100	64	66.5	100	66	55-141	3	40
Carbon Tetrachloride	34.3	50.0	69	35.4	50.0	71	51-135	3	40
Chlorobenzene	40.8	50.0	82	41.6	50.0	83	70-116	2	40
Chloroethane	29.9	50.0	60	30.5	50.0	61	51-122	2	40
Chloroform	37.7	50.0	75	38.3	50.0	77	61-137	2	40
Chloromethane	29.6	50.0	59	30.6	50.0	61	37-146	3	40
cis-1,2-Dichloroethene	39.7	50.0	79	38.1	50.0	76	62-138	4	40

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 10/04/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 741533

Analyte Name	Lab Control Sample KQ2119719-03			Duplicate Lab Control Sample KQ2119719-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	36.4	50.0	73	37.1	50.0	74	58-138	2	40
Dibromochloromethane	34.5	50.0	69	36.5	50.0	73	69-120	6	40
Dibromomethane	38.5	50.0	77	39.3	50.0	79	68-125	2	40
Dichlorodifluoromethane	29.1	50.0	58	29.2	50.0	58	38-160	<1	40
Ethylbenzene	40.7	50.0	81	42.4	50.0	85	70-118	4	40
Hexachlorobutadiene	31.8	50.0	64	32.7	50.0	65	54-140	3	40
Isopropylbenzene	39.3	50.0	79	40.2	50.0	80	67-133	2	40
m,p-Xylenes	77.9	100	78	78.4	100	78	69-127	<1	40
Methylene Chloride	31.5	50.0	63 *	32.4	50.0	65	65-122	3	40
Naphthalene	29.7	50.0	59	30.4	50.0	61	54-134	2	40
n-Butylbenzene	41.0	50.0	82	41.7	50.0	83	53-139	2	40
n-Propylbenzene	40.4	50.0	81	41.0	50.0	82	57-143	1	40
o-Xylene	38.8	50.0	78	39.8	50.0	80	69-124	3	40
sec-Butylbenzene	42.8	50.0	86	43.7	50.0	87	55-146	2	40
Styrene	40.1	50.0	80	41.2	50.0	82	62-135	3	40
tert-Butylbenzene	42.8	50.0	86	43.4	50.0	87	67-131	1	40
Tetrachloroethene (PCE)	36.4	50.0	73	36.9	50.0	74	66-126	1	40
Toluene	38.8	50.0	78	39.5	50.0	79	75-117	2	40
trans-1,2-Dichloroethene	33.5	50.0	67	34.0	50.0	68	63-127	1	40
trans-1,3-Dichloropropene	31.3	50.0	63	32.3	50.0	65	63-121	3	40
Trichloroethene (TCE)	37.7	50.0	75	38.1	50.0	76	67-126	1	40
Trichlorofluoromethane (CFC 11)	31.2	50.0	62	32.2	50.0	64	51-140	3	40
Vinyl Chloride	32.5	50.0	65	33.5	50.0	67	54-127	3	40

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 09/29/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 740571

Analyte Name	Lab Control Sample KQ2120518-03			Duplicate Lab Control Sample KQ2120518-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	8.52	10.0	85	8.45	10.0	85	66-124	<1	30
1,1,1-Trichloroethane (TCA)	10.1	10.0	101	10.3	10.0	103	59-136	3	30
1,1,2,2-Tetrachloroethane	8.57	10.0	86	8.97	10.0	90	70-127	5	30
1,1,2-Trichloroethane	8.71	10.0	87	8.65	10.0	87	74-118	<1	30
1,1-Dichloroethane	10.0	10.0	100	10.0	10.0	100	68-132	<1	30
1,1-Dichloroethene	8.78	10.0	88	8.73	10.0	87	66-129	<1	30
1,1-Dichloropropene	9.73	10.0	97	9.47	10.0	95	59-134	3	30
1,2,3-Trichlorobenzene	8.37	10.0	84	8.62	10.0	86	68-120	3	30
1,2,3-Trichloropropane	9.31	10.0	93	9.12	10.0	91	69-123	2	30
1,2,4-Trichlorobenzene	7.99	10.0	80	8.07	10.0	81	58-126	<1	30
1,2,4-Trimethylbenzene	10.4	10.0	104	10.1	10.0	101	63-122	3	30
1,2-Dibromo-3-chloropropane	7.81	10.0	78	8.50	10.0	85	55-132	8	30
1,2-Dibromoethane (EDB)	8.57	10.0	86	8.46	10.0	85	74-118	1	30
1,2-Dichlorobenzene	8.92	10.0	89	9.08	10.0	91	72-115	2	30
1,2-Dichloroethane (EDC)	10.2	10.0	102	10.2	10.0	102	56-142	<1	30
1,2-Dichloropropane	9.73	10.0	97	9.97	10.0	100	67-126	2	30
1,3,5-Trimethylbenzene	10.4	10.0	104	10.3	10.0	103	62-126	<1	30
1,3-Dichlorobenzene	8.78	10.0	88	8.82	10.0	88	70-116	<1	30
1,3-Dichloropropane	9.06	10.0	91	9.11	10.0	91	75-116	<1	30
1,4-Dichlorobenzene	8.91	10.0	89	8.84	10.0	88	73-115	<1	30
2,2-Dichloropropane	10.8	10.0	108	10.5	10.0	105	37-145	3	30
2-Butanone (MEK)	38.2	50.0	76	40.0	50.0	80	71-149	5	30
2-Chlorotoluene	10.1	10.0	101	9.86	10.0	99	55-131	2	30
2-Hexanone	39.5	50.0	79	41.2	50.0	82	59-131	4	30
4-Chlorotoluene	11.0	10.0	110	10.8	10.0	108	66-121	2	30
4-Isopropyltoluene	10.1	10.0	101	9.84	10.0	98	61-128	3	30
4-Methyl-2-pentanone (MIBK)	42.3	50.0	85	43.1	50.0	86	64-134	2	30
Acetone	43.4	50.0	87	44.5	50.0	89	68-135	3	30
Benzene	9.45	10.0	95	9.37	10.0	94	69-124	<1	30
Bromobenzene	8.95	10.0	90	8.91	10.0	89	72-116	<1	30
Bromochloromethane	8.63	10.0	86	8.97	10.0	90	75-131	4	30
Bromodichloromethane	9.38	10.0	94	9.73	10.0	97	63-129	4	30
Bromoform	7.56	10.0	76	7.57	10.0	76	52-144	<1	30
Bromomethane	10.8	10.0	108	10.8	10.0	108	35-113	<1	30
Carbon Disulfide	15.3	20.0	76	14.9	20.0	74	46-144	3	30
Carbon Tetrachloride	9.55	10.0	96	9.35	10.0	94	55-140	2	30
Chlorobenzene	8.96	10.0	90	8.57	10.0	86	72-116	4	30
Chloroethane	9.44	10.0	94	9.36	10.0	94	58-134	<1	30
Chloroform	9.45	10.0	95	9.43	10.0	94	70-129	<1	30
Chloromethane	8.11	10.0	81	7.88	10.0	79	34-130	3	30
cis-1,2-Dichloroethene	8.82	10.0	88	9.05	10.0	91	71-118	3	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 09/29/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 740571

Analyte Name	Lab Control Sample KQ2120518-03			Duplicate Lab Control Sample KQ2120518-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	9.29	10.0	93	9.48	10.0	95	62-132	2	30
Dibromochloromethane	8.25	10.0	83	8.13	10.0	81	67-126	1	30
Dibromomethane	9.45	10.0	95	9.65	10.0	97	69-128	2	30
Dichlorodifluoromethane	7.41	10.0	74	7.26	10.0	73	32-124	2	30
Ethylbenzene	8.94	10.0	89	8.87	10.0	89	67-121	<1	30
Hexachlorobutadiene	8.32	10.0	83	7.93	10.0	79	57-119	5	30
Isopropylbenzene	9.53	10.0	95	9.19	10.0	92	67-129	4	30
m,p-Xylenes	18.8	20.0	94	18.3	20.0	92	69-121	2	30
Methylene Chloride	8.89	10.0	89	8.86	10.0	89	71-122	<1	30
Naphthalene	7.65	10.0	77	8.05	10.0	81	64-126	5	30
n-Butylbenzene	10.1	10.0	101	9.66	10.0	97	55-130	4	30
n-Propylbenzene	10.2	10.0	102	10.0	10.0	100	61-124	2	30
o-Xylene	9.26	10.0	93	8.85	10.0	89	71-119	5	30
sec-Butylbenzene	10.6	10.0	106	10.2	10.0	102	59-128	4	30
Styrene	9.13	10.0	91	9.01	10.0	90	74-121	1	30
tert-Butylbenzene	10.1	10.0	101	9.92	10.0	99	61-127	2	30
Tetrachloroethene (PCE)	8.45	10.0	85	7.99	10.0	80	62-126	6	30
Toluene	9.15	10.0	92	9.16	10.0	92	69-124	<1	30
trans-1,2-Dichloroethene	9.20	10.0	92	8.93	10.0	89	67-125	3	30
trans-1,3-Dichloropropene	8.41	10.0	84	8.25	10.0	83	59-125	2	30
Trichloroethene (TCE)	9.43	10.0	94	9.52	10.0	95	67-128	<1	30
Trichlorofluoromethane (CFC 11)	9.36	10.0	94	9.22	10.0	92	52-141	2	30
Vinyl Chloride	9.08	10.0	91	8.91	10.0	89	55-123	2	30

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene
		50-150
B-25(10-25)C	K2110938-003	104
B-25(0-10)C	K2110938-006	102
Method Blank	KQ2118614-06	102
Lab Control Sample	KQ2118614-07	91
Duplicate Lab Control Sample	KQ2118614-08	89

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	1,4-Difluorobenzene
		50-150
B-25	K2110938-004	94
B-25	KQ2119530-12	97
Method Blank	KQ2119530-05	97
Lab Control Sample	KQ2119530-06	96
Duplicate Lab Control Sample	KQ2119530-07	97

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 09/29/21

Replicate Sample Summary
Volatile Petroleum Products by GC/FID

Sample Name: B-25
Lab Code: K2110938-004

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample 12			
Gasoline Range Organics (Toluene-Naphthalene GRO)	NWTPH-Gx	250	12.0	34.9 J	KQ2119530- 33.3 J	34.1	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118614-06

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	09/22/21 11:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	50 - 150	09/22/21 11:54	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2119530-05

Service Request: K2110938
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	250	12.0	1	09/29/21 14:06	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	97	50 - 150	09/29/21 14:06	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 09/22/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: mg/Kg
Basis: Dry
Analysis Lot: 739731

Lab Control Sample
KQ2118614-07

Duplicate Lab Control Sample
KQ2118614-08

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Gasoline Range Organics (Toluene-Naphthalene GRO)	19.5	25.0	78	19.2	25.0	77	76-114	1	40

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 09/29/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 741167

Lab Control Sample
KQ2119530-06

Duplicate Lab Control Sample
KQ2119530-07

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Gasoline Range Organics (Toluene-Naphthalene GRO)	460	500	92	462	500	92	80-119	<1	30



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Extraction Method: EPA 3546

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		30-112	33-107	35-124
B-25(10-25)C	K2110938-003	85	83	81
B-25(0-10)C	K2110938-006	89	77	78
Method Blank	KQ2118594-04	92	82	80
Lab Control Sample	KQ2118594-03	98	84	92
B-25(0-10)C	KQ2118594-01	89	75	81
B-25(0-10)C	KQ2118594-02	96	87	94

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 10/6/21
Date Extracted: 09/28/21

Duplicate Matrix Spike Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Sample Name: B-25(0-10)C
Lab Code: K2110938-006
Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2118594-01			Duplicate Matrix Spike KQ2118594-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2-Methylnaphthalene	0.51 J	414	566	73	475	559	85	28-98	14	40
Acenaphthene	0.89 J	427	566	75	501	559	89	30-101	16	40
Acenaphthylene	ND U	429	566	76	508	559	91	32-97	17	40
Anthracene	ND U	559	566	99	647	559	116	27-116	15	40
Benz(a)anthracene	0.93 J	503	566	89	588	559	105	27-127	16	40
Benzo(a)pyrene	0.66 J	561	566	99	657	559	117	25-129	16	40
Benzo(b)fluoranthene	0.78 J	498	566	88	579	559	103	21-130	15	40
Benzo(g,h,i)perylene	0.51 J	429	566	76	494	559	88	17-130	14	40
Benzo(k)fluoranthene	0.36 J	493	566	87	569	559	102	22-126	14	40
Chrysene	0.64 J	518	566	91	601	559	107	25-132	15	40
Dibenz(a,h)anthracene	ND U	431	566	76	498	559	89	32-116	14	40
Dibenzofuran	ND U	432	566	76	500	559	89	28-105	14	40
Fluoranthene	1.2 J	525	566	93	577	559	103	10-138	9	40
Fluorene	ND U	447	566	79	523	559	94	23-116	16	40
Indeno(1,2,3-cd)pyrene	0.48 J	469	566	83	552	559	99	17-138	16	40
Naphthalene	1.5 J	390	566	69	459	559	82	29-88	16	40
Phenanthrene	2.1 J	468	566	82	532	559	95	10-128	13	40
Pyrene	ND U	480	566	85	578	559	103	16-134	19	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118594-04

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	5.0	0.37	1	10/06/21 11:18	9/28/21	
Acenaphthene	ND U	5.0	0.30	1	10/06/21 11:18	9/28/21	
Acenaphthylene	ND U	5.0	0.28	1	10/06/21 11:18	9/28/21	
Anthracene	ND U	5.0	0.29	1	10/06/21 11:18	9/28/21	
Benz(a)anthracene	0.51 J	5.0	0.23	1	10/06/21 11:18	9/28/21	
Benzo(a)pyrene	1.0 J	5.0	0.38	1	10/06/21 11:18	9/28/21	
Benzo(b)fluoranthene	ND U	5.0	0.38	1	10/06/21 11:18	9/28/21	
Benzo(g,h,i)perylene	ND U	5.0	0.40	1	10/06/21 11:18	9/28/21	
Benzo(k)fluoranthene	ND U	5.0	0.24	1	10/06/21 11:18	9/28/21	
Chrysene	ND U	5.0	0.31	1	10/06/21 11:18	9/28/21	
Dibenz(a,h)anthracene	ND U	5.0	0.23	1	10/06/21 11:18	9/28/21	
Dibenzofuran	ND U	5.0	0.60	1	10/06/21 11:18	9/28/21	
Fluoranthene	ND U	5.0	0.63	1	10/06/21 11:18	9/28/21	
Fluorene	ND U	5.0	0.57	1	10/06/21 11:18	9/28/21	
Indeno(1,2,3-cd)pyrene	ND U	5.0	0.36	1	10/06/21 11:18	9/28/21	
Naphthalene	ND U	5.0	0.47	1	10/06/21 11:18	9/28/21	
Phenanthrene	ND U	5.0	0.59	1	10/06/21 11:18	9/28/21	
Pyrene	ND U	5.0	0.32	1	10/06/21 11:18	9/28/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	92	30 - 112	10/06/21 11:18	
Fluorene-d10	82	33 - 107	10/06/21 11:18	
Terphenyl-d14	80	35 - 124	10/06/21 11:18	

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 10/06/21
Date Extracted: 09/28/21

Lab Control Sample Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 741412

Lab Control Sample
KQ2118594-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2-Methylnaphthalene	392	500	78	43-92
Acenaphthene	417	500	83	44-95
Acenaphthylene	423	500	85	44-93
Anthracene	536	500	107 *	46-100
Benz(a)anthracene	496	500	99	52-105
Benzo(a)pyrene	552	500	110	52-111
Benzo(b)fluoranthene	491	500	98	52-114
Benzo(g,h,i)perylene	416	500	83	45-107
Benzo(k)fluoranthene	481	500	96	52-112
Chrysene	505	500	101	51-110
Dibenz(a,h)anthracene	427	500	85	44-110
Dibenzofuran	381	500	76	44-96
Fluoranthene	503	500	101	49-102
Fluorene	433	500	87	45-98
Indeno(1,2,3-cd)pyrene	467	500	93	44-117
Naphthalene	381	500	76	42-88
Phenanthrene	443	500	89	41-99
Pyrene	466	500	93	48-104

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		39-123	28-125	22-127
B-25	K2110938-004	54	71	41
Method Blank	KQ2118785-03	90	83	85
Lab Control Sample	KQ2118785-01	81	74	78
Duplicate Lab Control Sample	KQ2118785-02	88	81	81

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118785-03

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	3.3	0.40	1	10/12/21 14:49	9/24/21	
Acenaphthene	ND U	3.3	0.36	1	10/12/21 14:49	9/24/21	
Acenaphthylene	ND U	3.3	0.37	1	10/12/21 14:49	9/24/21	
Anthracene	ND U	3.3	0.29	1	10/12/21 14:49	9/24/21	
Benz(a)anthracene	0.52 J	3.3	0.34	1	10/12/21 14:49	9/24/21	
Benzo(a)pyrene	ND U	3.3	0.41	1	10/12/21 14:49	9/24/21	
Benzo(b)fluoranthene	ND U	3.3	0.25	1	10/12/21 14:49	9/24/21	
Benzo(g,h,i)perylene	ND U	3.3	0.36	1	10/12/21 14:49	9/24/21	
Benzo(k)fluoranthene	ND U	3.3	0.41	1	10/12/21 14:49	9/24/21	
Chrysene	ND U	3.3	0.65	1	10/12/21 14:49	9/24/21	
Dibenz(a,h)anthracene	ND U	3.3	0.45	1	10/12/21 14:49	9/24/21	
Dibenzofuran	ND U	3.3	0.42	1	10/12/21 14:49	9/24/21	
Fluoranthene	0.85 J	3.3	0.46	1	10/12/21 14:49	9/24/21	
Fluorene	ND U	3.3	0.42	1	10/12/21 14:49	9/24/21	
Indeno(1,2,3-cd)pyrene	ND U	3.3	0.44	1	10/12/21 14:49	9/24/21	
Naphthalene	ND U	3.3	0.71	1	10/12/21 14:49	9/24/21	
Phenanthrene	2.5 J	3.3	0.72	1	10/12/21 14:49	9/24/21	
Pyrene	ND U	3.3	0.78	1	10/12/21 14:49	9/24/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	90	39 - 123	10/12/21 14:49	
Fluorene-d10	83	28 - 125	10/12/21 14:49	
Terphenyl-d14	85	22 - 127	10/12/21 14:49	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 10/12/21
Date Extracted: 09/24/21

Duplicate Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ng/L
Basis: NA
Analysis Lot: 742199

Lab Control Sample
KQ2118785-01

Duplicate Lab Control Sample
KQ2118785-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2-Methylnaphthalene	397	500	79	425	500	85	42-108	7	30
Acenaphthene	389	500	78	428	500	86	58-98	10	30
Acenaphthylene	396	500	79	439	500	88	61-102	10	30
Anthracene	395	500	79	434	500	87	65-98	9	30
Benz(a)anthracene	383	500	77	419	500	84	67-96	9	30
Benzo(a)pyrene	415	500	83	448	500	90	68-107	8	30
Benzo(b)fluoranthene	426	500	85	464	500	93	69-104	9	30
Benzo(g,h,i)perylene	409	500	82	439	500	88	61-110	7	30
Benzo(k)fluoranthene	430	500	86	460	500	92	68-108	7	30
Chrysene	370	500	74	398	500	80	67-105	7	30
Dibenz(a,h)anthracene	416	500	83	447	500	89	54-118	7	30
Dibenzofuran	382	500	76	424	500	85	52-103	11	30
Fluoranthene	425	500	85	458	500	92	63-106	8	30
Fluorene	381	500	76	422	500	84	59-97	10	30
Indeno(1,2,3-cd)pyrene	431	500	86	465	500	93	61-115	8	30
Naphthalene	403	500	81	425	500	85	59-95	5	30
Phenanthrene	405	500	81	447	500	89	61-100	10	30
Pyrene	374	500	75	405	500	81	64-104	8	30

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	22-85	10-84
B-25(10-25)C	K2110938-003	53	49	54
B-25(0-10)C	K2110938-006	56	51	58
Method Blank	KQ2118619-04	62	58	66
Lab Control Sample	KQ2118619-03	58	55	63

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	30-102	10-124
B-25(10-25)C	K2110938-003	54	68	51
B-25(0-10)C	K2110938-006	57	74	61
Method Blank	KQ2118619-04	64	67	53
Lab Control Sample	KQ2118619-03	61	58	56

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	34-118	40-117
B-25	K2110938-004	76	73	79
Method Blank	KQ2118782-03	85	82	89
Lab Control Sample	KQ2118782-01	83	83	86
Duplicate Lab Control Sample	KQ2118782-02	84	84	90

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	48-109	35-132
B-25	K2110938-004	86	56	76
Method Blank	KQ2118782-03	87	103	80
Lab Control Sample	KQ2118782-01	88	94	79
Duplicate Lab Control Sample	KQ2118782-02	90	96	80

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118619-04

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	390	96	1	10/12/21 18:48	9/23/21	
Bis(2-ethylhexyl) Phthalate	13 J	97	8.9	1	10/12/21 18:48	9/23/21	
Carbazole	ND U	9.7	3.8	1	10/12/21 18:48	9/23/21	
Di-n-butyl Phthalate	6.9 J	19	4.8	1	10/12/21 18:48	9/23/21	
Di-n-octyl Phthalate	ND U	19	3.2	1	10/12/21 18:48	9/23/21	
Dibenzofuran	ND U	9.7	3.4	1	10/12/21 18:48	9/23/21	
2,4-Dinitrotoluene	ND U	9.7	2.5	1	10/12/21 18:48	9/23/21	
2-Methylphenol	ND U	9.7	4.1	1	10/12/21 18:48	9/23/21	
4-Methylphenol	ND U	19	4.5	1	10/12/21 18:48	9/23/21	
Nitrobenzene	ND U	9.7	3.4	1	10/12/21 18:48	9/23/21	
Pentachlorophenol (PCP)	ND U	97	5.3	1	10/12/21 18:48	9/23/21	
Phenol	ND U	29	3.1	1	10/12/21 18:48	9/23/21	
Pyridine	ND U	190	50	1	10/12/21 18:48	9/23/21	
2,4,5-Trichlorophenol	ND U	9.7	3.0	1	10/12/21 18:48	9/23/21	
2,4,6-Trichlorophenol	ND U	9.7	3.0	1	10/12/21 18:48	9/23/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	62	35 - 105	10/12/21 18:48	
2-Fluorophenol	58	22 - 85	10/12/21 18:48	
Nitrobenzene-d5	66	10 - 84	10/12/21 18:48	
Phenol-d6	64	39 - 109	10/12/21 18:48	
p-Terphenyl-d14	67	30 - 102	10/12/21 18:48	
2,4,6-Tribromophenol	53	10 - 124	10/12/21 18:48	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2118782-03

Service Request: K2110938
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	4.8	1.1	1	10/13/21 03:12	9/24/21	
Bis(2-ethylhexyl) Phthalate	0.20 J	0.96	0.13	1	10/01/21 12:54	9/24/21	
Carbazole	ND U	0.19	0.018	1	10/13/21 03:12	9/24/21	
Di-n-butyl Phthalate	0.091 J	0.19	0.023	1	10/13/21 03:12	9/24/21	
Di-n-octyl Phthalate	ND U	0.38	0.033	1	10/13/21 03:12	9/24/21	
Dibenzofuran	ND U	0.19	0.018	1	10/01/21 12:54	9/24/21	
2,4-Dinitrotoluene	ND U	0.19	0.018	1	10/13/21 03:12	9/24/21	
2-Methylphenol	ND U	0.48	0.11	1	10/13/21 03:12	9/24/21	
4-Methylphenol	ND U	0.48	0.12	1	10/13/21 03:12	9/24/21	
Nitrobenzene	ND U	0.19	0.028	1	10/13/21 03:12	9/24/21	
Pentachlorophenol (PCP)	ND U	0.96	0.34	1	10/13/21 03:12	9/24/21	
Phenol	ND U	0.48	0.063	1	10/13/21 03:12	9/24/21	
Pyridine	ND U	4.8	1.4	1	10/13/21 03:12	9/24/21	
2,4,5-Trichlorophenol	ND U	0.48	0.031	1	10/13/21 03:12	9/24/21	
2,4,6-Trichlorophenol	ND U	0.48	0.058	1	10/13/21 03:12	9/24/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	85	35 - 105	10/01/21 12:54	
2-Fluorophenol	82	34 - 118	10/13/21 03:12	
Nitrobenzene-d5	89	40 - 117	10/01/21 12:54	
Phenol-d6	87	39 - 109	10/13/21 03:12	
p-Terphenyl-d14	103	48 - 109	10/01/21 12:54	
2,4,6-Tribromophenol	80	35 - 132	10/13/21 03:12	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 10/12/21
Date Extracted: 09/23/21

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry
Analysis Lot: 742554

Lab Control Sample
KQ2118619-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol	144	250	58	32-81
2,4,6-Trichlorophenol	150	250	60	33-79
2,4-Dinitrotoluene	132	250	53	35-93
2-Methylphenol	165	250	66	27-74
4-Methylphenol	174	250	69	26-79
Benzoic Acid	ND U	750	0 *	10-34
Bis(2-ethylhexyl) Phthalate	155	250	62	39-113
Carbazole	171	250	68	37-95
Dibenzofuran	152	250	61	30-78
Di-n-butyl Phthalate	157	250	63	30-120
Di-n-octyl Phthalate	178	250	71	41-105
Nitrobenzene	128	250	51	28-78
Pentachlorophenol (PCP)	80.7 J	250	32	19-103
Phenol	172	250	69	27-75
Pyridine	231	500	46	10-54

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 10/13/21
Date Extracted: 09/24/21

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 742554

Lab Control Sample
KQ2118782-01

Duplicate Lab Control Sample
KQ2118782-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-Trichlorophenol	4.44	5.00	89	4.14	5.00	83	51-116	7	30
2,4,6-Trichlorophenol	4.51	5.00	90	4.55	5.00	91	51-114	<1	30
2,4-Dinitrotoluene	4.75	5.00	95	4.76	5.00	95	56-120	<1	30
2-Methylphenol	4.74	5.00	95	4.95	5.00	99	45-114	4	30
4-Methylphenol	5.18	5.00	104	5.32	5.00	106	44-120	3	30
Benzoic Acid	11.2	15.0	74	11.4	15.0	76	10-86	2	30
Carbazole	4.11	5.00	82	4.35	5.00	87	57-112	6	30
Di-n-butyl Phthalate	4.87	5.00	97	5.07	5.00	101	61-121	4	30
Di-n-octyl Phthalate	5.66	5.00	113	5.73	5.00	115	50-125	1	30
Nitrobenzene	4.55	5.00	91	4.70	5.00	94	43-120	3	30
Pentachlorophenol (PCP)	3.10	5.00	62	3.08	5.00	62	27-112	<1	30
Phenol	4.68	5.00	94	4.90	5.00	98	45-112	5	30
Pyridine	7.05	10.0	71	7.43	10.0	74	10-121	5	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 10/01/21
Date Extracted: 09/24/21

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 741402

Lab Control Sample
KQ2118782-01

Duplicate Lab Control Sample
KQ2118782-02

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Bis(2-ethylhexyl) Phthalate	4.54	5.00	91	4.55	5.00	91	42-147	<1	30
Dibenzofuran	4.30	5.00	86	4.39	5.00	88	51-102	2	30



Semivolatile Organic Compounds by GC

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-134	10-121
B-25(10-25)C	K2110938-003	83	55
B-25(0-10)C	K2110938-006	81	50
Method Blank	KQ2118596-11	82	52
Lab Control Sample	KQ2118596-08	77	51
Lab Control Sample	KQ2118596-09	82	51
B-25(0-10)C	KQ2118596-01	80	51
B-25(0-10)C	KQ2118596-02	80	49
B-25(0-10)C	KQ2118596-03	76	47
B-25(0-10)C	KQ2118596-04	85	55

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 11/14/21
Date Extracted: 09/22/21

Duplicate Matrix Spike Summary
Low Level Organochlorine Pesticides by GC

Sample Name: B-25(0-10)C
Lab Code: K2110938-006
Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2118596-01			Duplicate Matrix Spike KQ2118596-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Aldrin	ND U	19.5	26.8	73	19.8	25.4	78	18-89	2	40
alpha-BHC	ND U	16.7	26.8	62	15.9	25.4	63	16-96	5	40
beta-BHC	ND U	24.8	26.8	93	23.1	25.4	91	16-106	7	40
delta-BHC	ND U	22.6	26.8	84	22.1	25.4	87	20-95	2	40
gamma-BHC (Lindane)	ND U	19.8	26.8	74	20.6	25.4	81	17-97	4	40
cis-Chlordane	ND U	21.0	26.8	79	20.5	25.4	81	20-93	3	40
trans-Chlordane	ND U	24.2	26.8	90	24.4	25.4	96	10-103	<1	40
4,4'-DDD	ND Ui	24.2 P	26.8	90	23.6 P	25.4	93	10-180	2	40
4,4'-DDE	ND Ui	18.8	26.8	70	18.3	25.4	72	17-94	2	40
4,4'-DDT	ND U	31.7 P	26.8	118 *	27.4 P	25.4	108 *	17-104	14	40
Dieldrin	0.37 J	23.1	26.8	85	22.2	25.4	86	19-88	4	40
Endosulfan I	ND Ui	21.3 P	26.8	80	21.3 P	25.4	84	16-87	<1	40
Endosulfan II	ND Ui	19.2 P	26.8	72	27.8	25.4	109	15-117	36	40
Endosulfan Sulfate	ND U	31.2	26.8	116 *	29.8	25.4	117 *	17-98	5	40
Endrin	ND U	32.6	26.8	122 *	33.8	25.4	133 *	10-107	4	40
Endrin Aldehyde	ND U	15.0 P	26.8	56	14.9 P	25.4	59	21-94	<1	40
Endrin Ketone	ND U	27.3	26.8	102 *	25.8	25.4	101 *	19-97	6	40
Heptachlor	ND Ui	27.7 P	26.8	104	28.8 P	25.4	114 *	13-111	4	40
Heptachlor Epoxide	ND Ui	24.7	26.8	92	22.1	25.4	87	18-92	11	40
Methoxychlor	ND U	27.5 P	26.8	103	28.4 P	25.4	112	17-122	3	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 11/14/21
Date Extracted: 09/22/21

Duplicate Matrix Spike Summary
Low Level Organochlorine Pesticides by GC

Sample Name: B-25(0-10)C
Lab Code: K2110938-006
Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2118596-03			Duplicate Matrix Spike KQ2118596-04			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Toxaphene	ND U	772	1040	74	844	996	85	16-114	9	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118596-11

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.59	1	11/14/21 07:38	9/22/21	
alpha-BHC	ND U	1.0	0.29	1	11/14/21 07:38	9/22/21	
beta-BHC	ND U	1.0	0.27	1	11/14/21 07:38	9/22/21	
delta-BHC	ND U	1.0	0.28	1	11/14/21 07:38	9/22/21	
gamma-BHC (Lindane)	ND U	1.0	0.31	1	11/14/21 07:38	9/22/21	
cis-Chlordane	ND U	1.0	0.41	1	11/14/21 07:38	9/22/21	
trans-Chlordane	ND U	1.0	0.38	1	11/14/21 07:38	9/22/21	
4,4'-DDD	ND Ui	14	14	1	11/14/21 07:38	9/22/21	
4,4'-DDE	ND U	1.0	0.40	1	11/14/21 07:38	9/22/21	
4,4'-DDT	ND U	2.0	0.61	1	11/14/21 07:38	9/22/21	
Dieldrin	ND U	0.82	0.22	1	11/14/21 07:38	9/22/21	
Endosulfan I	ND U	1.0	0.37	1	11/14/21 07:38	9/22/21	
Endosulfan II	ND U	2.0	0.69	1	11/14/21 07:38	9/22/21	
Endosulfan Sulfate	ND U	2.0	0.99	1	11/14/21 07:38	9/22/21	
Endrin	ND U	1.0	0.32	1	11/14/21 07:38	9/22/21	
Endrin Aldehyde	ND U	2.0	0.89	1	11/14/21 07:38	9/22/21	
Endrin Ketone	ND U	1.0	0.45	1	11/14/21 07:38	9/22/21	
Heptachlor	ND Ui	1.3	1.3	1	11/14/21 07:38	9/22/21	
Heptachlor Epoxide	ND Ui	2.0	0.71	1	11/14/21 07:38	9/22/21	
Methoxychlor	ND U	2.0	0.71	1	11/14/21 07:38	9/22/21	
Toxaphene	ND U	100	34	1	11/14/21 07:38	9/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	82	10 - 134	11/14/21 07:38	
Tetrachloro-m-xylene	52	10 - 121	11/14/21 07:38	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 11/14/21
Date Extracted: 09/22/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 746245

Lab Control Sample
KQ2118596-08

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
4,4'-DDD	24.1 P	25.0	96	10-180
4,4'-DDE	19.0	25.0	76	17-94
4,4'-DDT	24.0	25.0	96	17-104
Aldrin	19.0	25.0	76	18-89
alpha-BHC	15.5	25.0	62	16-96
beta-BHC	21.5	25.0	86	16-106
cis-Chlordane	20.4	25.0	82	20-93
delta-BHC	20.2	25.0	81	20-95
Dieldrin	20.7	25.0	83	19-88
Endosulfan I	19.3 P	25.0	77	16-87
Endosulfan II	21.2	25.0	85	15-117
Endosulfan Sulfate	23.8	25.0	95	17-98
Endrin	25.4	25.0	102	10-107
Endrin Aldehyde	13.5 P	25.0	54	21-94
Endrin Ketone	25.1	25.0	100 *	19-97
gamma-BHC (Lindane)	18.2	25.0	73	17-97
Heptachlor	25.3 P	25.0	101	13-111
Heptachlor Epoxide	23.5	25.0	94 *	18-92
Methoxychlor	20.8	25.0	83	17-122
trans-Chlordane	21.7	25.0	87	10-103

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 11/14/21
Date Extracted: 09/22/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 746245

Lab Control Sample
KQ2118596-09

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Toxaphene	773 P	1000	77	16-114

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 9/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.1

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Dieldrin	0.22	0.37	0.92	85	JP	1	11/14/21 10:54

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: KQ2118596-01

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 9/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.1

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.65	24.2	129	137	P	1	11/14/21 11:33
4,4'-DDE	0.43	18.8	20.6	9		1	11/14/21 11:33
4,4'-DDT	0.66	31.7	105	107	P	1	11/14/21 11:33
Aldrin	0.64	19.5	21.8	11		1	11/14/21 11:33
Dieldrin	0.24	23.1	26.8	15		1	11/14/21 11:33
Endosulfan I	0.40	21.3	55.1	88	P	1	11/14/21 11:33
Endosulfan II	0.74	19.2	30.5	45	P	1	11/14/21 11:33
Endosulfan Sulfate	1.1	31.2	35.8	14		1	11/14/21 11:33
Endrin	0.35	32.6	33.0	1		1	11/14/21 11:33
Endrin Aldehyde	0.96	15.0	106	150	P	1	11/14/21 11:33
Endrin Ketone	0.49	27.3	29.0	6		1	11/14/21 11:33
Heptachlor	0.42	27.7	185	148	P	1	11/14/21 11:33
Heptachlor Epoxide	0.71	24.7	25.4	3		1	11/14/21 11:33
Methoxychlor	0.77	27.5	62.7	78	P	1	11/14/21 11:33
alpha-BHC	0.32	16.7	22.0	27		1	11/14/21 11:33
beta-BHC	0.29	24.8	27.1	9		1	11/14/21 11:33
cis-Chlordane	0.44	21.0	28.5	30		1	11/14/21 11:33
delta-BHC	0.31	22.6	25.5	12		1	11/14/21 11:33
gamma-BHC (Lindane)	0.34	19.8	26.5	29		1	11/14/21 11:33
trans-Chlordane	0.41	24.2	29.7	20		1	11/14/21 11:33

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: KQ2118596-02

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 9/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.1

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.61	23.6	104	126	P	1	11/14/21 12:12
4,4'-DDE	0.41	18.3	19.8	8		1	11/14/21 12:12
4,4'-DDT	0.62	27.4	88.2	105	P	1	11/14/21 12:12
Aldrin	0.60	19.8	20.9	5		1	11/14/21 12:12
Dieldrin	0.23	22.2	25.9	15		1	11/14/21 12:12
Endosulfan I	0.38	21.3	52.7	85	P	1	11/14/21 12:12
Endosulfan II	0.71	27.8	33.5	19		1	11/14/21 12:12
Endosulfan Sulfate	1.1	29.8	32.1	7		1	11/14/21 12:12
Endrin	0.33	33.8	45.0	28		1	11/14/21 12:12
Endrin Aldehyde	0.91	14.9	98.5	147	P	1	11/14/21 12:12
Endrin Ketone	0.46	25.8	28.2	9		1	11/14/21 12:12
Heptachlor	0.40	28.8	200	150	P	1	11/14/21 12:12
Heptachlor Epoxide	0.68	22.1	24.2	9		1	11/14/21 12:12
Methoxychlor	0.73	28.4	51.7	58	P	1	11/14/21 12:12
alpha-BHC	0.30	15.9	21.0	28		1	11/14/21 12:12
beta-BHC	0.28	23.1	24.0	4		1	11/14/21 12:12
cis-Chlordane	0.42	20.5	25.4	21		1	11/14/21 12:12
delta-BHC	0.29	22.1	24.6	11		1	11/14/21 12:12
gamma-BHC (Lindane)	0.32	20.6	25.6	22		1	11/14/21 12:12
trans-Chlordane	0.39	24.4	24.7	1		1	11/14/21 12:12

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: KQ2118596-03

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 9/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.1

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	36	772	1050	31		1	11/14/21 18:44

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: KQ2118596-04

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 9/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.1

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	34	844	1250	39		1	11/14/21 19:23

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil

Service Request: K2110938
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2118596-08

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.60	24.1	82.1	109	P	1	11/14/21 08:18
4,4'-DDE	0.40	19.0	19.9	5		1	11/14/21 08:18
4,4'-DDT	0.61	24.0	31.0	25		1	11/14/21 08:18
Aldrin	0.59	19.0	20.1	6		1	11/14/21 08:18
Dieldrin	0.22	20.7	24.4	16		1	11/14/21 08:18
Endosulfan I	0.37	19.3	49.8	88	P	1	11/14/21 08:18
Endosulfan II	0.69	21.2	21.4	<1		1	11/14/21 08:18
Endosulfan Sulfate	0.99	23.8	23.8	<1		1	11/14/21 08:18
Endrin	0.32	25.4	25.8	2		1	11/14/21 08:18
Endrin Aldehyde	0.89	13.5	28.1	70	P	1	11/14/21 08:18
Endrin Ketone	0.45	25.1	25.5	2		1	11/14/21 08:18
Heptachlor	0.39	25.3	184	152	P	1	11/14/21 08:18
Heptachlor Epoxide	0.66	23.5	23.9	2		1	11/14/21 08:18
Methoxychlor	0.71	20.8	24.4	16		1	11/14/21 08:18
alpha-BHC	0.29	15.5	19.3	22		1	11/14/21 08:18
beta-BHC	0.27	21.5	22.8	6		1	11/14/21 08:18
cis-Chlordane	0.41	20.4	24.6	19		1	11/14/21 08:18
delta-BHC	0.28	20.2	22.3	10		1	11/14/21 08:18
gamma-BHC (Lindane)	0.31	18.2	24.5	30		1	11/14/21 08:18
trans-Chlordane	0.38	21.7	24.0	10		1	11/14/21 08:18

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2118596-09

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	34	773	1170	41	P	1	11/14/21 09:36

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Extraction Method: EPA 3511

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-139	32-151
B-25	K2110938-004	16	59
Method Blank	KQ2118831-07	84	70
Lab Control Sample	KQ2118831-01	90	75
Duplicate Lab Control Sample	KQ2118831-02	77	73
Lab Control Sample	KQ2118831-05	80	67
Duplicate Lab Control Sample	KQ2118831-06	80	67

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118831-07

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.77	1	11/01/21 03:23	9/24/21	
alpha-BHC	ND U	1.0	0.25	1	11/01/21 03:23	9/24/21	
beta-BHC	ND U	1.0	0.17	1	11/01/21 03:23	9/24/21	
delta-BHC	ND U	1.0	0.27	1	11/01/21 03:23	9/24/21	
gamma-BHC (Lindane)	ND U	2.0	0.60	1	11/01/21 03:23	9/24/21	
cis-Chlordane	ND U	1.0	0.36	1	11/01/21 03:23	9/24/21	
trans-Chlordane	ND U	2.0	0.54	1	11/01/21 03:23	9/24/21	
4,4'-DDD	ND U	2.0	0.57	1	11/01/21 03:23	9/24/21	
4,4'-DDE	ND U	1.0	0.46	1	11/01/21 03:23	9/24/21	
4,4'-DDT	ND U	2.0	0.75	1	11/01/21 03:23	9/24/21	
Dieldrin	ND U	1.0	0.44	1	11/01/21 03:23	9/24/21	
Endosulfan I	ND U	1.0	0.36	1	11/01/21 03:23	9/24/21	
Endosulfan II	0.94 J	1.0	0.34	1	11/01/21 03:23	9/24/21	
Endosulfan Sulfate	ND U	1.0	0.47	1	11/01/21 03:23	9/24/21	
Endrin	ND U	1.0	0.42	1	11/01/21 03:23	9/24/21	
Endrin Aldehyde	ND U	1.0	0.47	1	11/01/21 03:23	9/24/21	
Endrin Ketone	ND U	2.0	0.70	1	11/01/21 03:23	9/24/21	
Heptachlor	ND U	2.0	0.61	1	11/01/21 03:23	9/24/21	
Heptachlor Epoxide	ND U	1.0	0.29	1	11/01/21 03:23	9/24/21	
Methoxychlor	ND U	2.0	0.85	1	11/01/21 03:23	9/24/21	
Toxaphene	ND U	100	49	1	11/01/21 03:23	9/24/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	84	10 - 139	11/01/21 03:23	
Tetrachloro-m-xylene	70	32 - 151	11/01/21 03:23	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 11/01/21
Date Extracted: 09/24/21

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 746230

Lab Control Sample
KQ2118831-01

Duplicate Lab Control Sample
KQ2118831-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
4,4'-DDD	25.4 P	25.0	102	23.7 P	25.0	95	35-158	7	30
4,4'-DDE	25.5	25.0	102	25.6	25.0	102	53-129	<1	30
4,4'-DDT	23.5	25.0	94	21.8	25.0	87	43-164	7	30
Aldrin	20.4	25.0	82	19.8	25.0	79	37-135	3	30
alpha-BHC	23.2	25.0	93	21.8	25.0	87	48-148	6	30
beta-BHC	20.7	25.0	83	19.9 P	25.0	80	37-133	4	30
cis-Chlordane	24.6	25.0	98	22.8	25.0	91	54-127	8	30
delta-BHC	20.5	25.0	82	19.5	25.0	78	44-128	5	30
Dieldrin	22.9	25.0	92	21.4	25.0	86	51-122	7	30
Endosulfan I	17.7	25.0	71	16.5	25.0	66	44-135	7	30
Endosulfan II	21.3	25.0	85	17.9 P	25.0	71	37-180	17	30
Endosulfan Sulfate	21.4	25.0	86	20.7 P	25.0	83	42-144	3	30
Endrin	24.7	25.0	99	23.7	25.0	95	52-133	4	30
Endrin Aldehyde	22.6	25.0	91	21.0	25.0	84	49-126	8	30
Endrin Ketone	22.4	25.0	89	24.0	25.0	96	54-131	7	30
gamma-BHC (Lindane)	23.2	25.0	93	22.4	25.0	90	51-140	3	30
Heptachlor	22.9	25.0	91	22.3	25.0	89	33-161	2	30
Heptachlor Epoxide	23.0	25.0	92	21.7	25.0	87	51-125	6	30
Methoxychlor	28.7	25.0	115	29.8 P	25.0	119	38-194	4	30
trans-Chlordane	24.2	25.0	97	22.4	25.0	90	54-126	8	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 11/01/21
Date Extracted: 09/24/21

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 746230

Lab Control Sample
KQ2118831-05

Duplicate Lab Control Sample
KQ2118831-06

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Toxaphene	1260	1000	126	1290	1000	129	44-190	2	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: B-25
Lab Code: K2110938-004

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 9/20/21

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
cis-Chlordane	0.36	0.60	0.73	20	J	1	11/01/21 07:09
trans-Chlordane	0.54	0.62	0.70	12	J	1	11/01/21 07:09

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2118831-01

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	25.4	65.1	88	P	1	11/01/21 03:55
4,4'-DDE	0.46	25.5	25.5	<1		1	11/01/21 03:55
4,4'-DDT	0.75	23.5	29.0	21		1	11/01/21 03:55
Aldrin	0.77	20.4	21.4	5		1	11/01/21 03:55
Dieldrin	0.44	22.9	23.8	4		1	11/01/21 03:55
Endosulfan I	0.36	17.7	17.9	1		1	11/01/21 03:55
Endosulfan II	0.34	21.3	21.7	2		1	11/01/21 03:55
Endosulfan Sulfate	0.47	21.4	21.5	<1		1	11/01/21 03:55
Endrin	0.42	24.7	25.0	1		1	11/01/21 03:55
Endrin Aldehyde	0.47	22.6	22.8	<1		1	11/01/21 03:55
Endrin Ketone	0.70	22.4	24.4	9		1	11/01/21 03:55
Heptachlor	0.61	22.9	25.3	10		1	11/01/21 03:55
Heptachlor Epoxide	0.29	23.0	23.1	<1		1	11/01/21 03:55
Methoxychlor	0.85	28.7	42.0	38		1	11/01/21 03:55
alpha-BHC	0.25	23.2	23.9	3		1	11/01/21 03:55
beta-BHC	0.17	20.7	21.5	4		1	11/01/21 03:55
cis-Chlordane	0.36	24.6	24.6	<1		1	11/01/21 03:55
delta-BHC	0.27	20.5	22.0	7		1	11/01/21 03:55
gamma-BHC (Lindane)	0.60	23.2	23.4	<1		1	11/01/21 03:55
trans-Chlordane	0.54	24.2	24.3	<1		1	11/01/21 03:55

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2118831-02

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	23.7	64.2	92	P	1	11/01/21 04:27
4,4'-DDE	0.46	25.6	25.7	<1		1	11/01/21 04:27
4,4'-DDT	0.75	21.8	24.4	11		1	11/01/21 04:27
Aldrin	0.77	19.8	20.6	4		1	11/01/21 04:27
Dieldrin	0.44	21.4	21.6	<1		1	11/01/21 04:27
Endosulfan I	0.36	16.5	16.6	<1		1	11/01/21 04:27
Endosulfan II	0.34	17.9	82.3	129	P	1	11/01/21 04:27
Endosulfan Sulfate	0.47	20.7	35.6	53	P	1	11/01/21 04:27
Endrin	0.42	23.7	24.3	3		1	11/01/21 04:27
Endrin Aldehyde	0.47	21.0	21.8	4		1	11/01/21 04:27
Endrin Ketone	0.70	24.0	24.2	<1		1	11/01/21 04:27
Heptachlor	0.61	22.3	32.2	36		1	11/01/21 04:27
Heptachlor Epoxide	0.29	21.7	22.4	3		1	11/01/21 04:27
Methoxychlor	0.85	29.8	0.85	189	P	1	11/01/21 04:27
alpha-BHC	0.25	21.8	22.8	4		1	11/01/21 04:27
beta-BHC	0.17	19.9	32.9	49	P	1	11/01/21 04:27
cis-Chlordane	0.36	22.8	23.5	3		1	11/01/21 04:27
delta-BHC	0.27	19.5	20.6	5		1	11/01/21 04:27
gamma-BHC (Lindane)	0.60	22.4	25.3	12		1	11/01/21 04:27
trans-Chlordane	0.54	22.4	23.6	5		1	11/01/21 04:27

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2118831-05

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1260	1270	<1		1	11/01/21 06:04

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2118831-06

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1290	1450	12		1	11/01/21 06:37

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2118831-07

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Endosulfan II	0.34	0.94	1.3	32	J	1	11/01/21 03:23

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 26-127
B-25(10-25)C	K2110938-003	90
B-25(0-10)C	K2110938-006	48
Method Blank	KQ2118590-04	38
Lab Control Sample	KQ2118590-03	111
B-25(0-10)C	KQ2118590-01	52
B-25(0-10)C	KQ2118590-02	46

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 17-113
B-25	K2110938-004	64
Method Blank	KQ2118892-03	48
Lab Control Sample	KQ2118892-01	92
Duplicate Lab Control Sample	KQ2118892-02	84

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 10/25/21
Date Extracted: 10/11/21

Duplicate Matrix Spike Summary
Chlorinated Herbicides by GC

Sample Name: B-25(0-10)C
Lab Code: K2110938-006
Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2118590-01			Duplicate Matrix Spike KQ2118590-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-T	ND U	93.1	192	48	75.8	192	39	21-137	20	40
2,4,5-TP (Silvex)	ND U	95.4	192	50	79.8	192	42	34-129	18	40
2,4-D	ND Ui	91.9	192	48	76.7	192	40	35-129	18	40
2,4-DB	ND U	94.1	192	49	78.5	192	41	20-131	18	40
Dalapon	ND U	87.3	192	45	77.8	192	41	14-100	12	40
Dicamba	ND U	94.5	192	49	81.1	192	42	32-129	15	40
Dichlorprop	ND U	88.5	192	46	75.7	192	39	23-140	15	40
Dinoseb	ND U	64.6	192	34	55.7 J	192	29	10-121	15	40
MCPA	ND U	12000	19200	62	10700	19200	56	13-130	12	40
MCPP	1000 J	12100	19200	57	10700	19200	50	10-169	12	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2118590-04

Service Request: K2110938
Date Collected: NA
Date Received: NA
Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	49	4.0	1	10/25/21 01:36	10/11/21	
2,4,5-TP (Silvex)	ND U	49	2.4	1	10/25/21 01:36	10/11/21	
2,4-D	ND U	49	7.7	1	10/25/21 01:36	10/11/21	
2,4-DB	ND U	49	5.4	1	10/25/21 01:36	10/11/21	
Dalapon	ND U	49	5.5	1	10/25/21 01:36	10/11/21	
Dicamba	ND U	49	4.3	1	10/25/21 01:36	10/11/21	
Dichlorprop	ND U	49	3.4	1	10/25/21 01:36	10/11/21	
Dinoseb	ND U	49	2.7	1	10/25/21 01:36	10/11/21	
MCPA	ND U	4900	320	1	10/25/21 01:36	10/11/21	
MCPP	ND U	4900	460	1	10/25/21 01:36	10/11/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	38	26 - 127	10/25/21 01:36	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2118892-03

Service Request: K2110938
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	10/01/21 22:18	9/27/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	10/01/21 22:18	9/27/21	
2,4-D	ND U	0.38	0.036	1	10/01/21 22:18	9/27/21	
2,4-DB	ND U	0.38	0.10	1	10/01/21 22:18	9/27/21	
Dalapon	ND U	0.38	0.28	1	10/01/21 22:18	9/27/21	
Dicamba	ND U	0.19	0.025	1	10/01/21 22:18	9/27/21	
Dichlorprop	ND U	0.38	0.030	1	10/01/21 22:18	9/27/21	
Dinoseb	ND U	0.19	0.015	1	10/01/21 22:18	9/27/21	
MCPA	ND U	94	8.7	1	10/01/21 22:18	9/27/21	
MCP	ND U	94	14	1	10/01/21 22:18	9/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	48	17 - 113	10/01/21 22:18	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 11/23/21
Date Extracted: 10/11/21

Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 747036

Lab Control Sample
KQ2118590-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-T	183	167	110	44-125
2,4,5-TP (Silvex)	187	167	112	46-125
2,4-D	186	167	112	46-120
2,4-DB	214	167	129 *	30-126
Dalapon	147	167	88	13-100
Dicamba	200	167	120 *	43-119
Dichlorprop	173	167	104	47-108
Dinoseb	33.5 J	167	20 *	25-110
MCPA	20900	16700	125	40-128
MCPD	19700	16700	118	49-134

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 10/01/21
Date Extracted: 09/27/21

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/L
Basis: NA
Analysis Lot: 743669

Lab Control Sample
KQ2118892-01

Duplicate Lab Control Sample
KQ2118892-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-T	1.98	2.50	79	1.84	2.50	74	30-120	8	30
2,4,5-TP (Silvex)	1.92	2.50	77	1.79	2.50	72	37-114	7	30
2,4-D	1.84	2.50	73	1.68	2.50	67	35-110	9	30
2,4-DB	1.97	2.50	79	2.49 P	2.50	100	10-134	24	30
Dalapon	1.82	2.50	73	2.82 P	2.50	113 *	14-110	43 *	30
Dicamba	1.81	2.50	72	1.80	2.50	72	30-108	<1	30
Dichlorprop	1.69	2.50	68	1.63	2.50	65	29-104	4	30
Dinoseb	1.53	2.50	61	1.42	2.50	57	11-105	7	30
MCPA	200	250	80	190	250	76	21-117	5	30
MCPP	215 P	250	86	230	250	92	16-141	7	30

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: B-25
Lab Code: K2110938-004

Service Request: K2110938
Date Collected: 09/20/21 11:45
Date Received: 9/20/21

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
MCPA	8.7	42	87	70	JP	1	10/23/21 14:40

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 9/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.1

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
MCP	540	1000	1200	18	J	1	10/25/21 02:51

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: KQ2118590-01

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 9/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.1

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	4.7	93.1	96.6	4		1	10/25/21 03:16
2,4,5-TP (Silvex)	2.8	95.4	97.4	2		1	10/25/21 03:16
2,4-D	8.9	91.9	105	13		1	10/25/21 03:16
2,4-DB	6.3	94.1	116	21		1	10/25/21 03:16
Dalapon	6.4	87.3	88.8	2		1	10/25/21 03:16
Dicamba	5.0	94.5	106	11		1	10/25/21 03:16
Dichlorprop	4.0	88.5	97.4	10		1	10/25/21 03:16
Dinoseb	3.2	64.6	65.7	2		1	10/25/21 03:16
MCPA	370	12000	13100	9		1	10/25/21 03:16
MCPP	540	12100	13200	9		1	10/25/21 03:16

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-25(0-10)C
Lab Code: KQ2118590-02

Service Request: K2110938
Date Collected: 09/20/21 12:35
Date Received: 9/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.1

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	4.7	75.8	79.0	4		1	10/25/21 03:41
2,4,5-TP (Silvex)	2.8	79.8	81.6	2		1	10/25/21 03:41
2,4-D	8.9	76.7	90.4	16		1	10/25/21 03:41
2,4-DB	6.3	78.5	98.7	23		1	10/25/21 03:41
Dalapon	6.4	77.8	79.5	2		1	10/25/21 03:41
Dicamba	5.0	81.1	92.3	13		1	10/25/21 03:41
Dichlorprop	4.0	75.7	84.6	11		1	10/25/21 03:41
Dinoseb	3.2	55.7	57.7	4	J	1	10/25/21 03:41
MCPA	370	10700	11000	3		1	10/25/21 03:41
MCPP	530	10700	11400	6		1	10/25/21 03:41

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2118590-03

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	4.0	183	200	9		1	11/23/21 11:33
2,4,5-TP (Silvex)	2.4	187	209	11		1	11/23/21 11:33
2,4-D	7.7	186	209	12		1	11/23/21 11:33
2,4-DB	5.4	214	230	7		1	11/23/21 11:33
Dalapon	5.5	147	185	23		1	11/23/21 11:33
Dicamba	4.3	200	210	5		1	11/23/21 11:33
Dichlorprop	3.4	173	213	21		1	11/23/21 11:33
Dinoseb	2.7	33.5	41.9	22	J	1	11/23/21 11:33
MCPA	320	20900	21300	2		1	11/23/21 11:33
MCPP	460	19700	23200	16		1	11/23/21 11:33

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2118892-01

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.98	2.02	2		1	10/01/21 22:44
2,4,5-TP (Silvex)	0.045	1.92	1.95	2		1	10/01/21 22:44
2,4-D	0.036	1.84	1.99	8		1	10/01/21 22:44
2,4-DB	0.10	1.97	2.61	28		1	10/01/21 22:44
Dalapon	0.28	1.82	1.31	33		1	10/01/21 22:44
Dicamba	0.025	1.81	1.91	5		1	10/01/21 22:44
Dichlorprop	0.030	1.69	1.80	6		1	10/01/21 22:44
Dinoseb	0.015	1.53	1.57	3		1	10/01/21 22:44
MCPA	8.7	200	143	33		1	10/01/21 22:44
MCPP	14	215	133	47	P	1	10/01/21 22:44

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2118892-02

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.84	1.91	4		1	10/01/21 23:07
2,4,5-TP (Silvex)	0.045	1.79	1.85	3		1	10/01/21 23:07
2,4-D	0.036	1.68	1.90	12		1	10/01/21 23:07
2,4-DB	0.10	2.49	1.35	59	P	1	10/01/21 23:07
Dalapon	0.28	2.82	1.41	67	P	1	10/01/21 23:07
Dicamba	0.025	1.80	1.98	10		1	10/01/21 23:07
Dichlorprop	0.030	1.63	1.66	2		1	10/01/21 23:07
Dinoseb	0.015	1.42	1.52	7		1	10/01/21 23:07
MCPA	8.7	190	160	17		1	10/01/21 23:07
MCPP	14	230	167	32		1	10/01/21 23:07

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: Method

Sample Name	Lab Code	Tri-n-propyltin
		10-152
B-25(10-25)C	K2110938-003	103
B-25(0-10)C	K2110938-006	135
Method Blank	KQ2119001-04	132
Lab Control Sample	KQ2119001-03	137

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: EPA 3520C

Sample Name	Lab Code	Tri-n-propyltin
		10-195
B-25	K2110938-004	86
Method Blank	KQ2118891-03	87
Lab Control Sample	KQ2118891-01	94
Duplicate Lab Control Sample	KQ2118891-02	79

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118891-03

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.050	0.029	1	10/27/21 09:32	9/27/21	
Di-n-butyltin Cation	0.039 J	0.050	0.0073	1	10/27/21 09:32	9/27/21	
Tri-n-butyltin Cation	ND U	0.050	0.012	1	10/27/21 09:32	9/27/21	
Tetra-n-butyltin	ND U	0.050	0.038	1	10/27/21 09:32	9/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	87	10 - 195	10/27/21 09:32	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2119001-04

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.98	0.26	1	10/27/21 20:37	10/11/21	
Di-n-butyltin Cation	ND U	0.98	0.19	1	10/27/21 20:37	10/11/21	
Tri-n-butyltin Cation	ND U	0.98	0.43	1	10/27/21 20:37	10/11/21	
Tetra-n-butyltin	ND U	0.98	0.44	1	10/27/21 20:37	10/11/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	132	10 - 152	10/27/21 20:37	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 10/27/21
Date Extracted: 10/11/21

Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 744813

Lab Control Sample
KQ2119001-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Di-n-butyltin Cation	25.6	19.2	134	10-190
n-Butyltin Cation	26.2 P	15.6	168	10-200
Tetra-n-butyltin	33.0	25.0	132	10-194
Tri-n-butyltin Cation	25.9	22.3	116	10-186

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 10/27/21
Date Extracted: 09/27/21

Duplicate Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 744793

Lab Control Sample
KQ2118891-01

Duplicate Lab Control Sample
KQ2118891-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Di-n-butyltin Cation	0.353	0.383	92	0.294	0.383	77	10-200	18	30
n-Butyltin Cation	0.272	0.312	87	0.221	0.312	71	10-200	21	30
Tetra-n-butyltin	0.377	0.500	75	0.302	0.500	60	10-200	22	30
Tri-n-butyltin Cation	0.403	0.446	90	0.339	0.446	76	10-200	17	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2118891-01

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.353	0.483	31		1	10/27/21 09:50
Tetra-n-butyltin	0.038	0.377	0.458	19		1	10/27/21 09:50
Tri-n-butyltin Cation	0.012	0.403	0.547	30		1	10/27/21 09:50
n-Butyltin Cation	0.029	0.272	0.357	27		1	10/27/21 09:50

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2118891-02

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.294	0.407	32		1	10/27/21 10:08
Tetra-n-butyltin	0.038	0.302	0.361	18		1	10/27/21 10:08
Tri-n-butyltin Cation	0.012	0.339	0.463	31		1	10/27/21 10:08
n-Butyltin Cation	0.029	0.221	0.299	30		1	10/27/21 10:08

ALS Group USA, Corp.
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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2118891-03

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.039	0.050	25	J	1	10/27/21 09:32

ALS Group USA, Corp.
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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2119001-03

Service Request: K2110938
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	25.6	30.5	17		1	10/27/21 20:54
Tetra-n-butyltin	0.44	33.0	41.1	22		1	10/27/21 20:54
Tri-n-butyltin Cation	0.43	25.9	38.5	39		1	10/27/21 20:54
n-Butyltin Cation	0.26	26.2	15.3	53	P	1	10/27/21 20:54

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-25(10-25)C	K2110938-003	96	93
B-25(0-10)C	K2110938-006	101	98
Method Blank	KQ2118977-04	98	94
Lab Control Sample	KQ2118977-03	101	97

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3510C

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-25	K2110938-004	76	115
Method Blank	KQ2118889-04	88	107
Lab Control Sample	KQ2118889-02	91	103
Duplicate Lab Control Sample	KQ2118889-03	98	108

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118889-04

Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	80 J	250	11	1	10/16/21 23:37	9/27/21	
Residual Range Organics (C25 - C36 RRO)	72 J	500	19	1	10/16/21 23:37	9/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	88	50 - 150	10/16/21 23:37	
n-Triacontane	107	50 - 150	10/16/21 23:37	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2118977-04

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	2.2 J	25	1.8	1	10/10/21 16:08	10/4/21	
Residual Range Organics (C25 - C36 RRO)	11 J	99	3.9	1	10/10/21 16:08	10/4/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	98	50 - 150	10/10/21 16:08	
n-Triacontane	94	50 - 150	10/10/21 16:08	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 10/10/21
Date Extracted: 10/04/21

Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Units: mg/Kg
Basis: Dry
Analysis Lot: 741958

Lab Control Sample
KQ2118977-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Diesel Range Organics (C12 - C25 DRO)	266	267	100	42-134
Residual Range Organics (C25 - C36 RRO)	119	133	89	48-141

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 10/16/21
Date Extracted: 09/27/21

Duplicate Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Units: ug/L
Basis: NA
Analysis Lot: 742854

Analyte Name	Lab Control Sample KQ2118889-02			Duplicate Lab Control Sample KQ2118889-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Diesel Range Organics (C12 - C25 DRO)	3240	3200	101	3460	3200	108	46-140	7	30
Residual Range Organics (C25 - C36 RRO)	1470	1600	92	1530	1600	96	45-159	4	30



Metals

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2118591-03

Service Request: K2110938
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7471B	ND U	mg/Kg	0.02	0.002	1	09/27/21 17:35	09/23/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2118690-03

Service Request: K2110938
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	mg/Kg	0.5	0.06	5	10/06/21 12:50	09/23/21	
Barium	6020A	ND U	mg/Kg	0.05	0.020	5	10/06/21 12:50	09/23/21	
Cadmium	6020A	ND U	mg/Kg	0.020	0.007	5	10/06/21 12:50	09/23/21	
Chromium	6020A	0.07 J	mg/Kg	0.20	0.06	5	10/06/21 12:50	09/23/21	
Lead	6020A	ND U	mg/Kg	0.05	0.020	5	10/06/21 12:50	09/23/21	
Selenium	6020A	ND U	mg/Kg	1.0	0.09	5	10/06/21 12:50	09/23/21	
Silver	6020A	0.011 J	mg/Kg	0.020	0.004	5	10/06/21 12:50	09/23/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2118729-01

Service Request: K2110938
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	ug/L	0.20	0.008	1	09/30/21 12:41	09/29/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2119153-01

Service Request: K2110938
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	ug/L	0.50	0.09	1	10/05/21 13:40	09/29/21	
Barium	6020A	ND U	ug/L	0.050	0.020	1	10/05/21 13:40	09/29/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	10/05/21 13:40	09/29/21	
Chromium	6020A	ND U	ug/L	0.20	0.03	1	10/05/21 13:40	09/29/21	
Lead	6020A	ND U	ug/L	0.020	0.006	1	10/05/21 13:40	09/29/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/05/21 13:40	09/29/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/05/21 13:40	09/29/21	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 09/27/21
Date Extracted: 09/23/21

Matrix Spike Summary
Total Metals

Sample Name: B-25(0-10)C
Lab Code: K2110938-006
Analysis Method: 7471B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2118591-02

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	0.008 J	0.662	0.567	115	80-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 10/6/21
Date Extracted: 09/23/21

Matrix Spike Summary
Total Metals

Sample Name: B-25(0-10)C
Lab Code: K2110938-006
Analysis Method: 6020A
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2118690-01

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	2.85	111	107	101	75-125
Barium	137	298	213	76	75-125
Cadmium	0.049	11.6	10.7	108	75-125
Chromium	12.2	54.9	42.6	100	75-125
Lead	2.95	127	107	116	75-125
Selenium	0.08 J	120	107	112	75-125
Silver	0.021	11.2	10.7	105	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

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Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 09/27/21

Replicate Sample Summary

Total Metals

Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2118591-01 Result			
Mercury	7471B	0.023	0.002	0.008 J	0.007 J	0.008	15	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 10/06/21

Replicate Sample Summary

Total Metals

Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2118690-02 Result			
Arsenic	6020A	0.46	0.05	2.85	4.93	3.89	53 *	20
Barium	6020A	0.046	0.018	137	59.3	98.2	79 *	20
Cadmium	6020A	0.018	0.006	0.049	0.045	0.047	7	20
Chromium	6020A	0.18	0.05	12.2	14.4	13.3	17	20
Lead	6020A	0.046	0.018	2.95	3.74	3.35	24 *	20
Selenium	6020A	0.91	0.08	0.08 J	ND U	NC	NC	20
Silver	6020A	0.018	0.004	0.021	0.029	0.025	27 #	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 09/27/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2118591-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7471B	0.579	0.500	116	80-120

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Analyzed: 10/06/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2118690-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	103	100	103	80-120
Barium	6020A	218	200	109	80-120
Cadmium	6020A	10.7	10.0	107	80-120
Chromium	6020A	42.2	40.0	105	80-120
Lead	6020A	108	100	108	80-120
Selenium	6020A	109	100	109	80-120
Silver	6020A	10.6	10.0	106	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 09/30/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2118729-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	5.02	5.00	100	80-120

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2110938
Date Analyzed: 10/05/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2119153-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	48.3	50.0	97	80-120
Barium	6020A	100	100	100	80-120
Cadmium	6020A	25.2	25.0	101	80-120
Chromium	6020A	9.76	10.0	98	80-120
Lead	6020A	50.0	50.0	100	80-120
Selenium	6020A	50.7	50.0	101	80-120
Silver	6020A	12.3	12.5	99	80-120



General Chemistry

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ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project EQRB/319
Sample Matrix: Soil

Service Request: K2110938
Date Collected: 09/20/21
Date Received: 09/20/21
Date Analyzed: 09/22/21

Replicate Sample Summary

Inorganic Parameters

Sample Name: B-25(0-10)C
Lab Code: K2110938-006

Units: Percent
Basis: As Received

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2110938-006DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total	160.3 Modified	-	86.1	88.0	87.1	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



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January 13, 2022

Analytical Report for Service Request No: K2112045

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

RE: EQRB / 319

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 13, 2021
For your reference, these analyses have been assigned our service request number **K2112045**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals
Butyltins
Semi-Volatile Petroleum Products by GCFID
Volatile Petroleum Products by GCFID
Low Level Organochlorine Pesticides by GC
Ultra Low Level Organochlorine Pesticides by GCECD
Polychlorinated Biphenyls (PCBs)
Chlorinated Herbicides by GC
Volatile Organic Compounds by GC MS, Unpreserved
Volatile Organic Compounds
Polynuclear Aromatic Hydrocarbon by GCMS SIM Ultra Low Level
Low Level Semivolatile Organic Compounds by GCMS
Polycyclic Aromatic Hydrocarbons
Subcontract Lab Results

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB
Sample Matrix: Soil, Water

Service Request: K2112045
Date Received: 10/13/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Eleven soil, water samples were received for analysis at ALS Environmental on 10/13/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 11/03/2021:A couple analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 11/03/2021:The upper control criterion was exceeded for multiple analytes in Laboratory Control Sample (LCS). The analytes in question were not detected in the associated field samples above the MRL. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

:The upper control criterion was exceeded for p-Terphenyl-d14 in sample B-29 0-12 C. No target analytes were detected in the sample above the MRL. The error associated with an elevated recovery equated to a high bias. The quality of the sample data was not significantly affected. No further corrective action was appropriate.

The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS14 \1108F002.D: Indeno(1,2,3-cd)pyrene. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 11/05/2021:A couple analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 10/21/2021:Analyte 2-Methylnaphthalene was flagged as outside the control criterion for Continuing Calibration Verification (CCV) KQ2120825-02. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 10/21/2021:The control criteria were exceeded for Fluoranthene-d10 and Terphenyl-d14 in sample B37 due to matrix interference. The presence of non-target background components prevented adequate resolution of the surrogate. Accurate quantitation was not possible. No further corrective action was appropriate.

Method 8270D, 10/21/2021:Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

Approved by _____

Date 01/13/2022



Chain of Custody

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Phone (360)577-7222 Fax (360)636-1068
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K2112045

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835	Laboratory ALS Labs Lab Project No.	CHAIN OF CUSTODY Chain of Custody No. <u>1 of 3</u>
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Project Manager: <u>Jill Betts</u> Project No.: <u>319</u> Project Name: <u>EQRB</u> Collected by: <u>Robert Schettler</u>	Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____	Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) _____ No Provide Preliminary Results _____ Yes
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Comments
 Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail.
See composite notes below
Samples in 5 coolers

Lab ID	Sample #	Date	Time	Sample Description	Matrix			Number of Containers	Analyses to be Performed											Remarks				
					Soil	Water	Other		NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH					
		10/12/21	0950	B-37 0-3	X			4																
		10/12/21	1157	B-37 6-10	X			4																
		10/12/21	1201	B-37 10-15	X			4																
		10/12/21	1202	B-37 15-20	X			4																
		10/12/21	1205	B-37 20-23	X			4																
		10/12/21		B37	X			4 25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	dissolved metals field filteral
	B37 (0-23)			(B-37 0-3) (B-37 6-10) (B-37 10-15) (B-37 15-20) (B-37 20-23)					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Relinquished by: <u>Robert Schettler</u> Company: <u>Arx</u>	Date: <u>10/13/21</u> Time: <u>1300</u>	Received by: <u>[Signature]</u> Company: <u>ALS</u>
Relinquished by: <u>[Signature]</u> Company: <u>ALS</u>	Date: <u>10/13/21</u> Time: <u>1100</u>	Received by: <u>[Signature]</u> Company: <u>ALS</u>

22112045

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835	Laboratory ALS Labs Lab Project No.	CHAIN OF CUSTODY Chain of Custody No. <u>2 of 3</u>
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Project Manager: <u>Jill Betts</u> Project No.: <u>319</u> Project Name: <u>EORB</u> Collected by: <u>Robert Schetty</u>	Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____	Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>
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Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. <i>See composite notes below</i> <i>Samples in 5 coolers</i>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th rowspan="2">Matrix</th> <th colspan="11">Analyses to be Performed</th> <th rowspan="2">Remarks</th> </tr> <tr> <th>Soil</th> <th>Water</th> <th>Other</th> <th>Number of Containers</th> <th>NWTPH-Gx</th> <th>NWTPH-Dx</th> <th>VOCs by EPA Method 8260B</th> <th>PAHs by EPA Method 8270SIM</th> <th>Low Level SVOCs by EPA Method 8270D</th> <th>Low Level Organochlorine Pesticides by EPA Method 8081B</th> <th>PCBs by EPA Method 8082A</th> <th>PCDD and PCDFs by EPA Method 8290A</th> <th>Butyltins</th> <th>Total RCRA 8 Metals by EPA Method 200/6020A/7471B</th> <th>RUSH</th> </tr> </table>	Matrix	Analyses to be Performed											Remarks	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH
Matrix	Analyses to be Performed											Remarks																	
	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A		PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH													

Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH	Remarks	
		10/12/21	1250	B-34 0-5	X			4													
		10/12/21	1300	B-34 5-10	X			4													
		10/12/21	1315	B-34 10-15	X			4													
		10/12/21	1318	B-34 15-20	X			4													
		10/12/21	1325	B-34 20-23	X			4													
		10/12/21		B-34	X			25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	dissolves metals field filtered
	B-34 (0-23)			(B-34 0-5 B-34 5-10 B-34 10-15 B-34 15-20 B-34 20-23)				25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Relinquished by: <u>Robert Schetty</u>	Company: <u>ALS</u>	Date: <u>10/13/21</u>	Time: <u>0925</u>	Received by: <u>[Signature]</u>	Company: <u>ALS</u>
Relinquished by: <u>[Signature]</u>	Company: <u>ALS</u>	Date: <u>10/13/21</u>	Time: <u>1110</u>	Received by: <u>[Signature]</u>	Company: <u>ALS</u>
Relinquished by: _____	Company: _____	Date: _____	Time: _____	Received by: _____	Company: _____

K2112043

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835	Laboratory ALS Labs	CHAIN OF CUSTODY Chain of Custody No. <u>3 of 3</u>
Project Manager: <u>Jill Betts</u> Project No.: <u>319</u> Project Name: <u>EQRB</u> Collected by: <u>Robert Schettler</u>		Lab Project No.: _____ Test Filtrate: _____ Test Sediment: _____ Test Both: _____ Liquid with Sediment Sample Multi-Phase Sample Test One (which): _____ Test Separately: _____ Shake: _____
Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) _____ No Provide Preliminary Results _____ Yes		

Project Manager: Jill Betts
 Project No.: 319
 Project Name: EQRB
 Collected by: Robert Schettler

Liquid with Sediment Sample
 Test Filtrate: _____ Test Sediment: _____ Test Both: _____
Multi-Phase Sample
 Test One (which): _____ Test Separately: _____ Shake: _____

Samples Received at 4C (Y or N) _____
 Appropriate Containers Used (Y or N) _____
 Provide Verbal Results (Y or N) _____ No
 Provide Preliminary Results _____ Yes

Comments
 Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail.

See composite notes below

Samples in 5 coolers

Matrix	Analyses to be Performed													RUSH	Remarks
	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins		

Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/741B	RUSH	Remarks	
		10/12/21	1455	B-29 0-5	X			4													
		10/12/21	1500	B-29 5-10	X			4													
		10/12/21	1505	B-29 10-12	X			4													
		10/12/21		B29	X			4 25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		dissolved metals field filteret
				B-29 (0-12)					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
				(B-29 0-5 B-29 5-10 B-29 10-12)					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

Relinquished by: <u>Robert Schettler</u>	Company: <u>Aper</u>	Date: <u>10/13/21</u>	Time: <u>0925</u>	Received by: <u>[Signature]</u>	Company: <u>ALS</u>
Relinquished by: <u>[Signature]</u>	Company: <u>ALS</u>	Date: <u>10/13/21</u>	Time: <u>1110</u>	Received by: <u>[Signature]</u>	Company: <u>ALS</u>
Relinquished by: _____	Company: _____	Date: _____	Time: _____	Received by: _____	Company: _____

Cooler Receipt and Preservation Form

Client Coles & Betts Service Request K21 112045
 Received: OCT 13 2021 Opened: OCT 13 2021 By: CG Unloaded: OCT 13 2021 By: CG

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 2. Samples were received in: (circle) Cooler Box Envelope Other NA
 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 4. Was a Temperature Blank present in cooler? NA Y N If yes, note the temperature in the appropriate column below:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 5. Were samples received within the method specified temperature ranges? NA Y N
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number <u>NA</u>	Filed
1.1	—	IR02	1/5	—	—	—	
2.5	—	—	2/5	—	—	—	
1.8	—	—	3/5	—	—	—	
1.5	—	—	4/5	—	—	—	
2.6	—	—	5/5	—	—	—	

6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves Boxes
7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
8. Were samples received in good condition (unbroken) NA Y N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
10. Did all sample labels and tags agree with custody papers? NA Y N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: received 1 vial for trip blank B-37 & trip blank B-34

KC11 2045

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835		Laboratory ALS Labs Lab Project No.		CHAIN OF CUSTODY Chain of Custody No. <u>1 of 3</u>																			
Project Manager <u>Jill Betts</u> Project No. <u>319</u> Project Name <u>EORB</u> Collected by <u>Robert Schettler</u>		Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____		Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>																			
Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. <i>See composite notes below (see edits)</i> <i>Samples in 5 coolers</i>		Matrix Soil _____ Water _____ Other _____ Number of Containers _____		Analyses to be Performed NWTPH-Gx _____ NWTPH-Dx _____ VOCs by EPA Method 8260B _____ PAHs by EPA Method 8270SIM _____ Low Level SVOCs by EPA Method 8270D _____ Low Level Organochlorine Pesticides by EPA Method 8081B _____ PCBs by EPA Method 8082A _____ PCDD and PCDFs by EPA Method 8290A _____ Butyltins _____ Total RCRA 8 Metals by EPA Method 200/6020A/7471B _____ RUSH _____																			
Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH	Remarks			
		10/12/21	0950	B-37 0-3	X			4															
		10/12/21	1157	B-37 6-10	X			4															
		10/12/21	1201	B-37 10-15	X			4															
		10/12/21	1202	B-37 15-20	X			4															
		10/12/21	1205	B-37 20-23	X			4															
		10/12/21		B37	X			4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	* Dissolved metals field filter		
	B37 (0-10)			B-37 0-3				25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	B37 (10-23)			B-37 6-10				25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
				B-37 10-15																			
				B-37 15-20																			
				B-37 20-23																			
Relinquished by	<u>Robert Schettler</u>	Company	<u>Amx</u>	Date	<u>10/13/21</u>	Time	<u>0925</u>	Received by	<u>[Signature]</u>	Company	<u>Amx</u>	Date	<u>10/13/21</u>	Time	<u>0925</u>	Received by	<u>[Signature]</u>	Company	<u>Amx</u>	Date	<u>10/13/21</u>	Time	<u>0925</u>
Relinquished by		Company		Date		Time		Received by		Company		Date		Time		Received by		Company		Date		Time	
Relinquished by		Company		Date		Time		Received by		Company		Date		Time		Received by		Company		Date		Time	

12112045

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835		Laboratory ALS Labs		CHAIN OF CUSTODY Chain of Custody No. <u>243</u>																	
Project Manager <u>Jill Betts</u> Project No. <u>319</u> Project Name <u>EORB</u> Collected by <u>Robert Schettler</u>		Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____		Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>																	
Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. <i>See composite notes below (see edits)</i> <i>Samples in 5 coolers</i>		Matrix Soil _____ Water _____ Other _____ Number of Containers _____		Analyses to be Performed NWTPH-Gx _____ NWTPH-Dx _____ VOCs by EPA Method 8260B _____ PAHs by EPA Method 8270SIM _____ Low Level SVOCs by EPA Method 8270D _____ Low Level Organochlorine Pesticides by EPA Method 8081B _____ PCBs by EPA Method 8082A _____ PCDD and PCDFs by EPA Method 8290A _____ Butyltins _____ Total RCRA 8 Metals by EPA Method 200/6020A/7471B _____ RUSH _____																	
Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH	Remarks	
		10/12/21	1250	B-34 0-5	X			4													
		10/12/21	1300	B-34 5-10	X			4													
		10/12/21	1315	B-34 10-15	X			4													
		10/12/21	1318	B-34 15-20	X			4													
		10/12/21	1325	B-34 20-23	X			4													
		10/12/21		B34	X			25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	B34 (0-10)			B-34 0-5				25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	B34 (10-23)			B-34 5-10				25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
				B-34 10-15																	
				B-34 15-20																	
				B-34 20-23																	
Relinquished by <u>Robert Schettler</u>	Company <u>Apex</u>	Date <u>10/12/21</u>	Time <u>1400</u>	Received by <u>[Signature]</u>	Company <u>ALS</u>	Date <u>10/13/21</u>	Time <u>0925</u>	Received by <u>[Signature]</u>	Company <u>ALS</u>	Date <u>10/13/21</u>	Time <u>0925</u>	Received by <u>[Signature]</u>	Company <u>ALS</u>								
Relinquished by	Company	Date	Time	Received by	Company	Date	Time	Received by	Company												
Relinquished by	Company	Date	Time	Received by	Company	Date	Time	Received by	Company												

KZ112045

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835		Laboratory ALS Labs		CHAIN OF CUSTODY Chain of Custody No. <u>3 of 3</u>													
Project Manager: <u>Jill Betts</u>		Project No.: <u>319</u>		Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____		Samples Received at 4C (Y or N) _____											
Project Name: <u>EORB</u>		Collected by: <u>Robert Schettler</u>		Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____		Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results _____ Yes											
Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. <i>See composite notes below</i> <i>Samples in 5 coolers</i>			Matrix		Analyses to be Performed						Remarks						
			Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM		Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B
Lab ID	Sample #	Date	Time	Sample Description													
		10/12/21	1455	B-29 0-5	X				4								
		10/12/21	1500	B-29 5-10	X				4								
		10/12/21	1505	B-29 10-12	X				4								
		10/12/21		B29	X				25	✓	✓	✓	✓	✓	✓	✓	✓
				B-29 (0-12)						✓	✓	✓	✓	✓	✓	✓	✓
				(B-29 0-5)						✓	✓	✓	✓	✓	✓	✓	✓
				(B-29 5-10)						✓	✓	✓	✓	✓	✓	✓	✓
				(B-29 10-12)						✓	✓	✓	✓	✓	✓	✓	✓
Relinquished by: <u>Robert Schettler</u>		Company: <u>Apco</u>		Date: <u>10/15/21</u> Time: <u>0925</u>		Received by: <u>[Signature]</u>		Company: <u>ALS</u>		Date: <u>10/13/21</u> Time: <u>0924</u>		Company: _____					
Relinquished by: _____		Company: _____		Date: _____ Time: _____		Received by: _____		Company: _____		Date: _____ Time: _____		Company: _____					
Relinquished by: _____		Company: _____		Date: _____ Time: _____		Received by: _____		Company: _____		Date: _____ Time: _____		Company: _____					



Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Analysis Method: 160.3 Modified
Prep Method: None

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Units: Percent
Basis: As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
B-37 0-10 C	K2112045-006	88.6	-	-	1	10/18/21 15:15	
B-34 0-10 C	K2112045-014	80.4	-	-	1	10/18/21 15:15	
B-37 10-23 C	K2112045-022	89.3	-	-	1	10/18/21 15:15	
B-34 10-23 C	K2112045-023	79.2	-	-	1	10/18/21 15:15	
B-29 0-12 C	K2112045-024	81.2	-	-	1	10/18/21 15:15	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 10/18/21

Replicate Sample Summary
Inorganic Parameters

Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Units: Percent
Basis: As Received

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2112045-014DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total	160.3 Modified	-	80.4	79.8	80.1	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	5.46	mg/Kg	0.56	0.07	5	10/20/21 13:54	10/18/21	
Barium	6020A	48.7	mg/Kg	0.056	0.022	5	10/20/21 13:54	10/18/21	
Cadmium	6020A	0.112	mg/Kg	0.022	0.008	5	10/20/21 13:54	10/18/21	
Chromium	6020A	10.9	mg/Kg	0.22	0.07	5	10/20/21 13:54	10/18/21	
Lead	6020A	5.73	mg/Kg	0.056	0.022	5	10/20/21 13:54	10/18/21	
Mercury	7471B	0.018 J	mg/Kg	0.022	0.002	1	10/18/21 15:01	10/18/21	
Selenium	6020A	0.2 J	mg/Kg	1.1	0.1	5	10/20/21 13:54	10/18/21	
Silver	6020A	0.038	mg/Kg	0.022	0.004	5	10/20/21 13:54	10/18/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B37
Lab Code: K2112045-007

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	0.96	ug/L	0.50	0.09	1	10/27/21 17:07	10/21/21	
Barium	6020A	54.6	ug/L	0.050	0.020	1	10/27/21 17:07	10/21/21	
Cadmium	6020A	0.028	ug/L	0.020	0.008	1	10/27/21 17:07	10/21/21	
Chromium	6020A	5.19	ug/L	0.20	0.03	1	10/27/21 17:07	10/21/21	
Lead	6020A	2.93	ug/L	0.020	0.006	1	10/27/21 17:07	10/21/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 14:57	10/20/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 17:07	10/21/21	
Silver	6020A	0.024	ug/L	0.020	0.009	1	10/27/21 17:07	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B37
Lab Code: K2112045-007

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	12.0	ug/L	2.0	0.4	1	10/27/21 17:01	10/21/21	
Barium	6020A	922	ug/L	0.20	0.08	1	10/27/21 17:01	10/21/21	
Cadmium	6020A	0.563	ug/L	0.080	0.032	1	10/27/21 17:01	10/21/21	
Chromium	6020A	116	ug/L	0.80	0.12	1	10/27/21 17:01	10/21/21	
Lead	6020A	62.5	ug/L	0.080	0.024	1	10/27/21 17:01	10/21/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 14:47	10/20/21	
Selenium	6020A	ND U	ug/L	4.0	0.8	1	10/27/21 17:01	10/21/21	
Silver	6020A	0.556	ug/L	0.080	0.036	1	10/27/21 17:01	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	3.55	mg/Kg	0.62	0.07	5	10/20/21 13:43	10/18/21	
Barium	6020A	122	mg/Kg	0.062	0.025	5	10/20/21 13:43	10/18/21	
Cadmium	6020A	0.217	mg/Kg	0.025	0.009	5	10/20/21 13:43	10/18/21	
Chromium	6020A	18.5	mg/Kg	0.25	0.07	5	10/20/21 13:43	10/18/21	
Lead	6020A	61.5	mg/Kg	0.062	0.025	5	10/20/21 13:43	10/18/21	
Mercury	7471B	0.433	mg/Kg	0.024	0.002	1	10/18/21 15:03	10/18/21	
Selenium	6020A	0.2 J	mg/Kg	1.2	0.1	5	10/20/21 13:43	10/18/21	
Silver	6020A	0.550	mg/Kg	0.025	0.005	5	10/20/21 13:43	10/18/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B34
Lab Code: K2112045-015

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	0.48 J	ug/L	0.50	0.09	1	10/27/21 17:09	10/21/21	
Barium	6020A	15.5	ug/L	0.050	0.020	1	10/27/21 17:09	10/21/21	
Cadmium	6020A	0.008 J	ug/L	0.020	0.008	1	10/27/21 17:09	10/21/21	
Chromium	6020A	1.55	ug/L	0.20	0.03	1	10/27/21 17:09	10/21/21	
Lead	6020A	0.944	ug/L	0.020	0.006	1	10/27/21 17:09	10/21/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 14:58	10/20/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 17:09	10/21/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/27/21 17:09	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B34
Lab Code: K2112045-015

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	3.50	ug/L	0.50	0.09	1	10/27/21 17:03	10/21/21	
Barium	6020A	206	ug/L	0.050	0.020	1	10/27/21 17:03	10/21/21	
Cadmium	6020A	0.208	ug/L	0.020	0.008	1	10/27/21 17:03	10/21/21	
Chromium	6020A	29.1	ug/L	0.20	0.03	1	10/27/21 17:03	10/21/21	
Lead	6020A	20.1	ug/L	0.020	0.006	1	10/27/21 17:03	10/21/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 14:53	10/20/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 17:03	10/21/21	
Silver	6020A	0.041	ug/L	0.020	0.009	1	10/27/21 17:03	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B29
Lab Code: K2112045-020

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	0.78	ug/L	0.50	0.09	1	10/27/21 17:12	10/21/21	
Barium	6020A	8.29	ug/L	0.050	0.020	1	10/27/21 17:12	10/21/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	10/27/21 17:12	10/21/21	
Chromium	6020A	0.14 J	ug/L	0.20	0.03	1	10/27/21 17:12	10/21/21	
Lead	6020A	0.080	ug/L	0.020	0.006	1	10/27/21 17:12	10/21/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 15:03	10/20/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 17:12	10/21/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/27/21 17:12	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B29
Lab Code: K2112045-020

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	6.48	ug/L	0.50	0.09	1	10/27/21 17:05	10/21/21	
Barium	6020A	619	ug/L	0.050	0.020	1	10/27/21 17:05	10/21/21	
Cadmium	6020A	0.695	ug/L	0.020	0.008	1	10/27/21 17:05	10/21/21	
Chromium	6020A	57.6	ug/L	0.20	0.03	1	10/27/21 17:05	10/21/21	
Lead	6020A	12.5	ug/L	0.020	0.006	1	10/27/21 17:05	10/21/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 14:55	10/20/21	
Selenium	6020A	0.8 J	ug/L	1.0	0.2	1	10/27/21 17:05	10/21/21	
Silver	6020A	0.080	ug/L	0.020	0.009	1	10/27/21 17:05	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	3.96	mg/Kg	0.56	0.07	5	10/20/21 13:56	10/18/21	
Barium	6020A	49.2	mg/Kg	0.056	0.022	5	10/20/21 13:56	10/18/21	
Cadmium	6020A	0.057	mg/Kg	0.022	0.008	5	10/20/21 13:56	10/18/21	
Chromium	6020A	8.25	mg/Kg	0.22	0.07	5	10/20/21 13:56	10/18/21	
Lead	6020A	3.91	mg/Kg	0.056	0.022	5	10/20/21 13:56	10/18/21	
Mercury	7471B	0.027	mg/Kg	0.022	0.002	1	10/18/21 15:09	10/18/21	
Selenium	6020A	ND U	mg/Kg	1.1	0.1	5	10/20/21 13:56	10/18/21	
Silver	6020A	0.030	mg/Kg	0.022	0.004	5	10/20/21 13:56	10/18/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	5.35	mg/Kg	0.62	0.07	5	10/20/21 13:59	10/18/21	
Barium	6020A	140	mg/Kg	0.062	0.025	5	10/20/21 13:59	10/18/21	
Cadmium	6020A	0.132	mg/Kg	0.025	0.009	5	10/20/21 13:59	10/18/21	
Chromium	6020A	24.3	mg/Kg	0.25	0.07	5	10/20/21 13:59	10/18/21	
Lead	6020A	22.2	mg/Kg	0.062	0.025	5	10/20/21 13:59	10/18/21	
Mercury	7471B	0.247	mg/Kg	0.025	0.003	1	10/18/21 15:11	10/18/21	
Selenium	6020A	0.2 J	mg/Kg	1.2	0.1	5	10/20/21 13:59	10/18/21	
Silver	6020A	0.105	mg/Kg	0.025	0.005	5	10/20/21 13:59	10/18/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.84	mg/Kg	0.61	0.07	5	10/20/21 14:05	10/18/21	
Barium	6020A	75.7	mg/Kg	0.061	0.024	5	10/20/21 14:05	10/18/21	
Cadmium	6020A	0.069	mg/Kg	0.024	0.009	5	10/20/21 14:05	10/18/21	
Chromium	6020A	12.5	mg/Kg	0.24	0.07	5	10/20/21 14:05	10/18/21	
Lead	6020A	4.70	mg/Kg	0.061	0.024	5	10/20/21 14:05	10/18/21	
Mercury	7471B	0.060	mg/Kg	0.022	0.002	1	10/18/21 15:13	10/18/21	
Selenium	6020A	0.1 J	mg/Kg	1.2	0.1	5	10/20/21 14:05	10/18/21	
Silver	6020A	0.031	mg/Kg	0.024	0.005	5	10/20/21 14:05	10/18/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120367-03

Service Request: K2112045
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	mg/Kg	0.5	0.06	5	10/20/21 13:39	10/18/21	
Barium	6020A	ND U	mg/Kg	0.05	0.020	5	10/20/21 13:39	10/18/21	
Cadmium	6020A	ND U	mg/Kg	0.020	0.007	5	10/20/21 13:39	10/18/21	
Chromium	6020A	ND U	mg/Kg	0.20	0.06	5	10/20/21 13:39	10/18/21	
Lead	6020A	ND U	mg/Kg	0.05	0.020	5	10/20/21 13:39	10/18/21	
Selenium	6020A	ND U	mg/Kg	1.0	0.09	5	10/20/21 13:39	10/18/21	
Silver	6020A	0.007 J	mg/Kg	0.020	0.004	5	10/20/21 13:39	10/18/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120469-03

Service Request: K2112045
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	ug/L	0.50	0.09	1	10/27/21 16:33	10/21/21	
Barium	6020A	ND U	ug/L	0.050	0.020	1	10/27/21 16:33	10/21/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	10/27/21 16:33	10/21/21	
Chromium	6020A	ND U	ug/L	0.20	0.03	1	10/27/21 16:33	10/21/21	
Lead	6020A	ND U	ug/L	0.020	0.006	1	10/27/21 16:33	10/21/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 16:33	10/21/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/27/21 16:33	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120490-01

Service Request: K2112045
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 14:44	10/20/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120364-03

Service Request: K2112045
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7471B	0.006 J	mg/Kg	0.02	0.002	1	10/18/21 14:58	10/18/21	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 10/20/21

Replicate Sample Summary
Total Metals

Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2120367-01 Result			
Arsenic	6020A	0.62	0.07	3.55	3.72	3.64	4	20
Barium	6020A	0.062	0.025	122	129	126	6	20
Cadmium	6020A	0.025	0.009	0.217	0.197	0.207	10	20
Chromium	6020A	0.25	0.07	18.5	19.9	19.2	8	20
Lead	6020A	0.062	0.025	61.5	55.6	58.6	10	20
Selenium	6020A	1.2	0.1	0.2 J	0.2 J	0.2	7	20
Silver	6020A	0.025	0.005	0.550	0.411	0.481	29 *	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 10/20/21

Replicate Sample Summary

Total Metals

Sample Name: B37
Lab Code: K2112045-007

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2120490-03 Result			
Mercury	7470A	0.20	0.02	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 10/18/21

Replicate Sample Summary

Total Metals

Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2120364-01 Result			
Mercury	7471B	0.024	0.002	0.433	0.389	0.411	11	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 10/20/21
Date Extracted: 10/18/21

Matrix Spike Summary
Total Metals

Sample Name: B-34 0-10 C
Lab Code: K2112045-014
Analysis Method: 6020A
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2120367-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	3.55	123	124	97	75-125
Barium	122	385	248	107	75-125
Cadmium	0.217	12.8	12.4	102	75-125
Chromium	18.5	69.8	49.5	104	75-125
Lead	61.5	184	124	99	75-125
Selenium	0.2 J	120	124	97	75-125
Silver	0.550	12.9	12.4	100	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 10/20/21
Date Extracted: 10/20/21

Matrix Spike Summary
Total Metals

Sample Name: B37
Lab Code: K2112045-007
Analysis Method: 7470A
Prep Method: Method

Units: ug/L
Basis: NA

Matrix Spike
KQ2120490-04

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	ND U	5.10	5.00	102	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 10/18/21
Date Extracted: 10/18/21

Matrix Spike Summary
Total Metals

Sample Name: B-34 0-10 C
Lab Code: K2112045-014
Analysis Method: 7471B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2120364-02

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	0.433	0.916	0.607	79 N	80-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 10/20/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2120367-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	99.6	100	100	80-120
Barium	6020A	212	200	106	80-120
Cadmium	6020A	10.5	10.0	105	80-120
Chromium	6020A	40.9	40.0	102	80-120
Lead	6020A	106	100	106	80-120
Selenium	6020A	100	100	100	80-120
Silver	6020A	10.3	10.0	103	80-120

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 10/27/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2120469-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	48.2	50.0	96	80-120
Barium	6020A	101	100	101	80-120
Cadmium	6020A	25.3	25.0	101	80-120
Chromium	6020A	9.84	10.0	98	80-120
Lead	6020A	49.8	50.0	100	80-120
Selenium	6020A	51.5	50.0	103	80-120
Silver	6020A	12.4	12.5	99	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 10/20/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2120490-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	5.40	5.00	108	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 10/18/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2120364-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7471B	0.518	0.500	104	80-120



Butyltins

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	0.44 J	1.1	0.30	1	10/26/21 21:13	10/20/21	
Di-n-butyltin Cation	0.37 J	1.1	0.22	1	10/26/21 21:13	10/20/21	
Tri-n-butyltin Cation	0.56 JP	1.1	0.49	1	10/26/21 21:13	10/20/21	*
Tetra-n-butyltin	ND U	1.1	0.50	1	10/26/21 21:13	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	224	10 - 152	10/26/21 21:13	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B37
Lab Code: K2112045-007

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.052	0.030	1	11/16/21 19:34	10/14/21	
Di-n-butyltin Cation	0.021 J	0.052	0.0076	1	11/16/21 19:34	10/14/21	*
Tri-n-butyltin Cation	ND U	0.052	0.013	1	11/16/21 19:34	10/14/21	
Tetra-n-butyltin	ND U	0.052	0.040	1	11/16/21 19:34	10/14/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	93	10 - 195	11/16/21 19:34	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	0.48 J	1.2	0.33	1	10/26/21 17:37	10/20/21	
Di-n-butyltin Cation	0.67 J	1.2	0.24	1	10/26/21 17:37	10/20/21	
Tri-n-butyltin Cation	1.2 J	1.2	0.54	1	10/26/21 17:37	10/20/21	*
Tetra-n-butyltin	ND U	1.2	0.55	1	10/26/21 17:37	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	178	10 - 152	10/26/21 17:37	*

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B34
Lab Code: K2112045-015

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.052	0.030	1	11/16/21 19:51	10/14/21	
Di-n-butyltin Cation	ND U	0.052	0.0076	1	11/16/21 19:51	10/14/21	
Tri-n-butyltin Cation	ND U	0.052	0.013	1	11/16/21 19:51	10/14/21	
Tetra-n-butyltin	ND U	0.052	0.040	1	11/16/21 19:51	10/14/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	84	10 - 195	11/16/21 19:51	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B29
Lab Code: K2112045-020

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.052	0.031	1	11/16/21 20:07	10/14/21	
Di-n-butyltin Cation	ND U	0.052	0.0077	1	11/16/21 20:07	10/14/21	
Tri-n-butyltin Cation	ND U	0.052	0.013	1	11/16/21 20:07	10/14/21	
Tetra-n-butyltin	ND U	0.052	0.040	1	11/16/21 20:07	10/14/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	70	10 - 195	11/16/21 20:07	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.1	0.30	1	10/26/21 21:29	10/20/21	
Di-n-butyltin Cation	0.27 JP	1.1	0.22	1	10/26/21 21:29	10/20/21	
Tri-n-butyltin Cation	0.68 J	1.1	0.49	1	10/26/21 21:29	10/20/21	*
Tetra-n-butyltin	ND U	1.1	0.50	1	10/26/21 21:29	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	166	10 - 152	10/26/21 21:29	*

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.3	0.33	1	10/26/21 21:46	10/20/21	
Di-n-butyltin Cation	0.25 J	1.3	0.24	1	10/26/21 21:46	10/20/21	
Tri-n-butyltin Cation	0.59 J	1.3	0.55	1	10/26/21 21:46	10/20/21	*
Tetra-n-butyltin	ND U	1.3	0.56	1	10/26/21 21:46	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	145	10 - 152	10/26/21 21:46	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	0.35 J	1.2	0.32	1	10/26/21 20:56	10/20/21	
Di-n-butyltin Cation	0.26 J	1.2	0.24	1	10/26/21 20:56	10/20/21	
Tri-n-butyltin Cation	0.70 J	1.2	0.53	1	10/26/21 20:56	10/20/21	*
Tetra-n-butyltin	ND U	1.2	0.55	1	10/26/21 20:56	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	188	10 - 152	10/26/21 20:56	*

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP

Extraction Method: Method

Sample Name	Lab Code	Tri-n-propyltin
		10-152
B-37 0-10 C	K2112045-006	224*
B-34 0-10 C	K2112045-014	178*
B-37 10-23 C	K2112045-022	166*
B-34 10-23 C	K2112045-023	145
B-29 0-12 C	K2112045-024	188*
Method Blank	KQ2120355-04	171*
Lab Control Sample	KQ2120355-03	194*
B-34 0-10 C	KQ2120355-01	137
B-34 0-10 C	KQ2120355-02	209*

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: EPA 3520C

Sample Name	Lab Code	Tri-n-propyltin
		10-195
B37	K2112045-007	93
B34	K2112045-015	84
B29	K2112045-020	70
Method Blank	KQ2120269-03	63
Lab Control Sample	KQ2120269-01	74
Duplicate Lab Control Sample	KQ2120269-02	85

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 10/26/21
Date Extracted: 10/20/21

Duplicate Matrix Spike Summary
Butyltins

Sample Name: B-34 0-10 C
Lab Code: K2112045-014
Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike KQ2120355-01		Duplicate Matrix Spike KQ2120355-02		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
n-Butyltin Cation	0.48 J	18.8	19.4	95	29.2	19.4	149	10-200	43*	40
Di-n-butyltin Cation	0.67 J	30.4	23.8	125	43.7	23.8	181	10-190	36	40
Tri-n-butyltin Cation	1.2 J	35.7	27.7	125	51.9	27.7	183	10-186	37	40
Tetra-n-butyltin	ND U	41.3	31.1	133	61.2	31.1	197 *	10-194	39	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120269-03

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.050	0.029	1	11/16/21 18:45	10/14/21	
Di-n-butyltin Cation	0.035 J	0.050	0.0073	1	11/16/21 18:45	10/14/21	
Tri-n-butyltin Cation	ND U	0.050	0.012	1	11/16/21 18:45	10/14/21	
Tetra-n-butyltin	ND U	0.050	0.038	1	11/16/21 18:45	10/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	63	10 - 195	11/16/21 18:45	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120355-04

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.96	0.26	1	10/26/21 16:15	10/20/21	
Di-n-butyltin Cation	ND U	0.96	0.19	1	10/26/21 16:15	10/20/21	
Tri-n-butyltin Cation	ND U	0.96	0.43	1	10/26/21 16:15	10/20/21	
Tetra-n-butyltin	ND U	0.96	0.44	1	10/26/21 16:15	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	171	10 - 152	10/26/21 16:15	*

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 10/26/21
Date Extracted: 10/20/21

Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 744779

Lab Control Sample
KQ2120355-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Di-n-butyltin Cation	36.1	19.2	188	10-190
n-Butyltin Cation	28.2	15.6	181	10-200
Tetra-n-butyltin	43.6	25.0	174	10-194
Tri-n-butyltin Cation	43.1	22.3	194 *	10-186

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 11/16/21
Date Extracted: 10/14/21

Duplicate Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 749551

Lab Control Sample
KQ2120269-01

Duplicate Lab Control Sample
KQ2120269-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Di-n-butyltin Cation	0.389	0.383	102	0.412	0.383	107	10-200	6	30
n-Butyltin Cation	0.223 P	0.312	72	0.241 P	0.312	77	10-200	8	30
Tetra-n-butyltin	0.288	0.500	58	0.332	0.500	66	10-200	14	30
Tri-n-butyltin Cation	0.329 P	0.446	74	0.399	0.446	90	10-200	19	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 88.6

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.22	0.37	0.43	15	J	1	10/26/21 21:13
Tri-n-butyltin Cation	0.49	0.56	0.96	53	JP	1	10/26/21 21:13
n-Butyltin Cation	0.30	0.44	0.60	31	J	1	10/26/21 21:13

ALS Group USA, Corp.
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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: B37
Lab Code: K2112045-007

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0076	0.021	0.014	40	J	1	11/16/21 19:34

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 80.4

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.24	0.67	0.85	24	J	1	10/26/21 17:37
Tri-n-butyltin Cation	0.54	1.2	1.5	22	J	1	10/26/21 17:37
n-Butyltin Cation	0.33	0.48	0.62	25	J	1	10/26/21 17:37

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 89.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.22	0.27	0.45	50	JP	1	10/26/21 21:29
Tri-n-butyltin Cation	0.49	0.68	0.86	23	J	1	10/26/21 21:29

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 79.2

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.24	0.25	0.25	<1	J	1	10/26/21 21:46
Tri-n-butyltin Cation	0.55	0.59	0.59	<1	J	1	10/26/21 21:46

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 81.2

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.24	0.26	0.33	24	J	1	10/26/21 20:56
Tri-n-butyltin Cation	0.53	0.70	0.96	31	J	1	10/26/21 20:56
n-Butyltin Cation	0.32	0.35	0.44	23	J	1	10/26/21 20:56

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2120269-01

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.389	0.515	28		1	11/16/21 19:01
Tetra-n-butyltin	0.038	0.288	0.407	34		1	11/16/21 19:01
Tri-n-butyltin Cation	0.012	0.329	0.519	45	P	1	11/16/21 19:01
n-Butyltin Cation	0.029	0.223	0.399	57	P	1	11/16/21 19:01

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2120269-02

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.412	0.570	32		1	11/16/21 19:18
Tetra-n-butyltin	0.038	0.332	0.432	26		1	11/16/21 19:18
Tri-n-butyltin Cation	0.012	0.399	0.566	35		1	11/16/21 19:18
n-Butyltin Cation	0.029	0.241	0.417	53	P	1	11/16/21 19:18

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120269-03

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.035	0.048	31	J	1	11/16/21 18:45

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: KQ2120355-01

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 80.4

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.24	30.4	38.1	22		1	10/26/21 17:54
Tetra-n-butyltin	0.55	41.3	50.2	19		1	10/26/21 17:54
Tri-n-butyltin Cation	0.54	35.7	47.6	29		1	10/26/21 17:54
n-Butyltin Cation	0.33	18.8	26.3	33		1	10/26/21 17:54

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: KQ2120355-02

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 80.4

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.24	43.7	54.8	23		1	10/26/21 18:10
Tetra-n-butyltin	0.55	61.2	77.6	24		1	10/26/21 18:10
Tri-n-butyltin Cation	0.54	51.9	68.4	27		1	10/26/21 18:10
n-Butyltin Cation	0.33	29.2	38.1	26		1	10/26/21 18:10

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120355-03

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	36.1	47.9	28		1	10/26/21 16:31
Tetra-n-butyltin	0.44	43.6	55.5	24		1	10/26/21 16:31
Tri-n-butyltin Cation	0.43	43.1	57.3	28		1	10/26/21 16:31
n-Butyltin Cation	0.26	28.2	40.8	37		1	10/26/21 16:31



Semi-Volatile Petroleum Products by GC/FID

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	6.7 J	28	2.1	1	10/27/21 09:54	10/21/21	
Residual Range Organics (C25 - C36 RRO)	22 J	110	4.5	1	10/27/21 09:54	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	109	50 - 150	10/27/21 09:54	
n-Triacontane	112	50 - 150	10/27/21 09:54	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B37
Lab Code: K2112045-007

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	560 Z	250	11	1	11/01/21 19:10	10/15/21	*
Residual Range Organics (C25 - C36 RRO)	690 O	500	19	1	11/01/21 19:10	10/15/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	88	50 - 150	11/01/21 19:10	
n-Triacontane	96	50 - 150	11/01/21 19:10	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	170 H	62	4.5	1	10/27/21 10:39	10/21/21	
Residual Range Organics (C25 - C36 RRO)	460 O	250	9.7	1	10/27/21 10:39	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	107	50 - 150	10/27/21 10:39	
n-Triacontane	78	50 - 150	10/28/21 22:15	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B34
Lab Code: K2112045-015

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	520 Z	250	11	1	11/01/21 18:48	10/15/21	*
Residual Range Organics (C25 - C36 RRO)	700 O	500	19	1	11/01/21 18:48	10/15/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	98	50 - 150	11/01/21 18:48	
n-Triacontane	106	50 - 150	11/01/21 18:48	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B29
Lab Code: K2112045-020

Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	120 J	250	11	1	10/29/21 07:12	10/15/21	*
Residual Range Organics (C25 - C36 RRO)	180 J	500	19	1	10/29/21 07:12	10/15/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	78	50 - 150	10/29/21 07:12	
n-Triacontane	80	50 - 150	10/29/21 07:12	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	3.2 J	28	2.1	1	10/27/21 06:55	10/21/21	
Residual Range Organics (C25 - C36 RRO)	16 J	110	4.4	1	10/27/21 06:55	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	110	50 - 150	10/27/21 06:55	
n-Triacontane	112	50 - 150	10/27/21 06:55	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	13 J	32	2.3	1	10/27/21 08:47	10/21/21	
Residual Range Organics (C25 - C36 RRO)	32 J	130	5.0	1	10/27/21 08:47	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	104	50 - 150	10/27/21 08:47	
n-Triacontane	107	50 - 150	10/27/21 08:47	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	ND U	31	2.3	1	10/27/21 05:48	10/21/21	
Residual Range Organics (C25 - C36 RRO)	ND U	120	4.8	1	10/27/21 05:48	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	86	50 - 150	10/27/21 05:48	
n-Triacontane	87	50 - 150	10/27/21 05:48	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-37 0-10 C	K2112045-006	109	112
B-34 0-10 C	K2112045-014	107	78
B-37 10-23 C	K2112045-022	110	112
B-34 10-23 C	K2112045-023	104	107
B-29 0-12 C	K2112045-024	86	87
B-34 0-10 C	KQ2120357-01	111	86
Method Blank	KQ2120357-03	86	89
Lab Control Sample	KQ2120357-02	113	109

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B37	K2112045-007	88	96
B34	K2112045-015	98	106
B29	K2112045-020	78	80
Method Blank	KQ2120335-03	97	103
Lab Control Sample	KQ2120335-01	80	84
Duplicate Lab Control Sample	KQ2120335-02	83	84

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 10/27/21

Replicate Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2120357-01 Result			
Diesel Range Organics (C12 - C25 DRO)	NWTPH-Dx	62	4.5	170 H	180	173	4	40
Residual Range Organics (C25 - C36 RRO)	NWTPH-Dx	250	9.7	460 O	510	489	10	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120335-03

Service Request: K2112045
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	52 J	250	11	1	10/29/21 06:49	10/15/21	
Residual Range Organics (C25 - C36 RRO)	120 J	500	19	1	10/29/21 06:49	10/15/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	97	50 - 150	10/29/21 06:49	
n-Triacontane	103	50 - 150	10/29/21 06:49	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120357-03

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	1.8 J	25	1.8	1	10/27/21 05:26	10/21/21	
Residual Range Organics (C25 - C36 RRO)	5.8 J	99	3.9	1	10/27/21 05:26	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	86	50 - 150	10/27/21 05:26	
n-Triacontane	89	50 - 150	10/27/21 05:26	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 10/27/21
Date Extracted: 10/21/21

Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Units: mg/Kg
Basis: Dry
Analysis Lot: 743948

Lab Control Sample
KQ2120357-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Diesel Range Organics (C12 - C25 DRO)	295	267	111	42-134
Residual Range Organics (C25 - C36 RRO)	119	133	89	48-141

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 10/29/21
Date Extracted: 10/15/21

Duplicate Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Units: ug/L
Basis: NA
Analysis Lot: 744370

Analyte Name	Lab Control Sample KQ2120335-01			Duplicate Lab Control Sample KQ2120335-02			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Diesel Range Organics (C12 - C25 DRO)	2640	3200	83	2650	3200	83	46-140	<1	30
Residual Range Organics (C25 - C36 RRO)	1410	1600	88	1300	1600	81	45-159	8	30



Volatile Petroleum Products by GC/FID

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	12	1.6	108.24	10/25/21 19:07	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	60	50 - 150	10/25/21 19:07	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B37
Lab Code: K2112045-007

Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	43.9 J	250	12.0	1	10/18/21 16:07	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	104	50 - 150	10/18/21 16:07	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	13	1.7	104.14	10/25/21 19:31	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	61	50 - 150	10/25/21 19:31	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B34
Lab Code: K2112045-015

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	33.1 J	250	12.0	1	10/18/21 16:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	107	50 - 150	10/18/21 16:30	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B29
Lab Code: K2112045-020

Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	14.5 J	250	12.0	1	10/18/21 16:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	107	50 - 150	10/18/21 16:53	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	11	1.5	102.08	10/25/21 19:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	62	50 - 150	10/25/21 19:54	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	13	1.6	100.46	10/25/21 20:18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	53	50 - 150	10/25/21 20:18	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	13	1.7	109.16	10/25/21 20:41	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	50 - 150	10/25/21 20:41	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene
		50-150
B-37 0-10 C	K2112045-006	60
B-34 0-10 C	K2112045-014	61
B-37 10-23 C	K2112045-022	62
B-34 10-23 C	K2112045-023	53
B-29 0-12 C	K2112045-024	89
Method Blank	KQ2121047-03	89
Method Blank	KQ2121047-09	89
Lab Control Sample	KQ2121047-04	94
Duplicate Lab Control Sample	KQ2121047-05	94

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	1,4-Difluorobenzene
		50-150
B37	K2112045-007	104
B34	K2112045-015	107
B29	K2112045-020	107
Method Blank	KQ2120585-03	104
Lab Control Sample	KQ2120585-04	106
Duplicate Lab Control Sample	KQ2120585-05	105

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120585-03

Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	250	12.0	1	10/18/21 12:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	104	50 - 150	10/18/21 12:37	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121047-03

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	10/25/21 17:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	50 - 150	10/25/21 17:34	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121047-09

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	10/26/21 00:11	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	50 - 150	10/26/21 00:11	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 10/18/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 743015

Lab Control Sample
KQ2120585-04

Duplicate Lab Control Sample
KQ2120585-05

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Gasoline Range Organics (Toluene-Naphthalene GRO)	490	500	98	481	500	96	80-119	2	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: mg/Kg
Basis: Dry
Analysis Lot: 743674

Lab Control Sample
KQ2121047-04

Duplicate Lab Control Sample
KQ2121047-05

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Gasoline Range Organics (Toluene-Naphthalene GRO)	19.5	25.0	78	19.5	25.0	78	76-114	<1	40



Low Level Organochlorine Pesticides by GC

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.3	0.67	1	11/23/21 14:22	10/19/21	
alpha-BHC	ND Ui	1.1	0.75	1	11/23/21 14:22	10/19/21	
beta-BHC	ND Ui	1.1	1.1	1	11/23/21 14:22	10/19/21	
delta-BHC	ND U	1.1	0.32	1	11/23/21 14:22	10/19/21	
gamma-BHC (Lindane)	1.4 BP	1.1	0.35	1	11/23/21 14:22	10/19/21	
cis-Chlordane	ND U	1.1	0.47	1	11/23/21 14:22	10/19/21	
trans-Chlordane	ND U	1.1	0.43	1	11/23/21 14:22	10/19/21	
4,4'-DDD	ND Ui	2.3	1.5	1	11/23/21 14:22	10/19/21	
4,4'-DDE	ND U	1.1	0.46	1	11/23/21 14:22	10/19/21	
4,4'-DDT	ND Ui	2.5	2.5	1	11/23/21 14:22	10/19/21	
Dieldrin	ND U	1.1	0.25	1	11/23/21 14:22	10/19/21	
Endosulfan I	ND Ui	1.1	0.72	1	11/23/21 14:22	10/19/21	
Endosulfan II	ND Ui	4.3	4.3	1	11/23/21 14:22	10/19/21	
Endosulfan Sulfate	ND U	2.3	1.2	1	11/23/21 14:22	10/19/21	
Endrin	ND Ui	1.1	0.38	1	11/23/21 14:22	10/19/21	
Endrin Aldehyde	ND U	2.3	1.1	1	11/23/21 14:22	10/19/21	
Endrin Ketone	ND U	1.1	0.51	1	11/23/21 14:22	10/19/21	
Heptachlor	ND Ui	2.3	2.3	1	11/23/21 14:22	10/19/21	
Heptachlor Epoxide	ND U	2.3	0.75	1	11/23/21 14:22	10/19/21	
Methoxychlor	ND U	2.3	0.80	1	11/23/21 14:22	10/19/21	
Toxaphene	ND Ui	110	110	1	11/23/21 14:22	10/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	53	10 - 134	11/23/21 14:22	
Tetrachloro-m-xylene	60	10 - 121	11/23/21 14:22	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND Ui	2.5	0.90	1	11/23/21 14:53	10/19/21	
alpha-BHC	ND Ui	1.2	1.1	1	11/23/21 14:53	10/19/21	
beta-BHC	ND Ui	1.2	1.2	1	11/23/21 14:53	10/19/21	
delta-BHC	ND Ui	1.2	0.74	1	11/23/21 14:53	10/19/21	
gamma-BHC (Lindane)	1.6 BP	1.2	0.39	1	11/23/21 14:53	10/19/21	
cis-Chlordane	ND Ui	1.2	1.1	1	11/23/21 14:53	10/19/21	
trans-Chlordane	ND Ui	1.8	1.8	1	11/23/21 14:53	10/19/21	
4,4'-DDD	ND Ui	2.5	1.4	1	11/23/21 14:53	10/19/21	
4,4'-DDE	ND U	1.2	0.50	1	11/23/21 14:53	10/19/21	
4,4'-DDT	6.1 P	2.5	0.76	1	11/23/21 14:53	10/19/21	
Dieldrin	ND Ui	1.8	1.8	1	11/23/21 14:53	10/19/21	
Endosulfan I	ND U	1.2	0.46	1	11/23/21 14:53	10/19/21	
Endosulfan II	ND U	2.5	0.86	1	11/23/21 14:53	10/19/21	
Endosulfan Sulfate	ND Ui	2.5	2.0	1	11/23/21 14:53	10/19/21	
Endrin	ND U	1.2	0.40	1	11/23/21 14:53	10/19/21	
Endrin Aldehyde	ND U	2.5	1.1	1	11/23/21 14:53	10/19/21	
Endrin Ketone	ND U	1.2	0.56	1	11/23/21 14:53	10/19/21	
Heptachlor	ND Ui	2.5	2.5	1	11/23/21 14:53	10/19/21	
Heptachlor Epoxide	ND U	2.5	0.82	1	11/23/21 14:53	10/19/21	
Methoxychlor	ND U	2.5	0.88	1	11/23/21 14:53	10/19/21	
Toxaphene	ND Ui	160	160	1	11/23/21 14:53	10/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	52	10 - 134	11/23/21 14:53	
Tetrachloro-m-xylene	52	10 - 121	11/23/21 14:53	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.2	0.65	1	11/23/21 19:59	10/19/21	
alpha-BHC	ND Ui	1.1	0.74	1	11/23/21 19:59	10/19/21	
beta-BHC	ND Ui	1.1	1.1	1	11/23/21 19:59	10/19/21	
delta-BHC	ND U	1.1	0.31	1	11/23/21 19:59	10/19/21	
gamma-BHC (Lindane)	1.1 BP	1.1	0.35	1	11/23/21 19:59	10/19/21	
cis-Chlordane	ND U	1.1	0.45	1	11/23/21 19:59	10/19/21	
trans-Chlordane	ND U	1.1	0.42	1	11/23/21 19:59	10/19/21	
4,4'-DDD	ND U	2.2	0.66	1	11/23/21 19:59	10/19/21	
4,4'-DDE	ND U	1.1	0.44	1	11/23/21 19:59	10/19/21	
4,4'-DDT	ND Ui	2.2	1.4	1	11/23/21 19:59	10/19/21	
Dieldrin	ND U	1.1	0.25	1	11/23/21 19:59	10/19/21	
Endosulfan I	ND U	1.1	0.41	1	11/23/21 19:59	10/19/21	
Endosulfan II	ND U	2.2	0.76	1	11/23/21 19:59	10/19/21	
Endosulfan Sulfate	ND U	2.2	1.1	1	11/23/21 19:59	10/19/21	
Endrin	ND U	1.1	0.36	1	11/23/21 19:59	10/19/21	
Endrin Aldehyde	ND U	2.2	0.98	1	11/23/21 19:59	10/19/21	
Endrin Ketone	ND U	1.1	0.50	1	11/23/21 19:59	10/19/21	
Heptachlor	ND Ui	2.2	2.2	1	11/23/21 19:59	10/19/21	
Heptachlor Epoxide	ND U	2.2	0.73	1	11/23/21 19:59	10/19/21	
Methoxychlor	ND U	2.2	0.78	1	11/23/21 19:59	10/19/21	
Toxaphene	ND U	110	38	1	11/23/21 19:59	10/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	60	10 - 134	11/23/21 19:59	
Tetrachloro-m-xylene	59	10 - 121	11/23/21 19:59	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.5	0.74	1	11/23/21 20:29	10/19/21	
alpha-BHC	ND Ui	1.3	1.2	1	11/23/21 20:29	10/19/21	
beta-BHC	ND Ui	1.3	1.3	1	11/23/21 20:29	10/19/21	
delta-BHC	ND U	1.3	0.36	1	11/23/21 20:29	10/19/21	
gamma-BHC (Lindane)	1.3 BP	1.3	0.39	1	11/23/21 20:29	10/19/21	
cis-Chlordane	ND U	1.3	0.52	1	11/23/21 20:29	10/19/21	
trans-Chlordane	ND Ui	1.3	1.3	1	11/23/21 20:29	10/19/21	
4,4'-DDD	ND U	2.5	0.76	1	11/23/21 20:29	10/19/21	
4,4'-DDE	ND U	1.3	0.51	1	11/23/21 20:29	10/19/21	
4,4'-DDT	ND Ui	2.9	2.9	1	11/23/21 20:29	10/19/21	
Dieldrin	ND U	1.3	0.28	1	11/23/21 20:29	10/19/21	
Endosulfan I	ND Ui	1.3	0.79	1	11/23/21 20:29	10/19/21	
Endosulfan II	7.8	2.5	0.87	1	11/23/21 20:29	10/19/21	
Endosulfan Sulfate	ND U	2.5	1.3	1	11/23/21 20:29	10/19/21	
Endrin	ND U	1.3	0.41	1	11/23/21 20:29	10/19/21	
Endrin Aldehyde	ND U	2.5	1.2	1	11/23/21 20:29	10/19/21	
Endrin Ketone	ND U	1.3	0.57	1	11/23/21 20:29	10/19/21	
Heptachlor	ND Ui	2.5	2.5	1	11/23/21 20:29	10/19/21	
Heptachlor Epoxide	ND U	2.5	0.83	1	11/23/21 20:29	10/19/21	
Methoxychlor	ND U	2.5	0.89	1	11/23/21 20:29	10/19/21	
Toxaphene	ND Ui	150	150	1	11/23/21 20:29	10/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	59	10 - 134	11/23/21 20:29	
Tetrachloro-m-xylene	59	10 - 121	11/23/21 20:29	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.5	0.73	1	11/23/21 21:00	10/19/21	
alpha-BHC	ND Ui	1.2	0.71	1	11/23/21 21:00	10/19/21	
beta-BHC	ND Ui	1.2	1.2	1	11/23/21 21:00	10/19/21	
delta-BHC	ND U	1.2	0.35	1	11/23/21 21:00	10/19/21	
gamma-BHC (Lindane)	1.3 B	1.2	0.39	1	11/23/21 21:00	10/19/21	
cis-Chlordane	ND U	1.2	0.51	1	11/23/21 21:00	10/19/21	
trans-Chlordane	ND U	1.2	0.47	1	11/23/21 21:00	10/19/21	
4,4'-DDD	ND U	2.5	0.74	1	11/23/21 21:00	10/19/21	
4,4'-DDE	ND U	1.2	0.50	1	11/23/21 21:00	10/19/21	
4,4'-DDT	ND Ui	2.5	2.2	1	11/23/21 21:00	10/19/21	
Dieldrin	ND U	1.2	0.28	1	11/23/21 21:00	10/19/21	
Endosulfan I	ND U	1.2	0.46	1	11/23/21 21:00	10/19/21	
Endosulfan II	ND U	2.5	0.85	1	11/23/21 21:00	10/19/21	
Endosulfan Sulfate	ND U	2.5	1.3	1	11/23/21 21:00	10/19/21	
Endrin	ND U	1.2	0.40	1	11/23/21 21:00	10/19/21	
Endrin Aldehyde	ND U	2.5	1.1	1	11/23/21 21:00	10/19/21	
Endrin Ketone	ND U	1.2	0.56	1	11/23/21 21:00	10/19/21	
Heptachlor	ND Ui	2.5	2.5	1	11/23/21 21:00	10/19/21	
Heptachlor Epoxide	ND U	2.5	0.82	1	11/23/21 21:00	10/19/21	
Methoxychlor	ND U	2.5	0.88	1	11/23/21 21:00	10/19/21	
Toxaphene	ND Ui	130	130	1	11/23/21 21:00	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	57	10 - 134	11/23/21 21:00	
Tetrachloro-m-xylene	60	10 - 121	11/23/21 21:00	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-134	10-121
B-37 0-10 C	K2112045-006	53	60
B-34 0-10 C	K2112045-014	52	52
B-37 10-23 C	K2112045-022	60	59
B-34 10-23 C	K2112045-023	59	59
B-29 0-12 C	K2112045-024	57	60
Method Blank	KQ2120360-10	47	65
Lab Control Sample	KQ2120360-07	43	55
Lab Control Sample	KQ2120360-08	53	61
B-34 0-10 C	KQ2120360-01	51	53
B-34 0-10 C	KQ2120360-02	60	58
B-34 0-10 C	KQ2120360-03	59	59
B-34 0-10 C	KQ2120360-04	65	59

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 11/23/21
Date Extracted: 10/19/21

Duplicate Matrix Spike Summary
Low Level Organochlorine Pesticides by GC

Sample Name: B-34 0-10 C
Lab Code: K2112045-014
Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2120360-01			Duplicate Matrix Spike KQ2120360-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Aldrin	ND Ui	17.1	30.7	56	19.1	30.8	62	18-89	11	40
alpha-BHC	ND Ui	18.0	30.7	59	20.6	30.8	67	16-96	13	40
beta-BHC	ND Ui	19.4	30.7	63	22.0	30.8	71	16-106	12	40
delta-BHC	ND Ui	16.8	30.7	55	18.5	30.8	60	20-95	9	40
gamma-BHC (Lindane)	1.6 B	19.0	30.7	57	20.6	30.8	62	17-97	8	40
cis-Chlordane	ND Ui	16.6	30.7	54	18.1	30.8	59	20-93	9	40
trans-Chlordane	ND Ui	15.5 P	30.7	50	16.9 P	30.8	55	10-103	9	40
4,4'-DDD	ND Ui	17.9	30.7	58	20.4	30.8	66	10-180	13	40
4,4'-DDE	ND U	16.3	30.7	53	18.0	30.8	59	17-94	10	40
4,4'-DDT	6.1	24.2	30.7	59	35.1	30.8	94	17-104	37	40
Dieldrin	ND Ui	14.8	30.7	48	16.3	30.8	53	19-88	10	40
Endosulfan I	ND U	14.3	30.7	47	15.6	30.8	51	16-87	8	40
Endosulfan II	ND U	16.2 P	30.7	53	17.5 P	30.8	57	15-117	8	40
Endosulfan Sulfate	ND Ui	17.9	30.7	58	19.6	30.8	64	17-98	9	40
Endrin	ND U	17.3	30.7	56	18.4	30.8	60	10-107	7	40
Endrin Aldehyde	ND U	16.5	30.7	54	17.2	30.8	56	21-94	4	40
Endrin Ketone	ND U	17.0	30.7	55	18.2	30.8	59	19-97	7	40
Heptachlor	ND Ui	ND Ui	30.7	0 *	ND Ui	30.8	0 *	13-111	NC	40
Heptachlor Epoxide	ND U	16.3	30.7	53	18.3	30.8	59	18-92	12	40
Methoxychlor	ND U	ND Ui	30.7	0 *	25.6 P	30.8	83	17-122	NC	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 11/23/21
Date Extracted: 10/19/21

Duplicate Matrix Spike Summary
Low Level Organochlorine Pesticides by GC

Sample Name: B-34 0-10 C
Lab Code: K2112045-014
Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2120360-03			Duplicate Matrix Spike KQ2120360-04			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Toxaphene	ND Ui	1080	1230	87	1170	1230	95	16-114	8	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120360-10

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.59	1	11/23/21 12:51	10/19/21	
alpha-BHC	ND Ui	1.0	0.53	1	11/23/21 12:51	10/19/21	
beta-BHC	ND Ui	1.0	0.62	1	11/23/21 12:51	10/19/21	
delta-BHC	ND U	1.0	0.28	1	11/23/21 12:51	10/19/21	
gamma-BHC (Lindane)	1.1	1.0	0.31	1	11/23/21 12:51	10/19/21	
cis-Chlordane	ND U	1.0	0.41	1	11/23/21 12:51	10/19/21	
trans-Chlordane	ND U	1.0	0.38	1	11/23/21 12:51	10/19/21	
4,4'-DDD	ND U	2.0	0.60	1	11/23/21 12:51	10/19/21	
4,4'-DDE	ND U	1.0	0.40	1	11/23/21 12:51	10/19/21	
4,4'-DDT	ND U	2.0	0.61	1	11/23/21 12:51	10/19/21	
Dieldrin	ND U	0.95	0.22	1	11/23/21 12:51	10/19/21	
Endosulfan I	ND U	1.0	0.37	1	11/23/21 12:51	10/19/21	
Endosulfan II	1.8 JP	2.0	0.69	1	11/23/21 12:51	10/19/21	
Endosulfan Sulfate	ND U	2.0	0.99	1	11/23/21 12:51	10/19/21	
Endrin	ND U	1.0	0.32	1	11/23/21 12:51	10/19/21	
Endrin Aldehyde	ND U	2.0	0.89	1	11/23/21 12:51	10/19/21	
Endrin Ketone	ND U	1.0	0.45	1	11/23/21 12:51	10/19/21	
Heptachlor	ND Ui	1.0	0.84	1	11/23/21 12:51	10/19/21	
Heptachlor Epoxide	ND U	2.0	0.66	1	11/23/21 12:51	10/19/21	
Methoxychlor	ND U	2.0	0.71	1	11/23/21 12:51	10/19/21	
Toxaphene	ND U	100	34	1	11/23/21 12:51	10/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	47	10 - 134	11/23/21 12:51	
Tetrachloro-m-xylene	65	10 - 121	11/23/21 12:51	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 11/23/21
Date Extracted: 10/19/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 747214

Lab Control Sample
KQ2120360-07

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
4,4'-DDD	16.2	25.0	65	10-180
4,4'-DDE	12.9	25.0	52	17-94
4,4'-DDT	22.2	25.0	89	17-104
Aldrin	14.4	25.0	58	18-89
alpha-BHC	14.1	25.0	57	16-96
beta-BHC	15.1	25.0	61	16-106
cis-Chlordane	13.9	25.0	55	20-93
delta-BHC	14.1	25.0	56	20-95
Dieldrin	12.3	25.0	49	19-88
Endosulfan I	11.0	25.0	44	16-87
Endosulfan II	13.4	25.0	53	15-117
Endosulfan Sulfate	13.9	25.0	55	17-98
Endrin	13.5	25.0	54	10-107
Endrin Aldehyde	13.4	25.0	54	21-94
Endrin Ketone	14.2	25.0	57	19-97
gamma-BHC (Lindane)	14.9	25.0	60	17-97
Heptachlor	15.4 P	25.0	62	13-111
Heptachlor Epoxide	13.3	25.0	53	18-92
Methoxychlor	20.6 P	25.0	83	17-122
trans-Chlordane	13.8	25.0	55	10-103

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 11/23/21
Date Extracted: 10/19/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 747214

Lab Control Sample
KQ2120360-08

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Toxaphene	989	1000	99	16-114

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 88.6

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	0.35	1.4	3.1	76	BP	1	11/23/21 14:22

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 80.4

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	0.76	6.1	11	57	P	1	11/23/21 14:53
gamma-BHC (Lindane)	0.39	1.6	2.8	55	BP	1	11/23/21 14:53

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 89.3

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	0.35	1.1	1.9	53	BP	1	11/23/21 19:59

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 79.2

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Endosulfan II	0.87	7.8	9.8	23		1	11/23/21 20:29
gamma-BHC (Lindane)	0.39	1.3	2.3	56	BP	1	11/23/21 20:29

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 81.2

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	0.39	1.3	1.9	37	B	1	11/23/21 21:00

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: KQ2120360-01

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 80.4

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.74	17.9	19.0	6		1	11/23/21 17:57
4,4'-DDE	0.50	16.3	19.3	17		1	11/23/21 17:57
4,4'-DDT	0.75	24.2	31.0	25		1	11/23/21 17:57
Aldrin	0.73	17.1	21.2	21		1	11/23/21 17:57
Dieldrin	0.28	14.8	16.5	11		1	11/23/21 17:57
Endosulfan I	0.46	14.3	15.0	5		1	11/23/21 17:57
Endosulfan II	0.85	16.2	32.0	66	P	1	11/23/21 17:57
Endosulfan Sulfate	1.3	17.9	18.5	3		1	11/23/21 17:57
Endrin	0.40	17.3	18.1	5		1	11/23/21 17:57
Endrin Aldehyde	1.1	16.5	16.7	1		1	11/23/21 17:57
Endrin Ketone	0.56	17.0	18.0	6		1	11/23/21 17:57
Heptachlor Epoxide	0.82	16.3	18.0	10		1	11/23/21 17:57
alpha-BHC	0.36	18.0	19.7	9		1	11/23/21 17:57
beta-BHC	0.34	19.4	26.6	31		1	11/23/21 17:57
cis-Chlordane	0.51	16.6	17.2	4		1	11/23/21 17:57
delta-BHC	0.35	16.8	18.7	11		1	11/23/21 17:57
gamma-BHC (Lindane)	0.39	19.0	19.8	4		1	11/23/21 17:57
trans-Chlordane	0.47	15.5	23.9	43	P	1	11/23/21 17:57

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: KQ2120360-02

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 80.4

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.74	20.4	20.6	<1		1	11/23/21 18:27
4,4'-DDE	0.50	18.0	23.0	24		1	11/23/21 18:27
4,4'-DDT	0.76	35.1	37.6	7		1	11/23/21 18:27
Aldrin	0.73	19.1	26.8	34		1	11/23/21 18:27
Dieldrin	0.28	16.3	20.1	21		1	11/23/21 18:27
Endosulfan I	0.46	15.6	17.8	13		1	11/23/21 18:27
Endosulfan II	0.85	17.5	32.4	60	P	1	11/23/21 18:27
Endosulfan Sulfate	1.3	19.6	20.3	4		1	11/23/21 18:27
Endrin	0.40	18.4	20.4	10		1	11/23/21 18:27
Endrin Aldehyde	1.1	17.2	19.2	11		1	11/23/21 18:27
Endrin Ketone	0.56	18.2	20.0	9		1	11/23/21 18:27
Heptachlor Epoxide	0.82	18.3	19.4	6		1	11/23/21 18:27
Methoxychlor	0.88	25.6	71.7	95	P	1	11/23/21 18:27
alpha-BHC	0.36	20.6	21.3	3		1	11/23/21 18:27
beta-BHC	0.34	22.0	29.7	30		1	11/23/21 18:27
cis-Chlordane	0.51	18.1	22.6	22		1	11/23/21 18:27
delta-BHC	0.35	18.5	20.6	11		1	11/23/21 18:27
gamma-BHC (Lindane)	0.39	20.6	20.8	<1		1	11/23/21 18:27
trans-Chlordane	0.47	16.9	48.2	96	P	1	11/23/21 18:27

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: KQ2120360-03

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 80.4

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	42	1080	1320	20		1	11/23/21 18:57

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: KQ2120360-04

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 80.4

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	42	1170	1300	11		1	11/23/21 19:28

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2120360-07

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.60	16.2	16.3	<1		1	11/23/21 13:21
4,4'-DDE	0.40	12.9	16.5	24		1	11/23/21 13:21
4,4'-DDT	0.61	22.2	22.4	<1		1	11/23/21 13:21
Aldrin	0.59	14.4	15.0	4		1	11/23/21 13:21
Dieldrin	0.22	12.3	13.3	8		1	11/23/21 13:21
Endosulfan I	0.37	11.0	11.9	8		1	11/23/21 13:21
Endosulfan II	0.69	13.4	14.7	9		1	11/23/21 13:21
Endosulfan Sulfate	0.99	13.9	14.4	4		1	11/23/21 13:21
Endrin	0.32	13.5	16.1	18		1	11/23/21 13:21
Endrin Aldehyde	0.89	13.4	14.9	11		1	11/23/21 13:21
Endrin Ketone	0.45	14.2	18.1	24		1	11/23/21 13:21
Heptachlor	0.39	15.4	50.9	107	P	1	11/23/21 13:21
Heptachlor Epoxide	0.66	13.3	14.8	11		1	11/23/21 13:21
Methoxychlor	0.71	20.6	35.4	53	P	1	11/23/21 13:21
alpha-BHC	0.29	14.1	15.9	12		1	11/23/21 13:21
beta-BHC	0.27	15.1	17.7	16		1	11/23/21 13:21
cis-Chlordane	0.41	13.9	14.8	6		1	11/23/21 13:21
delta-BHC	0.28	14.1	15.3	8		1	11/23/21 13:21
gamma-BHC (Lindane)	0.31	14.9	16.1	8		1	11/23/21 13:21
trans-Chlordane	0.38	13.8	14.2	3		1	11/23/21 13:21

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120360-08

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	34	989	1090	10		1	11/23/21 13:52

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120360-10

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Endosulfan II	0.69	1.8	3.3	59	JP	1	11/23/21 12:51
gamma-BHC (Lindane)	0.31	1.1	1.6	37		1	11/23/21 12:51



Ultra Low Level Organochlorine Pesticides by GC/ECD

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B37
Lab Code: K2112045-007

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	6.0	2.4	1	01/12/22 21:54	1/10/22	*
alpha-BHC	ND U	3.0	0.75	1	01/12/22 21:54	1/10/22	*
beta-BHC	ND Ui	3.0	2.6	1	01/12/22 21:54	1/10/22	*
delta-BHC	ND U	3.0	0.81	1	01/12/22 21:54	1/10/22	*
gamma-BHC (Lindane)	ND U	6.0	1.8	1	01/12/22 21:54	1/10/22	*
cis-Chlordane	ND U	3.0	1.1	1	01/12/22 21:54	1/10/22	*
trans-Chlordane	ND U	6.0	1.7	1	01/12/22 21:54	1/10/22	*
4,4'-DDD	ND U	6.0	1.8	1	01/12/22 21:54	1/10/22	*
4,4'-DDE	ND U	3.0	1.4	1	01/12/22 21:54	1/10/22	*
4,4'-DDT	ND U	6.0	2.3	1	01/12/22 21:54	1/10/22	*
Dieldrin	ND U	3.0	1.4	1	01/12/22 21:54	1/10/22	*
Endosulfan I	ND Ui	3.0	1.9	1	01/12/22 21:54	1/10/22	*
Endosulfan II	ND Ui	23	23	1	01/12/22 21:54	1/10/22	*
Endosulfan Sulfate	ND U	3.0	1.5	1	01/12/22 21:54	1/10/22	*
Endrin	ND Ui	5.5	5.5	1	01/12/22 21:54	1/10/22	*
Endrin Aldehyde	ND U	3.0	1.5	1	01/12/22 21:54	1/10/22	*
Endrin Ketone	ND U	6.0	2.1	1	01/12/22 21:54	1/10/22	*
Heptachlor	ND U	6.0	1.9	1	01/12/22 21:54	1/10/22	*
Heptachlor Epoxide	ND U	3.0	0.87	1	01/12/22 21:54	1/10/22	*
Methoxychlor	ND U	6.0	2.6	1	01/12/22 21:54	1/10/22	*
Toxaphene	ND U	300	150	1	01/12/22 21:54	1/10/22	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	62	10 - 139	01/12/22 21:54	
Tetrachloro-m-xylene	76	32 - 151	01/12/22 21:54	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B34
Lab Code: K2112045-015

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	6.0	2.4	1	01/12/22 22:34	1/10/22	*
alpha-BHC	ND U	3.0	0.75	1	01/12/22 22:34	1/10/22	*
beta-BHC	ND U	3.0	0.51	1	01/12/22 22:34	1/10/22	*
delta-BHC	ND U	3.0	0.81	1	01/12/22 22:34	1/10/22	*
gamma-BHC (Lindane)	ND U	6.0	1.8	1	01/12/22 22:34	1/10/22	*
cis-Chlordane	ND U	3.0	1.1	1	01/12/22 22:34	1/10/22	*
trans-Chlordane	ND U	6.0	1.7	1	01/12/22 22:34	1/10/22	*
4,4'-DDD	ND U	6.0	1.8	1	01/12/22 22:34	1/10/22	*
4,4'-DDE	ND U	3.0	1.4	1	01/12/22 22:34	1/10/22	*
4,4'-DDT	ND U	6.0	2.3	1	01/12/22 22:34	1/10/22	*
Dieldrin	ND Ui	3.0	1.8	1	01/12/22 22:34	1/10/22	*
Endosulfan I	ND U	3.0	1.1	1	01/12/22 22:34	1/10/22	*
Endosulfan II	ND Ui	14	14	1	01/12/22 22:34	1/10/22	*
Endosulfan Sulfate	ND U	3.0	1.5	1	01/12/22 22:34	1/10/22	*
Endrin	ND Ui	3.6	3.6	1	01/12/22 22:34	1/10/22	*
Endrin Aldehyde	ND U	3.0	1.5	1	01/12/22 22:34	1/10/22	*
Endrin Ketone	ND U	6.0	2.1	1	01/12/22 22:34	1/10/22	*
Heptachlor	ND U	6.0	1.9	1	01/12/22 22:34	1/10/22	*
Heptachlor Epoxide	ND U	3.0	0.87	1	01/12/22 22:34	1/10/22	*
Methoxychlor	ND U	6.0	2.6	1	01/12/22 22:34	1/10/22	*
Toxaphene	ND U	300	150	1	01/12/22 22:34	1/10/22	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	58	10 - 139	01/12/22 22:34	
Tetrachloro-m-xylene	73	32 - 151	01/12/22 22:34	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B29
Lab Code: K2112045-020

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	6.0	2.4	1	01/12/22 23:13	1/10/22	*
alpha-BHC	ND U	3.0	0.75	1	01/12/22 23:13	1/10/22	*
beta-BHC	ND U	3.0	0.51	1	01/12/22 23:13	1/10/22	*
delta-BHC	ND U	3.0	0.81	1	01/12/22 23:13	1/10/22	*
gamma-BHC (Lindane)	ND U	6.0	1.8	1	01/12/22 23:13	1/10/22	*
cis-Chlordane	ND U	3.0	1.1	1	01/12/22 23:13	1/10/22	*
trans-Chlordane	ND U	6.0	1.7	1	01/12/22 23:13	1/10/22	*
4,4'-DDD	ND U	6.0	1.8	1	01/12/22 23:13	1/10/22	*
4,4'-DDE	ND U	3.0	1.4	1	01/12/22 23:13	1/10/22	*
4,4'-DDT	ND U	6.0	2.3	1	01/12/22 23:13	1/10/22	*
Dieldrin	ND U	3.0	1.4	1	01/12/22 23:13	1/10/22	*
Endosulfan I	ND U	3.0	1.1	1	01/12/22 23:13	1/10/22	*
Endosulfan II	ND Ui	3.0	1.5	1	01/12/22 23:13	1/10/22	*
Endosulfan Sulfate	ND U	3.0	1.5	1	01/12/22 23:13	1/10/22	*
Endrin	ND U	3.0	1.3	1	01/12/22 23:13	1/10/22	*
Endrin Aldehyde	ND U	3.0	1.5	1	01/12/22 23:13	1/10/22	*
Endrin Ketone	ND U	6.0	2.1	1	01/12/22 23:13	1/10/22	*
Heptachlor	ND U	6.0	1.9	1	01/12/22 23:13	1/10/22	*
Heptachlor Epoxide	ND U	3.0	0.87	1	01/12/22 23:13	1/10/22	*
Methoxychlor	ND U	6.0	2.6	1	01/12/22 23:13	1/10/22	*
Toxaphene	ND U	300	150	1	01/12/22 23:13	1/10/22	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	49	10 - 139	01/12/22 23:13	
Tetrachloro-m-xylene	65	32 - 151	01/12/22 23:13	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Extraction Method: EPA 3511

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-139	32-151
B37	K2112045-007	62	76
B34	K2112045-015	58	73
B29	K2112045-020	49	65
Method Blank	KQ2200405-07	89	62
Lab Control Sample	KQ2200405-01	78	54
Duplicate Lab Control Sample	KQ2200405-02	86	55
Lab Control Sample	KQ2200405-03	88	63
Duplicate Lab Control Sample	KQ2200405-04	93	57
Lab Control Sample	KQ2200405-05	88	55
Duplicate Lab Control Sample	KQ2200405-06	86	56

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2200405-07

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.77	1	01/12/22 18:36	1/10/22	
alpha-BHC	ND U	1.0	0.25	1	01/12/22 18:36	1/10/22	
beta-BHC	0.37 JP	1.0	0.17	1	01/12/22 18:36	1/10/22	
delta-BHC	ND U	1.0	0.27	1	01/12/22 18:36	1/10/22	
gamma-BHC (Lindane)	ND U	2.0	0.60	1	01/12/22 18:36	1/10/22	
cis-Chlordane	ND U	1.0	0.36	1	01/12/22 18:36	1/10/22	
trans-Chlordane	ND U	2.0	0.54	1	01/12/22 18:36	1/10/22	
4,4'-DDD	ND U	2.0	0.57	1	01/12/22 18:36	1/10/22	
4,4'-DDE	ND U	1.0	0.46	1	01/12/22 18:36	1/10/22	
4,4'-DDT	ND U	2.0	0.75	1	01/12/22 18:36	1/10/22	
Dieldrin	ND U	1.0	0.44	1	01/12/22 18:36	1/10/22	
Endosulfan I	ND U	1.0	0.36	1	01/12/22 18:36	1/10/22	
Endosulfan II	ND U	1.0	0.34	1	01/12/22 18:36	1/10/22	
Endosulfan Sulfate	ND U	1.0	0.47	1	01/12/22 18:36	1/10/22	
Endrin	ND U	1.0	0.42	1	01/12/22 18:36	1/10/22	
Endrin Aldehyde	ND U	1.0	0.47	1	01/12/22 18:36	1/10/22	
Endrin Ketone	ND U	2.0	0.70	1	01/12/22 18:36	1/10/22	
Heptachlor	ND U	2.0	0.61	1	01/12/22 18:36	1/10/22	
Heptachlor Epoxide	ND U	1.0	0.29	1	01/12/22 18:36	1/10/22	
Methoxychlor	ND U	2.0	0.85	1	01/12/22 18:36	1/10/22	
Toxaphene	ND U	100	49	1	01/12/22 18:36	1/10/22	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	89	10 - 139	01/12/22 18:36	
Tetrachloro-m-xylene	62	32 - 151	01/12/22 18:36	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 01/12/22
Date Extracted: 01/10/22

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 751503

Lab Control Sample
KQ2200405-01

Duplicate Lab Control Sample
KQ2200405-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
4,4'-DDD	21.7 P	25.0	87	21.9 P	25.0	88	35-158	<1	30
4,4'-DDE	20.3	25.0	81	20.4	25.0	82	53-129	<1	30
4,4'-DDT	20.5	25.0	82	20.9	25.0	84	43-164	2	30
Aldrin	16.6	25.0	66	15.8	25.0	63	37-135	5	30
alpha-BHC	19.9	25.0	80	21.0	25.0	84	48-148	5	30
beta-BHC	17.1	25.0	68	18.3	25.0	73	37-133	7	30
cis-Chlordane	19.7	25.0	79	19.7	25.0	79	54-127	<1	30
delta-BHC	18.9	25.0	76	20.3	25.0	81	44-128	7	30
Dieldrin	20.5	25.0	82	21.5	25.0	86	51-122	5	30
Endosulfan I	16.9 P	25.0	67	17.7 P	25.0	71	44-135	5	30
Endosulfan II	17.1	25.0	68	15.9	25.0	63	37-180	7	30
Endosulfan Sulfate	19.5	25.0	78	20.5	25.0	82	42-144	5	30
Endrin	20.2	25.0	81	21.2	25.0	85	52-133	5	30
Endrin Aldehyde	18.3	25.0	73	19.2	25.0	77	49-126	4	30
Endrin Ketone	20.5	25.0	82	21.2	25.0	85	54-131	3	30
gamma-BHC (Lindane)	19.9	25.0	80	20.4	25.0	82	51-140	3	30
Heptachlor	17.3	25.0	69	15.9	25.0	64	33-161	8	30
Heptachlor Epoxide	19.0	25.0	76	19.7	25.0	79	51-125	4	30
Methoxychlor	21.8	25.0	87	23.2	25.0	93	38-194	6	30
trans-Chlordane	19.4	25.0	77	18.9	25.0	76	54-126	2	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 01/12/22
Date Extracted: 01/10/22

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 751503

Lab Control Sample
KQ2200405-05

Duplicate Lab Control Sample
KQ2200405-06

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Toxaphene	1110	1000	111	1150	1000	115	44-190	3	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2200405-01

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	21.7	61.8	96	P	1	01/12/22 19:16
4,4'-DDE	0.46	20.3	21.4	5		1	01/12/22 19:16
4,4'-DDT	0.75	20.5	22.7	10		1	01/12/22 19:16
Aldrin	0.77	16.6	17.2	4		1	01/12/22 19:16
Dieldrin	0.44	20.5	21.7	6		1	01/12/22 19:16
Endosulfan I	0.36	16.9	42.0	85	P	1	01/12/22 19:16
Endosulfan II	0.34	17.1	18.9	10		1	01/12/22 19:16
Endosulfan Sulfate	0.47	19.5	20.4	5		1	01/12/22 19:16
Endrin	0.42	20.2	21.0	4		1	01/12/22 19:16
Endrin Aldehyde	0.47	18.3	18.9	3		1	01/12/22 19:16
Endrin Ketone	0.70	20.5	22.4	9		1	01/12/22 19:16
Heptachlor	0.61	17.3	20.2	15		1	01/12/22 19:16
Heptachlor Epoxide	0.29	19.0	19.9	5		1	01/12/22 19:16
Methoxychlor	0.85	21.8	22.1	1		1	01/12/22 19:16
alpha-BHC	0.25	19.9	21.0	5		1	01/12/22 19:16
beta-BHC	0.17	17.1	17.4	2		1	01/12/22 19:16
cis-Chlordane	0.36	19.7	24.4	21		1	01/12/22 19:16
delta-BHC	0.27	18.9	19.2	2		1	01/12/22 19:16
gamma-BHC (Lindane)	0.60	19.9	20.0	<1		1	01/12/22 19:16
trans-Chlordane	0.54	19.4	20.8	7		1	01/12/22 19:16

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2200405-02

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	21.9	65.5	100	P	1	01/12/22 19:55
4,4'-DDE	0.46	20.4	21.6	6		1	01/12/22 19:55
4,4'-DDT	0.75	20.9	27.2	26		1	01/12/22 19:55
Aldrin	0.77	15.8	16.3	3		1	01/12/22 19:55
Dieldrin	0.44	21.5	22.1	3		1	01/12/22 19:55
Endosulfan I	0.36	17.7	41.5	80	P	1	01/12/22 19:55
Endosulfan II	0.34	15.9	20.2	24		1	01/12/22 19:55
Endosulfan Sulfate	0.47	20.5	21.3	4		1	01/12/22 19:55
Endrin	0.42	21.2	21.9	3		1	01/12/22 19:55
Endrin Aldehyde	0.47	19.2	22.5	16		1	01/12/22 19:55
Endrin Ketone	0.70	21.2	22.5	6		1	01/12/22 19:55
Heptachlor	0.61	15.9	18.0	12		1	01/12/22 19:55
Heptachlor Epoxide	0.29	19.7	21.1	7		1	01/12/22 19:55
Methoxychlor	0.85	23.2	23.4	<1		1	01/12/22 19:55
alpha-BHC	0.25	21.0	21.6	3		1	01/12/22 19:55
beta-BHC	0.17	18.3	18.5	1		1	01/12/22 19:55
cis-Chlordane	0.36	19.7	20.0	2		1	01/12/22 19:55
delta-BHC	0.27	20.3	21.2	4		1	01/12/22 19:55
gamma-BHC (Lindane)	0.60	20.4	20.7	1		1	01/12/22 19:55
trans-Chlordane	0.54	18.9	19.1	1		1	01/12/22 19:55

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2200405-05

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1110	1210	9		1	01/12/22 20:35

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2200405-06

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1150	1180	3		1	01/12/22 21:14

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2200405-07

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
beta-BHC	0.17	0.37	1.1	99	JP	1	01/12/22 18:36



Polychlorinated Biphenyls (PCBs)

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B37
Lab Code: K2112045-007
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	0.20	0.044	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1221	ND	U	0.40	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1232	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1242	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1248	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1254	ND	Ui	0.20	0.041	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1260	ND	Ui	0.20	0.045	1	10/14/21	12/02/21	KWG2102756	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	9	10-140	12/02/21	Outside Control Limits

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B34
Lab Code: K2112045-015
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1221	ND	U	0.40	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1232	ND	Ui	0.20	0.062	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1242	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1248	ND	Ui	0.20	0.030	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1254	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1260	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	7	10-140	12/02/21	Outside Control Limits

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B29
Lab Code: K2112045-020
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1221	ND	U	0.40	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1232	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1242	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1248	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1254	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1260	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	12	10-140	12/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG2102756-3
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1221	ND	U	0.40	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1232	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1242	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1248	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1254	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1260	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	89	10-140	12/02/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-37 0-10 C
Lab Code: K2112045-006
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	23	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	5.1	J	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	3.4	J	12	3.3	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	87	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-34 0-10 C
Lab Code: K2112045-014
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	13	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	25	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	13	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	13	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	22		13	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	32		13	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	18		13	3.6	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	76	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-37 10-23 C
Lab Code: K2112045-022
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	11	3.2	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	22	3.2	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	11	3.2	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	11	3.2	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	ND	U	11	3.2	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	ND	U	11	3.2	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	ND	U	11	3.2	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	93	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-34 10-23 C
Lab Code: K2112045-023
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	13	3.7	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	26	3.7	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	13	3.7	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	13	3.7	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	ND	U	13	3.7	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	ND	U	13	3.7	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	ND	U	13	3.7	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	92	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-29 0-12 C
Lab Code: K2112045-024
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	13	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	25	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	13	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	13	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	ND	U	13	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	ND	U	13	3.6	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	ND	U	13	3.6	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	92	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG2102785-4
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	19	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	86	20-155	11/03/21	Acceptable

Comments: _____

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045

**Surrogate Recovery Summary
 Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3511
Analysis Method: 8082A

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
B37	K2112045-007	9 *
B34	K2112045-015	7 *
B29	K2112045-020	12
Method Blank	KWG2102756-3	89
Lab Control Sample	KWG2102756-1	81
Duplicate Lab Control Sample	KWG2102756-2	82

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 10-140

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045

**Surrogate Recovery Summary
 Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
B-37 0-10 C	K2112045-006	87
B-34 0-10 C	K2112045-014	76
B-37 10-23 C	K2112045-022	93
B-34 10-23 C	K2112045-023	92
B-29 0-12 C	K2112045-024	92
Method Blank	KWG2102785-4	86
B-34 0-10 CMS	KWG2102785-1	89
B-34 0-10 CDMS	KWG2102785-2	82
Lab Control Sample	KWG2102785-3	93

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 20-155

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Extracted: 10/19/2021
Date Analyzed: 11/03/2021

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name: B-34 0-10 C
Lab Code: K2112045-014
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102785

Analyte Name	Sample Result	B-34 0-10 CMS KWG2102785-1 Matrix Spike			B-34 0-10 CDMS KWG2102785-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Aroclor 1016	ND	111	123	90	107	123	87	44-119	3	40
Aroclor 1260	18	122	123	84	117	123	80	56-130	5	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Extracted: 10/14/2021
Date Analyzed: 12/02/2021 - 12/03/2021

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG2102756

Analyte Name	Lab Control Sample KWG2102756-1 Lab Control Spike			Duplicate Lab Control Sample KWG2102756-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Aroclor 1016	1.94	2.50	78	2.06	2.50	82	31-164	6	30
Aroclor 1260	2.29	2.50	92	2.46	2.50	99	34-182	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Extracted: 10/19/2021
Date Analyzed: 11/03/2021

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102785

Lab Control Sample
 KWG2102785-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Aroclor 1016	90.5	100	90	44-119
Aroclor 1260	95.2	100	95	56-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Chlorinated Herbicides by GC

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	56	4.6	1	11/30/21 23:29	10/25/21	
2,4,5-TP (Silvex)	ND U	56	2.8	1	11/30/21 23:29	10/25/21	
2,4-D	ND U	56	8.7	1	11/30/21 23:29	10/25/21	*
2,4-DB	ND Ui	56	8.3	1	11/30/21 23:29	10/25/21	
Dalapon	ND U	56	6.2	1	11/30/21 23:29	10/25/21	
Dicamba	ND U	56	4.9	1	11/30/21 23:29	10/25/21	
Dichlorprop	ND U	56	3.9	1	11/30/21 23:29	10/25/21	*
Dinoseb	ND U	56	3.1	1	11/30/21 23:29	10/25/21	
MCPA	ND U	5600	370	1	11/30/21 23:29	10/25/21	
MCPP	ND U	5600	520	1	11/30/21 23:29	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	73	26 - 127	11/30/21 23:29	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B37
Lab Code: K2112045-007

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/23/21 07:18	10/18/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/23/21 07:18	10/18/21	
2,4-D	ND Ui	0.38	0.21	1	11/23/21 07:18	10/18/21	*
2,4-DB	ND Ui	0.38	0.18	1	11/23/21 07:18	10/18/21	
Dalapon	ND U	0.38	0.28	1	11/23/21 07:18	10/18/21	
Dicamba	ND Ui	0.19	0.027	1	11/23/21 07:18	10/18/21	
Dichlorprop	ND U	0.38	0.030	1	11/23/21 07:18	10/18/21	*
Dinoseb	ND U	0.19	0.015	1	11/23/21 07:18	10/18/21	
MCPA	25 J	94	8.7	1	11/23/21 07:18	10/18/21	
MCPP	ND Ui	94	26	1	11/23/21 07:18	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	64	17 - 113	11/23/21 07:18	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	62	5.0	1	11/30/21 23:55	10/25/21	
2,4,5-TP (Silvex)	ND U	62	3.0	1	11/30/21 23:55	10/25/21	
2,4-D	ND U	62	9.6	1	11/30/21 23:55	10/25/21	*
2,4-DB	24 JP	62	6.8	1	11/30/21 23:55	10/25/21	
Dalapon	ND U	62	6.9	1	11/30/21 23:55	10/25/21	
Dicamba	ND U	62	5.4	1	11/30/21 23:55	10/25/21	
Dichlorprop	ND U	62	4.3	1	11/30/21 23:55	10/25/21	*
Dinoseb	ND U	62	3.4	1	11/30/21 23:55	10/25/21	
MCPA	ND U	6200	400	1	11/30/21 23:55	10/25/21	
MCPP	ND U _i	6200	710	1	11/30/21 23:55	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	80	26 - 127	11/30/21 23:55	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B34
Lab Code: K2112045-015

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/23/21 07:44	10/18/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/23/21 07:44	10/18/21	
2,4-D	ND Ui	0.38	0.056	1	11/23/21 07:44	10/18/21	*
2,4-DB	ND Ui	0.38	0.25	1	11/23/21 07:44	10/18/21	
Dalapon	ND U	0.38	0.28	1	11/23/21 07:44	10/18/21	
Dicamba	ND Ui	0.19	0.042	1	11/23/21 07:44	10/18/21	
Dichlorprop	ND U	0.38	0.030	1	11/23/21 07:44	10/18/21	*
Dinoseb	ND U	0.19	0.015	1	11/23/21 07:44	10/18/21	
MCPA	ND U	94	8.7	1	11/23/21 07:44	10/18/21	
MCPP	ND U	94	14	1	11/23/21 07:44	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	57	17 - 113	11/23/21 07:44	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B29
Lab Code: K2112045-020

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/23/21 08:09	10/18/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/23/21 08:09	10/18/21	
2,4-D	ND Ui	0.38	0.086	1	11/23/21 08:09	10/18/21	*
2,4-DB	ND U	0.38	0.10	1	11/23/21 08:09	10/18/21	
Dalapon	ND U	0.38	0.28	1	11/23/21 08:09	10/18/21	
Dicamba	ND U	0.19	0.025	1	11/23/21 08:09	10/18/21	
Dichlorprop	ND U	0.38	0.030	1	11/23/21 08:09	10/18/21	*
Dinoseb	ND U	0.19	0.015	1	11/23/21 08:09	10/18/21	
MCPA	ND U	94	8.7	1	11/23/21 08:09	10/18/21	
MCP	ND U	94	14	1	11/23/21 08:09	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	46	17 - 113	11/23/21 08:09	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	56	4.5	1	12/01/21 01:11	10/25/21	
2,4,5-TP (Silvex)	ND U	56	2.7	1	12/01/21 01:11	10/25/21	
2,4-D	ND U	56	8.7	1	12/01/21 01:11	10/25/21	*
2,4-DB	ND Ui	56	18	1	12/01/21 01:11	10/25/21	
Dalapon	ND U	56	6.2	1	12/01/21 01:11	10/25/21	
Dicamba	ND U	56	4.9	1	12/01/21 01:11	10/25/21	
Dichlorprop	ND U	56	3.9	1	12/01/21 01:11	10/25/21	*
Dinoseb	ND U	56	3.1	1	12/01/21 01:11	10/25/21	
MCPA	ND U	5600	360	1	12/01/21 01:11	10/25/21	
MCPP	ND U	5600	520	1	12/01/21 01:11	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	78	26 - 127	12/01/21 01:11	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	63	5.1	1	12/01/21 01:37	10/25/21	
2,4,5-TP (Silvex)	ND U	63	3.1	1	12/01/21 01:37	10/25/21	
2,4-D	ND U	63	9.8	1	12/01/21 01:37	10/25/21	*
2,4-DB	ND Ui	63	22	1	12/01/21 01:37	10/25/21	
Dalapon	ND U	63	7.0	1	12/01/21 01:37	10/25/21	
Dicamba	ND U	63	5.5	1	12/01/21 01:37	10/25/21	
Dichlorprop	ND U	63	4.3	1	12/01/21 01:37	10/25/21	*
Dinoseb	ND U	63	3.5	1	12/01/21 01:37	10/25/21	
MCPA	ND U	6300	410	1	12/01/21 01:37	10/25/21	
MCPD	ND Ui	6300	660	1	12/01/21 01:37	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	73	26 - 127	12/01/21 01:37	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	62	5.0	1	11/30/21 03:16	10/25/21	
2,4,5-TP (Silvex)	ND U	62	3.0	1	11/30/21 03:16	10/25/21	
2,4-D	ND U	62	9.5	1	11/30/21 03:16	10/25/21	
2,4-DB	ND U	62	6.7	1	11/30/21 03:16	10/25/21	
Dalapon	ND U	62	6.8	1	11/30/21 03:16	10/25/21	
Dicamba	ND U	62	5.3	1	11/30/21 03:16	10/25/21	
Dichlorprop	ND U	62	4.2	1	11/30/21 03:16	10/25/21	*
Dinoseb	ND U	62	3.4	1	11/30/21 03:16	10/25/21	
MCPA	ND U	6200	400	1	11/30/21 03:16	10/25/21	
MCPP	ND U	6200	570	1	11/30/21 03:16	10/25/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	74	26 - 127	11/30/21 03:16	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 26-127
B-37 0-10 C	K2112045-006	73
B-34 0-10 C	K2112045-014	80
B-37 10-23 C	K2112045-022	78
B-34 10-23 C	K2112045-023	73
B-29 0-12 C	K2112045-024	74
Method Blank	KQ2120356-04	74
Lab Control Sample	KQ2120356-03	74
B-34 0-10 C	KQ2120356-01	74
B-34 0-10 C	KQ2120356-02	78

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 17-113
B37	K2112045-007	64
B34	K2112045-015	57
B29	K2112045-020	46
Method Blank	KQ2120437-03	63
Lab Control Sample	KQ2120437-01	65
Duplicate Lab Control Sample	KQ2120437-02	66

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 12/1/21
Date Extracted: 10/25/21

Duplicate Matrix Spike Summary
Chlorinated Herbicides by GC

Sample Name: B-34 0-10 C
Lab Code: K2112045-014
Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2120356-01			Duplicate Matrix Spike KQ2120356-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-T	ND U	151	207	73	161	207	77	21-137	6	40
2,4,5-TP (Silvex)	ND U	136	207	66	149	207	72	34-129	9	40
2,4-D	ND U	164	207	79	168	207	81	35-129	2	40
2,4-DB	24 J	196	207	83	200	207	85	20-131	2	40
Dalapon	ND U	116	207	56	112	207	54	14-100	3	40
Dicamba	ND U	148	207	71	158	207	76	32-129	7	40
Dichlorprop	ND U	129	207	62	138	207	67	23-140	6	40
Dinoseb	ND U	106	207	51	113	207	55	10-121	7	40
MCPA	ND U	17900	20700	86	20000	20700	97	13-130	11	40
MCPP	ND Ui	17700	20700	85	18900	20700	91	10-169	7	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120356-04

Service Request: K2112045
Date Collected: NA
Date Received: NA
Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	50	4.0	1	11/30/21 21:47	10/25/21	
2,4,5-TP (Silvex)	ND U	50	2.4	1	11/30/21 21:47	10/25/21	
2,4-D	ND U	50	7.7	1	11/30/21 21:47	10/25/21	
2,4-DB	ND Ui	50	23	1	11/30/21 21:47	10/25/21	
Dalapon	ND U	50	5.5	1	11/30/21 21:47	10/25/21	
Dicamba	ND U	50	4.3	1	11/30/21 21:47	10/25/21	
Dichlorprop	ND U	50	3.4	1	11/30/21 21:47	10/25/21	
Dinoseb	ND U	50	2.7	1	11/30/21 21:47	10/25/21	
MCPA	ND U	5000	320	1	11/30/21 21:47	10/25/21	
MCPP	ND U	5000	460	1	11/30/21 21:47	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	74	26 - 127	11/30/21 21:47	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120437-03

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/23/21 06:02	10/18/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/23/21 06:02	10/18/21	
2,4-D	ND U	0.38	0.036	1	11/23/21 06:02	10/18/21	
2,4-DB	ND U	0.38	0.10	1	11/23/21 06:02	10/18/21	
Dalapon	ND U	0.38	0.28	1	11/23/21 06:02	10/18/21	
Dicamba	ND U	0.19	0.025	1	11/23/21 06:02	10/18/21	
Dichlorprop	ND U	0.38	0.030	1	11/23/21 06:02	10/18/21	
Dinoseb	ND U	0.19	0.015	1	11/23/21 06:02	10/18/21	
MCPA	ND U	94	8.7	1	11/23/21 06:02	10/18/21	
MCPD	ND U	94	14	1	11/23/21 06:02	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	63	17 - 113	11/23/21 06:02	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 11/30/21
Date Extracted: 10/25/21

Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 747806

Lab Control Sample
KQ2120356-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-T	129	167	77	44-125
2,4,5-TP (Silvex)	133	167	80	46-125
2,4-D	129	167	77	46-120
2,4-DB	174	167	105	30-126
Dalapon	76.5	167	46	13-100
Dicamba	129	167	77	43-119
Dichlorprop	121	167	73	47-108
Dinoseb	107	167	64	25-110
MCPA	17700	16700	106	40-128
MCPB	17900	16700	108	49-134

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 11/23/21
Date Extracted: 10/18/21

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/L
Basis: NA
Analysis Lot: 747173

Lab Control Sample
KQ2120437-01

Duplicate Lab Control Sample
KQ2120437-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-T	1.61	2.50	64	1.66	2.50	66	30-120	3	30
2,4,5-TP (Silvex)	1.72	2.50	69	1.75	2.50	70	37-114	2	30
2,4-D	1.66	2.50	66	1.67	2.50	67	35-110	1	30
2,4-DB	1.65	2.50	66	1.76	2.50	70	10-134	6	30
Dalapon	1.02 P	2.50	41	1.06 P	2.50	42	14-110	3	30
Dicamba	1.75	2.50	70	1.75	2.50	70	30-108	<1	30
Dichlorprop	1.59	2.50	64	1.62	2.50	65	29-104	2	30
Dinoseb	1.26	2.50	51	1.44	2.50	58	11-105	13	30
MCPA	210 P	250	84	210 P	250	84	21-117	<1	30
MCPP	223	250	89	223	250	89	16-141	<1	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: B37
Lab Code: K2112045-007

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
MCPA	8.7	25	30	18	J	1	11/23/21 07:18

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 80.4

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4-DB	6.8	24	46	63	JP	1	11/30/21 23:55

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: KQ2120356-01

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 80.4

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.0	151	166	9		1	12/01/21 00:20
2,4,5-TP (Silvex)	3.0	136	152	11		1	12/01/21 00:20
2,4-D	9.6	164	172	5		1	12/01/21 00:20
2,4-DB	6.8	196	208	6		1	12/01/21 00:20
Dalapon	6.9	116	136	16		1	12/01/21 00:20
Dicamba	5.4	148	176	17		1	12/01/21 00:20
Dichlorprop	4.3	129	176	31		1	12/01/21 00:20
Dinoseb	3.4	106	134	23		1	12/01/21 00:20
MCPA	400	17900	20200	12		1	12/01/21 00:20
MCPP	580	17700	25300	35		1	12/01/21 00:20

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: KQ2120356-02

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 80.4

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	5.0	161	179	11		1	12/01/21 00:46
2,4,5-TP (Silvex)	3.0	149	171	14		1	12/01/21 00:46
2,4-D	9.6	168	182	8		1	12/01/21 00:46
2,4-DB	6.8	200	204	2		1	12/01/21 00:46
Dalapon	6.9	112	139	22		1	12/01/21 00:46
Dicamba	5.4	158	186	16		1	12/01/21 00:46
Dichlorprop	4.3	138	187	30		1	12/01/21 00:46
Dinoseb	3.4	113	139	21		1	12/01/21 00:46
MCPA	400	20000	21800	9		1	12/01/21 00:46
MCPP	580	18900	24400	25		1	12/01/21 00:46

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120356-03

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	4.0	129	142	10		1	11/30/21 22:13
2,4,5-TP (Silvex)	2.4	133	148	11		1	11/30/21 22:13
2,4-D	7.7	129	145	12		1	11/30/21 22:13
2,4-DB	5.4	174	181	4		1	11/30/21 22:13
Dalapon	5.5	76.5	99.6	26		1	11/30/21 22:13
Dicamba	4.3	129	148	14		1	11/30/21 22:13
Dichlorprop	3.4	121	159	27		1	11/30/21 22:13
Dinoseb	2.7	107	124	15		1	11/30/21 22:13
MCPA	320	17700	16300	8		1	11/30/21 22:13
MCPP	460	17900	15200	16		1	11/30/21 22:13

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dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2120437-01

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.61	1.77	9		1	11/23/21 06:27
2,4,5-TP (Silvex)	0.045	1.72	1.91	10		1	11/23/21 06:27
2,4-D	0.036	1.66	1.81	9		1	11/23/21 06:27
2,4-DB	0.10	1.65	2.13	25		1	11/23/21 06:27
Dalapon	0.28	1.02	2.28	76	P	1	11/23/21 06:27
Dicamba	0.025	1.75	1.86	6		1	11/23/21 06:27
Dichlorprop	0.030	1.59	1.89	17		1	11/23/21 06:27
Dinoseb	0.015	1.26	1.41	11		1	11/23/21 06:27
MCPA	8.7	210	368	55	P	1	11/23/21 06:27
MCPP	14	223	231	4		1	11/23/21 06:27

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2120437-02

Service Request: K2112045
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.66	1.84	10		1	11/23/21 06:53
2,4,5-TP (Silvex)	0.045	1.75	1.94	10		1	11/23/21 06:53
2,4-D	0.036	1.67	1.84	10		1	11/23/21 06:53
2,4-DB	0.10	1.76	2.11	18		1	11/23/21 06:53
Dalapon	0.28	1.06	1.69	46	P	1	11/23/21 06:53
Dicamba	0.025	1.75	1.89	8		1	11/23/21 06:53
Dichlorprop	0.030	1.62	1.91	16		1	11/23/21 06:53
Dinoseb	0.015	1.44	1.63	12		1	11/23/21 06:53
MCPA	8.7	210	411	65	P	1	11/23/21 06:53
MCPP	14	223	230	3		1	11/23/21 06:53



Volatile Organic Compounds by GC/MS, Unpreserved

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.4	0.12	1	10/20/21 15:43	*
1,1,1-Trichloroethane (TCA)	ND U	5.4	0.12	1	10/20/21 15:43	*
1,1,2,2-Tetrachloroethane	ND U	5.4	0.15	1	10/20/21 15:43	*
1,1,2-Trichloroethane	ND U	5.4	0.17	1	10/20/21 15:43	*
1,1-Dichloroethane	ND U	5.4	0.14	1	10/20/21 15:43	*
1,1-Dichloroethene	ND U	5.4	0.28	1	10/20/21 15:43	*
1,1-Dichloropropene	ND U	5.4	0.15	1	10/20/21 15:43	*
1,2,3-Trichlorobenzene	ND U	22	0.21	1	10/20/21 15:43	*
1,2,3-Trichloropropane	ND U	5.4	0.49	1	10/20/21 15:43	*
1,2,4-Trichlorobenzene	ND U	22	0.15	1	10/20/21 15:43	*
1,2,4-Trimethylbenzene	ND U	22	0.059	1	10/20/21 15:43	*
1,2-Dibromo-3-chloropropane	ND U	22	0.44	1	10/20/21 15:43	*
1,2-Dibromoethane (EDB)	ND U	22	0.11	1	10/20/21 15:43	*
1,2-Dichlorobenzene	ND U	5.4	0.084	1	10/20/21 15:43	*
1,2-Dichloroethane (EDC)	ND U	5.4	0.076	1	10/20/21 15:43	*
1,2-Dichloropropane	ND U	5.4	0.15	1	10/20/21 15:43	*
1,3,5-Trimethylbenzene	ND U	22	0.10	1	10/20/21 15:43	*
1,3-Dichlorobenzene	ND U	5.4	0.11	1	10/20/21 15:43	*
1,3-Dichloropropane	ND U	5.4	0.14	1	10/20/21 15:43	*
1,4-Dichlorobenzene	ND U	5.4	0.094	1	10/20/21 15:43	*
2,2-Dichloropropane	ND U	5.4	0.11	1	10/20/21 15:43	*
2-Butanone (MEK)	ND U	22	0.98	1	10/20/21 15:43	*
2-Chlorotoluene	ND U	22	0.14	1	10/20/21 15:43	*
2-Hexanone	ND U	22	1.1	1	10/20/21 15:43	*
4-Chlorotoluene	ND U	22	0.096	1	10/20/21 15:43	*
4-Isopropyltoluene	ND U	22	0.070	1	10/20/21 15:43	*
4-Methyl-2-pentanone (MIBK)	ND U	22	2.0	1	10/20/21 15:43	*
Acetone	6.0 J	22	3.2	1	10/20/21 15:43	*
Benzene	ND U	5.4	0.059	1	10/20/21 15:43	*
Bromobenzene	ND U	5.4	0.096	1	10/20/21 15:43	*
Bromochloromethane	ND U	5.4	0.27	1	10/20/21 15:43	*
Bromodichloromethane	ND U	5.4	0.18	1	10/20/21 15:43	*
Bromoform	ND U	5.4	0.16	1	10/20/21 15:43	*
Bromomethane	ND U	5.4	0.22	1	10/20/21 15:43	*
Carbon Disulfide	ND U	5.4	0.10	1	10/20/21 15:43	*
Carbon Tetrachloride	ND U	5.4	0.11	1	10/20/21 15:43	*
Chlorobenzene	ND U	5.4	0.071	1	10/20/21 15:43	*
Chloroethane	ND U	5.4	0.81	1	10/20/21 15:43	*
Chloroform	ND U	5.4	0.12	1	10/20/21 15:43	*
Chloromethane	ND U	5.4	0.20	1	10/20/21 15:43	*
Dibromochloromethane	ND U	5.4	0.20	1	10/20/21 15:43	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.4	0.31	1	10/20/21 15:43	*
Dichlorodifluoromethane	ND U	5.4	0.14	1	10/20/21 15:43	*
Ethylbenzene	ND U	5.4	0.11	1	10/20/21 15:43	*
Hexachlorobutadiene	ND U	22	0.44	1	10/20/21 15:43	*
Isopropylbenzene	ND U	22	0.088	1	10/20/21 15:43	*
Methylene Chloride	1.2 J	11	0.18	1	10/20/21 15:43	*
Naphthalene	ND U	22	0.15	1	10/20/21 15:43	*
Styrene	ND U	5.4	0.16	1	10/20/21 15:43	*
Tetrachloroethene (PCE)	ND U	5.4	0.18	1	10/20/21 15:43	*
Toluene	ND U	5.4	0.17	1	10/20/21 15:43	*
Trichloroethene (TCE)	ND U	5.4	0.17	1	10/20/21 15:43	*
Trichlorofluoromethane	ND U	5.4	0.093	1	10/20/21 15:43	*
Vinyl Chloride	ND U	5.4	0.20	1	10/20/21 15:43	*
cis-1,2-Dichloroethene	ND U	5.4	0.14	1	10/20/21 15:43	*
cis-1,3-Dichloropropene	ND U	5.4	0.15	1	10/20/21 15:43	*
m,p-Xylenes	ND U	5.4	0.11	1	10/20/21 15:43	*
n-Butylbenzene	ND U	22	0.075	1	10/20/21 15:43	*
n-Propylbenzene	ND U	22	0.15	1	10/20/21 15:43	*
o-Xylene	ND U	5.4	0.088	1	10/20/21 15:43	*
sec-Butylbenzene	ND U	22	0.081	1	10/20/21 15:43	*
tert-Butylbenzene	ND U	22	0.16	1	10/20/21 15:43	*
trans-1,2-Dichloroethene	ND U	5.4	0.14	1	10/20/21 15:43	*
trans-1,3-Dichloropropene	ND U	5.4	0.12	1	10/20/21 15:43	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	61 - 133	10/20/21 15:43	
Dibromofluoromethane	97	59 - 134	10/20/21 15:43	
Toluene-d8	101	77 - 122	10/20/21 15:43	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	6.3	0.14	1	10/20/21 16:04	*
1,1,1-Trichloroethane (TCA)	ND U	6.3	0.14	1	10/20/21 16:04	*
1,1,2,2-Tetrachloroethane	ND U	6.3	0.17	1	10/20/21 16:04	*
1,1,2-Trichloroethane	ND U	6.3	0.19	1	10/20/21 16:04	*
1,1-Dichloroethane	ND U	6.3	0.16	1	10/20/21 16:04	*
1,1-Dichloroethene	ND U	6.3	0.32	1	10/20/21 16:04	*
1,1-Dichloropropene	ND U	6.3	0.17	1	10/20/21 16:04	*
1,2,3-Trichlorobenzene	ND U	25	0.24	1	10/20/21 16:04	*
1,2,3-Trichloropropane	ND U	6.3	0.57	1	10/20/21 16:04	*
1,2,4-Trichlorobenzene	ND U	25	0.17	1	10/20/21 16:04	*
1,2,4-Trimethylbenzene	ND U	25	0.068	1	10/20/21 16:04	*
1,2-Dibromo-3-chloropropane	ND U	25	0.51	1	10/20/21 16:04	*
1,2-Dibromoethane (EDB)	ND U	25	0.12	1	10/20/21 16:04	*
1,2-Dichlorobenzene	ND U	6.3	0.097	1	10/20/21 16:04	*
1,2-Dichloroethane (EDC)	ND U	6.3	0.089	1	10/20/21 16:04	*
1,2-Dichloropropane	ND U	6.3	0.17	1	10/20/21 16:04	*
1,3,5-Trimethylbenzene	ND U	25	0.12	1	10/20/21 16:04	*
1,3-Dichlorobenzene	ND U	6.3	0.12	1	10/20/21 16:04	*
1,3-Dichloropropane	ND U	6.3	0.16	1	10/20/21 16:04	*
1,4-Dichlorobenzene	ND U	6.3	0.11	1	10/20/21 16:04	*
2,2-Dichloropropane	ND U	6.3	0.13	1	10/20/21 16:04	*
2-Butanone (MEK)	ND U	25	1.2	1	10/20/21 16:04	*
2-Chlorotoluene	ND U	25	0.16	1	10/20/21 16:04	*
2-Hexanone	ND U	25	1.2	1	10/20/21 16:04	*
4-Chlorotoluene	ND U	25	0.12	1	10/20/21 16:04	*
4-Isopropyltoluene	ND U	25	0.081	1	10/20/21 16:04	*
4-Methyl-2-pentanone (MIBK)	ND U	25	2.3	1	10/20/21 16:04	*
Acetone	33	25	3.7	1	10/20/21 16:04	*
Benzene	ND U	6.3	0.068	1	10/20/21 16:04	*
Bromobenzene	ND U	6.3	0.12	1	10/20/21 16:04	*
Bromochloromethane	ND U	6.3	0.31	1	10/20/21 16:04	*
Bromodichloromethane	ND U	6.3	0.21	1	10/20/21 16:04	*
Bromoform	ND U	6.3	0.18	1	10/20/21 16:04	*
Bromomethane	ND U	6.3	0.26	1	10/20/21 16:04	*
Carbon Disulfide	ND U	6.3	0.12	1	10/20/21 16:04	*
Carbon Tetrachloride	ND U	6.3	0.12	1	10/20/21 16:04	*
Chlorobenzene	ND U	6.3	0.082	1	10/20/21 16:04	*
Chloroethane	ND U	6.3	0.94	1	10/20/21 16:04	*
Chloroform	ND U	6.3	0.14	1	10/20/21 16:04	*
Chloromethane	ND U	6.3	0.23	1	10/20/21 16:04	*
Dibromochloromethane	ND U	6.3	0.23	1	10/20/21 16:04	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	6.3	0.36	1	10/20/21 16:04	*
Dichlorodifluoromethane	ND U	6.3	0.16	1	10/20/21 16:04	*
Ethylbenzene	ND U	6.3	0.12	1	10/20/21 16:04	*
Hexachlorobutadiene	ND U	25	0.51	1	10/20/21 16:04	*
Isopropylbenzene	ND U	25	0.11	1	10/20/21 16:04	*
Methylene Chloride	2.2 J	13	0.21	1	10/20/21 16:04	*
Naphthalene	ND U	25	0.17	1	10/20/21 16:04	*
Styrene	ND U	6.3	0.18	1	10/20/21 16:04	*
Tetrachloroethene (PCE)	ND U	6.3	0.21	1	10/20/21 16:04	*
Toluene	ND U	6.3	0.19	1	10/20/21 16:04	*
Trichloroethene (TCE)	ND U	6.3	0.19	1	10/20/21 16:04	*
Trichlorofluoromethane	ND U	6.3	0.11	1	10/20/21 16:04	*
Vinyl Chloride	ND U	6.3	0.23	1	10/20/21 16:04	*
cis-1,2-Dichloroethene	ND U	6.3	0.16	1	10/20/21 16:04	*
cis-1,3-Dichloropropene	ND U	6.3	0.17	1	10/20/21 16:04	*
m,p-Xylenes	ND U	6.3	0.13	1	10/20/21 16:04	*
n-Butylbenzene	ND U	25	0.087	1	10/20/21 16:04	*
n-Propylbenzene	ND U	25	0.17	1	10/20/21 16:04	*
o-Xylene	ND U	6.3	0.11	1	10/20/21 16:04	*
sec-Butylbenzene	ND U	25	0.094	1	10/20/21 16:04	*
tert-Butylbenzene	ND U	25	0.18	1	10/20/21 16:04	*
trans-1,2-Dichloroethene	ND U	6.3	0.16	1	10/20/21 16:04	*
trans-1,3-Dichloropropene	ND U	6.3	0.14	1	10/20/21 16:04	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	61 - 133	10/20/21 16:04	
Dibromofluoromethane	98	59 - 134	10/20/21 16:04	
Toluene-d8	99	77 - 122	10/20/21 16:04	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.2	0.12	1	10/20/21 16:25	*
1,1,1-Trichloroethane (TCA)	ND U	5.2	0.12	1	10/20/21 16:25	*
1,1,2,2-Tetrachloroethane	ND U	5.2	0.14	1	10/20/21 16:25	*
1,1,2-Trichloroethane	ND U	5.2	0.16	1	10/20/21 16:25	*
1,1-Dichloroethane	ND U	5.2	0.13	1	10/20/21 16:25	*
1,1-Dichloroethene	ND U	5.2	0.27	1	10/20/21 16:25	*
1,1-Dichloropropene	ND U	5.2	0.14	1	10/20/21 16:25	*
1,2,3-Trichlorobenzene	ND U	21	0.20	1	10/20/21 16:25	*
1,2,3-Trichloropropane	ND U	5.2	0.47	1	10/20/21 16:25	*
1,2,4-Trichlorobenzene	ND U	21	0.14	1	10/20/21 16:25	*
1,2,4-Trimethylbenzene	ND U	21	0.057	1	10/20/21 16:25	*
1,2-Dibromo-3-chloropropane	ND U	21	0.42	1	10/20/21 16:25	*
1,2-Dibromoethane (EDB)	ND U	21	0.098	1	10/20/21 16:25	*
1,2-Dichlorobenzene	ND U	5.2	0.081	1	10/20/21 16:25	*
1,2-Dichloroethane (EDC)	ND U	5.2	0.073	1	10/20/21 16:25	*
1,2-Dichloropropane	ND U	5.2	0.14	1	10/20/21 16:25	*
1,3,5-Trimethylbenzene	ND U	21	0.096	1	10/20/21 16:25	*
1,3-Dichlorobenzene	ND U	5.2	0.098	1	10/20/21 16:25	*
1,3-Dichloropropane	ND U	5.2	0.13	1	10/20/21 16:25	*
1,4-Dichlorobenzene	ND U	5.2	0.090	1	10/20/21 16:25	*
2,2-Dichloropropane	ND U	5.2	0.11	1	10/20/21 16:25	*
2-Butanone (MEK)	ND U	21	0.94	1	10/20/21 16:25	*
2-Chlorotoluene	ND U	21	0.13	1	10/20/21 16:25	*
2-Hexanone	ND U	21	0.97	1	10/20/21 16:25	*
4-Chlorotoluene	ND U	21	0.092	1	10/20/21 16:25	*
4-Isopropyltoluene	ND U	21	0.067	1	10/20/21 16:25	*
4-Methyl-2-pentanone (MIBK)	ND U	21	1.9	1	10/20/21 16:25	*
Acetone	11 J	21	3.1	1	10/20/21 16:25	*
Benzene	ND U	5.2	0.057	1	10/20/21 16:25	*
Bromobenzene	ND U	5.2	0.092	1	10/20/21 16:25	*
Bromochloromethane	ND U	5.2	0.25	1	10/20/21 16:25	*
Bromodichloromethane	ND U	5.2	0.17	1	10/20/21 16:25	*
Bromoform	ND U	5.2	0.15	1	10/20/21 16:25	*
Bromomethane	ND U	5.2	0.21	1	10/20/21 16:25	*
Carbon Disulfide	0.74 J	5.2	0.096	1	10/20/21 16:25	*
Carbon Tetrachloride	ND U	5.2	0.098	1	10/20/21 16:25	*
Chlorobenzene	ND U	5.2	0.068	1	10/20/21 16:25	*
Chloroethane	ND U	5.2	0.78	1	10/20/21 16:25	*
Chloroform	ND U	5.2	0.12	1	10/20/21 16:25	*
Chloromethane	ND U	5.2	0.19	1	10/20/21 16:25	*
Dibromochloromethane	ND U	5.2	0.19	1	10/20/21 16:25	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.2	0.30	1	10/20/21 16:25	*
Dichlorodifluoromethane	ND U	5.2	0.13	1	10/20/21 16:25	*
Ethylbenzene	ND U	5.2	0.098	1	10/20/21 16:25	*
Hexachlorobutadiene	ND U	21	0.42	1	10/20/21 16:25	*
Isopropylbenzene	ND U	21	0.085	1	10/20/21 16:25	*
Methylene Chloride	1.1 J	10	0.17	1	10/20/21 16:25	*
Naphthalene	ND U	21	0.14	1	10/20/21 16:25	*
Styrene	ND U	5.2	0.15	1	10/20/21 16:25	*
Tetrachloroethene (PCE)	ND U	5.2	0.17	1	10/20/21 16:25	*
Toluene	ND U	5.2	0.16	1	10/20/21 16:25	*
Trichloroethene (TCE)	ND U	5.2	0.16	1	10/20/21 16:25	*
Trichlorofluoromethane	ND U	5.2	0.089	1	10/20/21 16:25	*
Vinyl Chloride	ND U	5.2	0.19	1	10/20/21 16:25	*
cis-1,2-Dichloroethene	ND U	5.2	0.13	1	10/20/21 16:25	*
cis-1,3-Dichloropropene	ND U	5.2	0.14	1	10/20/21 16:25	*
m,p-Xylenes	ND U	5.2	0.11	1	10/20/21 16:25	*
n-Butylbenzene	ND U	21	0.072	1	10/20/21 16:25	*
n-Propylbenzene	ND U	21	0.14	1	10/20/21 16:25	*
o-Xylene	ND U	5.2	0.085	1	10/20/21 16:25	*
sec-Butylbenzene	ND U	21	0.078	1	10/20/21 16:25	*
tert-Butylbenzene	ND U	21	0.15	1	10/20/21 16:25	*
trans-1,2-Dichloroethene	ND U	5.2	0.13	1	10/20/21 16:25	*
trans-1,3-Dichloropropene	ND U	5.2	0.12	1	10/20/21 16:25	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	61 - 133	10/20/21 16:25	
Dibromofluoromethane	97	59 - 134	10/20/21 16:25	
Toluene-d8	100	77 - 122	10/20/21 16:25	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	4.8	0.11	1	10/20/21 16:46	*
1,1,1-Trichloroethane (TCA)	ND U	4.8	0.11	1	10/20/21 16:46	*
1,1,2,2-Tetrachloroethane	ND U	4.8	0.13	1	10/20/21 16:46	*
1,1,2-Trichloroethane	ND U	4.8	0.15	1	10/20/21 16:46	*
1,1-Dichloroethane	ND U	4.8	0.12	1	10/20/21 16:46	*
1,1-Dichloroethene	ND U	4.8	0.25	1	10/20/21 16:46	*
1,1-Dichloropropene	ND U	4.8	0.13	1	10/20/21 16:46	*
1,2,3-Trichlorobenzene	ND U	19	0.19	1	10/20/21 16:46	*
1,2,3-Trichloropropane	ND U	4.8	0.45	1	10/20/21 16:46	*
1,2,4-Trichlorobenzene	ND U	19	0.13	1	10/20/21 16:46	*
1,2,4-Trimethylbenzene	ND U	19	0.054	1	10/20/21 16:46	*
1,2-Dibromo-3-chloropropane	ND U	19	0.40	1	10/20/21 16:46	*
1,2-Dibromoethane (EDB)	ND U	19	0.094	1	10/20/21 16:46	*
1,2-Dichlorobenzene	ND U	4.8	0.077	1	10/20/21 16:46	*
1,2-Dichloroethane (EDC)	ND U	4.8	0.070	1	10/20/21 16:46	*
1,2-Dichloropropane	ND U	4.8	0.13	1	10/20/21 16:46	*
1,3,5-Trimethylbenzene	ND U	19	0.092	1	10/20/21 16:46	*
1,3-Dichlorobenzene	ND U	4.8	0.094	1	10/20/21 16:46	*
1,3-Dichloropropane	ND U	4.8	0.12	1	10/20/21 16:46	*
1,4-Dichlorobenzene	ND U	4.8	0.086	1	10/20/21 16:46	*
2,2-Dichloropropane	ND U	4.8	0.098	1	10/20/21 16:46	*
2-Butanone (MEK)	10 J	19	0.90	1	10/20/21 16:46	*
2-Chlorotoluene	ND U	19	0.12	1	10/20/21 16:46	*
2-Hexanone	ND U	19	0.93	1	10/20/21 16:46	*
4-Chlorotoluene	ND U	19	0.088	1	10/20/21 16:46	*
4-Isopropyltoluene	ND U	19	0.064	1	10/20/21 16:46	*
4-Methyl-2-pentanone (MIBK)	ND U	19	1.8	1	10/20/21 16:46	*
Acetone	66	19	2.9	1	10/20/21 16:46	*
Benzene	ND U	4.8	0.054	1	10/20/21 16:46	*
Bromobenzene	ND U	4.8	0.088	1	10/20/21 16:46	*
Bromochloromethane	ND U	4.8	0.24	1	10/20/21 16:46	*
Bromodichloromethane	ND U	4.8	0.16	1	10/20/21 16:46	*
Bromoform	ND U	4.8	0.14	1	10/20/21 16:46	*
Bromomethane	ND U	4.8	0.20	1	10/20/21 16:46	*
Carbon Disulfide	ND U	4.8	0.092	1	10/20/21 16:46	*
Carbon Tetrachloride	ND U	4.8	0.094	1	10/20/21 16:46	*
Chlorobenzene	ND U	4.8	0.065	1	10/20/21 16:46	*
Chloroethane	ND U	4.8	0.74	1	10/20/21 16:46	*
Chloroform	ND U	4.8	0.11	1	10/20/21 16:46	*
Chloromethane	ND U	4.8	0.18	1	10/20/21 16:46	*
Dibromochloromethane	ND U	4.8	0.18	1	10/20/21 16:46	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	4.8	0.28	1	10/20/21 16:46	*
Dichlorodifluoromethane	ND U	4.8	0.12	1	10/20/21 16:46	*
Ethylbenzene	ND U	4.8	0.094	1	10/20/21 16:46	*
Hexachlorobutadiene	ND U	19	0.40	1	10/20/21 16:46	*
Isopropylbenzene	ND U	19	0.081	1	10/20/21 16:46	*
Methylene Chloride	1.4 J	9.6	0.16	1	10/20/21 16:46	*
Naphthalene	ND U	19	0.13	1	10/20/21 16:46	*
Styrene	ND U	4.8	0.14	1	10/20/21 16:46	*
Tetrachloroethene (PCE)	ND U	4.8	0.16	1	10/20/21 16:46	*
Toluene	ND U	4.8	0.15	1	10/20/21 16:46	*
Trichloroethene (TCE)	ND U	4.8	0.15	1	10/20/21 16:46	*
Trichlorofluoromethane	ND U	4.8	0.085	1	10/20/21 16:46	*
Vinyl Chloride	ND U	4.8	0.18	1	10/20/21 16:46	*
cis-1,2-Dichloroethene	ND U	4.8	0.12	1	10/20/21 16:46	*
cis-1,3-Dichloropropene	ND U	4.8	0.13	1	10/20/21 16:46	*
m,p-Xylenes	ND U	4.8	0.10	1	10/20/21 16:46	*
n-Butylbenzene	ND U	19	0.069	1	10/20/21 16:46	*
n-Propylbenzene	ND U	19	0.13	1	10/20/21 16:46	*
o-Xylene	ND U	4.8	0.081	1	10/20/21 16:46	*
sec-Butylbenzene	ND U	19	0.074	1	10/20/21 16:46	*
tert-Butylbenzene	ND U	19	0.14	1	10/20/21 16:46	*
trans-1,2-Dichloroethene	ND U	4.8	0.12	1	10/20/21 16:46	*
trans-1,3-Dichloropropene	ND U	4.8	0.11	1	10/20/21 16:46	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	61 - 133	10/20/21 16:46	
Dibromofluoromethane	96	59 - 134	10/20/21 16:46	
Toluene-d8	99	77 - 122	10/20/21 16:46	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.3	0.12	1	10/20/21 17:07	*
1,1,1-Trichloroethane (TCA)	ND U	5.3	0.12	1	10/20/21 17:07	*
1,1,2,2-Tetrachloroethane	ND U	5.3	0.14	1	10/20/21 17:07	*
1,1,2-Trichloroethane	ND U	5.3	0.16	1	10/20/21 17:07	*
1,1-Dichloroethane	ND U	5.3	0.13	1	10/20/21 17:07	*
1,1-Dichloroethene	ND U	5.3	0.27	1	10/20/21 17:07	*
1,1-Dichloropropene	ND U	5.3	0.14	1	10/20/21 17:07	*
1,2,3-Trichlorobenzene	ND U	21	0.20	1	10/20/21 17:07	*
1,2,3-Trichloropropane	ND U	5.3	0.48	1	10/20/21 17:07	*
1,2,4-Trichlorobenzene	ND U	21	0.14	1	10/20/21 17:07	*
1,2,4-Trimethylbenzene	ND U	21	0.057	1	10/20/21 17:07	*
1,2-Dibromo-3-chloropropane	ND U	21	0.43	1	10/20/21 17:07	*
1,2-Dibromoethane (EDB)	ND U	21	0.099	1	10/20/21 17:07	*
1,2-Dichlorobenzene	ND U	5.3	0.081	1	10/20/21 17:07	*
1,2-Dichloroethane (EDC)	ND U	5.3	0.074	1	10/20/21 17:07	*
1,2-Dichloropropane	ND U	5.3	0.14	1	10/20/21 17:07	*
1,3,5-Trimethylbenzene	ND U	21	0.097	1	10/20/21 17:07	*
1,3-Dichlorobenzene	ND U	5.3	0.099	1	10/20/21 17:07	*
1,3-Dichloropropane	ND U	5.3	0.13	1	10/20/21 17:07	*
1,4-Dichlorobenzene	ND U	5.3	0.091	1	10/20/21 17:07	*
2,2-Dichloropropane	ND U	5.3	0.11	1	10/20/21 17:07	*
2-Butanone (MEK)	ND U	21	0.95	1	10/20/21 17:07	*
2-Chlorotoluene	ND U	21	0.13	1	10/20/21 17:07	*
2-Hexanone	ND U	21	0.98	1	10/20/21 17:07	*
4-Chlorotoluene	ND U	21	0.093	1	10/20/21 17:07	*
4-Isopropyltoluene	ND U	21	0.068	1	10/20/21 17:07	*
4-Methyl-2-pentanone (MIBK)	ND U	21	1.9	1	10/20/21 17:07	*
Acetone	18 J	21	3.1	1	10/20/21 17:07	*
Benzene	ND U	5.3	0.057	1	10/20/21 17:07	*
Bromobenzene	ND U	5.3	0.093	1	10/20/21 17:07	*
Bromochloromethane	ND U	5.3	0.26	1	10/20/21 17:07	*
Bromodichloromethane	ND U	5.3	0.17	1	10/20/21 17:07	*
Bromoform	ND U	5.3	0.15	1	10/20/21 17:07	*
Bromomethane	ND U	5.3	0.22	1	10/20/21 17:07	*
Carbon Disulfide	ND U	5.3	0.097	1	10/20/21 17:07	*
Carbon Tetrachloride	ND U	5.3	0.099	1	10/20/21 17:07	*
Chlorobenzene	ND U	5.3	0.069	1	10/20/21 17:07	*
Chloroethane	ND U	5.3	0.78	1	10/20/21 17:07	*
Chloroform	ND U	5.3	0.12	1	10/20/21 17:07	*
Chloromethane	ND U	5.3	0.19	1	10/20/21 17:07	*
Dibromochloromethane	ND U	5.3	0.19	1	10/20/21 17:07	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.3	0.30	1	10/20/21 17:07	*
Dichlorodifluoromethane	ND U	5.3	0.13	1	10/20/21 17:07	*
Ethylbenzene	ND U	5.3	0.099	1	10/20/21 17:07	*
Hexachlorobutadiene	ND U	21	0.43	1	10/20/21 17:07	*
Isopropylbenzene	ND U	21	0.086	1	10/20/21 17:07	*
Methylene Chloride	1.2 J	11	0.17	1	10/20/21 17:07	*
Naphthalene	ND U	21	0.14	1	10/20/21 17:07	*
Styrene	ND U	5.3	0.15	1	10/20/21 17:07	*
Tetrachloroethene (PCE)	ND U	5.3	0.17	1	10/20/21 17:07	*
Toluene	ND U	5.3	0.16	1	10/20/21 17:07	*
Trichloroethene (TCE)	ND U	5.3	0.16	1	10/20/21 17:07	*
Trichlorofluoromethane	ND U	5.3	0.090	1	10/20/21 17:07	*
Vinyl Chloride	ND U	5.3	0.19	1	10/20/21 17:07	*
cis-1,2-Dichloroethene	ND U	5.3	0.13	1	10/20/21 17:07	*
cis-1,3-Dichloropropene	ND U	5.3	0.14	1	10/20/21 17:07	*
m,p-Xylenes	ND U	5.3	0.11	1	10/20/21 17:07	*
n-Butylbenzene	ND U	21	0.073	1	10/20/21 17:07	*
n-Propylbenzene	ND U	21	0.14	1	10/20/21 17:07	*
o-Xylene	ND U	5.3	0.086	1	10/20/21 17:07	*
sec-Butylbenzene	ND U	21	0.078	1	10/20/21 17:07	*
tert-Butylbenzene	ND U	21	0.15	1	10/20/21 17:07	*
trans-1,2-Dichloroethene	ND U	5.3	0.13	1	10/20/21 17:07	*
trans-1,3-Dichloropropene	ND U	5.3	0.12	1	10/20/21 17:07	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	61 - 133	10/20/21 17:07	
Dibromofluoromethane	98	59 - 134	10/20/21 17:07	
Toluene-d8	100	77 - 122	10/20/21 17:07	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		61-133	59-134	77-122
B-37 0-10 C	K2112045-006	96	97	101
B-34 0-10 C	K2112045-014	96	98	99
B-37 10-23 C	K2112045-022	94	97	100
B-34 10-23 C	K2112045-023	91	96	99
B-29 0-12 C	K2112045-024	96	98	100
Method Blank	KQ2120759-07	97	96	99
Lab Control Sample	KQ2120759-05	99	102	100
Duplicate Lab Control Sample	KQ2120759-06	100	101	102

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120759-07

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.0	0.11	1	10/20/21 15:22	
1,1,1-Trichloroethane (TCA)	ND U	5.0	0.11	1	10/20/21 15:22	
1,1,2,2-Tetrachloroethane	ND U	5.0	0.13	1	10/20/21 15:22	
1,1,2-Trichloroethane	ND U	5.0	0.15	1	10/20/21 15:22	
1,1-Dichloroethane	ND U	5.0	0.12	1	10/20/21 15:22	
1,1-Dichloroethene	ND U	5.0	0.25	1	10/20/21 15:22	
1,1-Dichloropropene	ND U	5.0	0.13	1	10/20/21 15:22	
1,2,3-Trichlorobenzene	ND U	20	0.19	1	10/20/21 15:22	
1,2,3-Trichloropropane	ND U	5.0	0.45	1	10/20/21 15:22	
1,2,4-Trichlorobenzene	ND U	20	0.13	1	10/20/21 15:22	
1,2,4-Trimethylbenzene	ND U	20	0.054	1	10/20/21 15:22	
1,2-Dibromo-3-chloropropane	ND U	20	0.40	1	10/20/21 15:22	
1,2-Dibromoethane (EDB)	ND U	20	0.094	1	10/20/21 15:22	
1,2-Dichlorobenzene	ND U	5.0	0.077	1	10/20/21 15:22	
1,2-Dichloroethane (EDC)	ND U	5.0	0.070	1	10/20/21 15:22	
1,2-Dichloropropane	ND U	5.0	0.13	1	10/20/21 15:22	
1,3,5-Trimethylbenzene	ND U	20	0.092	1	10/20/21 15:22	
1,3-Dichlorobenzene	ND U	5.0	0.094	1	10/20/21 15:22	
1,3-Dichloropropane	ND U	5.0	0.12	1	10/20/21 15:22	
1,4-Dichlorobenzene	ND U	5.0	0.086	1	10/20/21 15:22	
2,2-Dichloropropane	ND U	5.0	0.098	1	10/20/21 15:22	
2-Butanone (MEK)	ND U	20	0.90	1	10/20/21 15:22	
2-Chlorotoluene	ND U	20	0.12	1	10/20/21 15:22	
2-Hexanone	ND U	20	0.93	1	10/20/21 15:22	
4-Chlorotoluene	ND U	20	0.088	1	10/20/21 15:22	
4-Isopropyltoluene	ND U	20	0.064	1	10/20/21 15:22	
4-Methyl-2-pentanone (MIBK)	ND U	20	1.8	1	10/20/21 15:22	
Acetone	4.5 J	20	2.9	1	10/20/21 15:22	
Benzene	ND U	5.0	0.054	1	10/20/21 15:22	
Bromobenzene	ND U	5.0	0.088	1	10/20/21 15:22	
Bromochloromethane	ND U	5.0	0.24	1	10/20/21 15:22	
Bromodichloromethane	ND U	5.0	0.16	1	10/20/21 15:22	
Bromoform	ND U	5.0	0.14	1	10/20/21 15:22	
Bromomethane	ND U	5.0	0.20	1	10/20/21 15:22	
Carbon Disulfide	ND U	5.0	0.092	1	10/20/21 15:22	
Carbon Tetrachloride	ND U	5.0	0.094	1	10/20/21 15:22	
Chlorobenzene	ND U	5.0	0.065	1	10/20/21 15:22	
Chloroethane	ND U	5.0	0.74	1	10/20/21 15:22	
Chloroform	ND U	5.0	0.11	1	10/20/21 15:22	
Chloromethane	ND U	5.0	0.18	1	10/20/21 15:22	
Dibromochloromethane	ND U	5.0	0.18	1	10/20/21 15:22	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120759-07

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.0	0.28	1	10/20/21 15:22	
Dichlorodifluoromethane	ND U	5.0	0.12	1	10/20/21 15:22	
Ethylbenzene	ND U	5.0	0.094	1	10/20/21 15:22	
Hexachlorobutadiene	ND U	20	0.40	1	10/20/21 15:22	
Isopropylbenzene	ND U	20	0.081	1	10/20/21 15:22	
Methylene Chloride	0.92 J	10	0.16	1	10/20/21 15:22	
Naphthalene	ND U	20	0.13	1	10/20/21 15:22	
Styrene	ND U	5.0	0.14	1	10/20/21 15:22	
Tetrachloroethene (PCE)	ND U	5.0	0.16	1	10/20/21 15:22	
Toluene	ND U	5.0	0.15	1	10/20/21 15:22	
Trichloroethene (TCE)	ND U	5.0	0.15	1	10/20/21 15:22	
Trichlorofluoromethane	ND U	5.0	0.085	1	10/20/21 15:22	
Vinyl Chloride	ND U	5.0	0.18	1	10/20/21 15:22	
cis-1,2-Dichloroethene	ND U	5.0	0.12	1	10/20/21 15:22	
cis-1,3-Dichloropropene	ND U	5.0	0.13	1	10/20/21 15:22	
m,p-Xylenes	ND U	5.0	0.10	1	10/20/21 15:22	
n-Butylbenzene	ND U	20	0.069	1	10/20/21 15:22	
n-Propylbenzene	ND U	20	0.13	1	10/20/21 15:22	
o-Xylene	ND U	5.0	0.081	1	10/20/21 15:22	
sec-Butylbenzene	ND U	20	0.074	1	10/20/21 15:22	
tert-Butylbenzene	ND U	20	0.14	1	10/20/21 15:22	
trans-1,2-Dichloroethene	ND U	5.0	0.12	1	10/20/21 15:22	
trans-1,3-Dichloropropene	ND U	5.0	0.11	1	10/20/21 15:22	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	61 - 133	10/20/21 15:22	
Dibromofluoromethane	96	59 - 134	10/20/21 15:22	
Toluene-d8	99	77 - 122	10/20/21 15:22	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 10/20/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 743309

Analyte Name	Lab Control Sample KQ2120759-05			Duplicate Lab Control Sample KQ2120759-06			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	45.5	50.0	91	45.4	50.0	91	71-119	<1	40
1,1,1-Trichloroethane (TCA)	47.6	50.0	95	47.1	50.0	94	59-146	1	40
1,1,2,2-Tetrachloroethane	36.6	50.0	73	37.6	50.0	75	60-128	3	40
1,1,2-Trichloroethane	40.9	50.0	82	41.4	50.0	83	72-118	1	40
1,1-Dichloroethane	42.1	50.0	84	42.3	50.0	85	59-137	<1	40
1,1-Dichloroethene	50.1	50.0	100	49.3	50.0	99	64-152	2	40
1,1-Dichloropropene	45.0	50.0	90	43.8	50.0	88	52-142	3	40
1,2,3-Trichlorobenzene	41.4	50.0	83	40.4	50.0	81	52-138	2	40
1,2,3-Trichloropropane	38.2	50.0	76	39.1	50.0	78	53-134	2	40
1,2,4-Trichlorobenzene	43.3	50.0	87	42.5	50.0	85	57-136	2	40
1,2,4-Trimethylbenzene	43.6	50.0	87	42.6	50.0	85	65-132	2	40
1,2-Dibromo-3-chloropropane	42.7	50.0	85	45.6	50.0	91	55-127	7	40
1,2-Dibromoethane (EDB)	46.0	50.0	92	46.5	50.0	93	71-116	1	40
1,2-Dichlorobenzene	42.0	50.0	84	40.7	50.0	81	67-124	3	40
1,2-Dichloroethane (EDC)	42.9	50.0	86	43.5	50.0	87	65-121	1	40
1,2-Dichloropropane	39.9	50.0	80	40.0	50.0	80	71-121	<1	40
1,3,5-Trimethylbenzene	43.1	50.0	86	42.3	50.0	85	66-132	2	40
1,3-Dichlorobenzene	41.2	50.0	82	40.1	50.0	80	69-128	3	40
1,3-Dichloropropane	42.0	50.0	84	43.0	50.0	86	72-118	2	40
1,4-Dichlorobenzene	40.3	50.0	81	39.3	50.0	79	69-125	2	40
2,2-Dichloropropane	47.7	50.0	95	47.6	50.0	95	50-138	<1	40
2-Butanone (MEK)	77.2	100	77	78.3	100	78	54-116	1	40
2-Chlorotoluene	40.9	50.0	82	40.5	50.0	81	65-129	1	40
2-Hexanone	82.0	100	82	87.1	100	87	67-121	6	40
4-Chlorotoluene	41.3	50.0	83	40.5	50.0	81	51-134	2	40
4-Isopropyltoluene	45.1	50.0	90	43.4	50.0	87	61-132	4	40
4-Methyl-2-pentanone (MIBK)	74.0	100	74	76.4	100	76	69-126	3	40
Acetone	80.2	100	80	81.7	100	82	32-135	2	40
Benzene	41.6	50.0	83	41.0	50.0	82	68-122	1	40
Bromobenzene	43.5	50.0	87	42.4	50.0	85	71-124	2	40
Bromochloromethane	45.3	50.0	91	46.4	50.0	93	65-131	2	40
Bromodichloromethane	39.2	50.0	78	39.7	50.0	79	61-143	1	40
Bromoform	44.6	50.0	89	44.0	50.0	88	62-134	1	40
Bromomethane	48.7	50.0	97	49.8	50.0	100	22-180	2	40
Carbon Disulfide	49.2	50.0	98	49.1	50.0	98	55-141	<1	40
Carbon Tetrachloride	50.4	50.0	101	48.4	50.0	97	51-135	4	40
Chlorobenzene	43.0	50.0	86	42.7	50.0	85	70-116	<1	40
Chloroethane	48.7	50.0	97	48.9	50.0	98	51-122	<1	40
Chloroform	43.4	50.0	87	44.1	50.0	88	61-137	2	40
Chloromethane	47.4	50.0	95	48.1	50.0	96	37-146	1	40
cis-1,2-Dichloroethene	43.1	50.0	86	43.2	50.0	86	62-138	<1	40

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 10/20/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 743309

Analyte Name	Lab Control Sample KQ2120759-05			Duplicate Lab Control Sample KQ2120759-06			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	40.6	50.0	81	40.9	50.0	82	58-138	<1	40
Dibromochloromethane	45.8	50.0	92	46.4	50.0	93	69-120	1	40
Dibromomethane	42.3	50.0	85	42.5	50.0	85	68-125	<1	40
Dichlorodifluoromethane	59.9	50.0	120	58.4	50.0	117	38-160	2	40
Ethylbenzene	46.7	50.0	93	45.6	50.0	91	70-118	3	40
Hexachlorobutadiene	50.8	50.0	102	47.7	50.0	95	54-140	6	40
Isopropylbenzene	46.1	50.0	92	44.8	50.0	90	67-133	3	40
m,p-Xylenes	91.1	100	91	90.6	100	91	69-127	<1	40
Methylene Chloride	42.7	50.0	85	43.4	50.0	87	65-122	2	40
Naphthalene	42.0	50.0	84	42.1	50.0	84	54-134	<1	40
n-Butylbenzene	45.6	50.0	91	44.0	50.0	88	53-139	3	40
n-Propylbenzene	44.6	50.0	89	43.3	50.0	87	57-143	3	40
o-Xylene	44.5	50.0	89	43.9	50.0	88	69-124	1	40
sec-Butylbenzene	43.3	50.0	87	41.9	50.0	84	55-146	3	40
Styrene	45.2	50.0	90	51.9	50.0	104	62-135	14	40
tert-Butylbenzene	43.9	50.0	88	42.5	50.0	85	67-131	3	40
Tetrachloroethene (PCE)	47.0	50.0	94	45.6	50.0	91	66-126	3	40
Toluene	42.0	50.0	84	41.7	50.0	83	75-117	<1	40
trans-1,2-Dichloroethene	49.4	50.0	99	48.7	50.0	97	63-127	2	40
trans-1,3-Dichloropropene	43.1	50.0	86	43.9	50.0	88	63-121	2	40
Trichloroethene (TCE)	43.9	50.0	88	43.3	50.0	87	67-126	1	40
Trichlorofluoromethane	54.9	50.0	110	52.6	50.0	105	51-140	4	40
Vinyl Chloride	50.8	50.0	102	50.9	50.0	102	54-127	<1	40



Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B37
Lab Code: K2112045-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	17 J	20	3.3	1	10/20/21 18:29	
Benzene	0.090 J	0.50	0.062	1	10/20/21 18:29	
Bromobenzene	ND U	2.0	0.12	1	10/20/21 18:29	
Bromochloromethane	ND U	0.50	0.16	1	10/20/21 18:29	
Bromodichloromethane	ND U	0.50	0.091	1	10/20/21 18:29	*
Bromoform	ND U	0.50	0.16	1	10/20/21 18:29	
Bromomethane	ND U	0.50	0.16	1	10/20/21 18:29	
2-Butanone (MEK)	ND U	20	1.9	1	10/20/21 18:29	
n-Butylbenzene	ND U	4.0	0.054	1	10/20/21 18:29	
sec-Butylbenzene	ND U	2.0	0.062	1	10/20/21 18:29	
tert-Butylbenzene	ND U	2.0	0.059	1	10/20/21 18:29	
Carbon Disulfide	0.72	0.50	0.069	1	10/20/21 18:29	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/20/21 18:29	*
Chlorobenzene	ND U	0.50	0.11	1	10/20/21 18:29	
Chloroethane	ND U	0.50	0.16	1	10/20/21 18:29	
Chloroform	ND U	0.50	0.072	1	10/20/21 18:29	
Chloromethane	0.080 J	0.50	0.068	1	10/20/21 18:29	
2-Chlorotoluene	ND U	2.0	0.10	1	10/20/21 18:29	
4-Chlorotoluene	ND U	2.0	0.13	1	10/20/21 18:29	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/20/21 18:29	
Dibromochloromethane	ND U	0.50	0.14	1	10/20/21 18:29	*
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/20/21 18:29	
Dibromomethane	ND U	0.50	0.15	1	10/20/21 18:29	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/20/21 18:29	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/20/21 18:29	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/20/21 18:29	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/20/21 18:29	*
1,1-Dichloroethane	ND U	0.50	0.077	1	10/20/21 18:29	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/20/21 18:29	
1,1-Dichloroethene	ND U	0.50	0.080	1	10/20/21 18:29	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/20/21 18:29	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/20/21 18:29	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/20/21 18:29	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/20/21 18:29	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/20/21 18:29	
1,1-Dichloropropene	ND U	0.50	0.089	1	10/20/21 18:29	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/20/21 18:29	*
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/20/21 18:29	
Ethylbenzene	ND U	0.50	0.050	1	10/20/21 18:29	
Hexachlorobutadiene	ND U	2.0	0.11	1	10/20/21 18:29	
2-Hexanone	ND U	20	2.7	1	10/20/21 18:29	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B37
Lab Code: K2112045-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/20/21 18:29	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/20/21 18:29	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/20/21 18:29	
Methylene Chloride	ND U	2.0	0.10	1	10/20/21 18:29	
Naphthalene	ND U	2.0	0.088	1	10/20/21 18:29	
n-Propylbenzene	ND U	2.0	0.054	1	10/20/21 18:29	
Styrene	ND U	0.50	0.089	1	10/20/21 18:29	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/20/21 18:29	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/20/21 18:29	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/20/21 18:29	
Toluene	1.2	0.50	0.054	1	10/20/21 18:29	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	10/20/21 18:29	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	10/20/21 18:29	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/20/21 18:29	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/20/21 18:29	*
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/20/21 18:29	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/20/21 18:29	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/20/21 18:29	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/20/21 18:29	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/20/21 18:29	
Vinyl Chloride	ND U	0.50	0.075	1	10/20/21 18:29	
o-Xylene	ND U	0.50	0.074	1	10/20/21 18:29	
m,p-Xylenes	ND U	0.50	0.11	1	10/20/21 18:29	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	79	68 - 117	10/20/21 18:29	
Dibromofluoromethane	101	73 - 122	10/20/21 18:29	
Toluene-d8	102	65 - 144	10/20/21 18:29	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B34
Lab Code: K2112045-015

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	10 J	20	3.3	1	10/20/21 18:55	
Benzene	ND U	0.50	0.062	1	10/20/21 18:55	
Bromobenzene	ND U	2.0	0.12	1	10/20/21 18:55	
Bromochloromethane	ND U	0.50	0.16	1	10/20/21 18:55	
Bromodichloromethane	ND U	0.50	0.091	1	10/20/21 18:55	*
Bromoform	ND U	0.50	0.16	1	10/20/21 18:55	
Bromomethane	ND U	0.50	0.16	1	10/20/21 18:55	
2-Butanone (MEK)	ND U	20	1.9	1	10/20/21 18:55	
n-Butylbenzene	ND U	4.0	0.054	1	10/20/21 18:55	
sec-Butylbenzene	ND U	2.0	0.062	1	10/20/21 18:55	
tert-Butylbenzene	ND U	2.0	0.059	1	10/20/21 18:55	
Carbon Disulfide	0.41 J	0.50	0.069	1	10/20/21 18:55	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/20/21 18:55	*
Chlorobenzene	ND U	0.50	0.11	1	10/20/21 18:55	
Chloroethane	ND U	0.50	0.16	1	10/20/21 18:55	
Chloroform	ND U	0.50	0.072	1	10/20/21 18:55	
Chloromethane	0.070 J	0.50	0.068	1	10/20/21 18:55	
2-Chlorotoluene	ND U	2.0	0.10	1	10/20/21 18:55	
4-Chlorotoluene	ND U	2.0	0.13	1	10/20/21 18:55	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/20/21 18:55	
Dibromochloromethane	ND U	0.50	0.14	1	10/20/21 18:55	*
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/20/21 18:55	
Dibromomethane	ND U	0.50	0.15	1	10/20/21 18:55	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/20/21 18:55	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/20/21 18:55	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/20/21 18:55	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/20/21 18:55	*
1,1-Dichloroethane	ND U	0.50	0.077	1	10/20/21 18:55	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/20/21 18:55	
1,1-Dichloroethene	ND U	0.50	0.080	1	10/20/21 18:55	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/20/21 18:55	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/20/21 18:55	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/20/21 18:55	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/20/21 18:55	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/20/21 18:55	
1,1-Dichloropropene	ND U	0.50	0.089	1	10/20/21 18:55	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/20/21 18:55	*
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/20/21 18:55	
Ethylbenzene	ND U	0.50	0.050	1	10/20/21 18:55	
Hexachlorobutadiene	ND U	2.0	0.11	1	10/20/21 18:55	
2-Hexanone	ND U	20	2.7	1	10/20/21 18:55	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B34
Lab Code: K2112045-015

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/20/21 18:55	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/20/21 18:55	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/20/21 18:55	
Methylene Chloride	ND U	2.0	0.10	1	10/20/21 18:55	
Naphthalene	ND U	2.0	0.088	1	10/20/21 18:55	
n-Propylbenzene	ND U	2.0	0.054	1	10/20/21 18:55	
Styrene	ND U	0.50	0.089	1	10/20/21 18:55	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/20/21 18:55	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/20/21 18:55	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/20/21 18:55	
Toluene	0.46 J	0.50	0.054	1	10/20/21 18:55	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	10/20/21 18:55	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	10/20/21 18:55	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/20/21 18:55	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/20/21 18:55	*
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/20/21 18:55	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/20/21 18:55	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/20/21 18:55	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/20/21 18:55	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/20/21 18:55	
Vinyl Chloride	ND U	0.50	0.075	1	10/20/21 18:55	
o-Xylene	ND U	0.50	0.074	1	10/20/21 18:55	
m,p-Xylenes	ND U	0.50	0.11	1	10/20/21 18:55	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	84	68 - 117	10/20/21 18:55	
Dibromofluoromethane	99	73 - 122	10/20/21 18:55	
Toluene-d8	102	65 - 144	10/20/21 18:55	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B29
Lab Code: K2112045-020

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	6.3 J	20	3.3	1	10/20/21 19:22	
Benzene	ND U	0.50	0.062	1	10/20/21 19:22	
Bromobenzene	ND U	2.0	0.12	1	10/20/21 19:22	
Bromochloromethane	ND U	0.50	0.16	1	10/20/21 19:22	
Bromodichloromethane	ND U	0.50	0.091	1	10/20/21 19:22	*
Bromoform	ND U	0.50	0.16	1	10/20/21 19:22	
Bromomethane	ND U	0.50	0.16	1	10/20/21 19:22	
2-Butanone (MEK)	ND U	20	1.9	1	10/20/21 19:22	
n-Butylbenzene	ND U	4.0	0.054	1	10/20/21 19:22	
sec-Butylbenzene	ND U	2.0	0.062	1	10/20/21 19:22	
tert-Butylbenzene	ND U	2.0	0.059	1	10/20/21 19:22	
Carbon Disulfide	0.25 J	0.50	0.069	1	10/20/21 19:22	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/20/21 19:22	*
Chlorobenzene	ND U	0.50	0.11	1	10/20/21 19:22	
Chloroethane	ND U	0.50	0.16	1	10/20/21 19:22	
Chloroform	ND U	0.50	0.072	1	10/20/21 19:22	
Chloromethane	ND U	0.50	0.068	1	10/20/21 19:22	
2-Chlorotoluene	ND U	2.0	0.10	1	10/20/21 19:22	
4-Chlorotoluene	ND U	2.0	0.13	1	10/20/21 19:22	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/20/21 19:22	
Dibromochloromethane	ND U	0.50	0.14	1	10/20/21 19:22	*
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/20/21 19:22	
Dibromomethane	ND U	0.50	0.15	1	10/20/21 19:22	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/20/21 19:22	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/20/21 19:22	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/20/21 19:22	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/20/21 19:22	*
1,1-Dichloroethane	ND U	0.50	0.077	1	10/20/21 19:22	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/20/21 19:22	
1,1-Dichloroethene	ND U	0.50	0.080	1	10/20/21 19:22	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/20/21 19:22	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/20/21 19:22	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/20/21 19:22	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/20/21 19:22	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/20/21 19:22	
1,1-Dichloropropene	ND U	0.50	0.089	1	10/20/21 19:22	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/20/21 19:22	*
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/20/21 19:22	
Ethylbenzene	ND U	0.50	0.050	1	10/20/21 19:22	
Hexachlorobutadiene	ND U	2.0	0.11	1	10/20/21 19:22	
2-Hexanone	ND U	20	2.7	1	10/20/21 19:22	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B29
Lab Code: K2112045-020

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/20/21 19:22	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/20/21 19:22	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/20/21 19:22	
Methylene Chloride	ND U	2.0	0.10	1	10/20/21 19:22	
Naphthalene	ND U	2.0	0.088	1	10/20/21 19:22	
n-Propylbenzene	ND U	2.0	0.054	1	10/20/21 19:22	
Styrene	ND U	0.50	0.089	1	10/20/21 19:22	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/20/21 19:22	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/20/21 19:22	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/20/21 19:22	
Toluene	0.13 J	0.50	0.054	1	10/20/21 19:22	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	10/20/21 19:22	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	10/20/21 19:22	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/20/21 19:22	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/20/21 19:22	*
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/20/21 19:22	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/20/21 19:22	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/20/21 19:22	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/20/21 19:22	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/20/21 19:22	
Vinyl Chloride	ND U	0.50	0.075	1	10/20/21 19:22	
o-Xylene	ND U	0.50	0.074	1	10/20/21 19:22	
m,p-Xylenes	ND U	0.50	0.11	1	10/20/21 19:22	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	83	68 - 117	10/20/21 19:22	
Dibromofluoromethane	98	73 - 122	10/20/21 19:22	
Toluene-d8	99	65 - 144	10/20/21 19:22	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
B37	K2112045-007	79	101	102
B34	K2112045-015	84	99	102
B29	K2112045-020	83	98	99
Method Blank	KQ2121203-05	81	100	103
Lab Control Sample	KQ2121203-03	89	93	101
Duplicate Lab Control Sample	KQ2121203-04	88	93	100

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121203-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	ND U	20	3.3	1	10/20/21 12:17	
Benzene	ND U	0.50	0.062	1	10/20/21 12:17	
Bromobenzene	ND U	2.0	0.12	1	10/20/21 12:17	
Bromochloromethane	ND U	0.50	0.16	1	10/20/21 12:17	
Bromodichloromethane	ND U	0.50	0.091	1	10/20/21 12:17	
Bromoform	ND U	0.50	0.16	1	10/20/21 12:17	
Bromomethane	ND U	0.50	0.16	1	10/20/21 12:17	
2-Butanone (MEK)	ND U	20	1.9	1	10/20/21 12:17	
n-Butylbenzene	ND U	4.0	0.054	1	10/20/21 12:17	
sec-Butylbenzene	ND U	2.0	0.062	1	10/20/21 12:17	
tert-Butylbenzene	ND U	2.0	0.059	1	10/20/21 12:17	
Carbon Disulfide	0.14 J	0.50	0.069	1	10/20/21 12:17	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/20/21 12:17	
Chlorobenzene	ND U	0.50	0.11	1	10/20/21 12:17	
Chloroethane	ND U	0.50	0.16	1	10/20/21 12:17	
Chloroform	ND U	0.50	0.072	1	10/20/21 12:17	
Chloromethane	ND U	0.50	0.068	1	10/20/21 12:17	
2-Chlorotoluene	ND U	2.0	0.10	1	10/20/21 12:17	
4-Chlorotoluene	ND U	2.0	0.13	1	10/20/21 12:17	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/20/21 12:17	
Dibromochloromethane	ND U	0.50	0.14	1	10/20/21 12:17	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/20/21 12:17	
Dibromomethane	ND U	0.50	0.15	1	10/20/21 12:17	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/20/21 12:17	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/20/21 12:17	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/20/21 12:17	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/20/21 12:17	
1,1-Dichloroethane	ND U	0.50	0.077	1	10/20/21 12:17	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/20/21 12:17	
1,1-Dichloroethene	ND U	0.50	0.080	1	10/20/21 12:17	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/20/21 12:17	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/20/21 12:17	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/20/21 12:17	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/20/21 12:17	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/20/21 12:17	
1,1-Dichloropropene	ND U	0.50	0.089	1	10/20/21 12:17	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/20/21 12:17	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/20/21 12:17	
Ethylbenzene	ND U	0.50	0.050	1	10/20/21 12:17	
Hexachlorobutadiene	0.20 J	2.0	0.11	1	10/20/21 12:17	
2-Hexanone	ND U	20	2.7	1	10/20/21 12:17	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121203-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/20/21 12:17	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/20/21 12:17	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/20/21 12:17	
Methylene Chloride	0.15 J	2.0	0.10	1	10/20/21 12:17	
Naphthalene	0.28 J	2.0	0.088	1	10/20/21 12:17	
n-Propylbenzene	ND U	2.0	0.054	1	10/20/21 12:17	
Styrene	ND U	0.50	0.089	1	10/20/21 12:17	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/20/21 12:17	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/20/21 12:17	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/20/21 12:17	
Toluene	ND U	0.50	0.054	1	10/20/21 12:17	
1,2,3-Trichlorobenzene	0.58 J	2.0	0.11	1	10/20/21 12:17	
1,2,4-Trichlorobenzene	0.18 J	2.0	0.096	1	10/20/21 12:17	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/20/21 12:17	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/20/21 12:17	
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/20/21 12:17	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/20/21 12:17	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/20/21 12:17	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/20/21 12:17	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/20/21 12:17	
Vinyl Chloride	ND U	0.50	0.075	1	10/20/21 12:17	
o-Xylene	ND U	0.50	0.074	1	10/20/21 12:17	
m,p-Xylenes	ND U	0.50	0.11	1	10/20/21 12:17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	10/20/21 12:17	
Dibromofluoromethane	100	73 - 122	10/20/21 12:17	
Toluene-d8	103	65 - 144	10/20/21 12:17	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 10/20/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 743154

Analyte Name	Lab Control Sample KQ2121203-03			Duplicate Lab Control Sample KQ2121203-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	11.0	10.0	110	10.4	10.0	104	66-124	6	30
1,1,1-Trichloroethane (TCA)	12.1	10.0	121	11.0	10.0	110	59-136	9	30
1,1,2,2-Tetrachloroethane	9.73	10.0	97	9.49	10.0	95	70-127	2	30
1,1,2-Trichloroethane	9.90	10.0	99	9.58	10.0	96	74-118	3	30
1,1-Dichloroethane	12.2	10.0	122	10.9	10.0	109	68-132	11	30
1,1-Dichloroethene	10.1	10.0	101	9.11	10.0	91	66-129	10	30
1,1-Dichloropropene	11.2	10.0	112	10.6	10.0	106	59-134	6	30
1,2,3-Trichlorobenzene	9.11	10.0	91	9.01	10.0	90	68-120	1	30
1,2,3-Trichloropropane	9.62	10.0	96	9.89	10.0	99	69-123	3	30
1,2,4-Trichlorobenzene	9.43	10.0	94	8.78	10.0	88	58-126	7	30
1,2,4-Trimethylbenzene	10.2	10.0	102	9.39	10.0	94	63-122	8	30
1,2-Dibromo-3-chloropropane	10.4	10.0	104	9.39	10.0	94	55-132	10	30
1,2-Dibromoethane (EDB)	9.58	10.0	96	9.00	10.0	90	74-118	6	30
1,2-Dichlorobenzene	9.93	10.0	99	9.33	10.0	93	72-115	6	30
1,2-Dichloroethane (EDC)	11.7	10.0	117	11.1	10.0	111	56-142	5	30
1,2-Dichloropropane	11.3	10.0	113	10.6	10.0	106	67-126	7	30
1,3,5-Trimethylbenzene	9.96	10.0	100	9.16	10.0	92	62-126	8	30
1,3-Dichlorobenzene	9.69	10.0	97	9.28	10.0	93	70-116	4	30
1,3-Dichloropropane	9.98	10.0	100	10.2	10.0	102	75-116	2	30
1,4-Dichlorobenzene	9.79	10.0	98	9.24	10.0	92	73-115	6	30
2,2-Dichloropropane	11.7	10.0	117	11.1	10.0	111	37-145	6	30
2-Butanone (MEK)	61.6	50.0	123	56.4	50.0	113	71-149	9	30
2-Chlorotoluene	10.1	10.0	101	9.27	10.0	93	55-131	9	30
2-Hexanone	49.9	50.0	100	48.5	50.0	97	59-131	3	30
4-Chlorotoluene	10.2	10.0	102	9.41	10.0	94	66-121	8	30
4-Isopropyltoluene	10.4	10.0	104	9.52	10.0	95	61-128	9	30
4-Methyl-2-pentanone (MIBK)	56.2	50.0	112	53.6	50.0	107	64-134	5	30
Acetone	57.3	50.0	115	53.7	50.0	107	68-135	6	30
Benzene	11.3	10.0	113	10.6	10.0	106	69-124	7	30
Bromobenzene	10.1	10.0	101	9.24	10.0	92	72-116	9	30
Bromochloromethane	11.3	10.0	113	10.4	10.0	104	75-131	8	30
Bromodichloromethane	12.2	10.0	122	11.4	10.0	114	63-129	7	30
Bromoform	10.9	10.0	109	10.6	10.0	106	52-144	3	30
Bromomethane	8.07	10.0	81	7.67	10.0	77	35-113	5	30
Carbon Disulfide	21.4	20.0	107	20.3	20.0	102	46-144	5	30
Carbon Tetrachloride	12.8	10.0	128	11.4	10.0	114	55-140	11	30
Chlorobenzene	10.0	10.0	100	9.63	10.0	96	72-116	4	30
Chloroethane	12.4	10.0	124	11.4	10.0	114	58-134	8	30
Chloroform	11.7	10.0	117	10.6	10.0	106	70-129	10	30
Chloromethane	10.6	10.0	106	10.2	10.0	102	34-130	4	30
cis-1,2-Dichloroethene	10.9	10.0	109	10.2	10.0	102	71-118	6	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 10/20/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 743154

Analyte Name	Lab Control Sample KQ2121203-03			Duplicate Lab Control Sample KQ2121203-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	12.5	10.0	125	11.5	10.0	115	62-132	9	30
Dibromochloromethane	11.7	10.0	117	11.1	10.0	111	67-126	6	30
Dibromomethane	10.3	10.0	103	10.0	10.0	100	69-128	3	30
Dichlorodifluoromethane	11.2	10.0	112	10.7	10.0	107	32-124	5	30
Ethylbenzene	9.28	10.0	93	9.32	10.0	93	67-121	<1	30
Hexachlorobutadiene	11.7	10.0	117	10.6	10.0	106	57-119	10	30
Isopropylbenzene	9.83	10.0	98	9.53	10.0	95	67-129	3	30
m,p-Xylenes	19.4	20.0	97	18.8	20.0	94	69-121	3	30
Methylene Chloride	11.2	10.0	112	10.6	10.0	106	71-122	6	30
Naphthalene	8.18	10.0	82	8.22	10.0	82	64-126	<1	30
n-Butylbenzene	9.71	10.0	97	9.00	10.0	90	55-130	8	30
n-Propylbenzene	10.0	10.0	100	9.32	10.0	93	61-124	7	30
o-Xylene	9.64	10.0	96	9.27	10.0	93	71-119	4	30
sec-Butylbenzene	9.97	10.0	100	9.15	10.0	92	59-128	9	30
Styrene	9.70	10.0	97	9.33	10.0	93	74-121	4	30
tert-Butylbenzene	9.67	10.0	97	8.84	10.0	88	61-127	9	30
Tetrachloroethene (PCE)	10.3	10.0	103	9.72	10.0	97	62-126	6	30
Toluene	11.4	10.0	114	10.8	10.0	108	69-124	6	30
trans-1,2-Dichloroethene	11.3	10.0	113	10.3	10.0	103	67-125	9	30
trans-1,3-Dichloropropene	10.4	10.0	104	10.3	10.0	103	59-125	1	30
Trichloroethene (TCE)	10.9	10.0	109	10.3	10.0	103	67-128	6	30
Trichlorofluoromethane (CFC 11)	10.5	10.0	105	9.76	10.0	98	52-141	7	30
Vinyl Chloride	11.6	10.0	116	10.7	10.0	107	55-123	8	30



Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B37
Lab Code: K2112045-007

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	37	3.4	0.40	1	10/21/21 22:23	10/18/21	*
Acenaphthene	25	3.4	0.36	1	10/21/21 22:23	10/18/21	
Acenaphthylene	95	3.4	0.37	1	10/21/21 22:23	10/18/21	
Anthracene	100	3.4	0.29	1	10/21/21 22:23	10/18/21	
Benz(a)anthracene	250	3.4	0.34	1	10/21/21 22:23	10/18/21	
Benzo(a)pyrene	290	3.4	0.41	1	10/21/21 22:23	10/18/21	
Benzo(b)fluoranthene	320	3.4	0.25	1	10/21/21 22:23	10/18/21	
Benzo(g,h,i)perylene	210	3.4	0.36	1	10/21/21 22:23	10/18/21	
Benzo(k)fluoranthene	130	3.4	0.41	1	10/21/21 22:23	10/18/21	
Chrysene	390	3.4	0.65	1	10/21/21 22:23	10/18/21	
Dibenz(a,h)anthracene	50	3.4	0.45	1	10/21/21 22:23	10/18/21	
Dibenzofuran	19	3.4	0.42	1	10/21/21 22:23	10/18/21	
Fluoranthene	270	3.4	0.46	1	10/21/21 22:23	10/18/21	
Fluorene	33	3.4	0.42	1	10/21/21 22:23	10/18/21	
Indeno(1,2,3-cd)pyrene	210	3.4	0.44	1	10/21/21 22:23	10/18/21	
Naphthalene	120	3.4	0.71	1	10/21/21 22:23	10/18/21	
Phenanthrene	180	3.4	0.72	1	10/21/21 22:23	10/18/21	
Pyrene	350	3.4	0.78	1	10/21/21 22:23	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	13	39 - 123	10/21/21 22:23	*
Fluorene-d10	34	28 - 125	10/21/21 22:23	
Terphenyl-d14	7	22 - 127	10/21/21 22:23	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B34
Lab Code: K2112045-015

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	3.4	0.40	1	10/21/21 21:47	10/18/21	*
Acenaphthene	7.6	3.4	0.36	1	10/21/21 21:47	10/18/21	
Acenaphthylene	17	3.4	0.37	1	10/21/21 21:47	10/18/21	
Anthracene	4.3	3.4	0.29	1	10/21/21 21:47	10/18/21	
Benz(a)anthracene	10	3.4	0.34	1	10/21/21 21:47	10/18/21	
Benzo(a)pyrene	7.3	3.4	0.41	1	10/21/21 21:47	10/18/21	
Benzo(b)fluoranthene	17	3.4	0.25	1	10/21/21 21:47	10/18/21	
Benzo(g,h,i)perylene	13	3.4	0.36	1	10/21/21 21:47	10/18/21	
Benzo(k)fluoranthene	9.3	3.4	0.41	1	10/21/21 21:47	10/18/21	
Chrysene	16	3.4	0.65	1	10/21/21 21:47	10/18/21	
Dibenz(a,h)anthracene	4.7	3.4	0.45	1	10/21/21 21:47	10/18/21	
Dibenzofuran	5.6	3.4	0.42	1	10/21/21 21:47	10/18/21	
Fluoranthene	25	3.4	0.46	1	10/21/21 21:47	10/18/21	
Fluorene	7.6	3.4	0.42	1	10/21/21 21:47	10/18/21	
Indeno(1,2,3-cd)pyrene	11	3.4	0.44	1	10/21/21 21:47	10/18/21	
Naphthalene	12	3.4	0.71	1	10/21/21 21:47	10/18/21	
Phenanthrene	26	3.4	0.72	1	10/21/21 21:47	10/18/21	
Pyrene	38	3.4	0.78	1	10/21/21 21:47	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	80	39 - 123	10/21/21 21:47	
Fluorene-d10	81	28 - 125	10/21/21 21:47	
Terphenyl-d14	72	22 - 127	10/21/21 21:47	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B29
Lab Code: K2112045-020

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	4.9	3.4	0.40	1	10/21/21 19:57	10/18/21	*
Acenaphthene	5.7	3.4	0.36	1	10/21/21 19:57	10/18/21	
Acenaphthylene	5.4	3.4	0.37	1	10/21/21 19:57	10/18/21	
Anthracene	6.3	3.4	0.29	1	10/21/21 19:57	10/18/21	
Benz(a)anthracene	16	3.4	0.34	1	10/21/21 19:57	10/18/21	
Benzo(a)pyrene	25	3.4	0.41	1	10/21/21 19:57	10/18/21	
Benzo(b)fluoranthene	23	3.4	0.25	1	10/21/21 19:57	10/18/21	
Benzo(g,h,i)perylene	32	3.4	0.36	1	10/21/21 19:57	10/18/21	
Benzo(k)fluoranthene	9.2	3.4	0.41	1	10/21/21 19:57	10/18/21	
Chrysene	18	3.4	0.65	1	10/21/21 19:57	10/18/21	
Dibenz(a,h)anthracene	3.5	3.4	0.45	1	10/21/21 19:57	10/18/21	
Dibenzofuran	3.1 J	3.4	0.42	1	10/21/21 19:57	10/18/21	
Fluoranthene	38	3.4	0.46	1	10/21/21 19:57	10/18/21	
Fluorene	5.2	3.4	0.42	1	10/21/21 19:57	10/18/21	
Indeno(1,2,3-cd)pyrene	24	3.4	0.44	1	10/21/21 19:57	10/18/21	
Naphthalene	15	3.4	0.71	1	10/21/21 19:57	10/18/21	
Phenanthrene	29	3.4	0.72	1	10/21/21 19:57	10/18/21	
Pyrene	65	3.4	0.78	1	10/21/21 19:57	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	84	39 - 123	10/21/21 19:57	
Fluorene-d10	80	28 - 125	10/21/21 19:57	
Terphenyl-d14	72	22 - 127	10/21/21 19:57	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		39-123	28-125	22-127
B37	K2112045-007	13*	34	7*
B34	K2112045-015	80	81	72
B29	K2112045-020	84	80	72
Method Blank	KQ2120439-03	87	78	83
Lab Control Sample	KQ2120439-01	83	65	78
Duplicate Lab Control Sample	KQ2120439-02	87	78	83

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120439-03

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	3.2	0.40	1	10/21/21 18:08	10/18/21	
Acenaphthene	ND U	3.2	0.36	1	10/21/21 18:08	10/18/21	
Acenaphthylene	ND U	3.2	0.37	1	10/21/21 18:08	10/18/21	
Anthracene	0.37 J	3.2	0.29	1	10/21/21 18:08	10/18/21	
Benz(a)anthracene	0.86 J	3.2	0.34	1	10/21/21 18:08	10/18/21	
Benzo(a)pyrene	ND U	3.2	0.41	1	10/21/21 18:08	10/18/21	
Benzo(b)fluoranthene	ND U	3.2	0.25	1	10/21/21 18:08	10/18/21	
Benzo(g,h,i)perylene	ND U	3.2	0.36	1	10/21/21 18:08	10/18/21	
Benzo(k)fluoranthene	ND U	3.2	0.41	1	10/21/21 18:08	10/18/21	
Chrysene	ND U	3.2	0.65	1	10/21/21 18:08	10/18/21	
Dibenz(a,h)anthracene	ND U	3.2	0.45	1	10/21/21 18:08	10/18/21	
Dibenzofuran	ND U	3.2	0.42	1	10/21/21 18:08	10/18/21	
Fluoranthene	0.91 J	3.2	0.46	1	10/21/21 18:08	10/18/21	
Fluorene	ND U	3.2	0.42	1	10/21/21 18:08	10/18/21	
Indeno(1,2,3-cd)pyrene	ND U	3.2	0.44	1	10/21/21 18:08	10/18/21	
Naphthalene	ND U	3.2	0.71	1	10/21/21 18:08	10/18/21	
Phenanthrene	1.1 J	3.2	0.72	1	10/21/21 18:08	10/18/21	
Pyrene	ND U	3.2	0.78	1	10/21/21 18:08	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	87	39 - 123	10/21/21 18:08	
Fluorene-d10	78	28 - 125	10/21/21 18:08	
Terphenyl-d14	83	22 - 127	10/21/21 18:08	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 10/21/21
Date Extracted: 10/18/21

Duplicate Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ng/L
Basis: NA
Analysis Lot: 743386

Lab Control Sample
KQ2120439-01

Duplicate Lab Control Sample
KQ2120439-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2-Methylnaphthalene	316	500	63	405	500	81	42-108	25	30
Acenaphthene	338	500	68	422	500	84	58-98	22	30
Acenaphthylene	338	500	68	424	500	85	61-102	23	30
Anthracene	378	500	76	420	500	84	65-98	11	30
Benz(a)anthracene	392	500	78	418	500	84	67-96	6	30
Benzo(a)pyrene	414	500	83	447	500	89	68-107	8	30
Benzo(b)fluoranthene	434	500	87	467	500	93	69-104	7	30
Benzo(g,h,i)perylene	404	500	81	437	500	87	61-110	8	30
Benzo(k)fluoranthene	426	500	85	456	500	91	68-108	7	30
Chrysene	378	500	76	403	500	81	67-105	6	30
Dibenz(a,h)anthracene	407	500	81	444	500	89	54-118	9	30
Dibenzofuran	334	500	67	418	500	84	52-103	22	30
Fluoranthene	428	500	86	460	500	92	63-106	7	30
Fluorene	338	500	68	407	500	81	59-97	18	30
Indeno(1,2,3-cd)pyrene	424	500	85	460	500	92	61-115	8	30
Naphthalene	309	500	62	408	500	82	59-95	27	30
Phenanthrene	383	500	77	430	500	86	61-100	12	30
Pyrene	378	500	76	405	500	81	64-104	7	30



Low Level Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	450	110	1	11/03/21 18:31	10/19/21	
Bis(2-ethylhexyl) Phthalate	14 J	110	11	1	11/03/21 18:31	10/19/21	*
Carbazole	ND U	11	4.3	1	11/03/21 18:31	10/19/21	
Di-n-butyl Phthalate	ND U	23	5.5	1	11/03/21 18:31	10/19/21	
Di-n-octyl Phthalate	ND U	23	3.7	1	11/03/21 18:31	10/19/21	
Dibenzofuran	ND U	11	3.9	1	11/03/21 18:31	10/19/21	*
2,4-Dinitrotoluene	ND U	11	2.9	1	11/03/21 18:31	10/19/21	
2-Methylphenol	ND U	11	4.7	1	11/03/21 18:31	10/19/21	*
4-Methylphenol	ND U	23	5.1	1	11/03/21 18:31	10/19/21	*
Nitrobenzene	ND U	11	3.9	1	11/03/21 18:31	10/19/21	
Pentachlorophenol (PCP)	ND U	110	6.0	1	11/03/21 18:31	10/19/21	*
Phenol	ND U	34	3.5	1	11/03/21 18:31	10/19/21	*
Pyridine	ND U	230	57	1	11/03/21 18:31	10/19/21	*
2,4,5-Trichlorophenol	ND U	11	3.4	1	11/03/21 18:31	10/19/21	*
2,4,6-Trichlorophenol	ND U	11	3.4	1	11/03/21 18:31	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	78	35 - 105	11/03/21 18:31	
2-Fluorophenol	67	22 - 85	11/03/21 18:31	
Nitrobenzene-d5	73	10 - 84	11/03/21 18:31	
Phenol-d6	75	39 - 109	11/03/21 18:31	
p-Terphenyl-d14	89	30 - 102	11/03/21 18:31	
2,4,6-Tribromophenol	77	10 - 124	11/03/21 18:31	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B37
Lab Code: K2112045-007

Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	3.5	2.4	1.1	1	11/05/21 20:41	10/18/21	*
Bis(2-ethylhexyl) Phthalate	0.25 J	0.47	0.13	1	11/05/21 20:41	10/18/21	
Carbazole	ND U	0.094	0.018	1	11/05/21 20:41	10/18/21	
Di-n-butyl Phthalate	ND U	0.19	0.023	1	11/05/21 20:41	10/18/21	
Di-n-octyl Phthalate	ND U	0.19	0.033	1	11/05/21 20:41	10/18/21	
Dibenzofuran	ND U	0.094	0.018	1	11/05/21 20:41	10/18/21	
2,4-Dinitrotoluene	ND U	0.094	0.018	1	11/05/21 20:41	10/18/21	
2-Methylphenol	ND U	0.24	0.11	1	11/05/21 20:41	10/18/21	
4-Methylphenol	ND U	0.24	0.12	1	11/05/21 20:41	10/18/21	
Nitrobenzene	ND U	0.094	0.028	1	11/05/21 20:41	10/18/21	
Pentachlorophenol (PCP)	ND U	0.47	0.34	1	11/05/21 20:41	10/18/21	*
Phenol	ND U	0.24	0.063	1	11/05/21 20:41	10/18/21	
Pyridine	ND U	2.4	1.4	1	11/05/21 20:41	10/18/21	
2,4,5-Trichlorophenol	ND U	0.24	0.031	1	11/05/21 20:41	10/18/21	
2,4,6-Trichlorophenol	ND U	0.24	0.058	1	11/05/21 20:41	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	57	35 - 105	11/05/21 20:41	
2-Fluorophenol	55	34 - 118	11/05/21 20:41	
Nitrobenzene-d5	54	40 - 117	11/05/21 20:41	
Phenol-d6	60	39 - 109	11/05/21 20:41	
p-Terphenyl-d14	77	48 - 109	11/05/21 20:41	
2,4,6-Tribromophenol	64	35 - 132	11/05/21 20:41	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	500	120	1	11/03/21 18:59	10/19/21	
Bis(2-ethylhexyl) Phthalate	120	120	12	1	11/03/21 18:59	10/19/21	*
Carbazole	6.6 J	12	4.8	1	11/03/21 18:59	10/19/21	
Di-n-butyl Phthalate	ND U	25	6.0	1	11/03/21 18:59	10/19/21	
Di-n-octyl Phthalate	ND U	25	4.0	1	11/03/21 18:59	10/19/21	
Dibenzofuran	12 J	12	4.3	1	11/03/21 18:59	10/19/21	*
2,4-Dinitrotoluene	ND U	12	3.2	1	11/03/21 18:59	10/19/21	
2-Methylphenol	ND U	12	5.1	1	11/03/21 18:59	10/19/21	*
4-Methylphenol	180	25	5.6	1	11/03/21 18:59	10/19/21	*
Nitrobenzene	ND U	12	4.3	1	11/03/21 18:59	10/19/21	
Pentachlorophenol (PCP)	ND U	120	6.6	1	11/03/21 18:59	10/19/21	*
Phenol	ND U	37	3.9	1	11/03/21 18:59	10/19/21	*
Pyridine	ND U	250	63	1	11/03/21 18:59	10/19/21	*
2,4,5-Trichlorophenol	ND U	12	3.8	1	11/03/21 18:59	10/19/21	*
2,4,6-Trichlorophenol	ND U	12	3.8	1	11/03/21 18:59	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	73	35 - 105	11/03/21 18:59	
2-Fluorophenol	67	22 - 85	11/03/21 18:59	
Nitrobenzene-d5	70	10 - 84	11/03/21 18:59	
Phenol-d6	71	39 - 109	11/03/21 18:59	
p-Terphenyl-d14	87	30 - 102	11/03/21 18:59	
2,4,6-Tribromophenol	76	10 - 124	11/03/21 18:59	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B34
Lab Code: K2112045-015

Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	2.4	1.1	1	11/05/21 21:09	10/18/21	*
Bis(2-ethylhexyl) Phthalate	0.30 J	0.47	0.13	1	11/05/21 21:09	10/18/21	
Carbazole	ND U	0.094	0.018	1	11/05/21 21:09	10/18/21	
Di-n-butyl Phthalate	ND U	0.19	0.023	1	11/05/21 21:09	10/18/21	
Di-n-octyl Phthalate	ND U	0.19	0.033	1	11/05/21 21:09	10/18/21	
Dibenzofuran	ND U	0.094	0.018	1	11/05/21 21:09	10/18/21	
2,4-Dinitrotoluene	ND U	0.094	0.018	1	11/05/21 21:09	10/18/21	
2-Methylphenol	ND U	0.24	0.11	1	11/05/21 21:09	10/18/21	
4-Methylphenol	ND U	0.24	0.12	1	11/05/21 21:09	10/18/21	
Nitrobenzene	ND U	0.094	0.028	1	11/05/21 21:09	10/18/21	
Pentachlorophenol (PCP)	ND U	0.47	0.34	1	11/05/21 21:09	10/18/21	*
Phenol	ND U	0.24	0.063	1	11/05/21 21:09	10/18/21	
Pyridine	ND U	2.4	1.4	1	11/05/21 21:09	10/18/21	
2,4,5-Trichlorophenol	ND U	0.24	0.031	1	11/05/21 21:09	10/18/21	
2,4,6-Trichlorophenol	ND U	0.24	0.058	1	11/05/21 21:09	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	70	35 - 105	11/05/21 21:09	
2-Fluorophenol	63	34 - 118	11/05/21 21:09	
Nitrobenzene-d5	64	40 - 117	11/05/21 21:09	
Phenol-d6	68	39 - 109	11/05/21 21:09	
p-Terphenyl-d14	89	48 - 109	11/05/21 21:09	
2,4,6-Tribromophenol	76	35 - 132	11/05/21 21:09	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Sample Name: B29
Lab Code: K2112045-020

Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	2.4	1.1	1	11/05/21 21:37	10/18/21	*
Bis(2-ethylhexyl) Phthalate	0.27 J	0.47	0.13	1	11/05/21 21:37	10/18/21	
Carbazole	ND U	0.094	0.018	1	11/05/21 21:37	10/18/21	
Di-n-butyl Phthalate	0.032 J	0.19	0.023	1	11/05/21 21:37	10/18/21	
Di-n-octyl Phthalate	0.13 J	0.19	0.033	1	11/05/21 21:37	10/18/21	
Dibenzofuran	ND U	0.094	0.018	1	11/05/21 21:37	10/18/21	
2,4-Dinitrotoluene	ND U	0.094	0.018	1	11/05/21 21:37	10/18/21	
2-Methylphenol	ND U	0.24	0.11	1	11/05/21 21:37	10/18/21	
4-Methylphenol	ND U	0.24	0.12	1	11/05/21 21:37	10/18/21	
Nitrobenzene	ND U	0.094	0.028	1	11/05/21 21:37	10/18/21	
Pentachlorophenol (PCP)	ND U	0.47	0.34	1	11/05/21 21:37	10/18/21	*
Phenol	ND U	0.24	0.063	1	11/05/21 21:37	10/18/21	
Pyridine	ND U	2.4	1.4	1	11/05/21 21:37	10/18/21	
2,4,5-Trichlorophenol	ND U	0.24	0.031	1	11/05/21 21:37	10/18/21	
2,4,6-Trichlorophenol	ND U	0.24	0.058	1	11/05/21 21:37	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	68	35 - 105	11/05/21 21:37	
2-Fluorophenol	65	34 - 118	11/05/21 21:37	
Nitrobenzene-d5	64	40 - 117	11/05/21 21:37	
Phenol-d6	66	39 - 109	11/05/21 21:37	
p-Terphenyl-d14	88	48 - 109	11/05/21 21:37	
2,4,6-Tribromophenol	79	35 - 132	11/05/21 21:37	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	450	110	1	11/03/21 19:28	10/19/21	
Bis(2-ethylhexyl) Phthalate	ND U	110	10	1	11/03/21 19:28	10/19/21	*
Carbazole	ND U	11	4.3	1	11/03/21 19:28	10/19/21	
Di-n-butyl Phthalate	ND U	22	5.4	1	11/03/21 19:28	10/19/21	
Di-n-octyl Phthalate	ND U	22	3.6	1	11/03/21 19:28	10/19/21	
Dibenzofuran	ND U	11	3.9	1	11/03/21 19:28	10/19/21	*
2,4-Dinitrotoluene	ND U	11	2.8	1	11/03/21 19:28	10/19/21	
2-Methylphenol	ND U	11	4.6	1	11/03/21 19:28	10/19/21	*
4-Methylphenol	ND U	22	5.1	1	11/03/21 19:28	10/19/21	*
Nitrobenzene	ND U	11	3.9	1	11/03/21 19:28	10/19/21	
Pentachlorophenol (PCP)	ND U	110	6.0	1	11/03/21 19:28	10/19/21	*
Phenol	ND U	34	3.5	1	11/03/21 19:28	10/19/21	*
Pyridine	ND U	220	56	1	11/03/21 19:28	10/19/21	*
2,4,5-Trichlorophenol	ND U	11	3.4	1	11/03/21 19:28	10/19/21	*
2,4,6-Trichlorophenol	ND U	11	3.4	1	11/03/21 19:28	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	81	35 - 105	11/03/21 19:28	
2-Fluorophenol	68	22 - 85	11/03/21 19:28	
Nitrobenzene-d5	75	10 - 84	11/03/21 19:28	
Phenol-d6	77	39 - 109	11/03/21 19:28	
p-Terphenyl-d14	96	30 - 102	11/03/21 19:28	
2,4,6-Tribromophenol	80	10 - 124	11/03/21 19:28	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	500	130	1	11/03/21 19:56	10/19/21	
Bis(2-ethylhexyl) Phthalate	31 J	130	12	1	11/03/21 19:56	10/19/21	*
Carbazole	ND U	13	4.8	1	11/03/21 19:56	10/19/21	
Di-n-butyl Phthalate	ND U	25	6.1	1	11/03/21 19:56	10/19/21	
Di-n-octyl Phthalate	ND U	25	4.1	1	11/03/21 19:56	10/19/21	
Dibenzofuran	ND U	13	4.3	1	11/03/21 19:56	10/19/21	*
2,4-Dinitrotoluene	ND U	13	3.2	1	11/03/21 19:56	10/19/21	
2-Methylphenol	ND U	13	5.2	1	11/03/21 19:56	10/19/21	*
4-Methylphenol	25 J	25	5.7	1	11/03/21 19:56	10/19/21	*
Nitrobenzene	ND U	13	4.3	1	11/03/21 19:56	10/19/21	
Pentachlorophenol (PCP)	ND U	130	6.7	1	11/03/21 19:56	10/19/21	*
Phenol	ND U	38	4.0	1	11/03/21 19:56	10/19/21	*
Pyridine	ND U	250	63	1	11/03/21 19:56	10/19/21	*
2,4,5-Trichlorophenol	ND U	13	3.8	1	11/03/21 19:56	10/19/21	*
2,4,6-Trichlorophenol	ND U	13	3.8	1	11/03/21 19:56	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	81	35 - 105	11/03/21 19:56	
2-Fluorophenol	66	22 - 85	11/03/21 19:56	
Nitrobenzene-d5	76	10 - 84	11/03/21 19:56	
Phenol-d6	77	39 - 109	11/03/21 19:56	
p-Terphenyl-d14	87	30 - 102	11/03/21 19:56	
2,4,6-Tribromophenol	82	10 - 124	11/03/21 19:56	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	490	120	1	11/03/21 20:25	10/19/21	
Bis(2-ethylhexyl) Phthalate	12 J	120	11	1	11/03/21 20:25	10/19/21	*
Carbazole	ND U	12	4.7	1	11/03/21 20:25	10/19/21	
Di-n-butyl Phthalate	ND U	25	5.9	1	11/03/21 20:25	10/19/21	
Di-n-octyl Phthalate	ND U	25	4.0	1	11/03/21 20:25	10/19/21	
Dibenzofuran	ND U	12	4.2	1	11/03/21 20:25	10/19/21	*
2,4-Dinitrotoluene	ND U	12	3.1	1	11/03/21 20:25	10/19/21	
2-Methylphenol	ND U	12	5.1	1	11/03/21 20:25	10/19/21	*
4-Methylphenol	ND U	25	5.6	1	11/03/21 20:25	10/19/21	*
Nitrobenzene	ND U	12	4.2	1	11/03/21 20:25	10/19/21	
Pentachlorophenol (PCP)	ND U	120	6.6	1	11/03/21 20:25	10/19/21	*
Phenol	ND U	37	3.9	1	11/03/21 20:25	10/19/21	*
Pyridine	ND U	250	62	1	11/03/21 20:25	10/19/21	*
2,4,5-Trichlorophenol	ND U	12	3.7	1	11/03/21 20:25	10/19/21	*
2,4,6-Trichlorophenol	ND U	12	3.7	1	11/03/21 20:25	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	79	35 - 105	11/03/21 20:25	
2-Fluorophenol	68	22 - 85	11/03/21 20:25	
Nitrobenzene-d5	74	10 - 84	11/03/21 20:25	
Phenol-d6	77	39 - 109	11/03/21 20:25	
p-Terphenyl-d14	111	30 - 102	11/03/21 20:25	*
2,4,6-Tribromophenol	80	10 - 124	11/03/21 20:25	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	22-85	10-84
B-37 0-10 C	K2112045-006	78	67	73
B-34 0-10 C	K2112045-014	73	67	70
B-37 10-23 C	K2112045-022	81	68	75
B-34 10-23 C	K2112045-023	81	66	76
B-29 0-12 C	K2112045-024	79	68	74
Method Blank	KQ2120361-04	89	76	83
Lab Control Sample	KQ2120361-03	92	80	88*
B-34 0-10 C	KQ2120361-01	73	65	73
B-34 0-10 C	KQ2120361-02	80	61	78

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	30-102	10-124
B-37 0-10 C	K2112045-006	75	89	77
B-34 0-10 C	K2112045-014	71	87	76
B-37 10-23 C	K2112045-022	77	96	80
B-34 10-23 C	K2112045-023	77	87	82
B-29 0-12 C	K2112045-024	77	111*	80
Method Blank	KQ2120361-04	86	99	80
Lab Control Sample	KQ2120361-03	88	82	90
B-34 0-10 C	KQ2120361-01	73	84	80
B-34 0-10 C	KQ2120361-02	75	93	87

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	34-118	40-117
B37	K2112045-007	57	55	54
B34	K2112045-015	70	63	64
B29	K2112045-020	68	65	64
Method Blank	KQ2120538-03	76	68	72
Lab Control Sample	KQ2120538-01	89	78	86
Duplicate Lab Control Sample	KQ2120538-02	76	73	76

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	48-109	35-132
B37	K2112045-007	60	77	64
B34	K2112045-015	68	89	76
B29	K2112045-020	66	88	79
Method Blank	KQ2120538-03	77	102	77
Lab Control Sample	KQ2120538-01	86	108	87
Duplicate Lab Control Sample	KQ2120538-02	76	99	81

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 11/3/21
Date Extracted: 10/19/21

Duplicate Matrix Spike Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name: B-34 0-10 C
Lab Code: K2112045-014
Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2120361-01			Duplicate Matrix Spike KQ2120361-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Benzoic Acid	ND U	690	932	74	677	932	73	10-125	2	40
Bis(2-ethylhexyl) Phthalate	120	294	311	56	332	311	68	23-123	12	40
Carbazole	6.6 J	255	311	80	270	311	85	10-136	6	40
Di-n-butyl Phthalate	ND U	237	311	76	268	311	86	16-130	12	40
Di-n-octyl Phthalate	ND U	235	311	76	264	311	85	25-120	12	40
Dibenzofuran	12 J	251	311	77	272	311	84	15-96	8	40
2,4-Dinitrotoluene	ND U	190	311	61	212	311	68	10-131	11	40
2-Methylphenol	ND U	229	311	74	245	311	79	10-94	7	40
4-Methylphenol	180	367	311	60	446	311	85	10-103	20	40
Nitrobenzene	ND U	171	311	55	185	311	60	10-95	8	40
Pentachlorophenol (PCP)	ND U	218	311	70	257	311	83	10-134	16	40
Phenol	ND U	230	311	74	246	311	79	10-93	7	40
Pyridine	ND U	169 J	622	27	82.1 J	621	13	10-54	69*	40
2,4,5-Trichlorophenol	ND U	239	311	77	261	311	84	29-88	9	40
2,4,6-Trichlorophenol	ND U	237	311	76	262	311	84	20-96	10	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120361-04

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	400	96	1	11/03/21 16:37	10/19/21	
Bis(2-ethylhexyl) Phthalate	ND U	99	8.9	1	11/03/21 16:37	10/19/21	
Carbazole	ND U	9.9	3.8	1	11/03/21 16:37	10/19/21	
Di-n-butyl Phthalate	ND U	20	4.8	1	11/03/21 16:37	10/19/21	
Di-n-octyl Phthalate	ND U	20	3.2	1	11/03/21 16:37	10/19/21	
Dibenzofuran	ND U	9.9	3.4	1	11/03/21 16:37	10/19/21	
2,4-Dinitrotoluene	ND U	9.9	2.5	1	11/03/21 16:37	10/19/21	
2-Methylphenol	ND U	9.9	4.1	1	11/03/21 16:37	10/19/21	
4-Methylphenol	ND U	20	4.5	1	11/03/21 16:37	10/19/21	
Nitrobenzene	ND U	9.9	3.4	1	11/03/21 16:37	10/19/21	
Pentachlorophenol (PCP)	ND U	99	5.3	1	11/03/21 16:37	10/19/21	
Phenol	ND U	30	3.1	1	11/03/21 16:37	10/19/21	
Pyridine	ND U	200	50	1	11/03/21 16:37	10/19/21	
2,4,5-Trichlorophenol	ND U	9.9	3.0	1	11/03/21 16:37	10/19/21	
2,4,6-Trichlorophenol	ND U	9.9	3.0	1	11/03/21 16:37	10/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	89	35 - 105	11/03/21 16:37	
2-Fluorophenol	76	22 - 85	11/03/21 16:37	
Nitrobenzene-d5	83	10 - 84	11/03/21 16:37	
Phenol-d6	86	39 - 109	11/03/21 16:37	
p-Terphenyl-d14	99	30 - 102	11/03/21 16:37	
2,4,6-Tribromophenol	80	10 - 124	11/03/21 16:37	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120538-03

Service Request: K2112045
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	2.4	1.1	1	11/05/21 19:17	10/18/21	
Bis(2-ethylhexyl) Phthalate	ND U	0.47	0.13	1	11/05/21 19:17	10/18/21	
Carbazole	ND U	0.094	0.018	1	11/05/21 19:17	10/18/21	
Di-n-butyl Phthalate	ND U	0.19	0.023	1	11/05/21 19:17	10/18/21	
Di-n-octyl Phthalate	ND U	0.19	0.033	1	11/05/21 19:17	10/18/21	
Dibenzofuran	ND U	0.094	0.018	1	11/05/21 19:17	10/18/21	
2,4-Dinitrotoluene	ND U	0.094	0.018	1	11/05/21 19:17	10/18/21	
2-Methylphenol	ND U	0.24	0.11	1	11/05/21 19:17	10/18/21	
4-Methylphenol	ND U	0.24	0.12	1	11/05/21 19:17	10/18/21	
Nitrobenzene	ND U	0.094	0.028	1	11/05/21 19:17	10/18/21	
Pentachlorophenol (PCP)	ND U	0.47	0.34	1	11/05/21 19:17	10/18/21	
Phenol	ND U	0.24	0.063	1	11/05/21 19:17	10/18/21	
Pyridine	ND U	2.4	1.4	1	11/05/21 19:17	10/18/21	
2,4,5-Trichlorophenol	ND U	0.24	0.031	1	11/05/21 19:17	10/18/21	
2,4,6-Trichlorophenol	ND U	0.24	0.058	1	11/05/21 19:17	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	76	35 - 105	11/05/21 19:17	
2-Fluorophenol	68	34 - 118	11/05/21 19:17	
Nitrobenzene-d5	72	40 - 117	11/05/21 19:17	
Phenol-d6	77	39 - 109	11/05/21 19:17	
p-Terphenyl-d14	102	48 - 109	11/05/21 19:17	
2,4,6-Tribromophenol	77	35 - 132	11/05/21 19:17	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 11/03/21
Date Extracted: 10/19/21

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry
Analysis Lot: 744854

Lab Control Sample
KQ2120361-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol	218	250	87 *	32-81
2,4,6-Trichlorophenol	218	250	87 *	33-79
2,4-Dinitrotoluene	181	250	72	35-93
2-Methylphenol	218	250	87 *	27-74
4-Methylphenol	252	250	101 *	26-79
Benzoic Acid	198 J	750	26	10-34
Bis(2-ethylhexyl) Phthalate	147	250	59	39-113
Carbazole	212	250	85	37-95
Dibenzofuran	220	250	88 *	30-78
Di-n-butyl Phthalate	168	250	67	30-120
Di-n-octyl Phthalate	199	250	80	41-105
Nitrobenzene	163	250	65	28-78
Pentachlorophenol (PCP)	166	250	66	19-103
Phenol	215	250	86 *	27-75
Pyridine	397	500	79 *	10-54

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 11/05/21
Date Extracted: 10/18/21

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 745443

Lab Control Sample
KQ2120538-01

Duplicate Lab Control Sample
KQ2120538-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	4.45	5.00	89	4.05	5.00	81	51-116	9	30
2,4,6-Trichlorophenol	4.56	5.00	91	4.08	5.00	82	51-114	11	30
2,4-Dinitrotoluene	3.47	5.00	69	3.24	5.00	65	56-120	7	30
2-Methylphenol	4.24	5.00	85	3.85	5.00	77	45-114	10	30
4-Methylphenol	4.85	5.00	97	4.44	5.00	89	44-120	9	30
Benzoic Acid	9.89	15.0	66	9.92	15.0	66	10-86	<1	30
Bis(2-ethylhexyl) Phthalate	4.16	5.00	83	4.40	5.00	88	42-147	6	30
Carbazole	3.86	5.00	77	3.67	5.00	73	57-112	5	30
Dibenzofuran	4.47	5.00	89	4.05	5.00	81	51-102	10	30
Di-n-butyl Phthalate	3.69	5.00	74	3.42	5.00	68	61-121	8	30
Di-n-octyl Phthalate	4.17	5.00	83	3.98	5.00	80	50-125	5	30
Nitrobenzene	3.30	5.00	66	3.01	5.00	60	43-120	9	30
Pentachlorophenol (PCP)	4.10	5.00	82	3.89	5.00	78	27-112	5	30
Phenol	4.37	5.00	87	3.97	5.00	79	45-112	10	30
Pyridine	7.97	10.0	80	7.12	10.0	71	10-121	11	30



Polycyclic Aromatic Hydrocarbons by GC/MS SIM

ALS Environmental—Kelso Laboratory
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.91 J	5.6	0.42	1	11/08/21 12:21	10/20/21	
Acenaphthene	0.61 J	5.6	0.34	1	11/08/21 12:21	10/20/21	
Acenaphthylene	ND U	5.6	0.32	1	11/08/21 12:21	10/20/21	
Anthracene	ND U	5.6	0.33	1	11/08/21 12:21	10/20/21	
Benz(a)anthracene	0.56 J	5.6	0.26	1	11/08/21 12:21	10/20/21	
Benzo(a)pyrene	ND U	5.6	0.43	1	11/08/21 12:21	10/20/21	
Benzo(b)fluoranthene	ND U	5.6	0.43	1	11/08/21 12:21	10/20/21	
Benzo(g,h,i)perylene	ND U	5.6	0.45	1	11/08/21 12:21	10/20/21	
Benzo(k)fluoranthene	ND U	5.6	0.27	1	11/08/21 12:21	10/20/21	
Chrysene	ND U	5.6	0.35	1	11/08/21 12:21	10/20/21	
Dibenz(a,h)anthracene	ND U	5.6	0.26	1	11/08/21 12:21	10/20/21	
Dibenzofuran	ND U	5.6	0.68	1	11/08/21 12:21	10/20/21	
Fluoranthene	ND U	5.6	0.71	1	11/08/21 12:21	10/20/21	
Fluorene	ND U	5.6	0.65	1	11/08/21 12:21	10/20/21	
Indeno(1,2,3-cd)pyrene	ND U	5.6	0.41	1	11/08/21 12:21	10/20/21	*
Naphthalene	2.7 J	5.6	0.53	1	11/08/21 12:21	10/20/21	
Phenanthrene	1.6 J	5.6	0.67	1	11/08/21 12:21	10/20/21	
Pyrene	ND U	5.6	0.36	1	11/08/21 12:21	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	75	30 - 112	11/08/21 12:21	
Fluorene-d10	74	33 - 107	11/08/21 12:21	
Terphenyl-d14	76	35 - 124	11/08/21 12:21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	100	6.2	0.47	1	11/08/21 12:48	10/20/21	
Acenaphthene	210	6.2	0.38	1	11/08/21 12:48	10/20/21	
Acenaphthylene	77	6.2	0.35	1	11/08/21 12:48	10/20/21	
Anthracene	150	6.2	0.37	1	11/08/21 12:48	10/20/21	
Benz(a)anthracene	300	6.2	0.29	1	11/08/21 12:48	10/20/21	
Benzo(a)pyrene	340	6.2	0.48	1	11/08/21 12:48	10/20/21	
Benzo(b)fluoranthene	280	6.2	0.48	1	11/08/21 12:48	10/20/21	
Benzo(g,h,i)perylene	190	6.2	0.50	1	11/08/21 12:48	10/20/21	
Benzo(k)fluoranthene	99	6.2	0.30	1	11/08/21 12:48	10/20/21	
Chrysene	370	6.2	0.39	1	11/08/21 12:48	10/20/21	
Dibenz(a,h)anthracene	37	6.2	0.29	1	11/08/21 12:48	10/20/21	
Dibenzofuran	20	6.2	0.75	1	11/08/21 12:48	10/20/21	
Fluoranthene	420	6.2	0.79	1	11/08/21 12:48	10/20/21	
Fluorene	100	6.2	0.71	1	11/08/21 12:48	10/20/21	
Indeno(1,2,3-cd)pyrene	200	6.2	0.45	1	11/08/21 12:48	10/20/21	*
Naphthalene	180	6.2	0.59	1	11/08/21 12:48	10/20/21	
Phenanthrene	580	6.2	0.74	1	11/08/21 12:48	10/20/21	
Pyrene	680	6.2	0.40	1	11/08/21 12:48	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	65	30 - 112	11/08/21 12:48	
Fluorene-d10	71	33 - 107	11/08/21 12:48	
Terphenyl-d14	68	35 - 124	11/08/21 12:48	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.86 J	5.6	0.42	1	11/08/21 13:15	10/20/21	
Acenaphthene	0.73 J	5.6	0.34	1	11/08/21 13:15	10/20/21	
Acenaphthylene	ND U	5.6	0.32	1	11/08/21 13:15	10/20/21	
Anthracene	2.1 J	5.6	0.33	1	11/08/21 13:15	10/20/21	
Benz(a)anthracene	1.9 J	5.6	0.26	1	11/08/21 13:15	10/20/21	
Benzo(a)pyrene	3.1 J	5.6	0.43	1	11/08/21 13:15	10/20/21	
Benzo(b)fluoranthene	1.6 J	5.6	0.43	1	11/08/21 13:15	10/20/21	
Benzo(g,h,i)perylene	1.4 J	5.6	0.45	1	11/08/21 13:15	10/20/21	
Benzo(k)fluoranthene	0.69 J	5.6	0.27	1	11/08/21 13:15	10/20/21	
Chrysene	1.9 J	5.6	0.35	1	11/08/21 13:15	10/20/21	
Dibenz(a,h)anthracene	ND U	5.6	0.26	1	11/08/21 13:15	10/20/21	
Dibenzofuran	0.68 J	5.6	0.67	1	11/08/21 13:15	10/20/21	
Fluoranthene	5.7	5.6	0.71	1	11/08/21 13:15	10/20/21	
Fluorene	0.75 J	5.6	0.64	1	11/08/21 13:15	10/20/21	
Indeno(1,2,3-cd)pyrene	1.2 J	5.6	0.41	1	11/08/21 13:15	10/20/21	*
Naphthalene	2.9 J	5.6	0.53	1	11/08/21 13:15	10/20/21	
Phenanthrene	7.6	5.6	0.66	1	11/08/21 13:15	10/20/21	
Pyrene	6.0	5.6	0.36	1	11/08/21 13:15	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	75	30 - 112	11/08/21 13:15	
Fluorene-d10	75	33 - 107	11/08/21 13:15	
Terphenyl-d14	77	35 - 124	11/08/21 13:15	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	6.2 J	6.3	0.47	1	11/08/21 13:41	10/20/21	
Acenaphthene	4.4 J	6.3	0.38	1	11/08/21 13:41	10/20/21	
Acenaphthylene	7.1	6.3	0.36	1	11/08/21 13:41	10/20/21	
Anthracene	19	6.3	0.37	1	11/08/21 13:41	10/20/21	
Benz(a)anthracene	30	6.3	0.29	1	11/08/21 13:41	10/20/21	
Benzo(a)pyrene	40	6.3	0.48	1	11/08/21 13:41	10/20/21	
Benzo(b)fluoranthene	37	6.3	0.48	1	11/08/21 13:41	10/20/21	
Benzo(g,h,i)perylene	24	6.3	0.51	1	11/08/21 13:41	10/20/21	
Benzo(k)fluoranthene	14	6.3	0.31	1	11/08/21 13:41	10/20/21	
Chrysene	30	6.3	0.39	1	11/08/21 13:41	10/20/21	
Dibenz(a,h)anthracene	1.9 J	6.3	0.29	1	11/08/21 13:41	10/20/21	
Dibenzofuran	5.6 J	6.3	0.76	1	11/08/21 13:41	10/20/21	
Fluoranthene	60	6.3	0.80	1	11/08/21 13:41	10/20/21	
Fluorene	8.1	6.3	0.72	1	11/08/21 13:41	10/20/21	
Indeno(1,2,3-cd)pyrene	27	6.3	0.46	1	11/08/21 13:41	10/20/21	*
Naphthalene	22	6.3	0.60	1	11/08/21 13:41	10/20/21	
Phenanthrene	49	6.3	0.75	1	11/08/21 13:41	10/20/21	
Pyrene	68	6.3	0.41	1	11/08/21 13:41	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	60	30 - 112	11/08/21 13:41	
Fluorene-d10	65	33 - 107	11/08/21 13:41	
Terphenyl-d14	63	35 - 124	11/08/21 13:41	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	1.3 J	6.2	0.46	1	11/08/21 14:08	10/20/21	
Acenaphthene	0.66 J	6.2	0.37	1	11/08/21 14:08	10/20/21	
Acenaphthylene	0.52 J	6.2	0.35	1	11/08/21 14:08	10/20/21	
Anthracene	2.4 J	6.2	0.36	1	11/08/21 14:08	10/20/21	
Benz(a)anthracene	2.4 J	6.2	0.29	1	11/08/21 14:08	10/20/21	
Benzo(a)pyrene	5.5 J	6.2	0.47	1	11/08/21 14:08	10/20/21	
Benzo(b)fluoranthene	1.9 J	6.2	0.47	1	11/08/21 14:08	10/20/21	
Benzo(g,h,i)perylene	1.2 J	6.2	0.50	1	11/08/21 14:08	10/20/21	
Benzo(k)fluoranthene	0.90 J	6.2	0.30	1	11/08/21 14:08	10/20/21	
Chrysene	2.7 J	6.2	0.39	1	11/08/21 14:08	10/20/21	
Dibenz(a,h)anthracene	ND U	6.2	0.29	1	11/08/21 14:08	10/20/21	
Dibenzofuran	0.87 J	6.2	0.74	1	11/08/21 14:08	10/20/21	
Fluoranthene	4.3 J	6.2	0.78	1	11/08/21 14:08	10/20/21	
Fluorene	0.82 J	6.2	0.71	1	11/08/21 14:08	10/20/21	
Indeno(1,2,3-cd)pyrene	1.3 J	6.2	0.45	1	11/08/21 14:08	10/20/21	*
Naphthalene	3.5 J	6.2	0.58	1	11/08/21 14:08	10/20/21	
Phenanthrene	4.4 J	6.2	0.73	1	11/08/21 14:08	10/20/21	
Pyrene	4.6 J	6.2	0.40	1	11/08/21 14:08	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	83	30 - 112	11/08/21 14:08	
Fluorene-d10	85	33 - 107	11/08/21 14:08	
Terphenyl-d14	88	35 - 124	11/08/21 14:08	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045

SURROGATE RECOVERY SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Extraction Method: EPA 3546

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		30-112	33-107	35-124
B-37 0-10 C	K2112045-006	75	74	76
B-34 0-10 C	K2112045-014	65	71	68
B-37 10-23 C	K2112045-022	75	75	77
B-34 10-23 C	K2112045-023	60	65	63
B-29 0-12 C	K2112045-024	83	85	88
Method Blank	KQ2120639-04	77	81	80
Lab Control Sample	KQ2120639-03	81	81	86
B-34 0-10 C	KQ2120639-01	73	74	70
B-34 0-10 C	KQ2120639-02	65	65	67

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21
Date Analyzed: 11/8/21
Date Extracted: 10/20/21

Duplicate Matrix Spike Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Sample Name: B-34 0-10 C
Lab Code: K2112045-014
Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2120639-01			Duplicate Matrix Spike KQ2120639-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2-Methylnaphthalene	100	599	622	80	477	622	60	28-98	23	40
Acenaphthene	210	960	622	121 *	529	622	51	30-101	58*	40
Acenaphthylene	77	507	622	69	432	622	57	32-97	16	40
Anthracene	150	730	622	93	603	622	72	27-116	19	40
Benz(a)anthracene	300	637	622	55	537	622	39	27-127	17	40
Benzo(a)pyrene	340	654	622	51	545	622	33	25-129	18	40
Benzo(b)fluoranthene	280	624	622	55	514	622	37	21-130	19	40
Benzo(g,h,i)perylene	190	577	622	63	483	622	48	17-130	18	40
Benzo(k)fluoranthene	99	511	622	66	440	622	55	22-126	15	40
Chrysene	370	679	622	49	563	622	31	25-132	19	40
Dibenz(a,h)anthracene	37	486	622	72	414	622	61	32-116	16	40
Dibenzofuran	20	451	622	69	401	622	61	28-105	12	40
Fluoranthene	420	817	622	64	660	622	38	10-138	21	40
Fluorene	100	651	622	88	496	622	63	23-116	27	40
Indeno(1,2,3-cd)pyrene	200	618	622	68	515	622	51	17-138	18	40
Naphthalene	180	757	622	93 *	583	622	65	29-88	26	40
Phenanthrene	580	1200	622	100	809	622	37	10-128	39	40
Pyrene	680	1020	622	54	847	622	26	16-134	18	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120639-04

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.69 J	4.9	0.37	1	11/08/21 10:34	10/20/21	
Acenaphthene	0.77 J	4.9	0.30	1	11/08/21 10:34	10/20/21	
Acenaphthylene	0.33 J	4.9	0.28	1	11/08/21 10:34	10/20/21	
Anthracene	ND U	4.9	0.29	1	11/08/21 10:34	10/20/21	
Benz(a)anthracene	0.49 J	4.9	0.23	1	11/08/21 10:34	10/20/21	
Benzo(a)pyrene	ND U	4.9	0.38	1	11/08/21 10:34	10/20/21	
Benzo(b)fluoranthene	ND U	4.9	0.38	1	11/08/21 10:34	10/20/21	
Benzo(g,h,i)perylene	ND U	4.9	0.40	1	11/08/21 10:34	10/20/21	
Benzo(k)fluoranthene	ND U	4.9	0.24	1	11/08/21 10:34	10/20/21	
Chrysene	ND U	4.9	0.31	1	11/08/21 10:34	10/20/21	
Dibenz(a,h)anthracene	ND U	4.9	0.23	1	11/08/21 10:34	10/20/21	
Dibenzofuran	ND U	4.9	0.60	1	11/08/21 10:34	10/20/21	
Fluoranthene	ND U	4.9	0.63	1	11/08/21 10:34	10/20/21	
Fluorene	ND U	4.9	0.57	1	11/08/21 10:34	10/20/21	
Indeno(1,2,3-cd)pyrene	ND U	4.9	0.36	1	11/08/21 10:34	10/20/21	
Naphthalene	2.4 J	4.9	0.47	1	11/08/21 10:34	10/20/21	
Phenanthrene	0.76 J	4.9	0.59	1	11/08/21 10:34	10/20/21	
Pyrene	ND U	4.9	0.32	1	11/08/21 10:34	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	77	30 - 112	11/08/21 10:34	
Fluorene-d10	81	33 - 107	11/08/21 10:34	
Terphenyl-d14	80	35 - 124	11/08/21 10:34	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 11/08/21
Date Extracted: 10/20/21

Lab Control Sample Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 745137

Lab Control Sample
KQ2120639-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2-Methylnaphthalene	404	500	81	43-92
Acenaphthene	413	500	83	44-95
Acenaphthylene	420	500	84	44-93
Anthracene	501	500	100	46-100
Benz(a)anthracene	477	500	95	52-105
Benzo(a)pyrene	479	500	96	52-111
Benzo(b)fluoranthene	473	500	95	52-114
Benzo(g,h,i)perylene	471	500	94	45-107
Benzo(k)fluoranthene	465	500	93	52-112
Chrysene	478	500	96	51-110
Dibenz(a,h)anthracene	514	500	103	44-110
Dibenzofuran	392	500	78	44-96
Fluoranthene	417	500	83	49-102
Fluorene	422	500	84	45-98
Indeno(1,2,3-cd)pyrene	536	500	107	44-117
Naphthalene	409	500	82	42-88
Phenanthrene	409	500	82	41-99
Pyrene	442	500	88	48-104



Subcontract Lab Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



November 29, 2021

Service Request No:K2112045

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

Laboratory Results for: EQRB

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 13, 2021
For your reference, these analyses have been assigned our service request number **K2112045**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental



Certificate of Analysis

ALS Environmental - Houston HRMS
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ALS Environmental

Client: Coles & Betts ENV
Project: EQRB
Sample Matrix: S/W

Service Request No.: K2112045
Date Received: 10/28/21

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Eight samples were received for analysis at ALS Environmental in Houston on 10/28/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100629: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. 1,2,3,4,7,8,9-HpCDF & 1,2,3,7,8-PeCDF LCS/DLCS recoveries were below QC limits; associated compounds for the samples in the batch should be considered potentially bias low.

EQ2100630: A Laboratory Control Spike (LCS) sample was analyzed and reported in addition to a MS/MSD for this extraction batch. 1,2,3,4,7,8,9-HpCDF LCS recovery was below QC limits; associated compound for the samples in the batch should be considered potentially bias low. The MS/MSD was performed on an unrelated sample.

B flags – Method Blanks

The Method Blank EQ2100630-01 contained low levels of 1,2,3,4,6,7,8-HpCDD, OCDD, and OCDF below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

Y flags – Cleanup Standard

Select sample recoveries for the cleanup standard, 37Cl-2,3,7,8-TCDD are below control limits. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected, and is not used in quantitation of target analytes.

Y flags – Labeled Standards

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with 'Y' flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

2378-TCDF

Samples analyzed on the DB-5MSUI column were analyzed under conditions where sufficient separation between 2,3,7,8-TCDF and its closest eluter was achieved. Confirmation of this result was not required.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- Non-detected compounds are not included in the 'Total'

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319

Service Request:K2112045

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2112045-006	B-37 0-10 C	10/12/2021	0950
K2112045-007	B37	10/12/2021	
K2112045-014	B-34 0-10 C	10/12/2021	0950
K2112045-015	B34	10/12/2021	
K2112045-020	B29	10/12/2021	
K2112045-022	B-37 10-23 C	10/12/2021	0950
K2112045-023	B-34 10-23 C	10/12/2021	0950
K2112045-024	B-29 0-12 C	10/12/2021	0950

Service Request Summary

Folder #: K2112045
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA
Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: NPEDERSEN
Date Received: 10/13/21
Internal Due Date: 11/2/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

57 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 12 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 12 40 ml-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
 24 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 9 40 mL-Glass Vial GRO CLEAR Tef/Silicone Septa HCL
 5 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 5 -N/A N/A
 6 250 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 6 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
 3 125 mL-Plastic Bottle WM CLEAR HNO3 (Diss)
 3 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-DELILAH, K-Misty-1, K-Disposed, SUBBED, EHRMS-WIC 10B, K-PETUNIA-09, K-NOT CREATED, K-MET LTS, K-SVEXT, In Lab
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	KELSO					KELSO					HOUST ON	KELSO		KELSO	
				Hg D/7470A	Hg T/7470A	Hg/7471B	Metals D/6020A	Metals T/6020A	BUTYLINS/ALS SOP	HERB/8151A	NW_TPH/NWTPH-Dx	PCB/8082A	Pest OC LL/8081B	Pest OC ULL/8081B	PCDD PCDF/8290A	PAH SIM ULL/8270D	PAH SIM/8270D	SVO LL/8270D
K2112045-006	B-37 0-10 C	Soil	10/12/21 0950															
K2112045-007	B37	Water	10/12/21															
K2112045-008	B37 Trip Blank	Water	10/12/21															
K2112045-014	B-34 0-10 C	Soil	10/12/21 0950															
K2112045-015	B34	Water	10/12/21															
K2112045-016	B34 Trip Blank	Water	10/12/21															
K2112045-020	B29	Water	10/12/21															
K2112045-021	B29 Trip Blank	Water	10/12/21															
K2112045-022	B-37 10-23 C	Soil	10/12/21 0950															
K2112045-023	B-34 10-23 C	Soil	10/12/21 0950															
K2112045-024	B-29 0-12 C	Soil	10/12/21 0950															

Folder Comments:

KELSO		
NW_GAS/NWTPH-Gx	VOC FP/8260C	VOC Unp/8260C

Service Request Summary

Folder #: K2112045
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319
Report To: Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213
USA
Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: NPEDERSEN
Date Received: 10/13/21
Internal Due Date: 11/2/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

57 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
12 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
12 40 ml-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
24 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
9 40 mL-Glass Vial GRO CLEAR Tef/Silicone Septa HCL
5 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
5 -N/A N/A
6 250 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
6 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
3 125 mL-Plastic Bottle WM CLEAR HNO3 (Diss)
3 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-DELILAH, K-Misty-1, K-Disposed,
SUBBED, EHRMS-WIC 10B, K-PETUNIA-
09, K-NOT CREATED, K-MET LTS, K-
SVEXT, In Lab
Pressure Gas:

Composite 001 and 002 to make 006.
Composite 003,004 and 005 to make 022.
Composite 009 and 010 to make 014.
Composite 011,012 and 013 to make 023.
Composite 017,018 and 019 to make 024.
Reserve some from each discrete for future analysis.

KELSO		
NW_GAS/NWTPH-Gx	VOC FP/8260C	VOC Unp/8260C

Service Request Summary

Folder #: K2112045
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
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Phone Number: 503-477-6150
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Project Chemist: Mark Harris
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QAP: LAB QAP
Qualifier Set: Lab Standard
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EDD: No EDD Specified

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 5 -N/A N/A
 6 250 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
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 3 125 mL-Plastic Bottle WM CLEAR HNO3 (Diss)
 3 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-DELILAH, K-Misty-1, K-Disposed,
 SUBBED, EHRMS-WIC 10B, K-PETUNIA-
 09, K-NOT CREATED, K-MET LTS, K-
 SVEXT, In Lab
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Metals	Metals D/6020A	3	As Ba Cd Cr Pb Se Ag
Metals	Metals T/6020A	8	As,Bd,Cd,Cr,Pb,Se,Ag
Semivoa GC	Pest OC ULL/8081B	5	See attached Form V for target list Report list: 20324
Semivoa GC	Pest OC LL/8081B	8	See attached Form V for target list Report list: 20324
Semivoa GC	BUTYLTINS/ALS SOP	8	Report list: 17560
Semivoa GC	HERB/8151A	8	Report list: 18726
Semivoa GC	NW_TPH/NWTPH-Dx	9	Report list: 22364
Semivoa GC	PCB/8082A	8	Report list: 20420
Semivoa GCMS	PAH SIM ULL/8270D	3	Report list: 18998
Semivoa GCMS	PAH SIM/8270D	8	Report list: 18998
Semivoa GCMS	SVO LL/8270D	8	See attached Form V for target list
VOA GCMS	VOC FP/8260C	6	Report list: 20915
VOA GCMS	NW_GAS/NWTPH-Gx	11	Report list: 19509
VOA GCMS	VOC Unp/8260C	5	Report list: 20915

Data Qualifiers

Lab Standard

- + Possible Tedlar bag artifact.
- A TIC is a suspected aldol-condensation product
- B Analyte found in the associated method blank as well as in the sample.
- BC Reported results are not blank corrected.
- BH The back section of the tube yielded higher results than the front.
- BT Results indicated possible breakthrough; back section $\geq 10\%$ front section.
- C Result identification confirmed.
- D Compound identified in an analysis at a secondary dilution factor
- D Spike was diluted out
- DE Reported results are corrected for desorption efficiency.
- E Estimated value. Concentration above calibration range
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- H1 Sample analysis performed past holding time. See case narrative.
- H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
- H3 Sample was received and analyzed past holding time.
- H4 Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
- I Internal standard not within the specified limits. See case narrative.
- J Estimated Value. Concentration found below MRL.
- K A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
- K Analyte was detected above the method reporting limit prior to normalization.
- K The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- L1 Laboratory control sample recovery outside the specified limits; results may be biased high.
- L2 Laboratory control sample recovery outside the specified limits; results may be biased low.
- L3 Laboratory control sample recovery outside the specified limits.
- M Matrix interference; results may be biased high.
- M The duplicate injection precision not met.
- M1 Matrix interference due to coelution with a non-target compound; results may be biased high.
- N Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- P Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
- P Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
- Q Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
- R Duplicate Precision not met.
- R1 Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
- S Surrogate recovery not within specified limits.
- S The reported value was determined by the Method of Standard Additions (MSA).
- T Analyte is a tentatively identified compound, result is estimated.
- U Compound was analyzed for, but was not detected (ND).
- V1 The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
- V2 The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
- W Result quantified, but the corresponding peak was detected outside the generated retention time window.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- X See case narrative.
- Y Recovery outside limits
- Y The chromatogram resembles a petroleum product but does not match the calibration standard.
- Z The chromatogram does not resemble a petroleum product.
 - i The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCEntration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Conservation and Natural Resources	TX026932022-1	7/31/2022
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Conservation	04016-2021	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-27	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-28	5/1/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112045

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date: 11/16/21 Analyst: [Signature] Samples: 006

Second Level - Data Review – to be filled by person doing peer review

Date: 11/16/21 Analyst: [Signature] Samples: 006

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID

K2112045

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:

11/2/21

Analyst:

Jc

Samples:

014

Second Level - Data Review - to be filled by person doing peer review

Date:

11/2/21

Analyst:

VW

Samples:

014

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112045

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date: 11/19/21 Analyst: *[Signature]* Samples: 007, 015, 020, 022, 023, 024

Second Level - Data Review – to be filled by person doing peer review

Date: 11/19/21 Analyst: *[Signature]* Samples: 007, 015, 020, 022, 023, 024



Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Intra-Network Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

Project Name: EQRB
Project Number: 319
Project Manager: Jill Betts
Company: Coles and Betts Environmental Consulting, LLC
QAP: LAB QAP

PCDD PCDF
8290A

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
K2112045-006	B-37 0-10 C	1	Soil	10/12/21	0950	10/13/21	HOUSTON	II
K2112045-007	B37	2	Water	10/12/21		10/13/21	HOUSTON	II
K2112045-014	B-34 0-10 C	1	Soil	10/12/21	0950	10/13/21	HOUSTON	II
K2112045-015	B34	2	Water	10/12/21		10/13/21	HOUSTON	II
K2112045-020	B29	2	Water	10/12/21		10/13/21	HOUSTON	II
K2112045-022	B-37 10-23 C	1	Soil	10/12/21	0950	10/13/21	HOUSTON	II
K2112045-023	B-34 10-23 C	1	Soil	10/12/21	0950	10/13/21	HOUSTON	II
K2112045-024	B-29 0-12 C	1	Soil	10/12/21	0950	10/13/21	HOUSTON	II

Folder Comments:

Composite 001 and 002 to make 006.
 Composite 003,004 and 005 to make 022.
 Composite 009 and 010 to make 014.
 Composite 011,012 and 013 to make 023.
 Composite 017,018 and 019 to make 024.
 Reserve some from each discrete for future analysis.

<p>Special Instructions/Comments Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.</p> <p>pH Checked _____</p>	<p>Turnaround Requirements _____ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 ✓ STANDARD</p> <p>Requested FAX Date: _____ Requested Report Date: 11/02/21</p>	<p>Report Requirements _____ I. Results Only ✓ II. Results + QC Summaries _____ III. Results + QC and Calibration Summaries _____ IV. Data Validation Report with Raw Data</p> <p>PQL/MDL/J <u>Y</u> EDD <u>N</u></p>	<p>Invoice Information</p> <p>PO# 51K2112045</p> <p>Bill to</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------

Relinquished By: *[Signature]* 10/26/21 1100

Received By: *J. Macmillan* 10/28/21 10150

Airbill Number: _____



Cooler Receipt Form

Project Chemist CH

Client/Project AL4-H

Thermometer ID 1R41

Date/Time Received: 10-28-21

Initials: JM

Date/Time Logged in: 10-28-21

Initials CH

1. Method of delivery: US Mail Fed Ex UPS DHL Courier Client

2. Samples received in: Cooler Box Envelope Other

3. Were custody seals on coolers? Yes No
 Were they intact? Yes No N/A
 Were they signed and dated? Yes No N/A

If yes, how many and where? 1. F

4. Packing Material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Sleeves Other

5. Foreign or Regulated Soil? Yes No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
9324 5603 4441		10-28-21	10:40	JM	1.4	<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

- 6. Were custody papers properly filled out (ink, signed, dated, etc)? Yes No
- 7. Did all bottles arrive in good condition (not broken, no signs of leakage)? Yes No
- 8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? Yes No
- 9. Were appropriate bottles/containers and volumes received for the requested tests? Yes No
- 10. Did sample labels and tags agree with custody documents? Yes No

Notes, Discrepancies, & Resolutions:

Service request Label: 45



10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 390509
 Team: Semivoa GCMS/TWOODS

Prep Workflow: OrgExtDioxS(30)
 Prep Method: Method

Status: Prepped
 Prep Date/Time: 11/2/21 10:46

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	EQ2100629-01	MB		8290A/PCDD PCDF			Solid	10.002g	
2	EQ2100629-02	LCS		8290A/PCDD PCDF			Solid	10.031g	
3	EQ2100629-03	DLCS		8290A/PCDD PCDF			Solid	10.162g	
4	K2112045-006	B-37 0-10 C	.02	8290A/PCDD PCDF			Soil	9.380g	
5	K2112045-014	B-34 0-10 C	.02	8290A/PCDD PCDF			Soil	10.202g	Fuel odor in sample
6	K2112045-022	B-37 10-23 C	.02	8290A/PCDD PCDF			Soil	9.200g	
7	K2112045-023	B-34 10-23 C	.02	8290A/PCDD PCDF			Soil	10.236g	
8	K2112045-024	B-29 0-12 C	.02	8290A/PCDD PCDF			Soil	8.358g	
9	K2112198-003	B 0-10 C	.04	8290A/PCDD PCDF			Soil	10.097g	
10	K2112198-005	B-31 20-25 C	.01	8290A/PCDD PCDF			Soil	10.294g	
11	K2112279-004	B-28 (0-10 C)	.08	8290A/PCDD PCDF			Soil	10.074g	
12	K2112279-007	B-28 (10-25 C)	.01	8290A/PCDD PCDF			Soil	10.057g	

Spiking Solutions

Name: 8290/1613B Cleanup Working Standard	Inventory ID 219817	Logbook Ref: tw 10/15/21 219817	Expires On: 02/18/2022
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EQ2100629-01 100.00µL	EQ2100629-02 100.00µL	EQ2100629-03 100.00µL	K2112045-006 100.00µL	K2112045-014 100.00µL	K2112045-022 100.00µL
K2112045-023 100.00µL	K2112045-024 100.00µL	K2112198-003 100.00µL	K2112198-005 100.00µL	K2112279-004 100.00µL	K2112279-007 100.00µL

Name: 1613B Matrix Working Standard	Inventory ID 219968	Logbook Ref: TW 10/22/21 SN	Expires On: 04/20/2022
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EQ2100629-01 100.00µL	EQ2100629-02 100.00µL	EQ2100629-03 100.00µL	K2112045-006 100.00µL	K2112045-014 100.00µL	K2112045-022 100.00µL
K2112045-023 100.00µL	K2112045-024 100.00µL	K2112198-003 100.00µL	K2112198-005 100.00µL	K2112279-004 100.00µL	K2112279-007 100.00µL

Name: 1613B Labeled Working Standard	Inventory ID 220141	Logbook Ref: SN 11/2/21 220141 2-4 ng/ml	Expires On: 02/18/2022
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EQ2100629-01 1,000.00µL	EQ2100629-02 1,000.00µL	EQ2100629-03 1,000.00µL	K2112045-006 1,000.00µL	K2112045-014 1,000.00µL	K2112045-022 1,000.00µL
K2112045-023 1,000.00µL	K2112045-024 1,000.00µL	K2112198-003 1,000.00µL	K2112198-005 1,000.00µL	K2112279-004 1,000.00µL	K2112279-007 1,000.00µL

Preparation Steps

Step: Extraction	Step: Acid Clean	Step: Silica Gel Clean	Step: Final Volume
Started: 11/2/21 10:46	Started: 11/4/21 10:00	Started: 11/4/21 12:00	Started: 11/5/21 11:00
Finished: 11/3/21 09:00	Finished: 11/4/21 11:00	Finished: 11/4/21 15:00	Finished: 11/5/21 14:00
By: TWOODS	By: TWOODS	By: TWOODS	By: TWOODS
Comments	Comments	Comments	Comments

Preparation Information Benchsheet

Prep Run#: 390509
Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtDioxS(30)
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/2/21 10:46

Comments: _____

Reviewed By: kn 11/22/21 Date: _____

Chain of Custody

Relinquished By: _____	Date: _____	<u>Extracts Examined</u>
Received By: _____	Date: _____	Yes No

Preparation Information Benchsheet

Prep Run#: 390511
Team: Semivoa GCMS/SHIVANI NAIDU

Prep Workflow: OrgExtDioxAq-30
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/2/21 10:00

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2101124-001	GW-7A-013-01-307	.01	8290A/PCDD PCDF			Water	982mL	clear
2	E2101124-002	GW-7A-013-02-307	.01	8290A/PCDD PCDF			Water	1010mL	clear
3	E2101124-003	GW-07-FB-01-307	.01	8290A/PCDD PCDF			Water	1025mL	clear
4	E2101124-004	GW-07-EB-01-307	.02	8290A/PCDD PCDF			Water	1001mL	clear
5	E2101135-016	MFS-EB-102121-1	.10	8290A/PCDD PCDF			Water	956mL	clear
6	EQ2100630-01	MB		8290A/PCDD PCDF			Liquid	1000mL	
7	EQ2100630-02	LCS		8290A/PCDD PCDF			Liquid	1000mL	
8	EQ2100630-03	GW-7A-013-01-307 MS	.03	8290A/PCDD PCDF			Liquid	1033mL	
9	EQ2100630-04	GW-7A-013-01-307 DMS	.05	8290A/PCDD PCDF			Liquid	987mL	
10	K2112045-007	B37	.10	8290A/PCDD PCDF			Water	980mL	murky
11	K2112045-015	B34	.10	8290A/PCDD PCDF			Water	1057mL	yellow cloudy
12	K2112045-020	B29	.11	8290A/PCDD PCDF			Water	1029mL	brown cloudy
13	K2112198-006	B31	.14	8290A/PCDD PCDF			Water	1058mL	yellow cloudy
14	K2112279-008	B-28	.13	8290A/PCDD PCDF			Water	878mL	yellow cloudy

Spiking Solutions

Name: 8290/1613B Cleanup Working Standard	Inventory ID: 219817	Logbook Ref: tw 10/15/21 219817	Expires On: 02/18/2022
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E2101124-001 100.00µL	E2101124-002 100.00µL	E2101124-003 100.00µL	E2101124-004 100.00µL	E2101135-016 100.00µL	EQ2100630-01 100.00µL
EQ2100630-02 100.00µL	EQ2100630-03 100.00µL	EQ2100630-04 100.00µL	K2112045-007 100.00µL	K2112045-015 100.00µL	K2112045-020 100.00µL
K2112198-006 100.00µL	K2112279-008 100.00µL				

Name: 1613B Matrix Working Standard	Inventory ID: 219968	Logbook Ref: TW 10/22/21 SN	Expires On: 04/20/2022
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EQ2100630-02 100.00µL	EQ2100630-03 100.00µL	EQ2100630-04 100.00µL
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Name: 1613B Labeled Working Standard	Inventory ID: 220141	Logbook Ref: SN 11/2/21 220141 2-4 ng/ml	Expires On: 02/18/2022
---------------------------------------------	-----------------------------	-------------------------------------------------	-------------------------------

E2101124-001 1,000.00µL	E2101124-002 1,000.00µL	E2101124-003 1,000.00µL	E2101124-004 1,000.00µL	E2101135-016 1,000.00µL	EQ2100630-01 1,000.00µL
EQ2100630-02 1,000.00µL	EQ2100630-03 1,000.00µL	EQ2100630-04 1,000.00µL	K2112045-007 1,000.00µL	K2112045-015 1,000.00µL	K2112045-020 1,000.00µL
K2112198-006 1,000.00µL	K2112279-008 1,000.00µL				

Preparation Information Benchsheet

Prep Run#: 390511
Team: Semivoa GCMS/SHIVANI NAIDU

Prep Workflow: OrgExtDioxAq-30
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/2/21 10:00

Preparation Materials

Carbon, High Purity	tw 08/09/21 carbon (218695)	Ethyl Acetate 99.9% Minimum EtOAc	TW 12/15/20 (214517)	Glass Wool	tw 7/8/21 glass wool (218851)
Hexanes 95%	tw 09/07/21 hexanes (219108)	Chlorine Test Strips	Chlorine test Strips (210298)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	tw 10/6/21 dcm (219683)
Sodium Hydroxide 1N NaOH	tw 08/10/21 (218694)	Sodium Sulfate Anhydrous Reagent Grade Na2SO4	tw 04/12/21 (217292)	Tridecane (n-Tridecane)	tw 04/ tridecane (216874)
ColorpHast pH-Indicator Strips	pH strips tw 21020 (206953)	Silica Gel	tw 06/01/21 silics g (217554)	sulfuric acid	8/12/21 tw (218912)
Toluene 99.9% Minimum	tw 09/09/21 toluene (219187)				

Preparation Steps

Step: Extraction	Step: Acid Clean	Step: Silica Gel Clean	Step: Final Volume
Started: 11/2/21 10:00	Started: 11/5/21 10:00	Started: 11/5/21 12:00	Started: 11/5/21 15:00
Finished: 11/2/21 16:00	Finished: 11/5/21 11:00	Finished: 11/5/21 15:00	Finished: 11/5/21 18:00
By: SHIVANI NAIDU	By: SHIVANI NAIDU	By: SHIVANI NAIDU	By: SHIVANI NAIDU
Comments	Comments	Comments	Comments

Comments: _____

Reviewed By: SN Date: 11/5/21

Chain of Custody

Relinquished By: _____	Date: _____	Extracts Examined
Received By: _____	Date: _____	Yes No



Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 9.380g
Data File Name: P535241
ICAL Date: 07/10/21

Date Analyzed: 11/12/21 06:19
Date Extracted: 11/2/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P535234

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.747	0.747			1
1,2,3,7,8-PeCDD	ND	U	0.198	3.01			1
1,2,3,6,7,8-HxCDD	ND	U	0.152	3.01			1
1,2,3,4,7,8-HxCDD	ND	U	0.171	3.01			1
1,2,3,7,8,9-HxCDD	ND	U	0.154	3.01			1
1,2,3,4,6,7,8-HpCDD	8.73		0.161	3.01	1.10	1.000	1
OCDD	90.6		0.761	6.02	0.88	1.000	1
2,3,7,8-TCDF	ND	U	0.823	0.823			1
1,2,3,7,8-PeCDF	ND	U	0.170	3.01			1
2,3,4,7,8-PeCDF	ND	U	0.221	3.01			1
1,2,3,6,7,8-HxCDF	ND	U	0.131	3.01			1
1,2,3,7,8,9-HxCDF	ND	U	0.148	3.01			1
1,2,3,4,7,8-HxCDF	0.218J		0.119	3.01	1.05	1.000	1
2,3,4,6,7,8-HxCDF	0.165J		0.123	3.01	1.16	1.000	1
1,2,3,4,6,7,8-HpCDF	1.72JK		0.0676	3.01	0.83	1.000	1
1,2,3,4,7,8,9-HpCDF	0.120JK		0.0475	3.01	1.67	1.001	1
OCDF	8.24K		0.609	6.02	0.72	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 9.380g
Data File Name: P535241
ICAL Date: 07/10/21

Date Analyzed: 11/12/21 06:19
Date Extracted: 11/2/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P535234

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.747	0.747			1
Total Penta-Dioxins	ND	U	0.198	3.01			1
Total Hexa-Dioxins	ND	U	0.158	3.01			1
Total Hepta-Dioxins	15.1		0.161	3.01	1.08		1
Total Tetra-Furans	ND	U	0.823	0.823			1
Total Penta-Furans	ND	U	0.191	3.01			1
Total Hexa-Furans	0.165J		0.130	3.01	1.16		1
Total Hepta-Furans	4.01		0.0549	3.01	1.01		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 9.380g

Date Analyzed: 11/12/21 06:19
Date Extracted: 11/2/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P535234

Data File Name: P535241
ICAL Date: 07/10/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	489.023	24	Y	40-135	0.77	1.019
13C-1,2,3,7,8-PeCDD	2000	714.254	36	Y	40-135	1.57	1.171
13C-1,2,3,4,7,8-HxCDD	2000	806.303	40		40-135	1.27	0.992
13C-1,2,3,6,7,8-HxCDD	2000	791.770	40		40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	675.926	34	Y	40-135	1.03	1.066
13C-OCDD	4000	1102.358	28	Y	40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	309.696	15	Y	40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	706.278	35	Y	40-135	1.58	1.131
13C-2,3,4,7,8-PeCDF	2000	533.597	27	Y	40-135	1.57	1.162
13C-1,2,3,4,7,8-HxCDF	2000	694.572	35	Y	40-135	0.51	0.972
13C-1,2,3,6,7,8-HxCDF	2000	566.968	28	Y	40-135	0.51	0.975
13C-1,2,3,7,8,9-HxCDF	2000	721.214	36	Y	40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	665.041	33	Y	40-135	0.50	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	509.617	25	Y	40-135	0.42	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1011.256	51		40-135	0.42	1.080
37Cl-2,3,7,8-TCDD	800	247.038	31	Y	40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 0-10 C
Lab Code: K2112045-006

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.747	0.747	1	1	
1,2,3,7,8-PeCDD	ND	0.198	3.01	1	1	
1,2,3,6,7,8-HxCDD	ND	0.152	3.01	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.171	3.01	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.154	3.01	1	0.1	
1,2,3,4,6,7,8-HpCDD	8.73	0.161	3.01	1	0.01	0.0873
OCDD	90.6	0.761	6.02	1	0.0003	0.0272
2,3,7,8-TCDF	ND	0.823	0.823	1	0.1	
1,2,3,7,8-PeCDF	ND	0.170	3.01	1	0.03	
2,3,4,7,8-PeCDF	ND	0.221	3.01	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.131	3.01	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.148	3.01	1	0.1	
1,2,3,4,7,8-HxCDF	0.218	0.119	3.01	1	0.1	0.0218
2,3,4,6,7,8-HxCDF	0.165	0.123	3.01	1	0.1	0.0165
1,2,3,4,6,7,8-HpCDF	1.72	0.0676	3.01	1	0.01	0.0172
1,2,3,4,7,8,9-HpCDF	0.120	0.0475	3.01	1	0.01	0.00120
OCDF	8.24	0.609	6.02	1	0.0003	0.00247
Total TEQ						0.174

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B37
Lab Code: K2112045-007

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 980mL
Data File Name: P628339
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 04:58
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	8.31	8.31			1
1,2,3,7,8-PeCDD	ND	U	2.42	25.5			1
1,2,3,6,7,8-HxCDD	ND	U	1.73	25.5			1
1,2,3,4,7,8-HxCDD	ND	U	2.06	25.5			1
1,2,3,7,8,9-HxCDD	ND	U	1.73	25.5			1
1,2,3,4,6,7,8-HpCDD	31.0K		2.22	25.5	1.21	1.000	1
OCDD	435		2.08	51.0	0.87	1.000	1
2,3,7,8-TCDF	ND	U	4.87	5.10			1
1,2,3,7,8-PeCDF	ND	U	1.41	25.5			1
2,3,4,7,8-PeCDF	ND	U	1.66	25.5			1
1,2,3,6,7,8-HxCDF	ND	U	1.94	25.5			1
1,2,3,7,8,9-HxCDF	ND	U	2.59	25.5			1
1,2,3,4,7,8-HxCDF	ND	U	1.82	25.5			1
2,3,4,6,7,8-HxCDF	ND	U	1.92	25.5			1
1,2,3,4,6,7,8-HpCDF	9.82JK		1.18	25.5	1.27	1.000	1
1,2,3,4,7,8,9-HpCDF	0.917JK		0.915	25.5	0.76	1.001	1
OCDF	28.2BJ		4.58	51.0	0.89	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B37
Lab Code: K2112045-007

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 980mL
Data File Name: P628339
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 04:58
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	8.31	8.31			1
Total Penta-Dioxins	ND	U	2.42	25.5			1
Total Hexa-Dioxins	ND	U	1.83	25.5			1
Total Hepta-Dioxins	30.8		2.22	25.5	0.99		1
Total Tetra-Furans	ND	U	4.87	5.10			1
Total Penta-Furans	ND	U	1.52	25.5			1
Total Hexa-Furans	3.24J		2.04	25.5	1.32		1
Total Hepta-Furans	13.9J		1.02	25.5	1.00		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B37
Lab Code: K2112045-007

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 980mL
Data File Name: P628339
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 04:58
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628336

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	450.023	23	Y	40-135	0.76	1.020
13C-1,2,3,7,8-PeCDD	2000	625.068	31	Y	40-135	1.54	1.173
13C-1,2,3,4,7,8-HxCDD	2000	705.131	35	Y	40-135	1.25	0.992
13C-1,2,3,6,7,8-HxCDD	2000	919.742	46		40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	735.653	37	Y	40-135	1.06	1.066
13C-OCDD	4000	1233.632	31	Y	40-135	0.90	1.142
13C-2,3,7,8-TCDF	2000	406.647	20	Y	40-135	0.75	0.994
13C-1,2,3,7,8-PeCDF	2000	751.539	38	Y	40-135	1.62	1.134
13C-2,3,4,7,8-PeCDF	2000	622.585	31	Y	40-135	1.60	1.164
13C-1,2,3,4,7,8-HxCDF	2000	785.838	39	Y	40-135	0.51	0.972
13C-1,2,3,6,7,8-HxCDF	2000	762.748	38	Y	40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	672.680	34	Y	40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	785.885	39	Y	40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	667.011	33	Y	40-135	0.45	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1032.966	52		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	243.179	30	Y	40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B37
Lab Code: K2112045-007

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	8.31	8.31	1	1	
1,2,3,7,8-PeCDD	ND	2.42	25.5	1	1	
1,2,3,6,7,8-HxCDD	ND	1.73	25.5	1	0.1	
1,2,3,4,7,8-HxCDD	ND	2.06	25.5	1	0.1	
1,2,3,7,8,9-HxCDD	ND	1.73	25.5	1	0.1	
1,2,3,4,6,7,8-HpCDD	31.0	2.22	25.5	1	0.01	0.310
OCDD	435	2.08	51.0	1	0.0003	0.131
2,3,7,8-TCDF	ND	4.87	5.10	1	0.1	
1,2,3,7,8-PeCDF	ND	1.41	25.5	1	0.03	
2,3,4,7,8-PeCDF	ND	1.66	25.5	1	0.3	
1,2,3,6,7,8-HxCDF	ND	1.94	25.5	1	0.1	
1,2,3,7,8,9-HxCDF	ND	2.59	25.5	1	0.1	
1,2,3,4,7,8-HxCDF	ND	1.82	25.5	1	0.1	
2,3,4,6,7,8-HxCDF	ND	1.92	25.5	1	0.1	
1,2,3,4,6,7,8-HpCDF	9.82	1.18	25.5	1	0.01	0.0982
1,2,3,4,7,8,9-HpCDF	0.917	0.915	25.5	1	0.01	0.00917
OCDF	28.2	4.58	51.0	1	0.0003	0.00846
Total TEQ						0.557

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.202g
Data File Name: P628220
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 04:37
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.441	0.610			1
1,2,3,7,8-PeCDD	ND	U	0.205	3.05			1
1,2,3,6,7,8-HxCDD	0.674J		0.125	3.05	1.12	1.000	1
1,2,3,4,7,8-HxCDD	ND	U	0.141	3.05			1
1,2,3,7,8,9-HxCDD	0.151JK		0.123	3.05	1.99	1.007	1
1,2,3,4,6,7,8-HpCDD	9.55		0.144	3.05	1.04	1.000	1
OCDD	93.7		0.218	6.10	0.88	1.000	1
2,3,7,8-TCDF	0.649K		0.265	0.610	0.58	1.000	1
1,2,3,7,8-PeCDF	0.169JK		0.0843	3.05	1.25	1.001	1
2,3,4,7,8-PeCDF	0.310JK		0.106	3.05	1.25	1.000	1
1,2,3,6,7,8-HxCDF	ND	U	0.150	3.05			1
1,2,3,7,8,9-HxCDF	0.168JK		0.158	3.05	0.94	1.000	1
1,2,3,4,7,8-HxCDF	0.384J		0.139	3.05	1.40	1.000	1
2,3,4,6,7,8-HxCDF	0.219J		0.147	3.05	1.43	1.000	1
1,2,3,4,6,7,8-HpCDF	1.88J		0.0916	3.05	1.04	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0698	3.05			1
OCDF	2.74JK		0.285	6.10	0.71	1.006	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2112045
Project:	EQRB/319	Date Collected:	10/12/21 09:50
Sample Matrix:	Soil	Date Received:	10/13/21 11:10
Sample Name:	B-34 0-10 C	Units:	ng/Kg
Lab Code:	K2112045-014	Basis:	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	11/11/21 04:37
Prep Method:	Method	Date Extracted:	11/2/21
Sample Amount:	10.202g	Instrument Name:	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P628220	Blank File Name:	P628214
ICAL Date:	10/14/21	Cal Ver. File Name:	P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.441	0.610			1
Total Penta-Dioxins	ND	U	0.205	3.05			1
Total Hexa-Dioxins	2.06J		0.129	3.05	1.24		1
Total Hepta-Dioxins	17.7		0.144	3.05	1.08		1
Total Tetra-Furans	ND	U	0.265	0.610			1
Total Penta-Furans	ND	U	0.0936	3.05			1
Total Hexa-Furans	3.94		0.148	3.05	1.25		1
Total Hepta-Furans	4.92		0.0781	3.05	1.04		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.202g

Data File Name: P628220
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 04:37
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	953.319	48		40-135	0.77	1.019
13C-1,2,3,7,8-PeCDD	2000	989.393	49		40-135	1.51	1.171
13C-1,2,3,4,7,8-HxCDD	2000	879.530	44		40-135	1.34	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1081.838	54		40-135	1.16	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	815.147	41		40-135	1.03	1.065
13C-OCDD	4000	1363.522	34	Y	40-135	0.86	1.142
13C-2,3,7,8-TCDF	2000	828.408	41		40-135	0.77	0.995
13C-1,2,3,7,8-PeCDF	2000	1166.801	58		40-135	1.58	1.132
13C-2,3,4,7,8-PeCDF	2000	922.860	46		40-135	1.56	1.162
13C-1,2,3,4,7,8-HxCDF	2000	882.446	44		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	831.655	42		40-135	0.53	0.974
13C-1,2,3,7,8,9-HxCDF	2000	858.086	43		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	899.092	45		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	673.467	34	Y	40-135	0.45	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1114.715	56		40-135	0.44	1.079
37Cl-2,3,7,8-TCDD	800	477.155	60		40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 0-10 C
Lab Code: K2112045-014

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.441	0.610	1	1	
1,2,3,7,8-PeCDD	ND	0.205	3.05	1	1	
1,2,3,6,7,8-HxCDD	0.674	0.125	3.05	1	0.1	0.0674
1,2,3,4,7,8-HxCDD	ND	0.141	3.05	1	0.1	
1,2,3,7,8,9-HxCDD	0.151	0.123	3.05	1	0.1	0.0151
1,2,3,4,6,7,8-HpCDD	9.55	0.144	3.05	1	0.01	0.0955
OCDD	93.7	0.218	6.10	1	0.0003	0.0281
2,3,7,8-TCDF	0.649	0.265	0.610	1	0.1	0.0649
1,2,3,7,8-PeCDF	0.169	0.0843	3.05	1	0.03	0.00507
2,3,4,7,8-PeCDF	0.310	0.106	3.05	1	0.3	0.0930
1,2,3,6,7,8-HxCDF	ND	0.150	3.05	1	0.1	
1,2,3,7,8,9-HxCDF	0.168	0.158	3.05	1	0.1	0.0168
1,2,3,4,7,8-HxCDF	0.384	0.139	3.05	1	0.1	0.0384
2,3,4,6,7,8-HxCDF	0.219	0.147	3.05	1	0.1	0.0219
1,2,3,4,6,7,8-HpCDF	1.88	0.0916	3.05	1	0.01	0.0188
1,2,3,4,7,8,9-HpCDF	ND	0.0698	3.05	1	0.01	
OCDF	2.74	0.285	6.10	1	0.0003	0.000822
Total TEQ						0.466

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B34
Lab Code: K2112045-015

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1057mL
Data File Name: P628340
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 05:47
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	5.89	5.89			1
1,2,3,7,8-PeCDD	ND	U	1.91	23.7			1
1,2,3,6,7,8-HxCDD	ND	U	1.98	23.7			1
1,2,3,4,7,8-HxCDD	ND	U	2.35	23.7			1
1,2,3,7,8,9-HxCDD	ND	U	1.98	23.7			1
1,2,3,4,6,7,8-HpCDD	21.5BJK		1.95	23.7	0.87	1.001	1
OCDD	360		6.00	47.3	0.85	1.000	1
2,3,7,8-TCDF	ND	U	4.73	4.73			1
1,2,3,7,8-PeCDF	ND	U	1.79	23.7			1
2,3,4,7,8-PeCDF	ND	U	2.31	23.7			1
1,2,3,6,7,8-HxCDF	ND	U	2.57	23.7			1
1,2,3,7,8,9-HxCDF	ND	U	3.85	23.7			1
1,2,3,4,7,8-HxCDF	ND	U	2.32	23.7			1
2,3,4,6,7,8-HxCDF	ND	U	2.97	23.7			1
1,2,3,4,6,7,8-HpCDF	5.51JK		1.24	23.7	1.35	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.983	23.7			1
OCDF	24.4BJ		5.32	47.3	0.95	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B34
Lab Code: K2112045-015

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1057mL
Data File Name: P628340
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 05:47
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	5.89	5.89			1
Total Penta-Dioxins	ND	U	1.91	23.7			1
Total Hexa-Dioxins	ND	U	2.08	23.7			1
Total Hepta-Dioxins	28.7		1.95	23.7	1.02		1
Total Tetra-Furans	ND	U	4.73	4.73			1
Total Penta-Furans	ND	U	2.01	23.7			1
Total Hexa-Furans	4.17J		2.85	23.7	1.23		1
Total Hepta-Furans	ND	U	1.09	23.7			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Sample Name: B34
Lab Code: K2112045-015

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1057mL

Data File Name: P628340
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 05:47
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628336

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	503.454	25	Y	40-135	0.77	1.019
13C-1,2,3,7,8-PeCDD	2000	585.259	29	Y	40-135	1.53	1.173
13C-1,2,3,4,7,8-HxCDD	2000	659.064	33	Y	40-135	1.27	0.992
13C-1,2,3,6,7,8-HxCDD	2000	845.455	42		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	631.907	32	Y	40-135	1.10	1.066
13C-OCDD	4000	969.009	24	Y	40-135	0.92	1.142
13C-2,3,7,8-TCDF	2000	437.477	22	Y	40-135	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	745.366	37	Y	40-135	1.60	1.133
13C-2,3,4,7,8-PeCDF	2000	565.015	28	Y	40-135	1.60	1.164
13C-1,2,3,4,7,8-HxCDF	2000	754.744	38	Y	40-135	0.50	0.972
13C-1,2,3,6,7,8-HxCDF	2000	705.829	35	Y	40-135	0.51	0.975
13C-1,2,3,7,8,9-HxCDF	2000	550.257	28	Y	40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	628.938	31	Y	40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	589.308	29	Y	40-135	0.46	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	875.640	44		40-135	0.42	1.079
37Cl-2,3,7,8-TCDD	800	306.593	38	Y	40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B34
Lab Code: K2112045-015

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	5.89	5.89	1	1	
1,2,3,7,8-PeCDD	ND	1.91	23.7	1	1	
1,2,3,6,7,8-HxCDD	ND	1.98	23.7	1	0.1	
1,2,3,4,7,8-HxCDD	ND	2.35	23.7	1	0.1	
1,2,3,7,8,9-HxCDD	ND	1.98	23.7	1	0.1	
1,2,3,4,6,7,8-HpCDD	21.5	1.95	23.7	1	0.01	0.215
OCDD	360	6.00	47.3	1	0.0003	0.108
2,3,7,8-TCDF	ND	4.73	4.73	1	0.1	
1,2,3,7,8-PeCDF	ND	1.79	23.7	1	0.03	
2,3,4,7,8-PeCDF	ND	2.31	23.7	1	0.3	
1,2,3,6,7,8-HxCDF	ND	2.57	23.7	1	0.1	
1,2,3,7,8,9-HxCDF	ND	3.85	23.7	1	0.1	
1,2,3,4,7,8-HxCDF	ND	2.32	23.7	1	0.1	
2,3,4,6,7,8-HxCDF	ND	2.97	23.7	1	0.1	
1,2,3,4,6,7,8-HpCDF	5.51	1.24	23.7	1	0.01	0.0551
1,2,3,4,7,8,9-HpCDF	ND	0.983	23.7	1	0.01	
OCDF	24.4	5.32	47.3	1	0.0003	0.00732
Total TEQ						0.385

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B29
Lab Code: K2112045-020

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1029mL
Data File Name: P628341
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 06:37
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	3.35	4.86			1
1,2,3,7,8-PeCDD	ND	U	1.25	24.3			1
1,2,3,6,7,8-HxCDD	ND	U	1.20	24.3			1
1,2,3,4,7,8-HxCDD	ND	U	1.43	24.3			1
1,2,3,7,8,9-HxCDD	ND	U	1.20	24.3			1
1,2,3,4,6,7,8-HpCDD	3.17BJ		1.27	24.3	0.89	1.000	1
OCDD	26.6BJ		2.40	48.6	0.94	1.000	1
2,3,7,8-TCDF	ND	U	2.68	4.86			1
1,2,3,7,8-PeCDF	ND	U	0.927	24.3			1
2,3,4,7,8-PeCDF	ND	U	1.13	24.3			1
1,2,3,6,7,8-HxCDF	ND	U	1.10	24.3			1
1,2,3,7,8,9-HxCDF	ND	U	1.67	24.3			1
1,2,3,4,7,8-HxCDF	ND	U	1.01	24.3			1
2,3,4,6,7,8-HxCDF	ND	U	1.07	24.3			1
1,2,3,4,6,7,8-HpCDF	1.07JK		0.744	24.3	1.79	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.593	24.3			1
OCDF	3.79BJK		3.47	48.6	0.59	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B29
Lab Code: K2112045-020

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1029mL
Data File Name: P628341
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 06:37
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	3.35	4.86			1
Total Penta-Dioxins	ND	U	1.25	24.3			1
Total Hexa-Dioxins	ND	U	1.26	24.3			1
Total Hepta-Dioxins	3.17J		1.27	24.3	0.89		1
Total Tetra-Furans	ND	U	2.68	4.86			1
Total Penta-Furans	ND	U	1.02	24.3			1
Total Hexa-Furans	ND	U	1.18	24.3			1
Total Hepta-Furans	ND	U	0.653	24.3			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B29
Lab Code: K2112045-020

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1029mL
Data File Name: P628341
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 06:37
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628336

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	659.672	33	Y	40-135	0.74	1.020
13C-1,2,3,7,8-PeCDD	2000	736.144	37	Y	40-135	1.53	1.173
13C-1,2,3,4,7,8-HxCDD	2000	740.662	37	Y	40-135	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	952.163	48		40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	747.490	37	Y	40-135	1.07	1.066
13C-OCDD	4000	1222.468	31	Y	40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	627.852	31	Y	40-135	0.81	0.994
13C-1,2,3,7,8-PeCDF	2000	935.321	47		40-135	1.58	1.134
13C-2,3,4,7,8-PeCDF	2000	754.449	38	Y	40-135	1.59	1.164
13C-1,2,3,4,7,8-HxCDF	2000	846.855	42		40-135	0.51	0.972
13C-1,2,3,6,7,8-HxCDF	2000	795.152	40		40-135	0.50	0.975
13C-1,2,3,7,8,9-HxCDF	2000	628.167	31	Y	40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	826.942	41		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	669.779	33	Y	40-135	0.43	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1055.822	53		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	347.284	43		40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B29
Lab Code: K2112045-020

Service Request: K2112045
Date Collected: 10/12/21
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	3.35	4.86	1	1	
1,2,3,7,8-PeCDD	ND	1.25	24.3	1	1	
1,2,3,6,7,8-HxCDD	ND	1.20	24.3	1	0.1	
1,2,3,4,7,8-HxCDD	ND	1.43	24.3	1	0.1	
1,2,3,7,8,9-HxCDD	ND	1.20	24.3	1	0.1	
1,2,3,4,6,7,8-HpCDD	3.17	1.27	24.3	1	0.01	0.0317
OCDD	26.6	2.40	48.6	1	0.0003	0.00798
2,3,7,8-TCDF	ND	2.68	4.86	1	0.1	
1,2,3,7,8-PeCDF	ND	0.927	24.3	1	0.03	
2,3,4,7,8-PeCDF	ND	1.13	24.3	1	0.3	
1,2,3,6,7,8-HxCDF	ND	1.10	24.3	1	0.1	
1,2,3,7,8,9-HxCDF	ND	1.67	24.3	1	0.1	
1,2,3,4,7,8-HxCDF	ND	1.01	24.3	1	0.1	
2,3,4,6,7,8-HxCDF	ND	1.07	24.3	1	0.1	
1,2,3,4,6,7,8-HpCDF	1.07	0.744	24.3	1	0.01	0.0107
1,2,3,4,7,8,9-HpCDF	ND	0.593	24.3	1	0.01	
OCDF	3.79	3.47	48.6	1	0.0003	0.00114
Total TEQ						0.0515

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 9.200g
Data File Name: P628342
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 07:27
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.983	0.983			1
1,2,3,7,8-PeCDD	ND	U	0.233	3.04			1
1,2,3,6,7,8-HxCDD	ND	U	0.199	3.04			1
1,2,3,4,7,8-HxCDD	ND	U	0.225	3.04			1
1,2,3,7,8,9-HxCDD	ND	U	0.195	3.04			1
1,2,3,4,6,7,8-HpCDD	2.16J		0.259	3.04	1.10	1.000	1
OCDD	19.8		0.488	6.09	1.01	1.000	1
2,3,7,8-TCDF	ND	U	1.07	1.07			1
1,2,3,7,8-PeCDF	ND	U	0.166	3.04			1
2,3,4,7,8-PeCDF	ND	U	0.251	3.04			1
1,2,3,6,7,8-HxCDF	ND	U	0.204	3.04			1
1,2,3,7,8,9-HxCDF	ND	U	0.208	3.04			1
1,2,3,4,7,8-HxCDF	ND	U	0.184	3.04			1
2,3,4,6,7,8-HxCDF	ND	U	0.199	3.04			1
1,2,3,4,6,7,8-HpCDF	0.387J		0.125	3.04	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0935	3.04			1
OCDF	1.44JK		0.505	6.09	0.71	1.006	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2112045
Project:	EQRB/319	Date Collected:	10/12/21 09:50
Sample Matrix:	Soil	Date Received:	10/13/21 11:10
Sample Name:	B-37 10-23 C	Units:	ng/Kg
Lab Code:	K2112045-022	Basis:	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	11/17/21 07:27
Prep Method:	Method	Date Extracted:	11/2/21
Sample Amount:	9.200g	Instrument Name:	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P628342	Blank File Name:	P628214
ICAL Date:	10/14/21	Cal Ver. File Name:	P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.983	0.983			1
Total Penta-Dioxins	ND	U	0.233	3.04			1
Total Hexa-Dioxins	0.845J		0.205	3.04	1.18		1
Total Hepta-Dioxins	2.16J		0.259	3.04	1.10		1
Total Tetra-Furans	ND	U	1.07	1.07			1
Total Penta-Furans	ND	U	0.199	3.04			1
Total Hexa-Furans	ND	U	0.199	3.04			1
Total Hepta-Furans	1.15J		0.106	3.04	1.05		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 9.200g

Date Analyzed: 11/17/21 07:27
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628336

Data File Name: P628342
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	346.002	17	Y	40-135	0.79	1.020
13C-1,2,3,7,8-PeCDD	2000	481.291	24	Y	40-135	1.55	1.173
13C-1,2,3,4,7,8-HxCDD	2000	504.588	25	Y	40-135	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	628.202	31	Y	40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	454.893	23	Y	40-135	1.05	1.066
13C-OCDD	4000	679.299	17	Y	40-135	0.90	1.142
13C-2,3,7,8-TCDF	2000	182.605	9	Y	40-135	0.80	0.994
13C-1,2,3,7,8-PeCDF	2000	579.956	29	Y	40-135	1.55	1.134
13C-2,3,4,7,8-PeCDF	2000	379.908	19	Y	40-135	1.56	1.165
13C-1,2,3,4,7,8-HxCDF	2000	540.301	27	Y	40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	499.253	25	Y	40-135	0.51	0.975
13C-1,2,3,7,8,9-HxCDF	2000	539.890	27	Y	40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	523.515	26	Y	40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	401.344	20	Y	40-135	0.46	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	654.882	33	Y	40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	182.250	23	Y	40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-37 10-23 C
Lab Code: K2112045-022

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.983	0.983	1	1	
1,2,3,7,8-PeCDD	ND	0.233	3.04	1	1	
1,2,3,6,7,8-HxCDD	ND	0.199	3.04	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.225	3.04	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.195	3.04	1	0.1	
1,2,3,4,6,7,8-HpCDD	2.16	0.259	3.04	1	0.01	0.0216
OCDD	19.8	0.488	6.09	1	0.0003	0.00594
2,3,7,8-TCDF	ND	1.07	1.07	1	0.1	
1,2,3,7,8-PeCDF	ND	0.166	3.04	1	0.03	
2,3,4,7,8-PeCDF	ND	0.251	3.04	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.204	3.04	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.208	3.04	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.184	3.04	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.199	3.04	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.387	0.125	3.04	1	0.01	0.00387
1,2,3,4,7,8,9-HpCDF	ND	0.0935	3.04	1	0.01	
OCDF	1.44	0.505	6.09	1	0.0003	0.000432
Total TEQ						0.0318

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.236g
Data File Name: P628343
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 08:17
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.436	0.617			1
1,2,3,7,8-PeCDD	ND	U	0.150	3.08			1
1,2,3,6,7,8-HxCDD	ND	U	0.131	3.08			1
1,2,3,4,7,8-HxCDD	ND	U	0.147	3.08			1
1,2,3,7,8,9-HxCDD	0.198J		0.128	3.08	1.29	1.007	1
1,2,3,4,6,7,8-HpCDD	1.74J		0.178	3.08	0.97	1.000	1
OCDD	14.0		0.466	6.17	0.90	1.000	1
2,3,7,8-TCDF	ND	U	0.319	0.617			1
1,2,3,7,8-PeCDF	ND	U	0.117	3.08			1
2,3,4,7,8-PeCDF	ND	U	0.152	3.08			1
1,2,3,6,7,8-HxCDF	ND	U	0.130	3.08			1
1,2,3,7,8,9-HxCDF	0.253JK		0.154	3.08	1.79	1.000	1
1,2,3,4,7,8-HxCDF	ND	U	0.123	3.08			1
2,3,4,6,7,8-HxCDF	ND	U	0.134	3.08			1
1,2,3,4,6,7,8-HpCDF	0.555JK		0.117	3.08	0.53	1.000	1
1,2,3,4,7,8,9-HpCDF	0.112JK		0.0853	3.08	0.83	1.000	1
OCDF	7.08		0.487	6.17	0.87	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.236g
Data File Name: P628343
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 08:17
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.436	0.617			1
Total Penta-Dioxins	ND	U	0.150	3.08			1
Total Hexa-Dioxins	0.198J		0.135	3.08	1.29		1
Total Hepta-Dioxins	1.74J		0.178	3.08	0.97		1
Total Tetra-Furans	ND	U	0.319	0.617			1
Total Penta-Furans	ND	U	0.132	3.08			1
Total Hexa-Furans	ND	U	0.135	3.08			1
Total Hepta-Furans	0.397J		0.0970	3.08	1.18		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.236g

Date Analyzed: 11/17/21 08:17
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628336

Data File Name: P628343
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	981.827	49		40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1038.846	52		40-135	1.54	1.173
13C-1,2,3,4,7,8-HxCDD	2000	1100.083	55		40-135	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1286.577	64		40-135	1.28	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	924.228	46		40-135	1.04	1.066
13C-OCDD	4000	1282.066	32	Y	40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	943.935	47		40-135	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	1378.930	69		40-135	1.59	1.133
13C-2,3,4,7,8-PeCDF	2000	1063.747	53		40-135	1.56	1.164
13C-1,2,3,4,7,8-HxCDF	2000	1205.040	60		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1132.074	57		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1078.962	54		40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1127.106	56		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	782.276	39	Y	40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1314.264	66		40-135	0.43	1.079
37Cl-2,3,7,8-TCDD	800	413.173	52		40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-34 10-23 C
Lab Code: K2112045-023

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.436	0.617	1	1	
1,2,3,7,8-PeCDD	ND	0.150	3.08	1	1	
1,2,3,6,7,8-HxCDD	ND	0.131	3.08	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.147	3.08	1	0.1	
1,2,3,7,8,9-HxCDD	0.198	0.128	3.08	1	0.1	0.0198
1,2,3,4,6,7,8-HpCDD	1.74	0.178	3.08	1	0.01	0.0174
OCDD	14.0	0.466	6.17	1	0.0003	0.00420
2,3,7,8-TCDF	ND	0.319	0.617	1	0.1	
1,2,3,7,8-PeCDF	ND	0.117	3.08	1	0.03	
2,3,4,7,8-PeCDF	ND	0.152	3.08	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.130	3.08	1	0.1	
1,2,3,7,8,9-HxCDF	0.253	0.154	3.08	1	0.1	0.0253
1,2,3,4,7,8-HxCDF	ND	0.123	3.08	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.134	3.08	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.555	0.117	3.08	1	0.01	0.00555
1,2,3,4,7,8,9-HpCDF	0.112	0.0853	3.08	1	0.01	0.00112
OCDF	7.08	0.487	6.17	1	0.0003	0.00212
Total TEQ						0.0755

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.358g
Data File Name: P628344
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 09:07
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.460	0.737			1
1,2,3,7,8-PeCDD	ND	U	0.165	3.68			1
1,2,3,6,7,8-HxCDD	ND	U	0.189	3.68			1
1,2,3,4,7,8-HxCDD	ND	U	0.216	3.68			1
1,2,3,7,8,9-HxCDD	0.254JK		0.186	3.68	0.94	1.007	1
1,2,3,4,6,7,8-HpCDD	1.37J		0.192	3.68	0.94	1.000	1
OCDD	12.2		0.226	7.37	0.79	1.000	1
2,3,7,8-TCDF	ND	U	0.258	0.737			1
1,2,3,7,8-PeCDF	0.146J		0.0777	3.68	1.43	1.001	1
2,3,4,7,8-PeCDF	0.196JK		0.0938	3.68	2.57	1.000	1
1,2,3,6,7,8-HxCDF	0.205JK		0.165	3.68	0.79	1.000	1
1,2,3,7,8,9-HxCDF	ND	U	0.280	3.68			1
1,2,3,4,7,8-HxCDF	0.391J		0.159	3.68	1.35	1.000	1
2,3,4,6,7,8-HxCDF	ND	U	0.162	3.68			1
1,2,3,4,6,7,8-HpCDF	2.22J		0.122	3.68	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	0.262J		0.0935	3.68	1.20	1.000	1
OCDF	33.2		0.291	7.37	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.358g
Data File Name: P628344
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 09:07
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.460	0.737			1
Total Penta-Dioxins	ND	U	0.165	3.68			1
Total Hexa-Dioxins	ND	U	0.196	3.68			1
Total Hepta-Dioxins	2.86J		0.192	3.68	1.12		1
Total Tetra-Furans	ND	U	0.258	0.737			1
Total Penta-Furans	0.146J		0.0848	3.68	1.43		1
Total Hexa-Furans	0.717J		0.184	3.68	1.08		1
Total Hepta-Furans	2.22J		0.105	3.68	1.05		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.358g

Data File Name: P628344
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 09:07
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628336

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1007.682	50		40-135	0.75	1.019
13C-1,2,3,7,8-PeCDD	2000	1135.215	57		40-135	1.56	1.173
13C-1,2,3,4,7,8-HxCDD	2000	1247.166	62		40-135	1.24	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1493.917	75		40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1200.528	60		40-135	1.07	1.066
13C-OCDD	4000	1894.508	47		40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	950.424	48		40-135	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	1451.441	73		40-135	1.58	1.133
13C-2,3,4,7,8-PeCDF	2000	1167.637	58		40-135	1.62	1.164
13C-1,2,3,4,7,8-HxCDF	2000	1321.277	66		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1243.682	62		40-135	0.53	0.975
13C-1,2,3,7,8,9-HxCDF	2000	929.415	46		40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1316.699	66		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	965.545	48		40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1493.469	75		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	450.958	56		40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-29 0-12 C
Lab Code: K2112045-024

Service Request: K2112045
Date Collected: 10/12/21 09:50
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.460	0.737	1	1	
1,2,3,7,8-PeCDD	ND	0.165	3.68	1	1	
1,2,3,6,7,8-HxCDD	ND	0.189	3.68	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.216	3.68	1	0.1	
1,2,3,7,8,9-HxCDD	0.254	0.186	3.68	1	0.1	0.0254
1,2,3,4,6,7,8-HpCDD	1.37	0.192	3.68	1	0.01	0.0137
OCDD	12.2	0.226	7.37	1	0.0003	0.00366
2,3,7,8-TCDF	ND	0.258	0.737	1	0.1	
1,2,3,7,8-PeCDF	0.146	0.0777	3.68	1	0.03	0.00438
2,3,4,7,8-PeCDF	0.196	0.0938	3.68	1	0.3	0.0588
1,2,3,6,7,8-HxCDF	0.205	0.165	3.68	1	0.1	0.0205
1,2,3,7,8,9-HxCDF	ND	0.280	3.68	1	0.1	
1,2,3,4,7,8-HxCDF	0.391	0.159	3.68	1	0.1	0.0391
2,3,4,6,7,8-HxCDF	ND	0.162	3.68	1	0.1	
1,2,3,4,6,7,8-HpCDF	2.22	0.122	3.68	1	0.01	0.0222
1,2,3,4,7,8,9-HpCDF	0.262	0.0935	3.68	1	0.01	0.00262
OCDF	33.2	0.291	7.37	1	0.0003	0.00996
Total TEQ						0.200

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: EQ2100629-01

Service Request: K2112045
Date Collected: NA
Date Received: NA

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.002g

Data File Name: P628214
ICAL Date: 10/14/21

Date Analyzed: 11/10/21 23:38
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.503	0.503			1
1,2,3,7,8-PeCDD	ND	U	0.223	2.50			1
1,2,3,6,7,8-HxCDD	ND	U	0.112	2.50			1
1,2,3,4,7,8-HxCDD	ND	U	0.133	2.50			1
1,2,3,7,8,9-HxCDD	ND	U	0.112	2.50			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.189	2.50			1
OCDD	ND	U	0.181	5.00			1
2,3,7,8-TCDF	ND	U	0.326	0.500			1
1,2,3,7,8-PeCDF	ND	U	0.181	2.50			1
2,3,4,7,8-PeCDF	ND	U	0.199	2.50			1
1,2,3,6,7,8-HxCDF	ND	U	0.103	2.50			1
1,2,3,7,8,9-HxCDF	ND	U	0.118	2.50			1
1,2,3,4,7,8-HxCDF	ND	U	0.0952	2.50			1
2,3,4,6,7,8-HxCDF	ND	U	0.0930	2.50			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.129	2.50			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.105	2.50			1
OCDF	ND	U	0.187	5.00			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100629-01

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.002g

Date Analyzed: 11/10/21 23:38
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Data File Name: P628214
ICAL Date: 10/14/21

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.503	0.503			1
Total Penta-Dioxins	ND	U	0.223	2.50			1
Total Hexa-Dioxins	ND	U	0.118	2.50			1
Total Hepta-Dioxins	ND	U	0.189	2.50			1
Total Tetra-Furans	ND	U	0.326	0.500			1
Total Penta-Furans	ND	U	0.190	2.50			1
Total Hexa-Furans	ND	U	0.102	2.50			1
Total Hepta-Furans	ND	U	0.115	2.50			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100629-01

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.002g

Date Analyzed: 11/10/21 23:38
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Data File Name: P628214
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	720.752	36	Y	40-135	0.75	1.019
13C-1,2,3,7,8-PeCDD	2000	1080.330	54		40-135	1.55	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1181.010	59		40-135	1.24	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1522.485	76		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1301.443	65		40-135	1.05	1.066
13C-OCDD	4000	2611.054	65		40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	575.810	29	Y	40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1142.551	57		40-135	1.58	1.132
13C-2,3,4,7,8-PeCDF	2000	1005.855	50		40-135	1.60	1.162
13C-1,2,3,4,7,8-HxCDF	2000	1165.741	58		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1116.773	56		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1112.766	56		40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1245.699	62		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1084.630	54		40-135	0.44	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1614.283	81		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	266.670	33	Y	40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: EQ2100630-01

Service Request: K2112045
Date Collected: NA
Date Received: NA

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628240
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 22:24
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	5.40	5.40			1
1,2,3,7,8-PeCDD	ND	U	1.36	25.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.977	25.0			1
1,2,3,4,7,8-HxCDD	ND	U	1.21	25.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.995	25.0			1
1,2,3,4,6,7,8-HpCDD	2.51J		1.62	25.0	0.91	1.000	1
OCDD	21.4J		3.17	50.0	1.00	1.000	1
2,3,7,8-TCDF	ND	U	3.60	5.00			1
1,2,3,7,8-PeCDF	ND	U	1.05	25.0			1
2,3,4,7,8-PeCDF	ND	U	1.15	25.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.862	25.0			1
1,2,3,7,8,9-HxCDF	ND	U	1.08	25.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.829	25.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.821	25.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	1.03	25.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.862	25.0			1
OCDF	6.81JK		3.12	50.0	1.07	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: EQ2100630-01

Service Request: K2112045
Date Collected: NA
Date Received: NA
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL
Data File Name: P628240
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 22:24
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	5.40	5.40			1
Total Penta-Dioxins	ND	U	1.36	25.0			1
Total Hexa-Dioxins	ND	U	1.05	25.0			1
Total Hepta-Dioxins	2.51J		1.62	25.0	0.91		1
Total Tetra-Furans	ND	U	3.60	5.00			1
Total Penta-Furans	ND	U	1.10	25.0			1
Total Hexa-Furans	ND	U	0.889	25.0			1
Total Hepta-Furans	ND	U	0.931	25.0			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100630-01

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628240
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 22:24
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	747.549	37	Y	40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1005.432	50		40-135	1.55	1.170
13C-1,2,3,4,7,8-HxCDD	2000	964.293	48		40-135	1.30	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1278.756	64		40-135	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	951.175	48		40-135	1.05	1.066
13C-OCDD	4000	1436.380	36	Y	40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	682.049	34	Y	40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1123.970	56		40-135	1.57	1.130
13C-2,3,4,7,8-PeCDF	2000	990.302	50		40-135	1.59	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1017.861	51		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	998.196	50		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	944.104	47		40-135	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1088.195	54		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	874.764	44		40-135	0.45	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1268.511	63		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	319.341	40		40-135	NA	1.019



Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Analyzed: 11/11/21
Date Extracted: 11/02/21

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: ng/Kg
Basis: Dry
Analysis Lot: 745940

Lab Control Sample
EQ2100629-02

Duplicate Lab Control Sample
EQ2100629-03

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,3,4,6,7,8-HpCDD	82.3	99.7	83	80.9	98.4	82	70-130	2	25
1,2,3,4,7,8-HxCDD	91.5	99.7	92	89.2	98.4	91	70-130	3	25
1,2,3,6,7,8-HxCDD	75.7	99.7	76	76.9	98.4	78	70-130	2	25
1,2,3,7,8,9-HxCDD	82.7	99.7	83	82.9	98.4	84	70-130	<1	25
1,2,3,7,8-PeCDD	86.8	99.7	87	84.5	98.4	86	70-130	3	25
2,3,7,8-TCDD	15.6	19.9	78	15.1	19.7	77	70-130	3	25
OCDD	168	199	84	169	197	86	70-130	<1	25
1,2,3,4,6,7,8-HpCDF	85.6	99.7	86	85.1	98.4	86	70-130	<1	25
1,2,3,4,7,8,9-HpCDF	55.8	99.7	56 *	54.5	98.4	55 *	70-130	2	25
1,2,3,4,7,8-HxCDF	78.3	99.7	79	77.5	98.4	79	70-130	1	25
1,2,3,6,7,8-HxCDF	85.4	99.7	86	83.8	98.4	85	70-130	2	25
1,2,3,7,8,9-HxCDF	80.9	99.7	81	80.4	98.4	82	70-130	<1	25
1,2,3,7,8-PeCDF	60.6	99.7	61 *	61.6	98.4	63 *	70-130	2	25
2,3,4,6,7,8-HxCDF	77.9	99.7	78	79.5	98.4	81	70-130	2	25
2,3,4,7,8-PeCDF	80.1	99.7	80	78.8	98.4	80	70-130	2	25
2,3,7,8-TCDF	14.3	19.9	72	14.6	19.7	74	70-130	2	25
OCDF	151	199	76	148	197	75	70-130	2	25

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100629-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.031g

Data File Name: P628221
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 05:27
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	15.6		0.313	0.498	0.76	1.001	1
1,2,3,7,8-PeCDD	86.8		0.0886	2.49	1.58	1.000	1
1,2,3,6,7,8-HxCDD	75.7		0.0516	2.49	1.21	1.000	1
1,2,3,4,7,8-HxCDD	91.5		0.0599	2.49	1.23	1.000	1
1,2,3,7,8,9-HxCDD	82.7		0.0512	2.49	1.23	1.007	1
1,2,3,4,6,7,8-HpCDD	82.3		0.0807	2.49	1.05	1.000	1
OCDD	168		0.0763	4.98	0.89	1.000	1
2,3,7,8-TCDF	14.3		0.229	0.498	0.81	1.001	1
1,2,3,7,8-PeCDF	60.6		0.0773	2.49	1.55	1.001	1
2,3,4,7,8-PeCDF	80.1		0.0900	2.49	1.55	1.000	1
1,2,3,6,7,8-HxCDF	85.4		0.0569	2.49	1.27	1.000	1
1,2,3,7,8,9-HxCDF	80.9		0.0619	2.49	1.25	1.000	1
1,2,3,4,7,8-HxCDF	78.3		0.0537	2.49	1.22	1.000	1
2,3,4,6,7,8-HxCDF	77.9		0.0499	2.49	1.23	1.000	1
1,2,3,4,6,7,8-HpCDF	85.6		0.183	2.49	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	55.8		0.152	2.49	1.01	1.000	1
OCDF	151		0.130	4.98	0.89	1.006	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100629-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.031g

Date Analyzed: 11/11/21 05:27
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Data File Name: P628221
ICAL Date: 10/14/21

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	15.6		0.313	0.498	0.76		1
Total Penta-Dioxins	86.8		0.0886	2.49	1.58		1
Total Hexa-Dioxins	250		0.0538	2.49	1.23		1
Total Hepta-Dioxins	82.3		0.0807	2.49	1.05		1
Total Tetra-Furans	14.3		0.229	0.498	0.81		1
Total Penta-Furans	141		0.0830	2.49	1.55		1
Total Hexa-Furans	323		0.0554	2.49	1.22		1
Total Hepta-Furans	142		0.164	2.49	1.03		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100629-02

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.031g

Data File Name: P628221
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 05:27
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	991.533	50		40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1351.150	68		40-135	1.54	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1404.392	70		40-135	1.33	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1746.323	87		40-135	1.20	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1522.604	76		40-135	1.05	1.066
13C-OCDD	4000	3108.380	78		40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	812.630	41		40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1483.930	74		40-135	1.57	1.131
13C-2,3,4,7,8-PeCDF	2000	1253.249	63		40-135	1.56	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1355.109	68		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1240.718	62		40-135	0.53	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1326.938	66		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1444.448	72		40-135	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1295.326	65		40-135	0.44	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1930.021	97		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	366.707	46		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100629-03

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.162g

Data File Name: P628222
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 06:16
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	15.1		0.195	0.492	0.76	1.001	1
1,2,3,7,8-PeCDD	84.5		0.0568	2.46	1.55	1.000	1
1,2,3,6,7,8-HxCDD	76.9		0.0679	2.46	1.27	1.000	1
1,2,3,4,7,8-HxCDD	89.2		0.0803	2.46	1.26	1.000	1
1,2,3,7,8,9-HxCDD	82.9		0.0678	2.46	1.20	1.007	1
1,2,3,4,6,7,8-HpCDD	80.9		0.0596	2.46	1.02	1.000	1
OCDD	169		0.108	4.92	0.91	1.000	1
2,3,7,8-TCDF	14.6		0.164	0.492	0.78	1.001	1
1,2,3,7,8-PeCDF	61.6		0.0815	2.46	1.53	1.001	1
2,3,4,7,8-PeCDF	78.8		0.0922	2.46	1.53	1.000	1
1,2,3,6,7,8-HxCDF	83.8		0.0318	2.46	1.24	1.000	1
1,2,3,7,8,9-HxCDF	80.4		0.0363	2.46	1.26	1.000	1
1,2,3,4,7,8-HxCDF	77.5		0.0295	2.46	1.21	1.000	1
2,3,4,6,7,8-HxCDF	79.5		0.0291	2.46	1.24	1.000	1
1,2,3,4,6,7,8-HpCDF	85.1		0.191	2.46	1.04	1.000	1
1,2,3,4,7,8,9-HpCDF	54.5		0.158	2.46	1.03	1.000	1
OCDF	148		0.122	4.92	0.90	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100629-03

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.162g

Data File Name: P628222
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 06:16
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	15.1		0.195	0.492	0.76		1
Total Penta-Dioxins	84.7		0.0568	2.46	1.55		1
Total Hexa-Dioxins	249		0.0713	2.46	1.26		1
Total Hepta-Dioxins	80.9		0.0596	2.46	1.02		1
Total Tetra-Furans	14.6		0.164	0.492	0.78		1
Total Penta-Furans	140		0.0864	2.46	1.53		1
Total Hexa-Furans	321		0.0315	2.46	1.21		1
Total Hepta-Furans	140		0.171	2.46	1.04		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100629-03

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.162g

Date Analyzed: 11/11/21 06:16
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Data File Name: P628222
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	895.712	45		40-135	0.75	1.019
13C-1,2,3,7,8-PeCDD	2000	1274.039	64		40-135	1.57	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1331.412	67		40-135	1.25	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1697.395	85		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1419.069	71		40-135	1.06	1.066
13C-OCDD	4000	2840.097	71		40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	755.323	38	Y	40-135	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	1389.756	69		40-135	1.55	1.131
13C-2,3,4,7,8-PeCDF	2000	1176.047	59		40-135	1.58	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1317.934	66		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1260.949	63		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1279.825	64		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1398.740	70		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1211.836	61		40-135	0.43	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1804.539	90		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	338.993	42		40-135	NA	1.019

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Analyzed: 11/12/21
Date Extracted: 11/02/21

Lab Control Sample Summary

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: pg/L
Basis: NA
Analysis Lot: 746633

Lab Control Sample
EQ2100630-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,2,3,4,6,7,8-HpCDD	906	1000	91	70-130
1,2,3,4,7,8-HxCDD	1040	1000	104	70-130
1,2,3,6,7,8-HxCDD	854	1000	85	70-130
1,2,3,7,8,9-HxCDD	938	1000	94	70-130
1,2,3,7,8-PeCDD	988	1000	99	70-130
2,3,7,8-TCDD	179	200	90	70-130
OCDD	1940	2000	97	70-130
1,2,3,4,6,7,8-HpCDF	957	1000	96	70-130
1,2,3,4,7,8,9-HpCDF	601	1000	60 *	70-130
1,2,3,4,7,8-HxCDF	885	1000	89	70-130
1,2,3,6,7,8-HxCDF	942	1000	94	70-130
1,2,3,7,8,9-HxCDF	907	1000	91	70-130
1,2,3,7,8-PeCDF	699	1000	70	70-130
2,3,4,6,7,8-HxCDF	889	1000	89	70-130
2,3,4,7,8-PeCDF	902	1000	90	70-130
2,3,7,8-TCDF	172	200	86	70-130
OCDF	1890	2000	94	70-130

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100630-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628246
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 03:23
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	179		3.31	5.00	0.77	1.000	1
1,2,3,7,8-PeCDD	988		1.14	25.0	1.54	1.000	1
1,2,3,6,7,8-HxCDD	854		0.753	25.0	1.28	1.000	1
1,2,3,4,7,8-HxCDD	1040		0.882	25.0	1.29	1.000	1
1,2,3,7,8,9-HxCDD	938		0.749	25.0	1.25	1.007	1
1,2,3,4,6,7,8-HpCDD	906		1.31	25.0	0.96	1.000	1
OCDD	1940		2.18	50.0	0.88	1.000	1
2,3,7,8-TCDF	172		2.32	5.00	0.79	1.001	1
1,2,3,7,8-PeCDF	699		0.946	25.0	1.59	1.001	1
2,3,4,7,8-PeCDF	902		1.12	25.0	1.52	1.000	1
1,2,3,6,7,8-HxCDF	942		0.714	25.0	1.22	1.000	1
1,2,3,7,8,9-HxCDF	907		0.868	25.0	1.22	1.000	1
1,2,3,4,7,8-HxCDF	885		0.687	25.0	1.27	1.000	1
2,3,4,6,7,8-HxCDF	889		0.669	25.0	1.17	1.000	1
1,2,3,4,6,7,8-HpCDF	957		2.36	25.0	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	601		1.90	25.0	1.03	1.000	1
OCDF	1890		2.94	50.0	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100630-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628246
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 03:23
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	179		3.31	5.00	0.77		1
Total Penta-Dioxins	991		1.14	25.0	1.54		1
Total Hexa-Dioxins	2840		0.788	25.0	1.29		1
Total Hepta-Dioxins	906		1.31	25.0	0.96		1
Total Tetra-Furans	172		2.32	5.00	0.79		1
Total Penta-Furans	1620		1.03	25.0	1.59		1
Total Hexa-Furans	3620		0.730	25.0	1.27		1
Total Hepta-Furans	1560		2.08	25.0	1.05		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112045
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100630-02

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628246
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 03:23
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	973.024	49		40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1155.173	58		40-135	1.51	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1098.127	55		40-135	1.34	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1420.748	71		40-135	1.22	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1008.494	50		40-135	1.06	1.066
13C-OCDD	4000	1361.621	34	Y	40-135	0.88	1.142
13C-2,3,7,8-TCDF	2000	872.268	44		40-135	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	1401.776	70		40-135	1.57	1.130
13C-2,3,4,7,8-PeCDF	2000	1139.700	57		40-135	1.60	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1157.541	58		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1147.160	57		40-135	0.50	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1099.896	55		40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1217.710	61		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	911.152	46		40-135	0.43	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1403.935	70		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	404.417	51		40-135	NA	1.019



ALS Environmental
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January 13, 2022

Analytical Report for Service Request No: K2112046

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

RE: EQRB / 319

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 13, 2021
For your reference, these analyses have been assigned our service request number **K2112046**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals
Butyltins
Semi-Volatile Petroleum Products by GCFID
Volatile Petroleum Products by GCFID
Ultra Low Level Organochlorine Pesticides by GCECD
Low Level Organochlorine Pesticides by GC
Polychlorinated Biphenyls (PCBs)
Chlorinated Herbicides by GC
Volatile Organic Compounds by GC MS, Unpreserved
Volatile Organic Compounds
Polycyclic Aromatic Hydrocarbons
Low Level Semivolatile Organic Compounds by GCMS
Subcontract Lab Results

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB
Sample Matrix: Soil, Water

Service Request: K2112046
Date Received: 10/13/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Nine soil, water samples were received for analysis at ALS Environmental on 10/13/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 11/03/2021:A couple analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 11/03/2021:The upper control criterion was exceeded for multiple analytes in Laboratory Control Sample (LCS). The analytes in question were not detected in the associated field samples above the MRL, except for 4-Methylphenol in samples B-36 (10-17.5) and B-39 (0-10). The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

The upper control criterion was exceeded for p-Terphenyl-d14 in sample B-29 0-12 C. No target analytes were detected in the sample above the MRL. The error associated with an elevated recovery equated to a high bias. The quality of the sample data was not significantly affected. No further corrective action was appropriate.

The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS14 \1108F002.D: Indeno(1,2,3-cd)pyrene. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 11/23/2021:The analysis of sample B-35 (10-20) was initially performed within the recommended holding time. Re-extraction was required due to failing surrogates. The results from the second analysis were reported.

Method 8270D, 11/23/2021:Bis(2-ethylhexyl) Phthalate was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 11/23/2021:The upper control criterion was exceeded for multiple analytes in Laboratory Control Sample (LCS). The analytes in question were not detected in the associated field samples above the MRL. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method 8270D, 11/05/2021:A couple analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Approved by _____

Date 01/13/2022



Method 8270D, 10/21/2021:Analyte 2-Methylnaphthalene was flagged as outside the control criterion for Continuing Calibration Verification (CCV) KQ2120825-02. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 10/21/2021:Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

Semivoa GC:

Method 8081B, 11/23/2021:The upper control criterion was exceeded for Methoxychlor and Toxaphene in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8081B, 11/23/2021:The Method Blank KQ2120360-10 contained low levels of gamma-BHC (Lindane) above the Method Reporting Limit (MRL). In accordance with ALS QA/QC policy, all sample results less than twenty times the level found in the Method Blank were flagged as estimated. The samples were not re-extracted and re-analyzed due to being significantly past hold time.

Method 8081B, 01/12/2022:The analysis of samples B-36 and B-39 were initially performed within the recommended holding time. Reanalysis was required due to failing QC that had a low bias to the data. The reanalysis was performed past the recommended holding time. The results from the second analysis were reported.

Method 8082A:The analysis of 8082A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for Aroclor 1221 and 1242. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 11/30/2021:The analysis of 8151A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for 2,4-D and Dichlorprop. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 11/30/2021:The upper control criterion was exceeded for MCPA and MCPP in Continuing Calibration Verification (CCV) . The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8151A, 11/23/2021:The analysis of 8151A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for 2,4-D and Dichlorprop. The data quality was not affected. No further corrective action was necessary.

Method ALS SOP, 10/26/2021:The upper control criterion was exceeded for Tri-n-butyltin and Tri-n-propyltin in Laboratory Control Sample (LCS) KQ2120355-03. The analytes in question were not detected in the associated field samples above the MRL. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method ALS SOP, 10/26/2021:The upper control criterion was exceeded for Tri-n-propyltin in several samples. No target analytes were detected in the sample above the MRL. The error associated with an elevated recovery equated to a high bias. The quality of the sample data was not significantly affected. No further corrective action was appropriate.

Method ALS SOP, 11/16/2021:The upper control criterion was exceeded for most analytes in the closing Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analytes in question above the MRL. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method NWTPH-Dx, 10/28/2021:The upper control criterion was exceeded for n-Triacontane in Continuing Calibration

Approved by 

Date 01/13/2022



Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

K2112046

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835	Laboratory ALS Labs Lab Project No. _____	CHAIN OF CUSTODY Chain of Custody No. <u>163</u>
------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------	------------------------------------------------------------

Project Manager: <u>Jill Betts</u> Project No.: <u>319</u> Project Name: <u>EQRB</u> Collected by: <u>Robert Schettler</u>	Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____	Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>
-------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Comments
 Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail.
See composite notes below
Samples in 3 coolers

Lab ID	Sample #	Date	Time	Sample Description	Matrix			Number of Containers	Analyses to be Performed											Remarks		
					Soil	Water	Other		NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH			
		10/11/21	0945	B-35 0-5	X			4														
		10/11/21	0950	B-35 5-10	X			4														
		10/11/21	1000	B-35 10-15	X			4														
		10/11/21	1005	B-35 15-20	X			4														
	B-35(0-10)		B-35 05 + B-35 5-10						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	B-35(10-20)		B-35 10-15 + B-35 15-20						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		

Relinquished by: <u>Robert Schettler</u>	Company: <u>Apex</u>	Date: <u>10/13/21</u>	Time: <u>1800 0925</u>	Received by: <u>[Signature]</u>	Company: <u>ALS</u>
Relinquished by: <u>[Signature]</u>	Company: <u>ALS</u>	Date: <u>10/13/21</u>	Time: <u>1110</u>	Received by: <u>[Signature]</u>	Company: <u>ALS</u>
Relinquished by: _____	Company: _____	Date: _____	Time: _____	Received by: _____	Company: _____

K 2112046

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835			Laboratory ALS Labs Lab Project No. _____			CHAIN OF CUSTODY Chain of Custody No. <u>2 of 3</u>															
Project Manager <u>Jill Betts</u> Project No. <u>319</u> Project Name <u>EQRB</u> Collected by <u>Robert Schettler</u>			Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____			Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>															
Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. <p style="font-size: 1.2em; margin-left: 20px;">See composite notes below</p>			Matrix Soil _____ Water _____ Other _____ Number of Containers _____			Analyses to be Performed NWTPH-Gx _____ NWTPH-Dx _____ VOCs by EPA Method 8260B _____ PAHs by EPA Method 8270SIM _____ Low Level SVOCs by EPA Method 8270D _____ Low Level Organochlorine Pesticides by EPA Method 8081B _____ PCBs by EPA Method 8082A _____ PCDD and PCDFs by EPA Method 8290A _____ Butyltins _____ Total RCRA 8 Metals by EPA Method 200/6020A/7471B _____ RUSH _____															
Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH	Remarks	
		10/11/21	1400	B-36 0-5	X			4													
		10/11/21	1405	B-36 5-10	X			4													
		10/11/21	1410	B-36 10-15	X			4													
		10/11/21	1415	B-36 15-17.5	X			4													
		10/11/21	1500	B-36	X			26	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Dissolved metals field filter
	B-36 (0-10)			B-36 0-5 B-36 5-10					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	B-36 (10-17.5)			B-36 10-15 B-36 15-17.5					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Relinquished by	<u>Robert Schettler</u>	Company	<u>Apex</u>	Date	<u>10/13/21</u>	Time	<u>0925</u>	Received by	<u>[Signature]</u>	Company	<u>ALS</u>	Date	<u>10/13/21</u>	Time	<u>0925</u>	Received by	<u>[Signature]</u>	Company	<u>ALS</u>		
Relinquished by	<u>[Signature]</u>	Company	<u>ALS</u>	Date	<u>10/13/21</u>	Time	<u>1110</u>	Received by	<u>[Signature]</u>	Company	<u>ALS</u>										
Relinquished by		Company		Date		Time		Received by		Company											

K2112046

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835					Laboratory ALS Labs Lab Project No. _____					CHAIN OF CUSTODY Chain of Custody No. <u>303</u>											
Project Manager: Jill Betts Project No.: 319 Project Name: EQRB Collected by: <u>Robert Schottler</u>					Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____					Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>											
Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. <i>See composite notes below</i>					Matrix Soil _____ Water _____ Other _____		Number of Containers _____		Analyses to be Performed												
					NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA & Metals by EPA Method 200/6020A/7471B	RUSH	Remarks					
Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA & Metals by EPA Method 200/6020A/7471B	RUSH	Remarks	
		10/11/21	1406	B-39 0-5	X			4													
		10/11/21	1400	B-39 5-10	X			4													
		10/11/21	1436	B 39	X			26	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	dissolved metals field filtered
	B-39 (0-5)			B-39 0-5					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	B-39 (5-10)			B-39 5-10					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Relinquished by <u>Robert Schottler</u> Company <u>Apex</u>					Date <u>10/13/21</u> Time <u>1500</u>		Time <u>0925</u>		Received by <u>[Signature]</u>					Company <u>ALS</u> Date <u>10/13/21</u> Time <u>0925</u>							
Relinquished by <u>[Signature]</u> Company <u>ALS</u>					Date <u>10/13/21</u>		Time <u>1110</u>		Received by <u>[Signature]</u>					Company <u>ALS</u>							
Relinquished by _____ Company _____					Date _____		Time _____		Received by _____					Company _____							

Cooler Receipt and Preservation Form

Client Apex / Coles & Betts Service Request K21 12046
 Received: OCT 13 2021 Opened: OCT 13 2021 By: CG Unloaded: OCT 13 2021 By: CG

- Samples were received via? **USPS** Cooler **Fed Ex** **UPS** **DHL** **PDX** Courier **Hand Delivered**
 - Samples were received in: (circle) Cooler **Box** **Envelope** **Other** NA
 - Were custody seals on coolers? **NA** **Y** N If yes, how many and where? _____
 If present, were custody seals intact? **Y** **N** If present, were they signed and dated? **Y** **N**
 - Was a Temperature Blank present in cooler? **NA** Y **N** If yes, notate the temperature in the appropriate column below:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - Were samples received within the method specified temperature ranges? **NA** Y **N**
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA **Y** **N**
- If applicable, tissue samples were received: **Frozen** **Partially Thawed** **Thawed**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number	NA	Filed
2.2	_____	IR01	1/3	_____	_____	_____	<u>NA</u>	
1.4	_____	T	2/3	_____	_____	_____		
2.1	_____	T	3/3	_____	_____	_____		

- Packing material: **Inserts** **Baggies** Bubble Wrap **Gel Packs** Wet Ice **Dry Ice** **Sleeves** Boxes
- Were custody papers properly filled out (ink, signed, etc.)? **NA** Y **N**
- Were samples received in good condition (unbroken) **NA** Y **N**
- Were all sample labels complete (ie, analysis, preservation, etc.)? **NA** Y **N**
- Did all sample labels and tags agree with custody papers? **NA** Y **N**
- Were appropriate bottles/containers and volumes received for the tests indicated? **NA** Y **N**
- Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below **NA** Y **N**
- Were VOA vials received without headspace? Indicate in the table below. **NA** Y **N**
- Was C12/Res negative? **NA** Y **N**

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Received a trip blank for B-36 & a trip blank for B-39

K2112046

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835				Laboratory ALS Labs Lab Project No. _____				CHAIN OF CUSTODY Chain of Custody No. <u>1673</u>															
Project Manager <u>Jill Betts</u> Project No. <u>319</u> Project Name <u>EORB</u> Collected by <u>Robert Schettler</u>				Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____				Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>															
Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. <i>See composite notes below</i> <i>Samples in 3 coolers</i>				Matrix Soil _____ Water _____ Other _____ Number of Containers _____		Analyses to be Performed NMTPH-GX NMTPH-DX VOCs by EPA Method 8260B PAHs by EPA Method 8270SIM Low Level SVOCs by EPA Method 8270D Low Level Organochlorine Pesticides by EPA Method 8081B PCBs by EPA Method 8082A PCDD and PCDFs by EPA Method 8290A Butyltins Total RCRA 8 Metals by EPA Method 200.6020A/7471B RUSH						Remarks											
Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NMTPH-GX	NMTPH-DX	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200.6020A/7471B	RUSH	Remarks			
		10/11/21	0945	B-35 0-5	X			4															
		10/11/21	0950	B-35 5-10	X			4															
		10/11/21	1000	B-35 10-15	X			4															
		10/11/21	1005	B-35 15-20	X			4															
	B-35(0-10)			B-35 0-5 + B-35 5-10					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
	B-35(10-20)			B-35 10-15 + B-35 15-20					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Relinquished by <u>Robert Schettler</u>				Company <u>Apex</u>		Date <u>10/13/21</u> Time <u>1:00</u>		Received by <u>William ACS</u>		Company <u>ACS</u>		Date <u>10/13/21</u> Time <u>0925</u>		Received by <u>[Signature]</u>		Company <u>ACS</u>		Date <u>10/13/21</u> Time <u>0925</u>		Received by <u>[Signature]</u>		Company <u>ACS</u>	
Relinquished by _____				Company _____		Date <u>10/13/21</u> Time <u>1110</u>		Received by <u>[Signature]</u>		Company _____		Date _____ Time _____		Received by _____		Company _____		Date _____ Time _____		Received by _____		Company _____	
Relinquished by _____				Company _____		Date _____ Time _____		Received by _____		Company _____		Date _____ Time _____		Received by _____		Company _____		Date _____ Time _____		Received by _____		Company _____	

K2112046

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835				Laboratory ALS Labs Lab Project No. _____				CHAIN OF CUSTODY Chain of Custody No. <u>2 of 3</u>																		
Project Manager <u>Jill Betts</u> Project No. <u>319</u> Project Name <u>EQRB</u> Collected by <u>Robert Schettler</u>				Liquid with Sediment Sample _____ Test Filtrate _____ Test Sediment _____ Test Both Multi-Phase Sample _____ Test One (which) _____ Test Separately _____ Shake				Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>																		
Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. <p style="font-size: 1.2em; margin-left: 20px;">See composite notes below</p>				Matrix Soil _____ Water _____ Other _____ Number of Containers _____		Analyses to be Performed NWTPH-Gx NWTPH-Dx VOCs by EPA Method 8260B PAHs by EPA Method 8270SIM Low Level SVOCs by EPA Method 8270D Low Level Organochlorine Pesticides by EPA Method 8081B PCBs by EPA Method 8082A PCDD and PCDFs by EPA Method 8290A Butyltins Total RCRA 8 Metals by EPA Method 200/6020A/7471B RUSH						Remarks														
Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH	Remarks						
		10/11/21	1400	B-36 0-5	X			4																		
		10/11/21	1405	B-36 5-10	X			4																		
		10/11/21	1410	B-36 10-15	X			4																		
		10/11/21	1415	B-36 15-17.5	X			4																		
		10/11/21	1500	B-36	X			26	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Dissolved Metals field filter					
	D-36(0-10)			B-36 0-5 B-36 5-10					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
	B-36(10-17.5)			B-36 10-15 B-36 15-17.5					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓						
Relinquished by <u>Robert Schettler</u>		Company <u>Apex</u>		Date <u>10/13/21</u>	Time <u>1800</u>		Received by <u>[Signature]</u>		Company <u>ALS</u>		Date <u>10/13/21</u>		Time <u>1110</u>		Received by <u>[Signature]</u>		Company <u>ALS</u>		Date <u>10/13/21</u>		Time <u>1110</u>		Received by <u>[Signature]</u>		Company <u>ALS</u>	

K2112046

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835				Laboratory ALS Labs Lab Project No. _____				CHAIN OF CUSTODY Chain of Custody No. <u>3043</u>											
Project Manager <u>Jill Betts</u> Project No. <u>319</u> Project Name <u>EQRB</u> Collected by <u>Robert Schottler</u>				Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____				Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>											
Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. <i>See composite notes below (see edit)</i>				Matrix		Analyses to be Performed													
				Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200.6/200A/7471B	RUSH	Remarks
Lab ID	Sample #	Date	Time	Sample Description															
		10/11/21	1406	B-39 0-5	X		4												
		10/14/21	1400	B-39 5-10	X		4												
		10/16/21	1436	B 39	X		26	26	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	B-39 (0-5)			B-39 0-5 + B-39 5-10					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	B-39 (5-10)			B-39 5-10					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Relinquished by <u>Robert Schottler</u> Company <u>Apex</u>				Date <u>10/13/21</u> Time <u>1:500 0925</u>		Received by <u>[Signature]</u> Company <u>ALS</u>		Date <u>10/11/21</u> Time <u>1:500 0925</u>		Received by <u>[Signature]</u> Company <u>ALS</u>		Date <u>10/12/21</u> Time <u>0925</u>		Received by <u>[Signature]</u> Company <u>ALS</u>					
Relinquished by _____ Company _____				Date _____ Time _____		Received by _____ Company _____		Date _____ Time _____		Received by _____ Company _____		Date _____ Time _____		Received by _____ Company _____					
Relinquished by _____ Company _____				Date _____ Time _____		Received by _____ Company _____		Date _____ Time _____		Received by _____ Company _____		Date _____ Time _____		Received by _____ Company _____					



Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Analysis Method: 160.3 Modified
Prep Method: None

Service Request: K2112046
Date Collected: 10/11/21
Date Received: 10/13/21
Units: Percent
Basis: As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
B-35 (0-10)	K2112046-003	90.4	-	-	1	10/18/21 15:15	
B-35 (10-20)	K2112046-006	87.8	-	-	1	10/18/21 15:15	
B-36 (0-10)	K2112046-009	79.9	-	-	1	10/18/21 15:15	
B-36 (10-17.5)	K2112046-012	84.5	-	-	1	10/18/21 15:15	
B-39 (0-10)	K2112046-019	76.3	-	-	1	10/18/21 15:15	



Metals

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	4.31	mg/Kg	0.52	0.06	5	10/20/21 14:07	10/18/21	
Barium	6020A	53.8	mg/Kg	0.052	0.021	5	10/20/21 14:07	10/18/21	
Cadmium	6020A	0.053	mg/Kg	0.021	0.007	5	10/20/21 14:07	10/18/21	
Chromium	6020A	10.6	mg/Kg	0.21	0.06	5	10/20/21 14:07	10/18/21	
Lead	6020A	3.94	mg/Kg	0.052	0.021	5	10/20/21 14:07	10/18/21	
Mercury	7471B	0.050	mg/Kg	0.021	0.002	1	10/18/21 15:18	10/18/21	
Selenium	6020A	0.1 J	mg/Kg	1.0	0.09	5	10/20/21 14:07	10/18/21	
Silver	6020A	0.019 J	mg/Kg	0.021	0.004	5	10/20/21 14:07	10/18/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	3.03	mg/Kg	0.52	0.06	5	10/20/21 14:10	10/18/21	
Barium	6020A	62.5	mg/Kg	0.052	0.021	5	10/20/21 14:10	10/18/21	
Cadmium	6020A	0.051	mg/Kg	0.021	0.007	5	10/20/21 14:10	10/18/21	
Chromium	6020A	11.7	mg/Kg	0.21	0.06	5	10/20/21 14:10	10/18/21	
Lead	6020A	3.67	mg/Kg	0.052	0.021	5	10/20/21 14:10	10/18/21	
Mercury	7471B	0.009 J	mg/Kg	0.021	0.002	1	10/18/21 15:19	10/18/21	
Selenium	6020A	0.2 J	mg/Kg	1.0	0.09	5	10/20/21 14:10	10/18/21	
Silver	6020A	0.025	mg/Kg	0.021	0.004	5	10/20/21 14:10	10/18/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	3.15	mg/Kg	0.59	0.07	5	10/20/21 14:12	10/18/21	
Barium	6020A	125	mg/Kg	0.059	0.024	5	10/20/21 14:12	10/18/21	
Cadmium	6020A	0.082	mg/Kg	0.024	0.008	5	10/20/21 14:12	10/18/21	
Chromium	6020A	13.3	mg/Kg	0.24	0.07	5	10/20/21 14:12	10/18/21	
Lead	6020A	10.0	mg/Kg	0.059	0.024	5	10/20/21 14:12	10/18/21	
Mercury	7471B	0.019 J	mg/Kg	0.023	0.002	1	10/18/21 15:21	10/18/21	
Selenium	6020A	ND U	mg/Kg	1.2	0.1	5	10/20/21 14:12	10/18/21	
Silver	6020A	0.044	mg/Kg	0.024	0.005	5	10/20/21 14:12	10/18/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.13	mg/Kg	0.54	0.06	5	10/20/21 14:14	10/18/21	
Barium	6020A	77.7	mg/Kg	0.054	0.022	5	10/20/21 14:14	10/18/21	
Cadmium	6020A	0.061	mg/Kg	0.022	0.008	5	10/20/21 14:14	10/18/21	
Chromium	6020A	12.3	mg/Kg	0.22	0.06	5	10/20/21 14:14	10/18/21	
Lead	6020A	3.89	mg/Kg	0.054	0.022	5	10/20/21 14:14	10/18/21	
Mercury	7471B	0.042	mg/Kg	0.022	0.002	1	10/18/21 15:22	10/18/21	
Selenium	6020A	ND U	mg/Kg	1.1	0.10	5	10/20/21 14:14	10/18/21	
Silver	6020A	0.034	mg/Kg	0.022	0.004	5	10/20/21 14:14	10/18/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-36
Lab Code: K2112046-013

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	0.34 J	ug/L	0.50	0.09	1	10/27/21 16:52	10/21/21	
Barium	6020A	6.00	ug/L	0.050	0.020	1	10/27/21 16:52	10/21/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	10/27/21 16:52	10/21/21	
Chromium	6020A	0.31	ug/L	0.20	0.03	1	10/27/21 16:52	10/21/21	
Lead	6020A	0.082	ug/L	0.020	0.006	1	10/27/21 16:52	10/21/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 15:08	10/20/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 16:52	10/21/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/27/21 16:52	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-36
Lab Code: K2112046-013

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.38	ug/L	0.50	0.09	1	10/27/21 16:39	10/21/21	
Barium	6020A	93.8	ug/L	0.050	0.020	1	10/27/21 16:39	10/21/21	
Cadmium	6020A	0.103	ug/L	0.020	0.008	1	10/27/21 16:39	10/21/21	
Chromium	6020A	31.7	ug/L	0.20	0.03	1	10/27/21 16:39	10/21/21	
Lead	6020A	7.91	ug/L	0.020	0.006	1	10/27/21 16:39	10/21/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 15:05	10/20/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 16:39	10/21/21	
Silver	6020A	0.028	ug/L	0.020	0.009	1	10/27/21 16:39	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-39
Lab Code: K2112046-017

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	0.42 J	ug/L	0.50	0.09	1	10/27/21 16:59	10/21/21	
Barium	6020A	7.20	ug/L	0.050	0.020	1	10/27/21 16:59	10/21/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	10/27/21 16:59	10/21/21	
Chromium	6020A	0.20 J	ug/L	0.20	0.03	1	10/27/21 16:59	10/21/21	
Lead	6020A	0.052	ug/L	0.020	0.006	1	10/27/21 16:59	10/21/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 15:10	10/20/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 16:59	10/21/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/27/21 16:59	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-39
Lab Code: K2112046-017

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	1.60	ug/L	0.50	0.09	1	10/27/21 16:50	10/21/21	
Barium	6020A	64.4	ug/L	0.050	0.020	1	10/27/21 16:50	10/21/21	
Cadmium	6020A	0.065	ug/L	0.020	0.008	1	10/27/21 16:50	10/21/21	
Chromium	6020A	13.6	ug/L	0.20	0.03	1	10/27/21 16:50	10/21/21	
Lead	6020A	6.49	ug/L	0.020	0.006	1	10/27/21 16:50	10/21/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 15:07	10/20/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 16:50	10/21/21	
Silver	6020A	0.023	ug/L	0.020	0.009	1	10/27/21 16:50	10/21/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.27	mg/Kg	0.60	0.07	5	10/20/21 14:16	10/18/21	
Barium	6020A	85.8	mg/Kg	0.060	0.024	5	10/20/21 14:16	10/18/21	
Cadmium	6020A	0.106	mg/Kg	0.024	0.008	5	10/20/21 14:16	10/18/21	
Chromium	6020A	12.7	mg/Kg	0.24	0.07	5	10/20/21 14:16	10/18/21	
Lead	6020A	8.15	mg/Kg	0.060	0.024	5	10/20/21 14:16	10/18/21	
Mercury	7471B	0.035	mg/Kg	0.023	0.002	1	10/18/21 15:24	10/18/21	
Selenium	6020A	ND U	mg/Kg	1.2	0.1	5	10/20/21 14:16	10/18/21	
Silver	6020A	0.036	mg/Kg	0.024	0.005	5	10/20/21 14:16	10/18/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120367-03

Service Request: K2112046
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	mg/Kg	0.5	0.06	5	10/20/21 13:39	10/18/21	
Barium	6020A	ND U	mg/Kg	0.05	0.020	5	10/20/21 13:39	10/18/21	
Cadmium	6020A	ND U	mg/Kg	0.020	0.007	5	10/20/21 13:39	10/18/21	
Chromium	6020A	ND U	mg/Kg	0.20	0.06	5	10/20/21 13:39	10/18/21	
Lead	6020A	ND U	mg/Kg	0.05	0.020	5	10/20/21 13:39	10/18/21	
Selenium	6020A	ND U	mg/Kg	1.0	0.09	5	10/20/21 13:39	10/18/21	
Silver	6020A	0.007 J	mg/Kg	0.020	0.004	5	10/20/21 13:39	10/18/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120469-03

Service Request: K2112046
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	ug/L	0.50	0.09	1	10/27/21 16:33	10/21/21	
Barium	6020A	ND U	ug/L	0.050	0.020	1	10/27/21 16:33	10/21/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	10/27/21 16:33	10/21/21	
Chromium	6020A	ND U	ug/L	0.20	0.03	1	10/27/21 16:33	10/21/21	
Lead	6020A	ND U	ug/L	0.020	0.006	1	10/27/21 16:33	10/21/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 16:33	10/21/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/27/21 16:33	10/21/21	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120490-01

Service Request: K2112046
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/20/21 14:44	10/20/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120364-03

Service Request: K2112046
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7471B	0.006 J	mg/Kg	0.02	0.002	1	10/18/21 14:58	10/18/21	

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21
Date Received: 10/13/21
Date Analyzed: 10/27/21

Replicate Sample Summary
Total Metals

Sample Name: B-36
Lab Code: K2112046-013

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2120469-01 Result			
Arsenic	6020A	0.50	0.09	2.38	2.30	2.34	3	20
Barium	6020A	0.050	0.020	93.8	90.8	92.3	3	20
Cadmium	6020A	0.020	0.008	0.103	0.105	0.104	2	20
Chromium	6020A	0.20	0.03	31.7	28.6	30.2	10	20
Lead	6020A	0.020	0.006	7.91	7.41	7.66	7	20
Selenium	6020A	1.0	0.2	ND U	ND U	ND	-	20
Silver	6020A	0.020	0.009	0.028	0.027	0.028	4	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21
Date Received: 10/13/21
Date Analyzed: 10/27/21
Date Extracted: 10/21/21

Matrix Spike Summary
Total Metals

Sample Name: B-36
Lab Code: K2112046-013
Analysis Method: 6020A
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2120469-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	2.38	39.9	50.0	75	75-125
Barium	93.8	209	100	116	75-125
Cadmium	0.103	24.9	25.0	99	75-125
Chromium	31.7	47.0	10.0	153 N	75-125
Lead	7.91	55.3	50.0	95	75-125
Selenium	ND U	38.7	50.0	77	75-125
Silver	0.028	12.1	12.5	97	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 10/20/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2120367-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	99.6	100	100	80-120
Barium	6020A	212	200	106	80-120
Cadmium	6020A	10.5	10.0	105	80-120
Chromium	6020A	40.9	40.0	102	80-120
Lead	6020A	106	100	106	80-120
Selenium	6020A	100	100	100	80-120
Silver	6020A	10.3	10.0	103	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 10/27/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2120469-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	48.2	50.0	96	80-120
Barium	6020A	101	100	101	80-120
Cadmium	6020A	25.3	25.0	101	80-120
Chromium	6020A	9.84	10.0	98	80-120
Lead	6020A	49.8	50.0	100	80-120
Selenium	6020A	51.5	50.0	103	80-120
Silver	6020A	12.4	12.5	99	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 10/20/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2120490-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	5.40	5.00	108	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 10/18/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2120364-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7471B	0.518	0.500	104	80-120



Butyltins

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10

Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.1	0.29	1	10/26/21 22:52	10/20/21	
Di-n-butyltin Cation	0.22 J	1.1	0.21	1	10/26/21 22:52	10/20/21	
Tri-n-butyltin Cation	ND U	1.1	0.47	1	10/26/21 22:52	10/20/21	*
Tetra-n-butyltin	ND U	1.1	0.49	1	10/26/21 22:52	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	154	10 - 152	10/26/21 22:52	*

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10

Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.1	0.30	1	10/26/21 22:19	10/20/21	
Di-n-butyltin Cation	0.36 J	1.1	0.22	1	10/26/21 22:19	10/20/21	
Tri-n-butyltin Cation	0.85 J	1.1	0.49	1	10/26/21 22:19	10/20/21	*
Tetra-n-butyltin	ND U	1.1	0.51	1	10/26/21 22:19	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	181	10 - 152	10/26/21 22:19	*

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	0.52 J	1.2	0.33	1	10/26/21 22:35	10/20/21	
Di-n-butyltin Cation	0.59 J	1.2	0.24	1	10/26/21 22:35	10/20/21	
Tri-n-butyltin Cation	1.1 J	1.2	0.54	1	10/26/21 22:35	10/20/21	*
Tetra-n-butyltin	ND U	1.2	0.55	1	10/26/21 22:35	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	192	10 - 152	10/26/21 22:35	*

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.2	0.31	1	10/26/21 22:02	10/20/21	
Di-n-butyltin Cation	0.56 J	1.2	0.23	1	10/26/21 22:02	10/20/21	
Tri-n-butyltin Cation	0.73 JP	1.2	0.51	1	10/26/21 22:02	10/20/21	*
Tetra-n-butyltin	ND U	1.2	0.52	1	10/26/21 22:02	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	196	10 - 152	10/26/21 22:02	*

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10

Sample Name: B-36
Lab Code: K2112046-013

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.051	0.030	1	11/16/21 20:23	10/14/21	
Di-n-butyltin Cation	ND U	0.051	0.0075	1	11/16/21 20:23	10/14/21	
Tri-n-butyltin Cation	ND U	0.051	0.013	1	11/16/21 20:23	10/14/21	
Tetra-n-butyltin	ND U	0.051	0.039	1	11/16/21 20:23	10/14/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	87	10 - 195	11/16/21 20:23	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10

Sample Name: B-39
Lab Code: K2112046-017

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.051	0.030	1	11/16/21 20:40	10/14/21	
Di-n-butyltin Cation	0.0085 JP	0.051	0.0075	1	11/16/21 20:40	10/14/21	
Tri-n-butyltin Cation	ND U	0.051	0.013	1	11/16/21 20:40	10/14/21	
Tetra-n-butyltin	ND U	0.051	0.039	1	11/16/21 20:40	10/14/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	106	10 - 195	11/16/21 20:40	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.3	0.35	1	10/26/21 23:08	10/20/21	
Di-n-butyltin Cation	0.40 J	1.3	0.25	1	10/26/21 23:08	10/20/21	
Tri-n-butyltin Cation	0.74 J	1.3	0.57	1	10/26/21 23:08	10/20/21	*
Tetra-n-butyltin	ND U	1.3	0.58	1	10/26/21 23:08	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	208	10 - 152	10/26/21 23:08	*

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: Method

Sample Name	Lab Code	Tri-n-propyltin
		10-152
B-35 (0-10)	K2112046-003	154*
B-35 (10-20)	K2112046-006	181*
B-36 (0-10)	K2112046-009	192*
B-36 (10-17.5)	K2112046-012	196*
B-39 (0-10)	K2112046-019	208*
Method Blank	KQ2120355-04	171*
Lab Control Sample	KQ2120355-03	194*

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: EPA 3520C

Sample Name	Lab Code	Tri-n-propyltin
		10-195
B-36	K2112046-013	87
B-39	K2112046-017	106
Method Blank	KQ2120269-03	63
Lab Control Sample	KQ2120269-01	74
Duplicate Lab Control Sample	KQ2120269-02	85

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120269-03

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.050	0.029	1	11/16/21 18:45	10/14/21	
Di-n-butyltin Cation	0.035 J	0.050	0.0073	1	11/16/21 18:45	10/14/21	
Tri-n-butyltin Cation	ND U	0.050	0.012	1	11/16/21 18:45	10/14/21	
Tetra-n-butyltin	ND U	0.050	0.038	1	11/16/21 18:45	10/14/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	63	10 - 195	11/16/21 18:45	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120355-04

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.96	0.26	1	10/26/21 16:15	10/20/21	
Di-n-butyltin Cation	ND U	0.96	0.19	1	10/26/21 16:15	10/20/21	
Tri-n-butyltin Cation	ND U	0.96	0.43	1	10/26/21 16:15	10/20/21	
Tetra-n-butyltin	ND U	0.96	0.44	1	10/26/21 16:15	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	171	10 - 152	10/26/21 16:15	*

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 10/26/21
Date Extracted: 10/20/21

Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 744779

Lab Control Sample
KQ2120355-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Di-n-butyltin Cation	36.1	19.2	188	10-190
n-Butyltin Cation	28.2	15.6	181	10-200
Tetra-n-butyltin	43.6	25.0	174	10-194
Tri-n-butyltin Cation	43.1	22.3	194 *	10-186

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 11/16/21
Date Extracted: 10/14/21

Duplicate Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 749551

Lab Control Sample
KQ2120269-01

Duplicate Lab Control Sample
KQ2120269-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Di-n-butyltin Cation	0.389	0.383	102	0.412	0.383	107	10-200	6	30
n-Butyltin Cation	0.223 P	0.312	72	0.241 P	0.312	77	10-200	8	30
Tetra-n-butyltin	0.288	0.500	58	0.332	0.500	66	10-200	14	30
Tri-n-butyltin Cation	0.329 P	0.446	74	0.399	0.446	90	10-200	19	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 90.4

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.21	0.22	0.23	4	J	1	10/26/21 22:52

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 87.8

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.22	0.36	0.39	8	J	1	10/26/21 22:19
Tri-n-butyltin Cation	0.49	0.85	1.1	26	J	1	10/26/21 22:19

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 79.9

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.24	0.59	0.60	2	J	1	10/26/21 22:35
Tri-n-butyltin Cation	0.54	1.1	1.3	17	J	1	10/26/21 22:35
n-Butyltin Cation	0.33	0.52	0.59	13	J	1	10/26/21 22:35

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 84.5

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.23	0.56	0.71	24	J	1	10/26/21 22:02
Tri-n-butyltin Cation	0.51	0.73	1.1	40	JP	1	10/26/21 22:02

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: B-39
Lab Code: K2112046-017

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0075	0.0085	0.014	49	JP	1	11/16/21 20:40

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 76.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.25	0.40	0.51	24	J	1	10/26/21 23:08
Tri-n-butyltin Cation	0.57	0.74	1.1	39	J	1	10/26/21 23:08

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2120269-01

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.389	0.515	28		1	11/16/21 19:01
Tetra-n-butyltin	0.038	0.288	0.407	34		1	11/16/21 19:01
Tri-n-butyltin Cation	0.012	0.329	0.519	45	P	1	11/16/21 19:01
n-Butyltin Cation	0.029	0.223	0.399	57	P	1	11/16/21 19:01

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2120269-02

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.412	0.570	32		1	11/16/21 19:18
Tetra-n-butyltin	0.038	0.332	0.432	26		1	11/16/21 19:18
Tri-n-butyltin Cation	0.012	0.399	0.566	35		1	11/16/21 19:18
n-Butyltin Cation	0.029	0.241	0.417	53	P	1	11/16/21 19:18

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120269-03

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.035	0.048	31	J	1	11/16/21 18:45

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120355-03

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	36.1	47.9	28		1	10/26/21 16:31
Tetra-n-butyltin	0.44	43.6	55.5	24		1	10/26/21 16:31
Tri-n-butyltin Cation	0.43	43.1	57.3	28		1	10/26/21 16:31
n-Butyltin Cation	0.26	28.2	40.8	37		1	10/26/21 16:31



Semi-Volatile Petroleum Products by GC/FID

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10
Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	ND U	28	2.0	1	10/27/21 06:10	10/21/21	
Residual Range Organics (C25 - C36 RRO)	8.3 J	110	4.4	1	10/27/21 06:10	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	90	50 - 150	10/27/21 06:10	
n-Triacontane	93	50 - 150	10/27/21 06:10	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	3.6 J	28	2.1	1	10/27/21 06:33	10/21/21	
Residual Range Organics (C25 - C36 RRO)	16 J	110	4.5	1	10/27/21 06:33	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	113	50 - 150	10/27/21 06:33	
n-Triacontane	114	50 - 150	10/27/21 06:33	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	12 J	31	2.3	1	10/27/21 10:16	10/21/21	
Residual Range Organics (C25 - C36 RRO)	32 J	130	4.9	1	10/27/21 10:16	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	88	50 - 150	10/27/21 10:16	
n-Triacontane	92	50 - 150	10/27/21 10:16	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	140 Z	30	2.2	1	10/27/21 09:09	10/21/21	
Residual Range Organics (C25 - C36 RRO)	36 J	120	4.7	1	10/27/21 09:09	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	103	50 - 150	10/27/21 09:09	
n-Triacontane	92	50 - 150	10/28/21 21:52	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-36
Lab Code: K2112046-013

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	380 Z	260	12	1	11/01/21 17:18	10/15/21	*
Residual Range Organics (C25 - C36 RRO)	460 J	510	20	1	11/01/21 17:18	10/15/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	96	50 - 150	11/01/21 17:18	
n-Triacontane	97	50 - 150	11/01/21 17:18	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-39
Lab Code: K2112046-017

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	280 Z	250	11	1	11/01/21 17:41	10/15/21	*
Residual Range Organics (C25 - C36 RRO)	390 J	500	19	1	11/01/21 17:41	10/15/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	110	50 - 150	11/01/21 17:41	
n-Triacontane	115	50 - 150	11/01/21 17:41	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10
Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	16 J	33	2.4	1	10/27/21 09:32	10/21/21	
Residual Range Organics (C25 - C36 RRO)	34 J	130	5.1	1	10/27/21 09:32	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	89	50 - 150	10/27/21 09:32	
n-Triacontane	93	50 - 150	10/27/21 09:32	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-35 (0-10)	K2112046-003	90	93
B-35 (10-20)	K2112046-006	113	114
B-36 (0-10)	K2112046-009	88	92
B-36 (10-17.5)	K2112046-012	103	92
B-39 (0-10)	K2112046-019	89	93
Method Blank	KQ2120357-03	86	89
Lab Control Sample	KQ2120357-02	113	109

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-36	K2112046-013	96	97
B-39	K2112046-017	110	115
Method Blank	KQ2120335-03	97	103
Lab Control Sample	KQ2120335-01	80	84
Duplicate Lab Control Sample	KQ2120335-02	83	84

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120335-03

Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	52 J	250	11	1	10/29/21 06:49	10/15/21	
Residual Range Organics (C25 - C36 RRO)	120 J	500	19	1	10/29/21 06:49	10/15/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	97	50 - 150	10/29/21 06:49	
n-Triacontane	103	50 - 150	10/29/21 06:49	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120357-03

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	1.8 J	25	1.8	1	10/27/21 05:26	10/21/21	
Residual Range Organics (C25 - C36 RRO)	5.8 J	99	3.9	1	10/27/21 05:26	10/21/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	86	50 - 150	10/27/21 05:26	
n-Triacontane	89	50 - 150	10/27/21 05:26	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 10/27/21
Date Extracted: 10/21/21

Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Units: mg/Kg
Basis: Dry
Analysis Lot: 743948

Lab Control Sample
KQ2120357-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Diesel Range Organics (C12 - C25 DRO)	295	267	111	42-134
Residual Range Organics (C25 - C36 RRO)	119	133	89	48-141

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 10/29/21
Date Extracted: 10/15/21

Duplicate Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Units: ug/L
Basis: NA
Analysis Lot: 744370

Analyte Name	Lab Control Sample KQ2120335-01			Duplicate Lab Control Sample KQ2120335-02			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Diesel Range Organics (C12 - C25 DRO)	2640	3200	83	2650	3200	83	46-140	<1	30
Residual Range Organics (C25 - C36 RRO)	1410	1600	88	1300	1600	81	45-159	8	30



Volatile Petroleum Products by GC/FID

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	12	1.5	107.72	10/25/21 21:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	50	50 - 150	10/25/21 21:04	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	12	1.5	105.35	10/25/21 21:28	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	74	50 - 150	10/25/21 21:28	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	12	1.6	99.51	10/25/21 21:51	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	8	50 - 150	10/25/21 21:51	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	13	1.6	106.27	10/25/21 22:14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	69	50 - 150	10/25/21 22:14	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10

Sample Name: B-36
Lab Code: K2112046-013

Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

<u>Analyte Name</u>	<u>Result</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Gasoline Range Organics (Toluene-Naphthalene GRO)	22.6 J	250	12.0	1	10/18/21 17:16	

<u>Surrogate Name</u>	<u>% Rec</u>	<u>Control Limits</u>	<u>Date Analyzed</u>	<u>Q</u>
1,4-Difluorobenzene	105	50 - 150	10/18/21 17:16	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-39
Lab Code: K2112046-017

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	21.3 J	250	12.0	1	10/18/21 17:40	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	103	50 - 150	10/18/21 17:40	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	1.9 J	14	1.8	107.86	10/25/21 22:38	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	69	50 - 150	10/25/21 22:38	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene
		50-150
B-35 (0-10)	K2112046-003	50
B-35 (10-20)	K2112046-006	74
B-36 (0-10)	K2112046-009	8*
B-36 (10-17.5)	K2112046-012	69
B-39 (0-10)	K2112046-019	69
B-39 (0-10)	KQ2121047-06	68
Method Blank	KQ2121047-03	89
Method Blank	KQ2121047-09	89
Lab Control Sample	KQ2121047-04	94
Duplicate Lab Control Sample	KQ2121047-05	94

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	1,4-Difluorobenzene
		50-150
B-36	K2112046-013	105
B-39	K2112046-017	103
Method Blank	KQ2120585-03	104
Lab Control Sample	KQ2120585-04	106
Duplicate Lab Control Sample	KQ2120585-05	105

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21
Date Received: 10/13/21
Date Analyzed: 10/25/21

Replicate Sample Summary
Volatile Petroleum Products by GC/FID

Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Units: mg/Kg
Basis: Dry

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>MDL</u>	<u>Sample Result</u>	<u>Duplicate Sample KQ2121047-06 Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Gasoline Range Organics (Toluene-Naphthalene GRO)	NWTPH-Gx	14	1.8	1.9 J	1.9 J	1.94	<1	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120585-03

Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	250	12.0	1	10/18/21 12:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	104	50 - 150	10/18/21 12:37	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121047-03

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	10/25/21 17:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	50 - 150	10/25/21 17:34	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121047-09

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	10/26/21 00:11	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	50 - 150	10/26/21 00:11	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 10/18/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 743015

Lab Control Sample
KQ2120585-04

Duplicate Lab Control Sample
KQ2120585-05

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Gasoline Range Organics (Toluene-Naphthalene GRO)	490	500	98	481	500	96	80-119	2	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: mg/Kg
Basis: Dry
Analysis Lot: 743674

Lab Control Sample
KQ2121047-04

Duplicate Lab Control Sample
KQ2121047-05

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Gasoline Range Organics (Toluene-Naphthalene GRO)	19.5	25.0	78	19.5	25.0	78	76-114	<1	40



Ultra Low Level Organochlorine Pesticides by GC/ECD

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10

Sample Name: B-36
Lab Code: K2112046-013

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	6.0	2.4	1	01/12/22 23:53	1/10/22	*
alpha-BHC	ND U	3.0	0.75	1	01/12/22 23:53	1/10/22	*
beta-BHC	ND Ui	3.0	2.0	1	01/12/22 23:53	1/10/22	*
delta-BHC	ND U	3.0	0.81	1	01/12/22 23:53	1/10/22	*
gamma-BHC (Lindane)	ND U	6.0	1.8	1	01/12/22 23:53	1/10/22	*
cis-Chlordane	ND U	3.0	1.1	1	01/12/22 23:53	1/10/22	*
trans-Chlordane	ND U	6.0	1.7	1	01/12/22 23:53	1/10/22	*
4,4'-DDD	ND U	6.0	1.8	1	01/12/22 23:53	1/10/22	*
4,4'-DDE	ND U	3.0	1.4	1	01/12/22 23:53	1/10/22	*
4,4'-DDT	ND Ui	6.0	3.6	1	01/12/22 23:53	1/10/22	*
Dieldrin	ND U	3.0	1.4	1	01/12/22 23:53	1/10/22	*
Endosulfan I	ND U	3.0	1.1	1	01/12/22 23:53	1/10/22	*
Endosulfan II	ND U	3.0	1.1	1	01/12/22 23:53	1/10/22	*
Endosulfan Sulfate	ND U	3.0	1.5	1	01/12/22 23:53	1/10/22	*
Endrin	ND U	3.0	1.3	1	01/12/22 23:53	1/10/22	*
Endrin Aldehyde	ND U	3.0	1.5	1	01/12/22 23:53	1/10/22	*
Endrin Ketone	ND U	6.0	2.1	1	01/12/22 23:53	1/10/22	*
Heptachlor	ND U	6.0	1.9	1	01/12/22 23:53	1/10/22	*
Heptachlor Epoxide	ND U	3.0	0.87	1	01/12/22 23:53	1/10/22	*
Methoxychlor	ND U	6.0	2.6	1	01/12/22 23:53	1/10/22	*
Toxaphene	ND U	300	150	1	01/12/22 23:53	1/10/22	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	102	10 - 139	01/12/22 23:53	
Tetrachloro-m-xylene	67	32 - 151	01/12/22 23:53	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10

Sample Name: B-39
Lab Code: K2112046-017

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	6.0	2.4	1	01/13/22 00:32	1/10/22	*
alpha-BHC	ND U	3.0	0.75	1	01/13/22 00:32	1/10/22	*
beta-BHC	ND U	3.0	0.51	1	01/13/22 00:32	1/10/22	*
delta-BHC	ND U	3.0	0.81	1	01/13/22 00:32	1/10/22	*
gamma-BHC (Lindane)	ND U	6.0	1.8	1	01/13/22 00:32	1/10/22	*
cis-Chlordane	ND U	3.0	1.1	1	01/13/22 00:32	1/10/22	*
trans-Chlordane	ND U	6.0	1.7	1	01/13/22 00:32	1/10/22	*
4,4'-DDD	ND U	6.0	1.8	1	01/13/22 00:32	1/10/22	*
4,4'-DDE	ND U	3.0	1.4	1	01/13/22 00:32	1/10/22	*
4,4'-DDT	ND U	6.0	2.9	1	01/13/22 00:32	1/10/22	*
Dieldrin	ND U	3.0	1.4	1	01/13/22 00:32	1/10/22	*
Endosulfan I	ND U	3.0	1.1	1	01/13/22 00:32	1/10/22	*
Endosulfan II	ND U	3.0	1.1	1	01/13/22 00:32	1/10/22	*
Endosulfan Sulfate	ND U	3.0	1.5	1	01/13/22 00:32	1/10/22	*
Endrin	ND U	3.0	1.3	1	01/13/22 00:32	1/10/22	*
Endrin Aldehyde	ND U	3.0	1.5	1	01/13/22 00:32	1/10/22	*
Endrin Ketone	ND U	6.0	2.1	1	01/13/22 00:32	1/10/22	*
Heptachlor	ND U	6.0	1.9	1	01/13/22 00:32	1/10/22	*
Heptachlor Epoxide	ND U	3.0	0.87	1	01/13/22 00:32	1/10/22	*
Methoxychlor	ND U	6.0	2.6	1	01/13/22 00:32	1/10/22	*
Toxaphene	ND U	300	150	1	01/13/22 00:32	1/10/22	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	92	10 - 139	01/13/22 00:32	
Tetrachloro-m-xylene	47	32 - 151	01/13/22 00:32	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Extraction Method: EPA 3511

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-139	32-151
B-36	K2112046-013	102	67
B-39	K2112046-017	92	47
Method Blank	KQ2200405-07	89	62
Lab Control Sample	KQ2200405-01	78	54
Duplicate Lab Control Sample	KQ2200405-02	86	55
Lab Control Sample	KQ2200405-03	88	63
Duplicate Lab Control Sample	KQ2200405-04	93	57
Lab Control Sample	KQ2200405-05	88	55
Duplicate Lab Control Sample	KQ2200405-06	86	56

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2200405-07

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.77	1	01/12/22 18:36	1/10/22	
alpha-BHC	ND U	1.0	0.25	1	01/12/22 18:36	1/10/22	
beta-BHC	0.37 JP	1.0	0.17	1	01/12/22 18:36	1/10/22	
delta-BHC	ND U	1.0	0.27	1	01/12/22 18:36	1/10/22	
gamma-BHC (Lindane)	ND U	2.0	0.60	1	01/12/22 18:36	1/10/22	
cis-Chlordane	ND U	1.0	0.36	1	01/12/22 18:36	1/10/22	
trans-Chlordane	ND U	2.0	0.54	1	01/12/22 18:36	1/10/22	
4,4'-DDD	ND U	2.0	0.57	1	01/12/22 18:36	1/10/22	
4,4'-DDE	ND U	1.0	0.46	1	01/12/22 18:36	1/10/22	
4,4'-DDT	ND U	2.0	0.75	1	01/12/22 18:36	1/10/22	
Dieldrin	ND U	1.0	0.44	1	01/12/22 18:36	1/10/22	
Endosulfan I	ND U	1.0	0.36	1	01/12/22 18:36	1/10/22	
Endosulfan II	ND U	1.0	0.34	1	01/12/22 18:36	1/10/22	
Endosulfan Sulfate	ND U	1.0	0.47	1	01/12/22 18:36	1/10/22	
Endrin	ND U	1.0	0.42	1	01/12/22 18:36	1/10/22	
Endrin Aldehyde	ND U	1.0	0.47	1	01/12/22 18:36	1/10/22	
Endrin Ketone	ND U	2.0	0.70	1	01/12/22 18:36	1/10/22	
Heptachlor	ND U	2.0	0.61	1	01/12/22 18:36	1/10/22	
Heptachlor Epoxide	ND U	1.0	0.29	1	01/12/22 18:36	1/10/22	
Methoxychlor	ND U	2.0	0.85	1	01/12/22 18:36	1/10/22	
Toxaphene	ND U	100	49	1	01/12/22 18:36	1/10/22	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	89	10 - 139	01/12/22 18:36	
Tetrachloro-m-xylene	62	32 - 151	01/12/22 18:36	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 01/12/22
Date Extracted: 01/10/22

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 751503

Lab Control Sample
KQ2200405-01

Duplicate Lab Control Sample
KQ2200405-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
4,4'-DDD	21.7 P	25.0	87	21.9 P	25.0	88	35-158	<1	30
4,4'-DDE	20.3	25.0	81	20.4	25.0	82	53-129	<1	30
4,4'-DDT	20.5	25.0	82	20.9	25.0	84	43-164	2	30
Aldrin	16.6	25.0	66	15.8	25.0	63	37-135	5	30
alpha-BHC	19.9	25.0	80	21.0	25.0	84	48-148	5	30
beta-BHC	17.1	25.0	68	18.3	25.0	73	37-133	7	30
cis-Chlordane	19.7	25.0	79	19.7	25.0	79	54-127	<1	30
delta-BHC	18.9	25.0	76	20.3	25.0	81	44-128	7	30
Dieldrin	20.5	25.0	82	21.5	25.0	86	51-122	5	30
Endosulfan I	16.9 P	25.0	67	17.7 P	25.0	71	44-135	5	30
Endosulfan II	17.1	25.0	68	15.9	25.0	63	37-180	7	30
Endosulfan Sulfate	19.5	25.0	78	20.5	25.0	82	42-144	5	30
Endrin	20.2	25.0	81	21.2	25.0	85	52-133	5	30
Endrin Aldehyde	18.3	25.0	73	19.2	25.0	77	49-126	4	30
Endrin Ketone	20.5	25.0	82	21.2	25.0	85	54-131	3	30
gamma-BHC (Lindane)	19.9	25.0	80	20.4	25.0	82	51-140	3	30
Heptachlor	17.3	25.0	69	15.9	25.0	64	33-161	8	30
Heptachlor Epoxide	19.0	25.0	76	19.7	25.0	79	51-125	4	30
Methoxychlor	21.8	25.0	87	23.2	25.0	93	38-194	6	30
trans-Chlordane	19.4	25.0	77	18.9	25.0	76	54-126	2	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 01/12/22
Date Extracted: 01/10/22

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 751503

Lab Control Sample
KQ2200405-05

Duplicate Lab Control Sample
KQ2200405-06

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Toxaphene	1110	1000	111	1150	1000	115	44-190	3	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2200405-01

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	21.7	61.8	96	P	1	01/12/22 19:16
4,4'-DDE	0.46	20.3	21.4	5		1	01/12/22 19:16
4,4'-DDT	0.75	20.5	22.7	10		1	01/12/22 19:16
Aldrin	0.77	16.6	17.2	4		1	01/12/22 19:16
Dieldrin	0.44	20.5	21.7	6		1	01/12/22 19:16
Endosulfan I	0.36	16.9	42.0	85	P	1	01/12/22 19:16
Endosulfan II	0.34	17.1	18.9	10		1	01/12/22 19:16
Endosulfan Sulfate	0.47	19.5	20.4	5		1	01/12/22 19:16
Endrin	0.42	20.2	21.0	4		1	01/12/22 19:16
Endrin Aldehyde	0.47	18.3	18.9	3		1	01/12/22 19:16
Endrin Ketone	0.70	20.5	22.4	9		1	01/12/22 19:16
Heptachlor	0.61	17.3	20.2	15		1	01/12/22 19:16
Heptachlor Epoxide	0.29	19.0	19.9	5		1	01/12/22 19:16
Methoxychlor	0.85	21.8	22.1	1		1	01/12/22 19:16
alpha-BHC	0.25	19.9	21.0	5		1	01/12/22 19:16
beta-BHC	0.17	17.1	17.4	2		1	01/12/22 19:16
cis-Chlordane	0.36	19.7	24.4	21		1	01/12/22 19:16
delta-BHC	0.27	18.9	19.2	2		1	01/12/22 19:16
gamma-BHC (Lindane)	0.60	19.9	20.0	<1		1	01/12/22 19:16
trans-Chlordane	0.54	19.4	20.8	7		1	01/12/22 19:16

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2200405-02

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	21.9	65.5	100	P	1	01/12/22 19:55
4,4'-DDE	0.46	20.4	21.6	6		1	01/12/22 19:55
4,4'-DDT	0.75	20.9	27.2	26		1	01/12/22 19:55
Aldrin	0.77	15.8	16.3	3		1	01/12/22 19:55
Dieldrin	0.44	21.5	22.1	3		1	01/12/22 19:55
Endosulfan I	0.36	17.7	41.5	80	P	1	01/12/22 19:55
Endosulfan II	0.34	15.9	20.2	24		1	01/12/22 19:55
Endosulfan Sulfate	0.47	20.5	21.3	4		1	01/12/22 19:55
Endrin	0.42	21.2	21.9	3		1	01/12/22 19:55
Endrin Aldehyde	0.47	19.2	22.5	16		1	01/12/22 19:55
Endrin Ketone	0.70	21.2	22.5	6		1	01/12/22 19:55
Heptachlor	0.61	15.9	18.0	12		1	01/12/22 19:55
Heptachlor Epoxide	0.29	19.7	21.1	7		1	01/12/22 19:55
Methoxychlor	0.85	23.2	23.4	<1		1	01/12/22 19:55
alpha-BHC	0.25	21.0	21.6	3		1	01/12/22 19:55
beta-BHC	0.17	18.3	18.5	1		1	01/12/22 19:55
cis-Chlordane	0.36	19.7	20.0	2		1	01/12/22 19:55
delta-BHC	0.27	20.3	21.2	4		1	01/12/22 19:55
gamma-BHC (Lindane)	0.60	20.4	20.7	1		1	01/12/22 19:55
trans-Chlordane	0.54	18.9	19.1	1		1	01/12/22 19:55

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2200405-05

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1110	1210	9		1	01/12/22 20:35

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2200405-06

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1150	1180	3		1	01/12/22 21:14

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2200405-07

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
beta-BHC	0.17	0.37	1.1	99	JP	1	01/12/22 18:36



Low Level Organochlorine Pesticides by GC

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.1	0.62	1	11/23/21 21:30	10/19/21	
alpha-BHC	ND Ui	1.1	0.59	1	11/23/21 21:30	10/19/21	
beta-BHC	ND Ui	1.1	0.97	1	11/23/21 21:30	10/19/21	
delta-BHC	ND Ui	1.1	0.64	1	11/23/21 21:30	10/19/21	
gamma-BHC (Lindane)	0.84 BJP	1.1	0.33	1	11/23/21 21:30	10/19/21	
cis-Chlordane	ND U	1.1	0.44	1	11/23/21 21:30	10/19/21	
trans-Chlordane	ND Ui	1.1	0.56	1	11/23/21 21:30	10/19/21	
4,4'-DDD	ND Ui	2.1	1.3	1	11/23/21 21:30	10/19/21	
4,4'-DDE	ND U	1.1	0.43	1	11/23/21 21:30	10/19/21	
4,4'-DDT	ND Ui	2.1	1.8	1	11/23/21 21:30	10/19/21	
Dieldrin	ND U	1.1	0.24	1	11/23/21 21:30	10/19/21	
Endosulfan I	ND Ui	1.1	0.76	1	11/23/21 21:30	10/19/21	
Endosulfan II	5.9	2.1	0.73	1	11/23/21 21:30	10/19/21	
Endosulfan Sulfate	ND U	2.1	1.1	1	11/23/21 21:30	10/19/21	
Endrin	ND U	1.1	0.34	1	11/23/21 21:30	10/19/21	
Endrin Aldehyde	ND U	2.1	0.94	1	11/23/21 21:30	10/19/21	
Endrin Ketone	ND U	1.1	0.48	1	11/23/21 21:30	10/19/21	
Heptachlor	ND Ui	2.3	2.3	1	11/23/21 21:30	10/19/21	
Heptachlor Epoxide	ND U	2.1	0.70	1	11/23/21 21:30	10/19/21	
Methoxychlor	ND U	2.1	0.75	1	11/23/21 21:30	10/19/21	
Toxaphene	ND Ui	120	120	1	11/23/21 21:30	10/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	65	10 - 134	11/23/21 21:30	
Tetrachloro-m-xylene	59	10 - 121	11/23/21 21:30	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10

Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.2	0.66	1	11/23/21 22:00	10/19/21	
alpha-BHC	ND Ui	1.1	0.77	1	11/23/21 22:00	10/19/21	
beta-BHC	ND Ui	1.1	0.98	1	11/23/21 22:00	10/19/21	
delta-BHC	ND Ui	1.1	0.60	1	11/23/21 22:00	10/19/21	
gamma-BHC (Lindane)	ND Ui	1.1	0.74	1	11/23/21 22:00	10/19/21	
cis-Chlordane	ND U	1.1	0.46	1	11/23/21 22:00	10/19/21	
trans-Chlordane	ND U	1.1	0.43	1	11/23/21 22:00	10/19/21	
4,4'-DDD	ND Ui	2.2	1.4	1	11/23/21 22:00	10/19/21	
4,4'-DDE	ND U	1.1	0.45	1	11/23/21 22:00	10/19/21	
4,4'-DDT	ND Ui	2.2	2.1	1	11/23/21 22:00	10/19/21	
Dieldrin	ND U	1.1	0.25	1	11/23/21 22:00	10/19/21	
Endosulfan I	ND Ui	1.1	0.57	1	11/23/21 22:00	10/19/21	
Endosulfan II	ND Ui	3.0	3.0	1	11/23/21 22:00	10/19/21	
Endosulfan Sulfate	ND U	2.2	1.2	1	11/23/21 22:00	10/19/21	
Endrin	ND Ui	1.1	0.62	1	11/23/21 22:00	10/19/21	
Endrin Aldehyde	ND U	2.2	0.99	1	11/23/21 22:00	10/19/21	
Endrin Ketone	ND U	1.1	0.51	1	11/23/21 22:00	10/19/21	
Heptachlor	ND Ui	2.2	2.2	1	11/23/21 22:00	10/19/21	
Heptachlor Epoxide	ND U	2.2	0.74	1	11/23/21 22:00	10/19/21	
Methoxychlor	ND U	2.2	0.79	1	11/23/21 22:00	10/19/21	
Toxaphene	ND Ui	110	81	1	11/23/21 22:00	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	55	10 - 134	11/23/21 22:00	
Tetrachloro-m-xylene	59	10 - 121	11/23/21 22:00	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND Ui	2.4	0.94	1	11/23/21 22:31	10/19/21	
alpha-BHC	ND Ui	1.2	0.69	1	11/23/21 22:31	10/19/21	
beta-BHC	ND U	1.2	0.33	1	11/23/21 22:31	10/19/21	
delta-BHC	ND U	1.2	0.34	1	11/23/21 22:31	10/19/21	
gamma-BHC (Lindane)	0.94 BJP	1.2	0.38	1	11/23/21 22:31	10/19/21	
cis-Chlordane	ND U	1.2	0.50	1	11/23/21 22:31	10/19/21	
trans-Chlordane	ND Ui	1.2	0.63	1	11/23/21 22:31	10/19/21	
4,4'-DDD	ND Ui	2.4	1.8	1	11/23/21 22:31	10/19/21	
4,4'-DDE	ND U	1.2	0.48	1	11/23/21 22:31	10/19/21	
4,4'-DDT	ND U	2.4	0.73	1	11/23/21 22:31	10/19/21	
Dieldrin	ND U	1.2	0.27	1	11/23/21 22:31	10/19/21	
Endosulfan I	ND Ui	1.2	0.69	1	11/23/21 22:31	10/19/21	
Endosulfan II	ND Ui	2.4	0.86	1	11/23/21 22:31	10/19/21	
Endosulfan Sulfate	ND U	2.4	1.2	1	11/23/21 22:31	10/19/21	
Endrin	ND U	1.2	0.39	1	11/23/21 22:31	10/19/21	
Endrin Aldehyde	ND U	2.4	1.1	1	11/23/21 22:31	10/19/21	
Endrin Ketone	ND Ui	1.2	0.63	1	11/23/21 22:31	10/19/21	
Heptachlor	ND Ui	2.5	2.5	1	11/23/21 22:31	10/19/21	
Heptachlor Epoxide	ND U	2.4	0.79	1	11/23/21 22:31	10/19/21	
Methoxychlor	ND U	2.4	0.85	1	11/23/21 22:31	10/19/21	
Toxaphene	ND U	120	41	1	11/23/21 22:31	10/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	55	10 - 134	11/23/21 22:31	
Tetrachloro-m-xylene	59	10 - 121	11/23/21 22:31	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND Ui	2.3	0.82	1	11/23/21 23:01	10/19/21	
alpha-BHC	ND Ui	1.1	0.87	1	11/23/21 23:01	10/19/21	
beta-BHC	ND Ui	1.2	1.2	1	11/23/21 23:01	10/19/21	
delta-BHC	ND Ui	1.1	0.64	1	11/23/21 23:01	10/19/21	
gamma-BHC (Lindane)	1.9 B	1.1	0.36	1	11/23/21 23:01	10/19/21	
cis-Chlordane	ND U	1.1	0.47	1	11/23/21 23:01	10/19/21	
trans-Chlordane	ND U	1.1	0.43	1	11/23/21 23:01	10/19/21	
4,4'-DDD	ND Ui	2.3	1.7	1	11/23/21 23:01	10/19/21	
4,4'-DDE	ND U	1.1	0.46	1	11/23/21 23:01	10/19/21	
4,4'-DDT	ND Ui	3.4	3.4	1	11/23/21 23:01	10/19/21	
Dieldrin	ND U	1.1	0.25	1	11/23/21 23:01	10/19/21	
Endosulfan I	ND Ui	1.1	0.99	1	11/23/21 23:01	10/19/21	
Endosulfan II	ND Ui	4.6	4.6	1	11/23/21 23:01	10/19/21	
Endosulfan Sulfate	ND U	2.3	1.2	1	11/23/21 23:01	10/19/21	
Endrin	ND U	1.1	0.37	1	11/23/21 23:01	10/19/21	
Endrin Aldehyde	ND U	2.3	1.1	1	11/23/21 23:01	10/19/21	
Endrin Ketone	ND U	1.1	0.51	1	11/23/21 23:01	10/19/21	
Heptachlor	ND Ui	3.1	3.1	1	11/23/21 23:01	10/19/21	
Heptachlor Epoxide	ND U	2.3	0.75	1	11/23/21 23:01	10/19/21	
Methoxychlor	ND U	2.3	0.81	1	11/23/21 23:01	10/19/21	
Toxaphene	ND Ui	110	86	1	11/23/21 23:01	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	54	10 - 134	11/23/21 23:01	
Tetrachloro-m-xylene	59	10 - 121	11/23/21 23:01	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND Ui	2.6	2.0	1	11/23/21 23:32	10/19/21	
alpha-BHC	ND Ui	1.3	0.98	1	11/23/21 23:32	10/19/21	
beta-BHC	ND Ui	1.3	1.2	1	11/23/21 23:32	10/19/21	
delta-BHC	ND U	1.3	0.37	1	11/23/21 23:32	10/19/21	
gamma-BHC (Lindane)	1.7 BP	1.3	0.41	1	11/23/21 23:32	10/19/21	
cis-Chlordane	ND U	1.3	0.53	1	11/23/21 23:32	10/19/21	
trans-Chlordane	ND U	1.3	0.50	1	11/23/21 23:32	10/19/21	
4,4'-DDD	ND U	2.6	0.78	1	11/23/21 23:32	10/19/21	
4,4'-DDE	ND U	1.3	0.52	1	11/23/21 23:32	10/19/21	
4,4'-DDT	ND Ui	2.6	1.3	1	11/23/21 23:32	10/19/21	
Dieldrin	ND U	1.3	0.29	1	11/23/21 23:32	10/19/21	
Endosulfan I	ND U	1.3	0.48	1	11/23/21 23:32	10/19/21	
Endosulfan II	ND Ui	2.6	2.2	1	11/23/21 23:32	10/19/21	
Endosulfan Sulfate	ND U	2.6	1.3	1	11/23/21 23:32	10/19/21	
Endrin	ND U	1.3	0.42	1	11/23/21 23:32	10/19/21	
Endrin Aldehyde	ND U	2.6	1.2	1	11/23/21 23:32	10/19/21	
Endrin Ketone	ND U	1.3	0.59	1	11/23/21 23:32	10/19/21	
Heptachlor	ND Ui	1.3	1.2	1	11/23/21 23:32	10/19/21	
Heptachlor Epoxide	ND U	2.6	0.86	1	11/23/21 23:32	10/19/21	
Methoxychlor	ND U	2.6	0.92	1	11/23/21 23:32	10/19/21	
Toxaphene	ND U	130	44	1	11/23/21 23:32	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	62	10 - 134	11/23/21 23:32	
Tetrachloro-m-xylene	61	10 - 121	11/23/21 23:32	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-134	10-121
B-35 (0-10)	K2112046-003	65	59
B-35 (10-20)	K2112046-006	55	59
B-36 (0-10)	K2112046-009	55	59
B-36 (10-17.5)	K2112046-012	54	59
B-39 (0-10)	K2112046-019	62	61
Method Blank	KQ2120360-10	47	65
Lab Control Sample	KQ2120360-07	43	55
Lab Control Sample	KQ2120360-08	53	61

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120360-10

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.59	1	11/23/21 12:51	10/19/21	
alpha-BHC	ND Ui	1.0	0.53	1	11/23/21 12:51	10/19/21	
beta-BHC	ND Ui	1.0	0.62	1	11/23/21 12:51	10/19/21	
delta-BHC	ND U	1.0	0.28	1	11/23/21 12:51	10/19/21	
gamma-BHC (Lindane)	1.1	1.0	0.31	1	11/23/21 12:51	10/19/21	
cis-Chlordane	ND U	1.0	0.41	1	11/23/21 12:51	10/19/21	
trans-Chlordane	ND U	1.0	0.38	1	11/23/21 12:51	10/19/21	
4,4'-DDD	ND U	2.0	0.60	1	11/23/21 12:51	10/19/21	
4,4'-DDE	ND U	1.0	0.40	1	11/23/21 12:51	10/19/21	
4,4'-DDT	ND U	2.0	0.61	1	11/23/21 12:51	10/19/21	
Dieldrin	ND U	0.95	0.22	1	11/23/21 12:51	10/19/21	
Endosulfan I	ND U	1.0	0.37	1	11/23/21 12:51	10/19/21	
Endosulfan II	1.8 JP	2.0	0.69	1	11/23/21 12:51	10/19/21	
Endosulfan Sulfate	ND U	2.0	0.99	1	11/23/21 12:51	10/19/21	
Endrin	ND U	1.0	0.32	1	11/23/21 12:51	10/19/21	
Endrin Aldehyde	ND U	2.0	0.89	1	11/23/21 12:51	10/19/21	
Endrin Ketone	ND U	1.0	0.45	1	11/23/21 12:51	10/19/21	
Heptachlor	ND Ui	1.0	0.84	1	11/23/21 12:51	10/19/21	
Heptachlor Epoxide	ND U	2.0	0.66	1	11/23/21 12:51	10/19/21	
Methoxychlor	ND U	2.0	0.71	1	11/23/21 12:51	10/19/21	
Toxaphene	ND U	100	34	1	11/23/21 12:51	10/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	47	10 - 134	11/23/21 12:51	
Tetrachloro-m-xylene	65	10 - 121	11/23/21 12:51	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 11/23/21
Date Extracted: 10/19/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 747214

Lab Control Sample
KQ2120360-07

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
4,4'-DDD	16.2	25.0	65	10-180
4,4'-DDE	12.9	25.0	52	17-94
4,4'-DDT	22.2	25.0	89	17-104
Aldrin	14.4	25.0	58	18-89
alpha-BHC	14.1	25.0	57	16-96
beta-BHC	15.1	25.0	61	16-106
cis-Chlordane	13.9	25.0	55	20-93
delta-BHC	14.1	25.0	56	20-95
Dieldrin	12.3	25.0	49	19-88
Endosulfan I	11.0	25.0	44	16-87
Endosulfan II	13.4	25.0	53	15-117
Endosulfan Sulfate	13.9	25.0	55	17-98
Endrin	13.5	25.0	54	10-107
Endrin Aldehyde	13.4	25.0	54	21-94
Endrin Ketone	14.2	25.0	57	19-97
gamma-BHC (Lindane)	14.9	25.0	60	17-97
Heptachlor	15.4 P	25.0	62	13-111
Heptachlor Epoxide	13.3	25.0	53	18-92
Methoxychlor	20.6 P	25.0	83	17-122
trans-Chlordane	13.8	25.0	55	10-103

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 11/23/21
Date Extracted: 10/19/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 747214

Lab Control Sample
KQ2120360-08

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Toxaphene	989	1000	99	16-114

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 90.4

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Endosulfan II	0.73	5.9	8.1	31		1	11/23/21 21:30
gamma-BHC (Lindane)	0.33	0.84	2.2	89	BJP	1	11/23/21 21:30

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 79.9

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	0.38	0.94	1.8	63	BJP	1	11/23/21 22:31

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 84.5

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	0.36	1.9	2.2	15	B	1	11/23/21 23:01

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21

Units: ug/Kg
Basis: Dry
Percent Solids: 76.3

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	0.41	1.7	2.7	45	BP	1	11/23/21 23:32

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2120360-07

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.60	16.2	16.3	<1		1	11/23/21 13:21
4,4'-DDE	0.40	12.9	16.5	24		1	11/23/21 13:21
4,4'-DDT	0.61	22.2	22.4	<1		1	11/23/21 13:21
Aldrin	0.59	14.4	15.0	4		1	11/23/21 13:21
Dieldrin	0.22	12.3	13.3	8		1	11/23/21 13:21
Endosulfan I	0.37	11.0	11.9	8		1	11/23/21 13:21
Endosulfan II	0.69	13.4	14.7	9		1	11/23/21 13:21
Endosulfan Sulfate	0.99	13.9	14.4	4		1	11/23/21 13:21
Endrin	0.32	13.5	16.1	18		1	11/23/21 13:21
Endrin Aldehyde	0.89	13.4	14.9	11		1	11/23/21 13:21
Endrin Ketone	0.45	14.2	18.1	24		1	11/23/21 13:21
Heptachlor	0.39	15.4	50.9	107	P	1	11/23/21 13:21
Heptachlor Epoxide	0.66	13.3	14.8	11		1	11/23/21 13:21
Methoxychlor	0.71	20.6	35.4	53	P	1	11/23/21 13:21
alpha-BHC	0.29	14.1	15.9	12		1	11/23/21 13:21
beta-BHC	0.27	15.1	17.7	16		1	11/23/21 13:21
cis-Chlordane	0.41	13.9	14.8	6		1	11/23/21 13:21
delta-BHC	0.28	14.1	15.3	8		1	11/23/21 13:21
gamma-BHC (Lindane)	0.31	14.9	16.1	8		1	11/23/21 13:21
trans-Chlordane	0.38	13.8	14.2	3		1	11/23/21 13:21

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120360-08

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	34	989	1090	10		1	11/23/21 13:52

ALS Group USA, Corp.
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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120360-10

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Endosulfan II	0.69	1.8	3.3	59	JP	1	11/23/21 12:51
gamma-BHC (Lindane)	0.31	1.1	1.6	37		1	11/23/21 12:51



Polychlorinated Biphenyls (PCBs)

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-36
Lab Code: K2112046-013
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1221	ND	U	0.40	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1232	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1242	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1248	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1254	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1260	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	16	10-140	12/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-39
Lab Code: K2112046-017
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1221	ND	U	0.40	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1232	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1242	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1248	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1254	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	
Aroclor 1260	ND	U	0.20	0.028	1	10/14/21	12/03/21	KWG2102756	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	41	10-140	12/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG2102756-3
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1221	ND	U	0.40	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1232	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1242	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1248	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1254	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	
Aroclor 1260	ND	U	0.20	0.028	1	10/14/21	12/02/21	KWG2102756	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	89	10-140	12/02/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-35 (0-10)
Lab Code: K2112046-003
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	11	3.1	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	22	3.1	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	11	3.1	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	11	3.1	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	ND	U	11	3.1	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	ND	U	11	3.1	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	ND	U	11	3.1	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	90	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-35 (10-20)
Lab Code: K2112046-006
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	23	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	95	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-36 (0-10)
Lab Code: K2112046-009
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	12	3.5	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	24	3.5	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	12	3.5	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	12	3.5	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	ND	U	12	3.5	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	ND	U	12	3.5	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	ND	U	12	3.5	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	93	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	23	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	ND	U	12	3.3	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	94	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/2021
Date Received: 10/13/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-39 (0-10)
Lab Code: K2112046-019
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	13	3.8	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	26	3.8	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	13	3.8	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	13	3.8	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	ND	U	13	3.8	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	ND	U	13	3.8	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	ND	U	13	3.8	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	95	20-155	11/03/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG2102785-4
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1221	ND	U	19	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1232	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1242	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1248	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1254	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	
Aroclor 1260	ND	U	10	2.9	1	10/19/21	11/03/21	KWG2102785	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	86	20-155	11/03/21	Acceptable

Comments: _____

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046

**Surrogate Recovery Summary
 Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3511
Analysis Method: 8082A

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
B-36	K2112046-013	16
B-39	K2112046-017	41
Method Blank	KWG2102756-3	89
Lab Control Sample	KWG2102756-1	81
Duplicate Lab Control Sample	KWG2102756-2	82

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 10-140

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046

**Surrogate Recovery Summary
 Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
Batch QC	K2112045-014	76
B-35 (0-10)	K2112046-003	90
B-35 (10-20)	K2112046-006	95
B-36 (0-10)	K2112046-009	93
B-36 (10-17.5)	K2112046-012	94
B-39 (0-10)	K2112046-019	95
Method Blank	KWG2102785-4	86
Batch QCMS	KWG2102785-1	89
Batch QCDMS	KWG2102785-2	82
Lab Control Sample	KWG2102785-3	93

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 20-155

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Extracted: 10/19/2021
Date Analyzed: 11/03/2021

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name: Batch QC
Lab Code: K2112045-014
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102785

Analyte Name	Sample Result	Batch QCMS KWG2102785-1 Matrix Spike			Batch QCDMS KWG2102785-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Aroclor 1016	ND	111	123	90	107	123	87	44-119	3	40
Aroclor 1260	18	122	123	84	117	123	80	56-130	5	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Extracted: 10/14/2021
Date Analyzed: 12/02/2021 - 12/03/2021

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG2102756

Analyte Name	Lab Control Sample KWG2102756-1 Lab Control Spike			Duplicate Lab Control Sample KWG2102756-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Aroclor 1016	1.94	2.50	78	2.06	2.50	82	31-164	6	30
Aroclor 1260	2.29	2.50	92	2.46	2.50	99	34-182	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Extracted: 10/19/2021
Date Analyzed: 11/03/2021

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102785

Lab Control Sample
 KWG2102785-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Aroclor 1016	90.5	100	90	44-119
Aroclor 1260	95.2	100	95	56-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Chlorinated Herbicides by GC

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	55	4.5	1	11/30/21 03:41	10/25/21	
2,4,5-TP (Silvex)	ND U	55	2.7	1	11/30/21 03:41	10/25/21	
2,4-D	ND U	55	8.5	1	11/30/21 03:41	10/25/21	
2,4-DB	ND U	55	6.0	1	11/30/21 03:41	10/25/21	
Dalapon	ND U	55	6.1	1	11/30/21 03:41	10/25/21	
Dicamba	ND U	55	4.8	1	11/30/21 03:41	10/25/21	
Dichlorprop	ND U	55	3.8	1	11/30/21 03:41	10/25/21	*
Dinoseb	ND U	55	3.0	1	11/30/21 03:41	10/25/21	
MCPA	ND U	5500	360	1	11/30/21 03:41	10/25/21	
MCPP	ND U	5500	510	1	11/30/21 03:41	10/25/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	67	26 - 127	11/30/21 03:41	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	57	4.6	1	11/30/21 04:07	10/25/21	
2,4,5-TP (Silvex)	ND U	57	2.8	1	11/30/21 04:07	10/25/21	
2,4-D	ND U	57	8.8	1	11/30/21 04:07	10/25/21	*
2,4-DB	ND Ui	57	38	1	11/30/21 04:07	10/25/21	
Dalapon	ND U	57	6.3	1	11/30/21 04:07	10/25/21	
Dicamba	ND U	57	4.9	1	11/30/21 04:07	10/25/21	
Dichlorprop	ND U	57	3.9	1	11/30/21 04:07	10/25/21	*
Dinoseb	ND U	57	3.1	1	11/30/21 04:07	10/25/21	
MCPA	ND U	5700	370	1	11/30/21 04:07	10/25/21	
MCPD	ND U	5700	530	1	11/30/21 04:07	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	71	26 - 127	11/30/21 04:07	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	63	5.1	1	11/30/21 04:32	10/25/21	
2,4,5-TP (Silvex)	ND U	63	3.1	1	11/30/21 04:32	10/25/21	
2,4-D	ND U	63	9.7	1	11/30/21 04:32	10/25/21	
2,4-DB	ND U	63	6.8	1	11/30/21 04:32	10/25/21	
Dalapon	ND U	63	6.9	1	11/30/21 04:32	10/25/21	
Dicamba	ND U	63	5.4	1	11/30/21 04:32	10/25/21	
Dichlorprop	ND U	63	4.3	1	11/30/21 04:32	10/25/21	*
Dinoseb	ND U	63	3.4	1	11/30/21 04:32	10/25/21	
MCPA	ND U	6300	410	1	11/30/21 04:32	10/25/21	
MCPP	ND U	6300	580	1	11/30/21 04:32	10/25/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	70	26 - 127	11/30/21 04:32	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	59	4.8	1	11/30/21 04:57	10/25/21	
2,4,5-TP (Silvex)	ND U	59	2.9	1	11/30/21 04:57	10/25/21	
2,4-D	ND U	59	9.1	1	11/30/21 04:57	10/25/21	*
2,4-DB	ND Ui	59	54	1	11/30/21 04:57	10/25/21	
Dalapon	ND U	59	6.5	1	11/30/21 04:57	10/25/21	
Dicamba	ND U	59	5.1	1	11/30/21 04:57	10/25/21	
Dichlorprop	ND U	59	4.1	1	11/30/21 04:57	10/25/21	*
Dinoseb	ND U	59	3.2	1	11/30/21 04:57	10/25/21	
MCPA	ND U	5900	380	1	11/30/21 04:57	10/25/21	
MCPD	ND U	5900	550	1	11/30/21 04:57	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	71	26 - 127	11/30/21 04:57	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-36
Lab Code: K2112046-013

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/23/21 08:35	10/18/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/23/21 08:35	10/18/21	
2,4-D	ND U	0.38	0.036	1	11/23/21 08:35	10/18/21	
2,4-DB	ND U	0.38	0.10	1	11/23/21 08:35	10/18/21	
Dalapon	ND U	0.38	0.28	1	11/23/21 08:35	10/18/21	
Dicamba	ND U	0.19	0.025	1	11/23/21 08:35	10/18/21	
Dichlorprop	ND U	0.38	0.030	1	11/23/21 08:35	10/18/21	*
Dinoseb	ND U	0.19	0.015	1	11/23/21 08:35	10/18/21	
MCPA	ND U	94	8.7	1	11/23/21 08:35	10/18/21	
MCPD	ND U	94	14	1	11/23/21 08:35	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	54	17 - 113	11/23/21 08:35	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-39
Lab Code: K2112046-017

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/23/21 09:26	10/18/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/23/21 09:26	10/18/21	
2,4-D	ND Ui	0.38	0.046	1	11/23/21 09:26	10/18/21	*
2,4-DB	ND U	0.38	0.10	1	11/23/21 09:26	10/18/21	
Dalapon	ND U	0.38	0.28	1	11/23/21 09:26	10/18/21	
Dicamba	ND U	0.19	0.025	1	11/23/21 09:26	10/18/21	
Dichlorprop	ND Ui	0.38	0.062	1	11/23/21 09:26	10/18/21	*
Dinoseb	ND U	0.19	0.015	1	11/23/21 09:26	10/18/21	
MCPA	ND U	94	8.7	1	11/23/21 09:26	10/18/21	
MCP	ND U	94	14	1	11/23/21 09:26	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	65	17 - 113	11/23/21 09:26	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	65	5.3	1	11/30/21 05:23	10/25/21	
2,4,5-TP (Silvex)	ND U	65	3.2	1	11/30/21 05:23	10/25/21	
2,4-D	ND U	65	11	1	11/30/21 05:23	10/25/21	*
2,4-DB	ND U	65	7.1	1	11/30/21 05:23	10/25/21	
Dalapon	ND U	65	7.2	1	11/30/21 05:23	10/25/21	
Dicamba	ND U	65	5.7	1	11/30/21 05:23	10/25/21	
Dichlorprop	ND U	65	4.5	1	11/30/21 05:23	10/25/21	*
Dinoseb	ND U	65	3.6	1	11/30/21 05:23	10/25/21	
MCPA	ND U	6500	420	1	11/30/21 05:23	10/25/21	
MCPD	ND U	6500	610	1	11/30/21 05:23	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	69	26 - 127	11/30/21 05:23	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 26-127
B-35 (0-10)	K2112046-003	67
B-35 (10-20)	K2112046-006	71
B-36 (0-10)	K2112046-009	70
B-36 (10-17.5)	K2112046-012	71
B-39 (0-10)	K2112046-019	69
Method Blank	KQ2120356-04	74
Lab Control Sample	KQ2120356-03	74

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 17-113
B-36	K2112046-013	54
B-39	K2112046-017	65
Method Blank	KQ2120437-03	63
Lab Control Sample	KQ2120437-01	65
Duplicate Lab Control Sample	KQ2120437-02	66

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120356-04

Service Request: K2112046
Date Collected: NA
Date Received: NA
Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	50	4.0	1	11/30/21 21:47	10/25/21	
2,4,5-TP (Silvex)	ND U	50	2.4	1	11/30/21 21:47	10/25/21	
2,4-D	ND U	50	7.7	1	11/30/21 21:47	10/25/21	
2,4-DB	ND Ui	50	23	1	11/30/21 21:47	10/25/21	
Dalapon	ND U	50	5.5	1	11/30/21 21:47	10/25/21	
Dicamba	ND U	50	4.3	1	11/30/21 21:47	10/25/21	
Dichlorprop	ND U	50	3.4	1	11/30/21 21:47	10/25/21	
Dinoseb	ND U	50	2.7	1	11/30/21 21:47	10/25/21	
MCPA	ND U	5000	320	1	11/30/21 21:47	10/25/21	
MCP	ND U	5000	460	1	11/30/21 21:47	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	74	26 - 127	11/30/21 21:47	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120437-03

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/23/21 06:02	10/18/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/23/21 06:02	10/18/21	
2,4-D	ND U	0.38	0.036	1	11/23/21 06:02	10/18/21	
2,4-DB	ND U	0.38	0.10	1	11/23/21 06:02	10/18/21	
Dalapon	ND U	0.38	0.28	1	11/23/21 06:02	10/18/21	
Dicamba	ND U	0.19	0.025	1	11/23/21 06:02	10/18/21	
Dichlorprop	ND U	0.38	0.030	1	11/23/21 06:02	10/18/21	
Dinoseb	ND U	0.19	0.015	1	11/23/21 06:02	10/18/21	
MCPA	ND U	94	8.7	1	11/23/21 06:02	10/18/21	
MCPD	ND U	94	14	1	11/23/21 06:02	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	63	17 - 113	11/23/21 06:02	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 11/30/21
Date Extracted: 10/25/21

Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 747806

Lab Control Sample
KQ2120356-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-T	129	167	77	44-125
2,4,5-TP (Silvex)	133	167	80	46-125
2,4-D	129	167	77	46-120
2,4-DB	174	167	105	30-126
Dalapon	76.5	167	46	13-100
Dicamba	129	167	77	43-119
Dichlorprop	121	167	73	47-108
Dinoseb	107	167	64	25-110
MCPA	17700	16700	106	40-128
MCP	17900	16700	108	49-134

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 11/23/21
Date Extracted: 10/18/21

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/L
Basis: NA
Analysis Lot: 747173

Lab Control Sample
KQ2120437-01

Duplicate Lab Control Sample
KQ2120437-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-T	1.61	2.50	64	1.66	2.50	66	30-120	3	30
2,4,5-TP (Silvex)	1.72	2.50	69	1.75	2.50	70	37-114	2	30
2,4-D	1.66	2.50	66	1.67	2.50	67	35-110	1	30
2,4-DB	1.65	2.50	66	1.76	2.50	70	10-134	6	30
Dalapon	1.02 P	2.50	41	1.06 P	2.50	42	14-110	3	30
Dicamba	1.75	2.50	70	1.75	2.50	70	30-108	<1	30
Dichlorprop	1.59	2.50	64	1.62	2.50	65	29-104	2	30
Dinoseb	1.26	2.50	51	1.44	2.50	58	11-105	13	30
MCPA	210 P	250	84	210 P	250	84	21-117	<1	30
MCPP	223	250	89	223	250	89	16-141	<1	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120356-03

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	4.0	129	142	10		1	11/30/21 22:13
2,4,5-TP (Silvex)	2.4	133	148	11		1	11/30/21 22:13
2,4-D	7.7	129	145	12		1	11/30/21 22:13
2,4-DB	5.4	174	181	4		1	11/30/21 22:13
Dalapon	5.5	76.5	99.6	26		1	11/30/21 22:13
Dicamba	4.3	129	148	14		1	11/30/21 22:13
Dichlorprop	3.4	121	159	27		1	11/30/21 22:13
Dinoseb	2.7	107	124	15		1	11/30/21 22:13
MCPA	320	17700	16300	8		1	11/30/21 22:13
MCPP	460	17900	15200	16		1	11/30/21 22:13

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2120437-01

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.61	1.77	9		1	11/23/21 06:27
2,4,5-TP (Silvex)	0.045	1.72	1.91	10		1	11/23/21 06:27
2,4-D	0.036	1.66	1.81	9		1	11/23/21 06:27
2,4-DB	0.10	1.65	2.13	25		1	11/23/21 06:27
Dalapon	0.28	1.02	2.28	76	P	1	11/23/21 06:27
Dicamba	0.025	1.75	1.86	6		1	11/23/21 06:27
Dichlorprop	0.030	1.59	1.89	17		1	11/23/21 06:27
Dinoseb	0.015	1.26	1.41	11		1	11/23/21 06:27
MCPA	8.7	210	368	55	P	1	11/23/21 06:27
MCPP	14	223	231	4		1	11/23/21 06:27

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2120437-02

Service Request: K2112046
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.66	1.84	10		1	11/23/21 06:53
2,4,5-TP (Silvex)	0.045	1.75	1.94	10		1	11/23/21 06:53
2,4-D	0.036	1.67	1.84	10		1	11/23/21 06:53
2,4-DB	0.10	1.76	2.11	18		1	11/23/21 06:53
Dalapon	0.28	1.06	1.69	46	P	1	11/23/21 06:53
Dicamba	0.025	1.75	1.89	8		1	11/23/21 06:53
Dichlorprop	0.030	1.62	1.91	16		1	11/23/21 06:53
Dinoseb	0.015	1.44	1.63	12		1	11/23/21 06:53
MCPA	8.7	210	411	65	P	1	11/23/21 06:53
MCPP	14	223	230	3		1	11/23/21 06:53



Volatile Organic Compounds by GC/MS, Unpreserved

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10

Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.2	0.12	1	10/20/21 17:27	*
1,1,1-Trichloroethane (TCA)	ND U	5.2	0.12	1	10/20/21 17:27	*
1,1,2,2-Tetrachloroethane	ND U	5.2	0.14	1	10/20/21 17:27	*
1,1,2-Trichloroethane	ND U	5.2	0.16	1	10/20/21 17:27	*
1,1-Dichloroethane	ND U	5.2	0.13	1	10/20/21 17:27	*
1,1-Dichloroethene	ND U	5.2	0.26	1	10/20/21 17:27	*
1,1-Dichloropropene	ND U	5.2	0.14	1	10/20/21 17:27	*
1,2,3-Trichlorobenzene	ND U	21	0.20	1	10/20/21 17:27	*
1,2,3-Trichloropropane	ND U	5.2	0.47	1	10/20/21 17:27	*
1,2,4-Trichlorobenzene	ND U	21	0.14	1	10/20/21 17:27	*
1,2,4-Trimethylbenzene	ND U	21	0.057	1	10/20/21 17:27	*
1,2-Dibromo-3-chloropropane	ND U	21	0.42	1	10/20/21 17:27	*
1,2-Dibromoethane (EDB)	ND U	21	0.098	1	10/20/21 17:27	*
1,2-Dichlorobenzene	ND U	5.2	0.080	1	10/20/21 17:27	*
1,2-Dichloroethane (EDC)	ND U	5.2	0.073	1	10/20/21 17:27	*
1,2-Dichloropropane	ND U	5.2	0.14	1	10/20/21 17:27	*
1,3,5-Trimethylbenzene	ND U	21	0.096	1	10/20/21 17:27	*
1,3-Dichlorobenzene	ND U	5.2	0.098	1	10/20/21 17:27	*
1,3-Dichloropropane	ND U	5.2	0.13	1	10/20/21 17:27	*
1,4-Dichlorobenzene	ND U	5.2	0.090	1	10/20/21 17:27	*
2,2-Dichloropropane	ND U	5.2	0.11	1	10/20/21 17:27	*
2-Butanone (MEK)	ND U	21	0.94	1	10/20/21 17:27	*
2-Chlorotoluene	ND U	21	0.13	1	10/20/21 17:27	*
2-Hexanone	ND U	21	0.97	1	10/20/21 17:27	*
4-Chlorotoluene	ND U	21	0.092	1	10/20/21 17:27	*
4-Isopropyltoluene	ND U	21	0.067	1	10/20/21 17:27	*
4-Methyl-2-pentanone (MIBK)	ND U	21	1.9	1	10/20/21 17:27	*
Acetone	7.0 J	21	3.1	1	10/20/21 17:27	*
Benzene	ND U	5.2	0.057	1	10/20/21 17:27	*
Bromobenzene	ND U	5.2	0.092	1	10/20/21 17:27	*
Bromochloromethane	ND U	5.2	0.25	1	10/20/21 17:27	*
Bromodichloromethane	ND U	5.2	0.17	1	10/20/21 17:27	*
Bromoform	ND U	5.2	0.15	1	10/20/21 17:27	*
Bromomethane	ND U	5.2	0.21	1	10/20/21 17:27	*
Carbon Disulfide	ND U	5.2	0.096	1	10/20/21 17:27	*
Carbon Tetrachloride	ND U	5.2	0.098	1	10/20/21 17:27	*
Chlorobenzene	ND U	5.2	0.068	1	10/20/21 17:27	*
Chloroethane	ND U	5.2	0.77	1	10/20/21 17:27	*
Chloroform	ND U	5.2	0.12	1	10/20/21 17:27	*
Chloromethane	ND U	5.2	0.19	1	10/20/21 17:27	*
Dibromochloromethane	ND U	5.2	0.19	1	10/20/21 17:27	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10

Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.2	0.30	1	10/20/21 17:27	*
Dichlorodifluoromethane	ND U	5.2	0.13	1	10/20/21 17:27	*
Ethylbenzene	ND U	5.2	0.098	1	10/20/21 17:27	*
Hexachlorobutadiene	ND U	21	0.42	1	10/20/21 17:27	*
Isopropylbenzene	ND U	21	0.085	1	10/20/21 17:27	*
Methylene Chloride	1.1 J	10	0.17	1	10/20/21 17:27	*
Naphthalene	ND U	21	0.14	1	10/20/21 17:27	*
Styrene	ND U	5.2	0.15	1	10/20/21 17:27	*
Tetrachloroethene (PCE)	ND U	5.2	0.17	1	10/20/21 17:27	*
Toluene	ND U	5.2	0.16	1	10/20/21 17:27	*
Trichloroethene (TCE)	ND U	5.2	0.16	1	10/20/21 17:27	*
Trichlorofluoromethane	ND U	5.2	0.089	1	10/20/21 17:27	*
Vinyl Chloride	ND U	5.2	0.19	1	10/20/21 17:27	*
cis-1,2-Dichloroethene	ND U	5.2	0.13	1	10/20/21 17:27	*
cis-1,3-Dichloropropene	ND U	5.2	0.14	1	10/20/21 17:27	*
m,p-Xylenes	ND U	5.2	0.11	1	10/20/21 17:27	*
n-Butylbenzene	ND U	21	0.072	1	10/20/21 17:27	*
n-Propylbenzene	ND U	21	0.14	1	10/20/21 17:27	*
o-Xylene	ND U	5.2	0.085	1	10/20/21 17:27	*
sec-Butylbenzene	ND U	21	0.077	1	10/20/21 17:27	*
tert-Butylbenzene	ND U	21	0.15	1	10/20/21 17:27	*
trans-1,2-Dichloroethene	ND U	5.2	0.13	1	10/20/21 17:27	*
trans-1,3-Dichloropropene	ND U	5.2	0.12	1	10/20/21 17:27	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	61 - 133	10/20/21 17:27	
Dibromofluoromethane	96	59 - 134	10/20/21 17:27	
Toluene-d8	98	77 - 122	10/20/21 17:27	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10

Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.2	0.12	1	10/20/21 17:48	*
1,1,1-Trichloroethane (TCA)	ND U	5.2	0.12	1	10/20/21 17:48	*
1,1,2,2-Tetrachloroethane	ND U	5.2	0.14	1	10/20/21 17:48	*
1,1,2-Trichloroethane	ND U	5.2	0.16	1	10/20/21 17:48	*
1,1-Dichloroethane	ND U	5.2	0.13	1	10/20/21 17:48	*
1,1-Dichloroethene	ND U	5.2	0.26	1	10/20/21 17:48	*
1,1-Dichloropropene	ND U	5.2	0.14	1	10/20/21 17:48	*
1,2,3-Trichlorobenzene	ND U	21	0.20	1	10/20/21 17:48	*
1,2,3-Trichloropropane	ND U	5.2	0.47	1	10/20/21 17:48	*
1,2,4-Trichlorobenzene	ND U	21	0.14	1	10/20/21 17:48	*
1,2,4-Trimethylbenzene	ND U	21	0.057	1	10/20/21 17:48	*
1,2-Dibromo-3-chloropropane	ND U	21	0.42	1	10/20/21 17:48	*
1,2-Dibromoethane (EDB)	ND U	21	0.098	1	10/20/21 17:48	*
1,2-Dichlorobenzene	ND U	5.2	0.081	1	10/20/21 17:48	*
1,2-Dichloroethane (EDC)	ND U	5.2	0.073	1	10/20/21 17:48	*
1,2-Dichloropropane	ND U	5.2	0.14	1	10/20/21 17:48	*
1,3,5-Trimethylbenzene	ND U	21	0.096	1	10/20/21 17:48	*
1,3-Dichlorobenzene	ND U	5.2	0.098	1	10/20/21 17:48	*
1,3-Dichloropropane	ND U	5.2	0.13	1	10/20/21 17:48	*
1,4-Dichlorobenzene	ND U	5.2	0.090	1	10/20/21 17:48	*
2,2-Dichloropropane	ND U	5.2	0.11	1	10/20/21 17:48	*
2-Butanone (MEK)	ND U	21	0.94	1	10/20/21 17:48	*
2-Chlorotoluene	ND U	21	0.13	1	10/20/21 17:48	*
2-Hexanone	ND U	21	0.97	1	10/20/21 17:48	*
4-Chlorotoluene	ND U	21	0.092	1	10/20/21 17:48	*
4-Isopropyltoluene	ND U	21	0.067	1	10/20/21 17:48	*
4-Methyl-2-pentanone (MIBK)	ND U	21	1.9	1	10/20/21 17:48	*
Acetone	9.1 J	21	3.1	1	10/20/21 17:48	*
Benzene	ND U	5.2	0.057	1	10/20/21 17:48	*
Bromobenzene	ND U	5.2	0.092	1	10/20/21 17:48	*
Bromochloromethane	ND U	5.2	0.25	1	10/20/21 17:48	*
Bromodichloromethane	ND U	5.2	0.17	1	10/20/21 17:48	*
Bromoform	ND U	5.2	0.15	1	10/20/21 17:48	*
Bromomethane	ND U	5.2	0.21	1	10/20/21 17:48	*
Carbon Disulfide	ND U	5.2	0.096	1	10/20/21 17:48	*
Carbon Tetrachloride	ND U	5.2	0.098	1	10/20/21 17:48	*
Chlorobenzene	ND U	5.2	0.068	1	10/20/21 17:48	*
Chloroethane	ND U	5.2	0.77	1	10/20/21 17:48	*
Chloroform	ND U	5.2	0.12	1	10/20/21 17:48	*
Chloromethane	ND U	5.2	0.19	1	10/20/21 17:48	*
Dibromochloromethane	ND U	5.2	0.19	1	10/20/21 17:48	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10

Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.2	0.30	1	10/20/21 17:48	*
Dichlorodifluoromethane	ND U	5.2	0.13	1	10/20/21 17:48	*
Ethylbenzene	ND U	5.2	0.098	1	10/20/21 17:48	*
Hexachlorobutadiene	ND U	21	0.42	1	10/20/21 17:48	*
Isopropylbenzene	ND U	21	0.085	1	10/20/21 17:48	*
Methylene Chloride	1.4 J	10	0.17	1	10/20/21 17:48	*
Naphthalene	ND U	21	0.14	1	10/20/21 17:48	*
Styrene	ND U	5.2	0.15	1	10/20/21 17:48	*
Tetrachloroethene (PCE)	ND U	5.2	0.17	1	10/20/21 17:48	*
Toluene	ND U	5.2	0.16	1	10/20/21 17:48	*
Trichloroethene (TCE)	ND U	5.2	0.16	1	10/20/21 17:48	*
Trichlorofluoromethane	ND U	5.2	0.089	1	10/20/21 17:48	*
Vinyl Chloride	ND U	5.2	0.19	1	10/20/21 17:48	*
cis-1,2-Dichloroethene	ND U	5.2	0.13	1	10/20/21 17:48	*
cis-1,3-Dichloropropene	ND U	5.2	0.14	1	10/20/21 17:48	*
m,p-Xylenes	ND U	5.2	0.11	1	10/20/21 17:48	*
n-Butylbenzene	ND U	21	0.072	1	10/20/21 17:48	*
n-Propylbenzene	ND U	21	0.14	1	10/20/21 17:48	*
o-Xylene	ND U	5.2	0.085	1	10/20/21 17:48	*
sec-Butylbenzene	ND U	21	0.077	1	10/20/21 17:48	*
tert-Butylbenzene	ND U	21	0.15	1	10/20/21 17:48	*
trans-1,2-Dichloroethene	ND U	5.2	0.13	1	10/20/21 17:48	*
trans-1,3-Dichloropropene	ND U	5.2	0.12	1	10/20/21 17:48	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	61 - 133	10/20/21 17:48	
Dibromofluoromethane	97	59 - 134	10/20/21 17:48	
Toluene-d8	99	77 - 122	10/20/21 17:48	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	6.0	0.14	1	10/20/21 18:09	*
1,1,1-Trichloroethane (TCA)	ND U	6.0	0.14	1	10/20/21 18:09	*
1,1,2,2-Tetrachloroethane	ND U	6.0	0.16	1	10/20/21 18:09	*
1,1,2-Trichloroethane	ND U	6.0	0.18	1	10/20/21 18:09	*
1,1-Dichloroethane	ND U	6.0	0.15	1	10/20/21 18:09	*
1,1-Dichloroethene	ND U	6.0	0.30	1	10/20/21 18:09	*
1,1-Dichloropropene	ND U	6.0	0.16	1	10/20/21 18:09	*
1,2,3-Trichlorobenzene	ND U	24	0.23	1	10/20/21 18:09	*
1,2,3-Trichloropropane	ND U	6.0	0.54	1	10/20/21 18:09	*
1,2,4-Trichlorobenzene	ND U	24	0.16	1	10/20/21 18:09	*
1,2,4-Trimethylbenzene	ND U	24	0.065	1	10/20/21 18:09	*
1,2-Dibromo-3-chloropropane	ND U	24	0.48	1	10/20/21 18:09	*
1,2-Dibromoethane (EDB)	ND U	24	0.12	1	10/20/21 18:09	*
1,2-Dichlorobenzene	ND U	6.0	0.092	1	10/20/21 18:09	*
1,2-Dichloroethane (EDC)	ND U	6.0	0.084	1	10/20/21 18:09	*
1,2-Dichloropropane	ND U	6.0	0.16	1	10/20/21 18:09	*
1,3,5-Trimethylbenzene	ND U	24	0.11	1	10/20/21 18:09	*
1,3-Dichlorobenzene	ND U	6.0	0.12	1	10/20/21 18:09	*
1,3-Dichloropropane	ND U	6.0	0.15	1	10/20/21 18:09	*
1,4-Dichlorobenzene	ND U	6.0	0.11	1	10/20/21 18:09	*
2,2-Dichloropropane	ND U	6.0	0.12	1	10/20/21 18:09	*
2-Butanone (MEK)	ND U	24	1.1	1	10/20/21 18:09	*
2-Chlorotoluene	ND U	24	0.15	1	10/20/21 18:09	*
2-Hexanone	ND U	24	1.2	1	10/20/21 18:09	*
4-Chlorotoluene	ND U	24	0.11	1	10/20/21 18:09	*
4-Isopropyltoluene	ND U	24	0.077	1	10/20/21 18:09	*
4-Methyl-2-pentanone (MIBK)	ND U	24	2.2	1	10/20/21 18:09	*
Acetone	13 J	24	3.5	1	10/20/21 18:09	*
Benzene	ND U	6.0	0.065	1	10/20/21 18:09	*
Bromobenzene	ND U	6.0	0.11	1	10/20/21 18:09	*
Bromochloromethane	ND U	6.0	0.29	1	10/20/21 18:09	*
Bromodichloromethane	ND U	6.0	0.20	1	10/20/21 18:09	*
Bromoform	ND U	6.0	0.17	1	10/20/21 18:09	*
Bromomethane	ND U	6.0	0.24	1	10/20/21 18:09	*
Carbon Disulfide	ND U	6.0	0.11	1	10/20/21 18:09	*
Carbon Tetrachloride	ND U	6.0	0.12	1	10/20/21 18:09	*
Chlorobenzene	ND U	6.0	0.078	1	10/20/21 18:09	*
Chloroethane	ND U	6.0	0.89	1	10/20/21 18:09	*
Chloroform	ND U	6.0	0.14	1	10/20/21 18:09	*
Chloromethane	ND U	6.0	0.22	1	10/20/21 18:09	*
Dibromochloromethane	ND U	6.0	0.22	1	10/20/21 18:09	*

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	6.0	0.34	1	10/20/21 18:09	*
Dichlorodifluoromethane	ND U	6.0	0.15	1	10/20/21 18:09	*
Ethylbenzene	ND U	6.0	0.12	1	10/20/21 18:09	*
Hexachlorobutadiene	ND U	24	0.48	1	10/20/21 18:09	*
Isopropylbenzene	ND U	24	0.097	1	10/20/21 18:09	*
Methylene Chloride	1.8 J	12	0.20	1	10/20/21 18:09	*
Naphthalene	ND U	24	0.16	1	10/20/21 18:09	*
Styrene	ND U	6.0	0.17	1	10/20/21 18:09	*
Tetrachloroethene (PCE)	ND U	6.0	0.20	1	10/20/21 18:09	*
Toluene	ND U	6.0	0.18	1	10/20/21 18:09	*
Trichloroethene (TCE)	ND U	6.0	0.18	1	10/20/21 18:09	*
Trichlorofluoromethane	ND U	6.0	0.11	1	10/20/21 18:09	*
Vinyl Chloride	ND U	6.0	0.22	1	10/20/21 18:09	*
cis-1,2-Dichloroethene	ND U	6.0	0.15	1	10/20/21 18:09	*
cis-1,3-Dichloropropene	ND U	6.0	0.16	1	10/20/21 18:09	*
m,p-Xylenes	ND U	6.0	0.12	1	10/20/21 18:09	*
n-Butylbenzene	ND U	24	0.083	1	10/20/21 18:09	*
n-Propylbenzene	ND U	24	0.16	1	10/20/21 18:09	*
o-Xylene	ND U	6.0	0.097	1	10/20/21 18:09	*
sec-Butylbenzene	ND U	24	0.089	1	10/20/21 18:09	*
tert-Butylbenzene	ND U	24	0.17	1	10/20/21 18:09	*
trans-1,2-Dichloroethene	ND U	6.0	0.15	1	10/20/21 18:09	*
trans-1,3-Dichloropropene	ND U	6.0	0.14	1	10/20/21 18:09	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	61 - 133	10/20/21 18:09	
Dibromofluoromethane	95	59 - 134	10/20/21 18:09	
Toluene-d8	99	77 - 122	10/20/21 18:09	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.5	0.13	1	10/20/21 18:30	*
1,1,1-Trichloroethane (TCA)	ND U	5.5	0.13	1	10/20/21 18:30	*
1,1,2,2-Tetrachloroethane	ND U	5.5	0.15	1	10/20/21 18:30	*
1,1,2-Trichloroethane	ND U	5.5	0.17	1	10/20/21 18:30	*
1,1-Dichloroethane	ND U	5.5	0.14	1	10/20/21 18:30	*
1,1-Dichloroethene	ND U	5.5	0.28	1	10/20/21 18:30	*
1,1-Dichloropropene	ND U	5.5	0.15	1	10/20/21 18:30	*
1,2,3-Trichlorobenzene	ND U	22	0.21	1	10/20/21 18:30	*
1,2,3-Trichloropropane	ND U	5.5	0.50	1	10/20/21 18:30	*
1,2,4-Trichlorobenzene	ND U	22	0.15	1	10/20/21 18:30	*
1,2,4-Trimethylbenzene	ND U	22	0.060	1	10/20/21 18:30	*
1,2-Dibromo-3-chloropropane	ND U	22	0.45	1	10/20/21 18:30	*
1,2-Dibromoethane (EDB)	ND U	22	0.11	1	10/20/21 18:30	*
1,2-Dichlorobenzene	ND U	5.5	0.085	1	10/20/21 18:30	*
1,2-Dichloroethane (EDC)	ND U	5.5	0.078	1	10/20/21 18:30	*
1,2-Dichloropropane	ND U	5.5	0.15	1	10/20/21 18:30	*
1,3,5-Trimethylbenzene	ND U	22	0.11	1	10/20/21 18:30	*
1,3-Dichlorobenzene	ND U	5.5	0.11	1	10/20/21 18:30	*
1,3-Dichloropropane	ND U	5.5	0.14	1	10/20/21 18:30	*
1,4-Dichlorobenzene	ND U	5.5	0.095	1	10/20/21 18:30	*
2,2-Dichloropropane	ND U	5.5	0.11	1	10/20/21 18:30	*
2-Butanone (MEK)	ND U	22	1.0	1	10/20/21 18:30	*
2-Chlorotoluene	ND U	22	0.14	1	10/20/21 18:30	*
2-Hexanone	ND U	22	1.1	1	10/20/21 18:30	*
4-Chlorotoluene	ND U	22	0.097	1	10/20/21 18:30	*
4-Isopropyltoluene	ND U	22	0.071	1	10/20/21 18:30	*
4-Methyl-2-pentanone (MIBK)	ND U	22	2.0	1	10/20/21 18:30	*
Acetone	22	22	3.2	1	10/20/21 18:30	*
Benzene	ND U	5.5	0.060	1	10/20/21 18:30	*
Bromobenzene	ND U	5.5	0.097	1	10/20/21 18:30	*
Bromochloromethane	ND U	5.5	0.27	1	10/20/21 18:30	*
Bromodichloromethane	ND U	5.5	0.18	1	10/20/21 18:30	*
Bromoform	ND U	5.5	0.16	1	10/20/21 18:30	*
Bromomethane	ND U	5.5	0.23	1	10/20/21 18:30	*
Carbon Disulfide	ND U	5.5	0.11	1	10/20/21 18:30	*
Carbon Tetrachloride	ND U	5.5	0.11	1	10/20/21 18:30	*
Chlorobenzene	ND U	5.5	0.072	1	10/20/21 18:30	*
Chloroethane	ND U	5.5	0.82	1	10/20/21 18:30	*
Chloroform	ND U	5.5	0.13	1	10/20/21 18:30	*
Chloromethane	ND U	5.5	0.20	1	10/20/21 18:30	*
Dibromochloromethane	ND U	5.5	0.20	1	10/20/21 18:30	*

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.5	0.31	1	10/20/21 18:30	*
Dichlorodifluoromethane	ND U	5.5	0.14	1	10/20/21 18:30	*
Ethylbenzene	ND U	5.5	0.11	1	10/20/21 18:30	*
Hexachlorobutadiene	ND U	22	0.45	1	10/20/21 18:30	*
Isopropylbenzene	ND U	22	0.090	1	10/20/21 18:30	*
Methylene Chloride	1.3 J	11	0.18	1	10/20/21 18:30	*
Naphthalene	ND U	22	0.15	1	10/20/21 18:30	*
Styrene	ND U	5.5	0.16	1	10/20/21 18:30	*
Tetrachloroethene (PCE)	ND U	5.5	0.18	1	10/20/21 18:30	*
Toluene	ND U	5.5	0.17	1	10/20/21 18:30	*
Trichloroethene (TCE)	ND U	5.5	0.17	1	10/20/21 18:30	*
Trichlorofluoromethane	ND U	5.5	0.094	1	10/20/21 18:30	*
Vinyl Chloride	ND U	5.5	0.20	1	10/20/21 18:30	*
cis-1,2-Dichloroethene	ND U	5.5	0.14	1	10/20/21 18:30	*
cis-1,3-Dichloropropene	ND U	5.5	0.15	1	10/20/21 18:30	*
m,p-Xylenes	ND U	5.5	0.12	1	10/20/21 18:30	*
n-Butylbenzene	ND U	22	0.077	1	10/20/21 18:30	*
n-Propylbenzene	ND U	22	0.15	1	10/20/21 18:30	*
o-Xylene	ND U	5.5	0.090	1	10/20/21 18:30	*
sec-Butylbenzene	ND U	22	0.082	1	10/20/21 18:30	*
tert-Butylbenzene	ND U	22	0.16	1	10/20/21 18:30	*
trans-1,2-Dichloroethene	ND U	5.5	0.14	1	10/20/21 18:30	*
trans-1,3-Dichloropropene	ND U	5.5	0.13	1	10/20/21 18:30	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	61 - 133	10/20/21 18:30	
Dibromofluoromethane	98	59 - 134	10/20/21 18:30	
Toluene-d8	99	77 - 122	10/20/21 18:30	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	7.9	0.18	1	10/20/21 18:51	*
1,1,1-Trichloroethane (TCA)	ND U	7.9	0.18	1	10/20/21 18:51	*
1,1,2,2-Tetrachloroethane	ND U	7.9	0.21	1	10/20/21 18:51	*
1,1,2-Trichloroethane	ND U	7.9	0.24	1	10/20/21 18:51	*
1,1-Dichloroethane	ND U	7.9	0.19	1	10/20/21 18:51	*
1,1-Dichloroethene	ND U	7.9	0.40	1	10/20/21 18:51	*
1,1-Dichloropropene	ND U	7.9	0.21	1	10/20/21 18:51	*
1,2,3-Trichlorobenzene	ND U	32	0.31	1	10/20/21 18:51	*
1,2,3-Trichloropropane	ND U	7.9	0.72	1	10/20/21 18:51	*
1,2,4-Trichlorobenzene	ND U	32	0.21	1	10/20/21 18:51	*
1,2,4-Trimethylbenzene	ND U	32	0.086	1	10/20/21 18:51	*
1,2-Dibromo-3-chloropropane	ND U	32	0.64	1	10/20/21 18:51	*
1,2-Dibromoethane (EDB)	ND U	32	0.15	1	10/20/21 18:51	*
1,2-Dichlorobenzene	ND U	7.9	0.13	1	10/20/21 18:51	*
1,2-Dichloroethane (EDC)	ND U	7.9	0.12	1	10/20/21 18:51	*
1,2-Dichloropropane	ND U	7.9	0.21	1	10/20/21 18:51	*
1,3,5-Trimethylbenzene	ND U	32	0.15	1	10/20/21 18:51	*
1,3-Dichlorobenzene	ND U	7.9	0.15	1	10/20/21 18:51	*
1,3-Dichloropropane	ND U	7.9	0.19	1	10/20/21 18:51	*
1,4-Dichlorobenzene	ND U	7.9	0.14	1	10/20/21 18:51	*
2,2-Dichloropropane	ND U	7.9	0.16	1	10/20/21 18:51	*
2-Butanone (MEK)	ND U	32	1.5	1	10/20/21 18:51	*
2-Chlorotoluene	ND U	32	0.19	1	10/20/21 18:51	*
2-Hexanone	ND U	32	1.5	1	10/20/21 18:51	*
4-Chlorotoluene	ND U	32	0.14	1	10/20/21 18:51	*
4-Isopropyltoluene	ND U	32	0.11	1	10/20/21 18:51	*
4-Methyl-2-pentanone (MIBK)	ND U	32	2.9	1	10/20/21 18:51	*
Acetone	28 J	32	4.6	1	10/20/21 18:51	*
Benzene	ND U	7.9	0.086	1	10/20/21 18:51	*
Bromobenzene	ND U	7.9	0.14	1	10/20/21 18:51	*
Bromochloromethane	ND U	7.9	0.38	1	10/20/21 18:51	*
Bromodichloromethane	ND U	7.9	0.26	1	10/20/21 18:51	*
Bromoform	ND U	7.9	0.23	1	10/20/21 18:51	*
Bromomethane	ND U	7.9	0.32	1	10/20/21 18:51	*
Carbon Disulfide	ND U	7.9	0.15	1	10/20/21 18:51	*
Carbon Tetrachloride	ND U	7.9	0.15	1	10/20/21 18:51	*
Chlorobenzene	ND U	7.9	0.11	1	10/20/21 18:51	*
Chloroethane	ND U	7.9	1.2	1	10/20/21 18:51	*
Chloroform	ND U	7.9	0.18	1	10/20/21 18:51	*
Chloromethane	ND U	7.9	0.29	1	10/20/21 18:51	*
Dibromochloromethane	ND U	7.9	0.29	1	10/20/21 18:51	*

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	7.9	0.45	1	10/20/21 18:51	*
Dichlorodifluoromethane	ND U	7.9	0.19	1	10/20/21 18:51	*
Ethylbenzene	ND U	7.9	0.15	1	10/20/21 18:51	*
Hexachlorobutadiene	ND U	32	0.64	1	10/20/21 18:51	*
Isopropylbenzene	ND U	32	0.13	1	10/20/21 18:51	*
Methylene Chloride	2.7 J	16	0.26	1	10/20/21 18:51	*
Naphthalene	ND U	32	0.21	1	10/20/21 18:51	*
Styrene	ND U	7.9	0.23	1	10/20/21 18:51	*
Tetrachloroethene (PCE)	ND U	7.9	0.26	1	10/20/21 18:51	*
Toluene	ND U	7.9	0.24	1	10/20/21 18:51	*
Trichloroethene (TCE)	ND U	7.9	0.24	1	10/20/21 18:51	*
Trichlorofluoromethane	ND U	7.9	0.14	1	10/20/21 18:51	*
Vinyl Chloride	ND U	7.9	0.29	1	10/20/21 18:51	*
cis-1,2-Dichloroethene	ND U	7.9	0.19	1	10/20/21 18:51	*
cis-1,3-Dichloropropene	ND U	7.9	0.21	1	10/20/21 18:51	*
m,p-Xylenes	ND U	7.9	0.16	1	10/20/21 18:51	*
n-Butylbenzene	ND U	32	0.11	1	10/20/21 18:51	*
n-Propylbenzene	ND U	32	0.21	1	10/20/21 18:51	*
o-Xylene	ND U	7.9	0.13	1	10/20/21 18:51	*
sec-Butylbenzene	ND U	32	0.12	1	10/20/21 18:51	*
tert-Butylbenzene	ND U	32	0.23	1	10/20/21 18:51	*
trans-1,2-Dichloroethene	ND U	7.9	0.19	1	10/20/21 18:51	*
trans-1,3-Dichloropropene	ND U	7.9	0.18	1	10/20/21 18:51	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	61 - 133	10/20/21 18:51	
Dibromofluoromethane	97	59 - 134	10/20/21 18:51	
Toluene-d8	99	77 - 122	10/20/21 18:51	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		61-133	59-134	77-122
B-35 (0-10)	K2112046-003	98	96	98
B-35 (10-20)	K2112046-006	96	97	99
B-36 (0-10)	K2112046-009	94	95	99
B-36 (10-17.5)	K2112046-012	94	98	99
B-39 (0-10)	K2112046-019	96	97	99
Method Blank	KQ2120759-07	97	96	99
Lab Control Sample	KQ2120759-05	99	102	100
Duplicate Lab Control Sample	KQ2120759-06	100	101	102
B-39 (0-10)	KQ2120759-01	103	103	102
B-39 (0-10)	KQ2120759-02	101	102	101

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21
Date Received: 10/13/21
Date Analyzed: 10/20/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: B-39 (0-10) **Units:** ug/Kg
Lab Code: K2112046-019 **Basis:** Dry
Analysis Method: 8260C
Prep Method: None

Analyte Name	Sample Result	Matrix Spike KQ2120759-01			Duplicate Matrix Spike KQ2120759-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	ND U	45.9	50.6	91	48.0	58.5	82	16-131	4	40
1,1,1-Trichloroethane (TCA)	ND U	45.5	50.6	90	50.1	58.5	86	26-144	10	40
1,1,2,2-Tetrachloroethane	ND U	38.4	50.6	76	37.0	58.5	63	10-153	4	40
1,1,2-Trichloroethane	ND U	41.6	50.6	82	43.2	58.5	74	35-130	4	40
1,1-Dichloroethane	ND U	45.9	50.6	91	52.9	58.5	90	31-135	14	40
1,1-Dichloroethene	ND U	49.3	50.6	97	53.8	58.5	92	31-153	9	40
1,1-Dichloropropene	ND U	43.7	50.6	86	48.9	58.5	84	25-143	11	40
1,2,3-Trichlorobenzene	ND U	36.1	50.6	71	37.9	58.5	65	10-118	5	40
1,2,3-Trichloropropane	ND U	38.4	50.6	76	39.0	58.5	67	23-149	1	40
1,2,4-Trichlorobenzene	ND U	37.8	50.6	75	39.0	58.5	67	10-121	3	40
1,2,4-Trimethylbenzene	ND U	42.2	50.6	83	45.2	58.5	77	10-142	7	40
1,2-Dibromo-3-chloropropane	ND U	39.5	50.6	78	39.0	58.5	67	10-146	1	40
1,2-Dibromoethane (EDB)	ND U	43.0	50.6	85	47.3	58.5	81	26-131	9	40
1,2-Dichlorobenzene	ND U	41.2	50.6	81	42.4	58.5	73	10-124	3	40
1,2-Dichloroethane (EDC)	ND U	41.1	50.6	81	45.3	58.5	77	32-134	10	40
1,2-Dichloropropane	ND U	38.7	50.6	76	43.7	58.5	75	31-132	12	40
1,3,5-Trimethylbenzene	ND U	41.6	50.6	82	44.5	58.5	76	10-160	7	40
1,3-Dichlorobenzene	ND U	39.4	50.6	78	40.9	58.5	70	10-126	4	40
1,3-Dichloropropane	ND U	41.6	50.6	82	44.7	58.5	76	32-133	7	40
1,4-Dichlorobenzene	ND U	39.0	50.6	77	40.8	58.5	70	10-123	4	40
2,2-Dichloropropane	ND U	43.7	50.6	86	49.5	58.5	85	34-140	12	40
2-Butanone (MEK)	ND U	71.1	101	70	75.5	117	65	27-113	6	40
2-Chlorotoluene	ND U	40.0	50.6	79	42.5	58.5	73	10-140	6	40
2-Hexanone	ND U	82.4	101	81	79.3	117	68	15-162	4	40
4-Chlorotoluene	ND U	40.7	50.6	80	42.5	58.5	73	10-134	4	40
4-Isopropyltoluene	ND U	42.1	50.6	83	45.8	58.5	78	10-126	8	40
4-Methyl-2-pentanone (MIBK)	ND U	71.3	101	70	72.6	117	62	30-129	2	40
Acetone	28 J	87.1	101	59	92.6	117	55	18-117	6	40
Benzene	ND U	40.4	50.6	80	44.8	58.5	77	30-137	10	40
Bromobenzene	ND U	41.7	50.6	82	44.2	58.5	75	13-134	6	40
Bromochloromethane	ND U	43.7	50.6	86	48.5	58.5	83	34-132	10	40
Bromodichloromethane	ND U	37.8	50.6	75	42.0	58.5	72	14-146	10	40
Bromoform	ND U	42.5	50.6	84	42.6	58.5	73	10-139	<1	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21
Date Received: 10/13/21
Date Analyzed: 10/20/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: B-39 (0-10)
Lab Code: K2112046-019
Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2120759-01			Duplicate Matrix Spike KQ2120759-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Bromomethane	ND U	45.9	50.6	91	52.3	58.5	89	10-160	13	40
Carbon Disulfide	ND U	41.7	50.6	82	50.0	58.5	85	18-140	18	40
Carbon Tetrachloride	ND U	46.7	50.6	92	51.7	58.5	88	10-144	10	40
Chlorobenzene	ND U	42.4	50.6	84	45.5	58.5	78	15-124	7	40
Chloroethane	ND U	47.8	50.6	94	52.8	58.5	90	15-149	10	40
Chloroform	ND U	42.3	50.6	84	47.2	58.5	81	43-133	11	40
Chloromethane	ND U	46.3	50.6	91	51.9	58.5	89	30-133	11	40
Dibromochloromethane	ND U	44.7	50.6	88	46.9	58.5	80	21-132	5	40
Dibromomethane	ND U	39.8	50.6	79	44.9	58.5	77	41-127	12	40
Dichlorodifluoromethane	ND U	58.4	50.6	115	63.8	58.5	109	14-158	9	40
Ethylbenzene	ND U	45.0	50.6	89	49.3	58.5	84	13-128	9	40
Hexachlorobutadiene	ND U	37.8	50.6	75	45.0	58.5	77	10-114	17	40
Isopropylbenzene	ND U	45.3	50.6	89	48.5	58.5	83	10-153	7	40
Methylene Chloride	2.7 J	43.0	50.6	80	48.9	58.5	79	36-123	13	40
Naphthalene	ND U	37.6	50.6	74	38.0	58.5	65	10-127	<1	40
Styrene	ND U	45.9	50.6	91	47.9	58.5	82	10-130	4	40
Tetrachloroethene (PCE)	ND U	44.9	50.6	89	49.7	58.5	85	10-132	10	40
Toluene	ND U	40.9	50.6	81	45.3	58.5	77	24-142	10	40
Trichloroethene (TCE)	ND U	41.9	50.6	83	45.1	58.5	77	18-145	7	40
Trichlorofluoromethane	ND U	53.1	50.6	105	57.8	58.5	99	20-137	8	40
Vinyl Chloride	ND U	49.5	50.6	98	54.6	58.5	93	31-140	10	40
cis-1,2-Dichloroethene	ND U	41.6	50.6	82	47.0	58.5	80	32-137	12	40
cis-1,3-Dichloropropene	ND U	38.0	50.6	75	42.9	58.5	73	20-132	12	40
m,p-Xylenes	ND U	89.4	101	88	99.3	117	85	10-139	10	40
n-Butylbenzene	ND U	41.8	50.6	83	45.5	58.5	78	10-125	8	40
n-Propylbenzene	ND U	42.5	50.6	84	45.8	58.5	78	10-145	8	40
o-Xylene	ND U	44.4	50.6	88	48.2	58.5	82	10-146	8	40
sec-Butylbenzene	ND U	40.5	50.6	80	44.2	58.5	76	10-141	9	40
tert-Butylbenzene	ND U	41.3	50.6	82	44.5	58.5	76	10-152	7	40
trans-1,2-Dichloroethene	ND U	45.7	50.6	90	52.0	58.5	89	29-139	13	40
trans-1,3-Dichloropropene	ND U	39.9	50.6	79	42.7	58.5	73	19-125	7	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120759-07

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.0	0.11	1	10/20/21 15:22	
1,1,1-Trichloroethane (TCA)	ND U	5.0	0.11	1	10/20/21 15:22	
1,1,2,2-Tetrachloroethane	ND U	5.0	0.13	1	10/20/21 15:22	
1,1,2-Trichloroethane	ND U	5.0	0.15	1	10/20/21 15:22	
1,1-Dichloroethane	ND U	5.0	0.12	1	10/20/21 15:22	
1,1-Dichloroethene	ND U	5.0	0.25	1	10/20/21 15:22	
1,1-Dichloropropene	ND U	5.0	0.13	1	10/20/21 15:22	
1,2,3-Trichlorobenzene	ND U	20	0.19	1	10/20/21 15:22	
1,2,3-Trichloropropane	ND U	5.0	0.45	1	10/20/21 15:22	
1,2,4-Trichlorobenzene	ND U	20	0.13	1	10/20/21 15:22	
1,2,4-Trimethylbenzene	ND U	20	0.054	1	10/20/21 15:22	
1,2-Dibromo-3-chloropropane	ND U	20	0.40	1	10/20/21 15:22	
1,2-Dibromoethane (EDB)	ND U	20	0.094	1	10/20/21 15:22	
1,2-Dichlorobenzene	ND U	5.0	0.077	1	10/20/21 15:22	
1,2-Dichloroethane (EDC)	ND U	5.0	0.070	1	10/20/21 15:22	
1,2-Dichloropropane	ND U	5.0	0.13	1	10/20/21 15:22	
1,3,5-Trimethylbenzene	ND U	20	0.092	1	10/20/21 15:22	
1,3-Dichlorobenzene	ND U	5.0	0.094	1	10/20/21 15:22	
1,3-Dichloropropane	ND U	5.0	0.12	1	10/20/21 15:22	
1,4-Dichlorobenzene	ND U	5.0	0.086	1	10/20/21 15:22	
2,2-Dichloropropane	ND U	5.0	0.098	1	10/20/21 15:22	
2-Butanone (MEK)	ND U	20	0.90	1	10/20/21 15:22	
2-Chlorotoluene	ND U	20	0.12	1	10/20/21 15:22	
2-Hexanone	ND U	20	0.93	1	10/20/21 15:22	
4-Chlorotoluene	ND U	20	0.088	1	10/20/21 15:22	
4-Isopropyltoluene	ND U	20	0.064	1	10/20/21 15:22	
4-Methyl-2-pentanone (MIBK)	ND U	20	1.8	1	10/20/21 15:22	
Acetone	4.5 J	20	2.9	1	10/20/21 15:22	
Benzene	ND U	5.0	0.054	1	10/20/21 15:22	
Bromobenzene	ND U	5.0	0.088	1	10/20/21 15:22	
Bromochloromethane	ND U	5.0	0.24	1	10/20/21 15:22	
Bromodichloromethane	ND U	5.0	0.16	1	10/20/21 15:22	
Bromoform	ND U	5.0	0.14	1	10/20/21 15:22	
Bromomethane	ND U	5.0	0.20	1	10/20/21 15:22	
Carbon Disulfide	ND U	5.0	0.092	1	10/20/21 15:22	
Carbon Tetrachloride	ND U	5.0	0.094	1	10/20/21 15:22	
Chlorobenzene	ND U	5.0	0.065	1	10/20/21 15:22	
Chloroethane	ND U	5.0	0.74	1	10/20/21 15:22	
Chloroform	ND U	5.0	0.11	1	10/20/21 15:22	
Chloromethane	ND U	5.0	0.18	1	10/20/21 15:22	
Dibromochloromethane	ND U	5.0	0.18	1	10/20/21 15:22	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120759-07

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.0	0.28	1	10/20/21 15:22	
Dichlorodifluoromethane	ND U	5.0	0.12	1	10/20/21 15:22	
Ethylbenzene	ND U	5.0	0.094	1	10/20/21 15:22	
Hexachlorobutadiene	ND U	20	0.40	1	10/20/21 15:22	
Isopropylbenzene	ND U	20	0.081	1	10/20/21 15:22	
Methylene Chloride	0.92 J	10	0.16	1	10/20/21 15:22	
Naphthalene	ND U	20	0.13	1	10/20/21 15:22	
Styrene	ND U	5.0	0.14	1	10/20/21 15:22	
Tetrachloroethene (PCE)	ND U	5.0	0.16	1	10/20/21 15:22	
Toluene	ND U	5.0	0.15	1	10/20/21 15:22	
Trichloroethene (TCE)	ND U	5.0	0.15	1	10/20/21 15:22	
Trichlorofluoromethane	ND U	5.0	0.085	1	10/20/21 15:22	
Vinyl Chloride	ND U	5.0	0.18	1	10/20/21 15:22	
cis-1,2-Dichloroethene	ND U	5.0	0.12	1	10/20/21 15:22	
cis-1,3-Dichloropropene	ND U	5.0	0.13	1	10/20/21 15:22	
m,p-Xylenes	ND U	5.0	0.10	1	10/20/21 15:22	
n-Butylbenzene	ND U	20	0.069	1	10/20/21 15:22	
n-Propylbenzene	ND U	20	0.13	1	10/20/21 15:22	
o-Xylene	ND U	5.0	0.081	1	10/20/21 15:22	
sec-Butylbenzene	ND U	20	0.074	1	10/20/21 15:22	
tert-Butylbenzene	ND U	20	0.14	1	10/20/21 15:22	
trans-1,2-Dichloroethene	ND U	5.0	0.12	1	10/20/21 15:22	
trans-1,3-Dichloropropene	ND U	5.0	0.11	1	10/20/21 15:22	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	61 - 133	10/20/21 15:22	
Dibromofluoromethane	96	59 - 134	10/20/21 15:22	
Toluene-d8	99	77 - 122	10/20/21 15:22	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 10/20/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 743309

Analyte Name	Lab Control Sample KQ2120759-05			Duplicate Lab Control Sample KQ2120759-06			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	45.5	50.0	91	45.4	50.0	91	71-119	<1	40
1,1,1-Trichloroethane (TCA)	47.6	50.0	95	47.1	50.0	94	59-146	1	40
1,1,2,2-Tetrachloroethane	36.6	50.0	73	37.6	50.0	75	60-128	3	40
1,1,2-Trichloroethane	40.9	50.0	82	41.4	50.0	83	72-118	1	40
1,1-Dichloroethane	42.1	50.0	84	42.3	50.0	85	59-137	<1	40
1,1-Dichloroethene	50.1	50.0	100	49.3	50.0	99	64-152	2	40
1,1-Dichloropropene	45.0	50.0	90	43.8	50.0	88	52-142	3	40
1,2,3-Trichlorobenzene	41.4	50.0	83	40.4	50.0	81	52-138	2	40
1,2,3-Trichloropropane	38.2	50.0	76	39.1	50.0	78	53-134	2	40
1,2,4-Trichlorobenzene	43.3	50.0	87	42.5	50.0	85	57-136	2	40
1,2,4-Trimethylbenzene	43.6	50.0	87	42.6	50.0	85	65-132	2	40
1,2-Dibromo-3-chloropropane	42.7	50.0	85	45.6	50.0	91	55-127	7	40
1,2-Dibromoethane (EDB)	46.0	50.0	92	46.5	50.0	93	71-116	1	40
1,2-Dichlorobenzene	42.0	50.0	84	40.7	50.0	81	67-124	3	40
1,2-Dichloroethane (EDC)	42.9	50.0	86	43.5	50.0	87	65-121	1	40
1,2-Dichloropropane	39.9	50.0	80	40.0	50.0	80	71-121	<1	40
1,3,5-Trimethylbenzene	43.1	50.0	86	42.3	50.0	85	66-132	2	40
1,3-Dichlorobenzene	41.2	50.0	82	40.1	50.0	80	69-128	3	40
1,3-Dichloropropane	42.0	50.0	84	43.0	50.0	86	72-118	2	40
1,4-Dichlorobenzene	40.3	50.0	81	39.3	50.0	79	69-125	2	40
2,2-Dichloropropane	47.7	50.0	95	47.6	50.0	95	50-138	<1	40
2-Butanone (MEK)	77.2	100	77	78.3	100	78	54-116	1	40
2-Chlorotoluene	40.9	50.0	82	40.5	50.0	81	65-129	1	40
2-Hexanone	82.0	100	82	87.1	100	87	67-121	6	40
4-Chlorotoluene	41.3	50.0	83	40.5	50.0	81	51-134	2	40
4-Isopropyltoluene	45.1	50.0	90	43.4	50.0	87	61-132	4	40
4-Methyl-2-pentanone (MIBK)	74.0	100	74	76.4	100	76	69-126	3	40
Acetone	80.2	100	80	81.7	100	82	32-135	2	40
Benzene	41.6	50.0	83	41.0	50.0	82	68-122	1	40
Bromobenzene	43.5	50.0	87	42.4	50.0	85	71-124	2	40
Bromochloromethane	45.3	50.0	91	46.4	50.0	93	65-131	2	40
Bromodichloromethane	39.2	50.0	78	39.7	50.0	79	61-143	1	40
Bromoform	44.6	50.0	89	44.0	50.0	88	62-134	1	40
Bromomethane	48.7	50.0	97	49.8	50.0	100	22-180	2	40
Carbon Disulfide	49.2	50.0	98	49.1	50.0	98	55-141	<1	40
Carbon Tetrachloride	50.4	50.0	101	48.4	50.0	97	51-135	4	40
Chlorobenzene	43.0	50.0	86	42.7	50.0	85	70-116	<1	40
Chloroethane	48.7	50.0	97	48.9	50.0	98	51-122	<1	40
Chloroform	43.4	50.0	87	44.1	50.0	88	61-137	2	40
Chloromethane	47.4	50.0	95	48.1	50.0	96	37-146	1	40
cis-1,2-Dichloroethene	43.1	50.0	86	43.2	50.0	86	62-138	<1	40

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 10/20/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 743309

Analyte Name	Lab Control Sample KQ2120759-05			Duplicate Lab Control Sample KQ2120759-06			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	40.6	50.0	81	40.9	50.0	82	58-138	<1	40
Dibromochloromethane	45.8	50.0	92	46.4	50.0	93	69-120	1	40
Dibromomethane	42.3	50.0	85	42.5	50.0	85	68-125	<1	40
Dichlorodifluoromethane	59.9	50.0	120	58.4	50.0	117	38-160	2	40
Ethylbenzene	46.7	50.0	93	45.6	50.0	91	70-118	3	40
Hexachlorobutadiene	50.8	50.0	102	47.7	50.0	95	54-140	6	40
Isopropylbenzene	46.1	50.0	92	44.8	50.0	90	67-133	3	40
m,p-Xylenes	91.1	100	91	90.6	100	91	69-127	<1	40
Methylene Chloride	42.7	50.0	85	43.4	50.0	87	65-122	2	40
Naphthalene	42.0	50.0	84	42.1	50.0	84	54-134	<1	40
n-Butylbenzene	45.6	50.0	91	44.0	50.0	88	53-139	3	40
n-Propylbenzene	44.6	50.0	89	43.3	50.0	87	57-143	3	40
o-Xylene	44.5	50.0	89	43.9	50.0	88	69-124	1	40
sec-Butylbenzene	43.3	50.0	87	41.9	50.0	84	55-146	3	40
Styrene	45.2	50.0	90	51.9	50.0	104	62-135	14	40
tert-Butylbenzene	43.9	50.0	88	42.5	50.0	85	67-131	3	40
Tetrachloroethene (PCE)	47.0	50.0	94	45.6	50.0	91	66-126	3	40
Toluene	42.0	50.0	84	41.7	50.0	83	75-117	<1	40
trans-1,2-Dichloroethene	49.4	50.0	99	48.7	50.0	97	63-127	2	40
trans-1,3-Dichloropropene	43.1	50.0	86	43.9	50.0	88	63-121	2	40
Trichloroethene (TCE)	43.9	50.0	88	43.3	50.0	87	67-126	1	40
Trichlorofluoromethane	54.9	50.0	110	52.6	50.0	105	51-140	4	40
Vinyl Chloride	50.8	50.0	102	50.9	50.0	102	54-127	<1	40



Volatile Organic Compounds

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10

Sample Name: B-36
Lab Code: K2112046-013

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	5.8 J	20	3.3	1	10/18/21 17:19	
Benzene	ND U	0.50	0.062	1	10/18/21 17:19	
Bromobenzene	ND U	2.0	0.12	1	10/18/21 17:19	
Bromochloromethane	ND U	0.50	0.16	1	10/18/21 17:19	
Bromodichloromethane	ND U	0.50	0.091	1	10/18/21 17:19	
Bromoform	ND U	0.50	0.16	1	10/18/21 17:19	
Bromomethane	ND U	0.50	0.16	1	10/18/21 17:19	
2-Butanone (MEK)	ND U	20	1.9	1	10/18/21 17:19	
n-Butylbenzene	ND U	4.0	0.054	1	10/18/21 17:19	
sec-Butylbenzene	ND U	2.0	0.062	1	10/18/21 17:19	
tert-Butylbenzene	ND U	2.0	0.059	1	10/18/21 17:19	
Carbon Disulfide	0.10 J	0.50	0.069	1	10/18/21 17:19	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/18/21 17:19	
Chlorobenzene	ND U	0.50	0.11	1	10/18/21 17:19	
Chloroethane	ND U	0.50	0.16	1	10/18/21 17:19	
Chloroform	ND U	0.50	0.072	1	10/18/21 17:19	
Chloromethane	0.090 J	0.50	0.068	1	10/18/21 17:19	
2-Chlorotoluene	ND U	2.0	0.10	1	10/18/21 17:19	
4-Chlorotoluene	ND U	2.0	0.13	1	10/18/21 17:19	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/18/21 17:19	
Dibromochloromethane	ND U	0.50	0.14	1	10/18/21 17:19	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/18/21 17:19	
Dibromomethane	ND U	0.50	0.15	1	10/18/21 17:19	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/18/21 17:19	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/18/21 17:19	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/18/21 17:19	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/18/21 17:19	*
1,1-Dichloroethane	ND U	0.50	0.077	1	10/18/21 17:19	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/18/21 17:19	
1,1-Dichloroethene	ND U	0.50	0.080	1	10/18/21 17:19	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/18/21 17:19	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/18/21 17:19	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/18/21 17:19	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/18/21 17:19	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/18/21 17:19	*
1,1-Dichloropropene	ND U	0.50	0.089	1	10/18/21 17:19	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/18/21 17:19	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/18/21 17:19	
Ethylbenzene	ND U	0.50	0.050	1	10/18/21 17:19	
Hexachlorobutadiene	ND U	2.0	0.11	1	10/18/21 17:19	
2-Hexanone	ND U	20	2.7	1	10/18/21 17:19	*

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10

Sample Name: B-36
Lab Code: K2112046-013

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/18/21 17:19	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/18/21 17:19	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/18/21 17:19	
Methylene Chloride	ND U	2.0	0.10	1	10/18/21 17:19	
Naphthalene	ND U	2.0	0.088	1	10/18/21 17:19	
n-Propylbenzene	ND U	2.0	0.054	1	10/18/21 17:19	
Styrene	ND U	0.50	0.089	1	10/18/21 17:19	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/18/21 17:19	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/18/21 17:19	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/18/21 17:19	
Toluene	0.17 J	0.50	0.054	1	10/18/21 17:19	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	10/18/21 17:19	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	10/18/21 17:19	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/18/21 17:19	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/18/21 17:19	
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/18/21 17:19	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/18/21 17:19	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/18/21 17:19	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/18/21 17:19	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/18/21 17:19	
Vinyl Chloride	ND U	0.50	0.075	1	10/18/21 17:19	
o-Xylene	ND U	0.50	0.074	1	10/18/21 17:19	
m,p-Xylenes	ND U	0.50	0.11	1	10/18/21 17:19	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	68 - 117	10/18/21 17:19	
Dibromofluoromethane	102	73 - 122	10/18/21 17:19	
Toluene-d8	98	65 - 144	10/18/21 17:19	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10

Sample Name: B-39
Lab Code: K2112046-017

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	5.3 J	20	3.3	1	10/18/21 17:42	
Benzene	ND U	0.50	0.062	1	10/18/21 17:42	
Bromobenzene	ND U	2.0	0.12	1	10/18/21 17:42	
Bromochloromethane	ND U	0.50	0.16	1	10/18/21 17:42	
Bromodichloromethane	ND U	0.50	0.091	1	10/18/21 17:42	
Bromoform	ND U	0.50	0.16	1	10/18/21 17:42	
Bromomethane	ND U	0.50	0.16	1	10/18/21 17:42	
2-Butanone (MEK)	ND U	20	1.9	1	10/18/21 17:42	
n-Butylbenzene	ND U	4.0	0.054	1	10/18/21 17:42	
sec-Butylbenzene	ND U	2.0	0.062	1	10/18/21 17:42	
tert-Butylbenzene	ND U	2.0	0.059	1	10/18/21 17:42	
Carbon Disulfide	ND U	0.50	0.069	1	10/18/21 17:42	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/18/21 17:42	
Chlorobenzene	ND U	0.50	0.11	1	10/18/21 17:42	
Chloroethane	ND U	0.50	0.16	1	10/18/21 17:42	
Chloroform	ND U	0.50	0.072	1	10/18/21 17:42	
Chloromethane	0.080 J	0.50	0.068	1	10/18/21 17:42	
2-Chlorotoluene	ND U	2.0	0.10	1	10/18/21 17:42	
4-Chlorotoluene	ND U	2.0	0.13	1	10/18/21 17:42	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/18/21 17:42	
Dibromochloromethane	ND U	0.50	0.14	1	10/18/21 17:42	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/18/21 17:42	
Dibromomethane	ND U	0.50	0.15	1	10/18/21 17:42	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/18/21 17:42	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/18/21 17:42	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/18/21 17:42	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/18/21 17:42	*
1,1-Dichloroethane	ND U	0.50	0.077	1	10/18/21 17:42	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/18/21 17:42	
1,1-Dichloroethene	ND U	0.50	0.080	1	10/18/21 17:42	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/18/21 17:42	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/18/21 17:42	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/18/21 17:42	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/18/21 17:42	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/18/21 17:42	*
1,1-Dichloropropene	ND U	0.50	0.089	1	10/18/21 17:42	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/18/21 17:42	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/18/21 17:42	
Ethylbenzene	ND U	0.50	0.050	1	10/18/21 17:42	
Hexachlorobutadiene	ND U	2.0	0.11	1	10/18/21 17:42	
2-Hexanone	ND U	20	2.7	1	10/18/21 17:42	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10

Sample Name: B-39
Lab Code: K2112046-017

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/18/21 17:42	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/18/21 17:42	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/18/21 17:42	
Methylene Chloride	ND U	2.0	0.10	1	10/18/21 17:42	
Naphthalene	ND U	2.0	0.088	1	10/18/21 17:42	
n-Propylbenzene	ND U	2.0	0.054	1	10/18/21 17:42	
Styrene	ND U	0.50	0.089	1	10/18/21 17:42	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/18/21 17:42	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/18/21 17:42	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/18/21 17:42	
Toluene	0.10 J	0.50	0.054	1	10/18/21 17:42	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	10/18/21 17:42	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	10/18/21 17:42	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/18/21 17:42	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/18/21 17:42	
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/18/21 17:42	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/18/21 17:42	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/18/21 17:42	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/18/21 17:42	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/18/21 17:42	
Vinyl Chloride	ND U	0.50	0.075	1	10/18/21 17:42	
o-Xylene	ND U	0.50	0.074	1	10/18/21 17:42	
m,p-Xylenes	ND U	0.50	0.11	1	10/18/21 17:42	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	68 - 117	10/18/21 17:42	
Dibromofluoromethane	103	73 - 122	10/18/21 17:42	
Toluene-d8	99	65 - 144	10/18/21 17:42	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
B-36	K2112046-013	96	102	98
B-39	K2112046-017	98	103	99
Method Blank	KQ2121331-05	91	99	97
Lab Control Sample	KQ2121331-03	96	95	101
Duplicate Lab Control Sample	KQ2121331-04	101	97	100

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121331-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	ND U	20	3.3	1	10/18/21 15:02	
Benzene	ND U	0.50	0.062	1	10/18/21 15:02	
Bromobenzene	ND U	2.0	0.12	1	10/18/21 15:02	
Bromochloromethane	ND U	0.50	0.16	1	10/18/21 15:02	
Bromodichloromethane	ND U	0.50	0.091	1	10/18/21 15:02	
Bromoform	ND U	0.50	0.16	1	10/18/21 15:02	
Bromomethane	ND U	0.50	0.16	1	10/18/21 15:02	
2-Butanone (MEK)	ND U	20	1.9	1	10/18/21 15:02	
n-Butylbenzene	ND U	4.0	0.054	1	10/18/21 15:02	
sec-Butylbenzene	ND U	2.0	0.062	1	10/18/21 15:02	
tert-Butylbenzene	ND U	2.0	0.059	1	10/18/21 15:02	
Carbon Disulfide	ND U	0.50	0.069	1	10/18/21 15:02	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/18/21 15:02	
Chlorobenzene	ND U	0.50	0.11	1	10/18/21 15:02	
Chloroethane	ND U	0.50	0.16	1	10/18/21 15:02	
Chloroform	ND U	0.50	0.072	1	10/18/21 15:02	
Chloromethane	ND U	0.50	0.068	1	10/18/21 15:02	
2-Chlorotoluene	ND U	2.0	0.10	1	10/18/21 15:02	
4-Chlorotoluene	ND U	2.0	0.13	1	10/18/21 15:02	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/18/21 15:02	
Dibromochloromethane	ND U	0.50	0.14	1	10/18/21 15:02	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/18/21 15:02	
Dibromomethane	ND U	0.50	0.15	1	10/18/21 15:02	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/18/21 15:02	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/18/21 15:02	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/18/21 15:02	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/18/21 15:02	
1,1-Dichloroethane	ND U	0.50	0.077	1	10/18/21 15:02	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/18/21 15:02	
1,1-Dichloroethene	ND U	0.50	0.080	1	10/18/21 15:02	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/18/21 15:02	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/18/21 15:02	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/18/21 15:02	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/18/21 15:02	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/18/21 15:02	
1,1-Dichloropropene	ND U	0.50	0.089	1	10/18/21 15:02	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/18/21 15:02	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/18/21 15:02	
Ethylbenzene	ND U	0.50	0.050	1	10/18/21 15:02	
Hexachlorobutadiene	ND U	2.0	0.11	1	10/18/21 15:02	
2-Hexanone	ND U	20	2.7	1	10/18/21 15:02	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121331-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/18/21 15:02	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/18/21 15:02	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/18/21 15:02	
Methylene Chloride	0.14 J	2.0	0.10	1	10/18/21 15:02	
Naphthalene	ND U	2.0	0.088	1	10/18/21 15:02	
n-Propylbenzene	ND U	2.0	0.054	1	10/18/21 15:02	
Styrene	ND U	0.50	0.089	1	10/18/21 15:02	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/18/21 15:02	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/18/21 15:02	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/18/21 15:02	
Toluene	ND U	0.50	0.054	1	10/18/21 15:02	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	10/18/21 15:02	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	10/18/21 15:02	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/18/21 15:02	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/18/21 15:02	
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/18/21 15:02	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/18/21 15:02	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/18/21 15:02	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/18/21 15:02	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/18/21 15:02	
Vinyl Chloride	ND U	0.50	0.075	1	10/18/21 15:02	
o-Xylene	ND U	0.50	0.074	1	10/18/21 15:02	
m,p-Xylenes	ND U	0.50	0.11	1	10/18/21 15:02	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	68 - 117	10/18/21 15:02	
Dibromofluoromethane	99	73 - 122	10/18/21 15:02	
Toluene-d8	97	65 - 144	10/18/21 15:02	

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 10/18/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 742875

Analyte Name	Lab Control Sample KQ2121331-03			Duplicate Lab Control Sample KQ2121331-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	9.66	10.0	97	9.61	10.0	96	66-124	<1	30
1,1,1-Trichloroethane (TCA)	10.4	10.0	104	10.4	10.0	104	59-136	<1	30
1,1,2,2-Tetrachloroethane	9.60	10.0	96	9.18	10.0	92	70-127	4	30
1,1,2-Trichloroethane	8.32	10.0	83	8.58	10.0	86	74-118	3	30
1,1-Dichloroethane	9.03	10.0	90	8.99	10.0	90	68-132	<1	30
1,1-Dichloroethene	8.23	10.0	82	8.34	10.0	83	66-129	1	30
1,1-Dichloropropene	9.04	10.0	90	9.13	10.0	91	59-134	<1	30
1,2,3-Trichlorobenzene	8.89	10.0	89	8.89	10.0	89	68-120	<1	30
1,2,3-Trichloropropane	8.85	10.0	89	9.30	10.0	93	69-123	5	30
1,2,4-Trichlorobenzene	8.67	10.0	87	8.44	10.0	84	58-126	3	30
1,2,4-Trimethylbenzene	10.2	10.0	102	9.71	10.0	97	63-122	5	30
1,2-Dibromo-3-chloropropane	9.13	10.0	91	9.97	10.0	100	55-132	9	30
1,2-Dibromoethane (EDB)	8.86	10.0	89	9.13	10.0	91	74-118	3	30
1,2-Dichlorobenzene	8.70	10.0	87	8.50	10.0	85	72-115	2	30
1,2-Dichloroethane (EDC)	8.94	10.0	89	9.23	10.0	92	56-142	3	30
1,2-Dichloropropane	8.84	10.0	88	8.87	10.0	89	67-126	<1	30
1,3,5-Trimethylbenzene	10.6	10.0	106	10.2	10.0	102	62-126	4	30
1,3-Dichlorobenzene	8.39	10.0	84	8.02	10.0	80	70-116	5	30
1,3-Dichloropropane	8.91	10.0	89	9.09	10.0	91	75-116	2	30
1,4-Dichlorobenzene	8.53	10.0	85	8.33	10.0	83	73-115	2	30
2,2-Dichloropropane	11.6	10.0	116	11.5	10.0	115	37-145	<1	30
2-Butanone (MEK)	38.2	50.0	76	41.5	50.0	83	71-149	8	30
2-Chlorotoluene	9.72	10.0	97	9.23	10.0	92	55-131	5	30
2-Hexanone	38.9	50.0	78	40.8	50.0	82	59-131	5	30
4-Chlorotoluene	9.26	10.0	93	8.87	10.0	89	66-121	4	30
4-Isopropyltoluene	10.4	10.0	104	10.0	10.0	100	61-128	4	30
4-Methyl-2-pentanone (MIBK)	43.8	50.0	88	45.9	50.0	92	64-134	5	30
Acetone	37.5	50.0	75	40.6	50.0	81	68-135	8	30
Benzene	9.01	10.0	90	9.02	10.0	90	69-124	<1	30
Bromobenzene	9.24	10.0	92	9.16	10.0	92	72-116	<1	30
Bromochloromethane	8.90	10.0	89	8.92	10.0	89	75-131	<1	30
Bromodichloromethane	9.24	10.0	92	9.08	10.0	91	63-129	2	30
Bromoform	9.11	10.0	91	9.42	10.0	94	52-144	3	30
Bromomethane	7.13	10.0	71	7.51	10.0	75	35-113	5	30
Carbon Disulfide	15.0	20.0	75	15.2	20.0	76	46-144	1	30
Carbon Tetrachloride	9.59	10.0	96	9.84	10.0	98	55-140	3	30
Chlorobenzene	8.93	10.0	89	8.94	10.0	89	72-116	<1	30
Chloroethane	7.50	10.0	75	7.69	10.0	77	58-134	3	30
Chloroform	8.56	10.0	86	8.88	10.0	89	70-129	4	30
Chloromethane	8.28	10.0	83	8.16	10.0	82	34-130	1	30
cis-1,2-Dichloroethene	8.33	10.0	83	8.37	10.0	84	71-118	<1	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 10/18/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 742875

Analyte Name	Lab Control Sample KQ2121331-03			Duplicate Lab Control Sample KQ2121331-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	10.1	10.0	101	10.3	10.0	103	62-132	2	30
Dibromochloromethane	8.99	10.0	90	9.38	10.0	94	67-126	4	30
Dibromomethane	8.61	10.0	86	8.94	10.0	89	69-128	4	30
Dichlorodifluoromethane	5.84	10.0	58	6.02	10.0	60	32-124	3	30
Ethylbenzene	9.59	10.0	96	9.69	10.0	97	67-121	1	30
Hexachlorobutadiene	9.21	10.0	92	8.92	10.0	89	57-119	3	30
Isopropylbenzene	10.4	10.0	104	10.1	10.0	101	67-129	2	30
m,p-Xylenes	19.6	20.0	98	19.3	20.0	96	69-121	2	30
Methylene Chloride	8.24	10.0	82	8.66	10.0	87	71-122	5	30
Naphthalene	9.50	10.0	95	9.77	10.0	98	64-126	3	30
n-Butylbenzene	9.90	10.0	99	9.63	10.0	96	55-130	3	30
n-Propylbenzene	10.1	10.0	101	9.77	10.0	98	61-124	3	30
o-Xylene	9.95	10.0	100	9.98	10.0	100	71-119	<1	30
sec-Butylbenzene	10.5	10.0	105	10.2	10.0	102	59-128	4	30
Styrene	9.52	10.0	95	9.57	10.0	96	74-121	<1	30
tert-Butylbenzene	10.8	10.0	108	10.5	10.0	105	61-127	3	30
Tetrachloroethene (PCE)	9.40	10.0	94	9.28	10.0	93	62-126	1	30
Toluene	8.86	10.0	89	9.20	10.0	92	69-124	4	30
trans-1,2-Dichloroethene	8.76	10.0	88	8.83	10.0	88	67-125	<1	30
trans-1,3-Dichloropropene	10.4	10.0	104	10.5	10.0	105	59-125	<1	30
Trichloroethene (TCE)	8.66	10.0	87	8.65	10.0	87	67-128	<1	30
Trichlorofluoromethane (CFC 11)	9.08	10.0	91	8.98	10.0	90	52-141	1	30
Vinyl Chloride	7.76	10.0	78	7.66	10.0	77	55-123	1	30



Polycyclic Aromatic Hydrocarbons by GC/MS SIM

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	1.1 J	5.4	0.41	1	11/08/21 14:35	10/20/21	
Acenaphthene	1.5 J	5.4	0.33	1	11/08/21 14:35	10/20/21	
Acenaphthylene	ND U	5.4	0.31	1	11/08/21 14:35	10/20/21	
Anthracene	0.38 J	5.4	0.32	1	11/08/21 14:35	10/20/21	
Benz(a)anthracene	0.73 J	5.4	0.25	1	11/08/21 14:35	10/20/21	
Benzo(a)pyrene	ND U	5.4	0.42	1	11/08/21 14:35	10/20/21	
Benzo(b)fluoranthene	ND U	5.4	0.42	1	11/08/21 14:35	10/20/21	
Benzo(g,h,i)perylene	ND U	5.4	0.44	1	11/08/21 14:35	10/20/21	
Benzo(k)fluoranthene	ND U	5.4	0.27	1	11/08/21 14:35	10/20/21	
Chrysene	0.43 J	5.4	0.34	1	11/08/21 14:35	10/20/21	
Dibenz(a,h)anthracene	0.42 J	5.4	0.25	1	11/08/21 14:35	10/20/21	
Dibenzofuran	ND U	5.4	0.66	1	11/08/21 14:35	10/20/21	
Fluoranthene	1.3 J	5.4	0.69	1	11/08/21 14:35	10/20/21	
Fluorene	ND U	5.4	0.62	1	11/08/21 14:35	10/20/21	
Indeno(1,2,3-cd)pyrene	ND U	5.4	0.40	1	11/08/21 14:35	10/20/21	*
Naphthalene	5.2 J	5.4	0.52	1	11/08/21 14:35	10/20/21	
Phenanthrene	2.0 J	5.4	0.65	1	11/08/21 14:35	10/20/21	
Pyrene	1.5 J	5.4	0.35	1	11/08/21 14:35	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	73	30 - 112	11/08/21 14:35	
Fluorene-d10	76	33 - 107	11/08/21 14:35	
Terphenyl-d14	77	35 - 124	11/08/21 14:35	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10

Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	1.2 J	5.7	0.43	1	11/08/21 15:02	10/20/21	
Acenaphthene	6.2	5.7	0.35	1	11/08/21 15:02	10/20/21	
Acenaphthylene	ND U	5.7	0.32	1	11/08/21 15:02	10/20/21	
Anthracene	ND U	5.7	0.33	1	11/08/21 15:02	10/20/21	
Benz(a)anthracene	0.51 J	5.7	0.27	1	11/08/21 15:02	10/20/21	
Benzo(a)pyrene	ND U	5.7	0.44	1	11/08/21 15:02	10/20/21	
Benzo(b)fluoranthene	ND U	5.7	0.44	1	11/08/21 15:02	10/20/21	
Benzo(g,h,i)perylene	ND U	5.7	0.46	1	11/08/21 15:02	10/20/21	
Benzo(k)fluoranthene	ND U	5.7	0.28	1	11/08/21 15:02	10/20/21	
Chrysene	ND U	5.7	0.36	1	11/08/21 15:02	10/20/21	
Dibenz(a,h)anthracene	ND U	5.7	0.27	1	11/08/21 15:02	10/20/21	
Dibenzofuran	ND U	5.7	0.69	1	11/08/21 15:02	10/20/21	
Fluoranthene	ND U	5.7	0.72	1	11/08/21 15:02	10/20/21	
Fluorene	ND U	5.7	0.65	1	11/08/21 15:02	10/20/21	
Indeno(1,2,3-cd)pyrene	ND U	5.7	0.41	1	11/08/21 15:02	10/20/21	*
Naphthalene	3.4 J	5.7	0.54	1	11/08/21 15:02	10/20/21	
Phenanthrene	1.5 J	5.7	0.68	1	11/08/21 15:02	10/20/21	
Pyrene	0.47 J	5.7	0.37	1	11/08/21 15:02	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	80	30 - 112	11/08/21 15:02	
Fluorene-d10	83	33 - 107	11/08/21 15:02	
Terphenyl-d14	83	35 - 124	11/08/21 15:02	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	3.2 J	6.2	0.46	1	11/08/21 15:29	10/20/21	
Acenaphthene	1.4 J	6.2	0.38	1	11/08/21 15:29	10/20/21	
Acenaphthylene	2.0 J	6.2	0.35	1	11/08/21 15:29	10/20/21	
Anthracene	3.8 J	6.2	0.36	1	11/08/21 15:29	10/20/21	
Benz(a)anthracene	11	6.2	0.29	1	11/08/21 15:29	10/20/21	
Benzo(a)pyrene	15	6.2	0.47	1	11/08/21 15:29	10/20/21	
Benzo(b)fluoranthene	13	6.2	0.47	1	11/08/21 15:29	10/20/21	
Benzo(g,h,i)perylene	11	6.2	0.50	1	11/08/21 15:29	10/20/21	
Benzo(k)fluoranthene	5.3 J	6.2	0.30	1	11/08/21 15:29	10/20/21	
Chrysene	13	6.2	0.39	1	11/08/21 15:29	10/20/21	
Dibenz(a,h)anthracene	1.3 J	6.2	0.29	1	11/08/21 15:29	10/20/21	
Dibenzofuran	4.4 J	6.2	0.75	1	11/08/21 15:29	10/20/21	
Fluoranthene	16	6.2	0.78	1	11/08/21 15:29	10/20/21	
Fluorene	2.0 J	6.2	0.71	1	11/08/21 15:29	10/20/21	
Indeno(1,2,3-cd)pyrene	11	6.2	0.45	1	11/08/21 15:29	10/20/21	*
Naphthalene	12	6.2	0.59	1	11/08/21 15:29	10/20/21	
Phenanthrene	11	6.2	0.73	1	11/08/21 15:29	10/20/21	
Pyrene	26	6.2	0.40	1	11/08/21 15:29	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	71	30 - 112	11/08/21 15:29	
Fluorene-d10	71	33 - 107	11/08/21 15:29	
Terphenyl-d14	75	35 - 124	11/08/21 15:29	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	2.5 J	5.8	0.43	1	11/08/21 15:56	10/20/21	
Acenaphthene	1.3 J	5.8	0.35	1	11/08/21 15:56	10/20/21	
Acenaphthylene	3.3 J	5.8	0.33	1	11/08/21 15:56	10/20/21	
Anthracene	2.3 J	5.8	0.34	1	11/08/21 15:56	10/20/21	
Benz(a)anthracene	5.2 J	5.8	0.27	1	11/08/21 15:56	10/20/21	
Benzo(a)pyrene	6.5	5.8	0.45	1	11/08/21 15:56	10/20/21	
Benzo(b)fluoranthene	7.7	5.8	0.45	1	11/08/21 15:56	10/20/21	
Benzo(g,h,i)perylene	5.3 J	5.8	0.47	1	11/08/21 15:56	10/20/21	
Benzo(k)fluoranthene	2.8 J	5.8	0.28	1	11/08/21 15:56	10/20/21	
Chrysene	7.6	5.8	0.37	1	11/08/21 15:56	10/20/21	
Dibenz(a,h)anthracene	ND U	5.8	0.27	1	11/08/21 15:56	10/20/21	
Dibenzofuran	2.2 J	5.8	0.70	1	11/08/21 15:56	10/20/21	
Fluoranthene	17	5.8	0.74	1	11/08/21 15:56	10/20/21	
Fluorene	2.4 J	5.8	0.67	1	11/08/21 15:56	10/20/21	
Indeno(1,2,3-cd)pyrene	5.0 J	5.8	0.42	1	11/08/21 15:56	10/20/21	*
Naphthalene	8.3	5.8	0.55	1	11/08/21 15:56	10/20/21	
Phenanthrene	18	5.8	0.69	1	11/08/21 15:56	10/20/21	
Pyrene	18	5.8	0.38	1	11/08/21 15:56	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	77	30 - 112	11/08/21 15:56	
Fluorene-d10	80	33 - 107	11/08/21 15:56	
Terphenyl-d14	83	35 - 124	11/08/21 15:56	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10
Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	4.5 J	6.5	0.49	1	11/08/21 16:23	10/20/21	
Acenaphthene	2.1 J	6.5	0.40	1	11/08/21 16:23	10/20/21	
Acenaphthylene	6.6	6.5	0.37	1	11/08/21 16:23	10/20/21	
Anthracene	2.5 J	6.5	0.38	1	11/08/21 16:23	10/20/21	
Benz(a)anthracene	3.6 J	6.5	0.30	1	11/08/21 16:23	10/20/21	
Benzo(a)pyrene	7.5	6.5	0.50	1	11/08/21 16:23	10/20/21	
Benzo(b)fluoranthene	4.7 J	6.5	0.50	1	11/08/21 16:23	10/20/21	
Benzo(g,h,i)perylene	3.8 J	6.5	0.53	1	11/08/21 16:23	10/20/21	
Benzo(k)fluoranthene	1.6 J	6.5	0.32	1	11/08/21 16:23	10/20/21	
Chrysene	4.9 J	6.5	0.41	1	11/08/21 16:23	10/20/21	
Dibenz(a,h)anthracene	ND U	6.5	0.30	1	11/08/21 16:23	10/20/21	
Dibenzofuran	2.1 J	6.5	0.79	1	11/08/21 16:23	10/20/21	
Fluoranthene	13	6.5	0.83	1	11/08/21 16:23	10/20/21	
Fluorene	3.1 J	6.5	0.75	1	11/08/21 16:23	10/20/21	
Indeno(1,2,3-cd)pyrene	3.3 J	6.5	0.47	1	11/08/21 16:23	10/20/21	*
Naphthalene	18	6.5	0.62	1	11/08/21 16:23	10/20/21	
Phenanthrene	14	6.5	0.77	1	11/08/21 16:23	10/20/21	
Pyrene	16	6.5	0.42	1	11/08/21 16:23	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	72	30 - 112	11/08/21 16:23	
Fluorene-d10	78	33 - 107	11/08/21 16:23	
Terphenyl-d14	77	35 - 124	11/08/21 16:23	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Extraction Method: EPA 3546

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		30-112	33-107	35-124
B-35 (0-10)	K2112046-003	73	76	77
B-35 (10-20)	K2112046-006	80	83	83
B-36 (0-10)	K2112046-009	71	71	75
B-36 (10-17.5)	K2112046-012	77	80	83
B-39 (0-10)	K2112046-019	72	78	77
Method Blank	KQ2120639-04	77	81	80
Lab Control Sample	KQ2120639-03	81	81	86

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120639-04

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.69 J	4.9	0.37	1	11/08/21 10:34	10/20/21	
Acenaphthene	0.77 J	4.9	0.30	1	11/08/21 10:34	10/20/21	
Acenaphthylene	0.33 J	4.9	0.28	1	11/08/21 10:34	10/20/21	
Anthracene	ND U	4.9	0.29	1	11/08/21 10:34	10/20/21	
Benz(a)anthracene	0.49 J	4.9	0.23	1	11/08/21 10:34	10/20/21	
Benzo(a)pyrene	ND U	4.9	0.38	1	11/08/21 10:34	10/20/21	
Benzo(b)fluoranthene	ND U	4.9	0.38	1	11/08/21 10:34	10/20/21	
Benzo(g,h,i)perylene	ND U	4.9	0.40	1	11/08/21 10:34	10/20/21	
Benzo(k)fluoranthene	ND U	4.9	0.24	1	11/08/21 10:34	10/20/21	
Chrysene	ND U	4.9	0.31	1	11/08/21 10:34	10/20/21	
Dibenz(a,h)anthracene	ND U	4.9	0.23	1	11/08/21 10:34	10/20/21	
Dibenzofuran	ND U	4.9	0.60	1	11/08/21 10:34	10/20/21	
Fluoranthene	ND U	4.9	0.63	1	11/08/21 10:34	10/20/21	
Fluorene	ND U	4.9	0.57	1	11/08/21 10:34	10/20/21	
Indeno(1,2,3-cd)pyrene	ND U	4.9	0.36	1	11/08/21 10:34	10/20/21	
Naphthalene	2.4 J	4.9	0.47	1	11/08/21 10:34	10/20/21	
Phenanthrene	0.76 J	4.9	0.59	1	11/08/21 10:34	10/20/21	
Pyrene	ND U	4.9	0.32	1	11/08/21 10:34	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	77	30 - 112	11/08/21 10:34	
Fluorene-d10	81	33 - 107	11/08/21 10:34	
Terphenyl-d14	80	35 - 124	11/08/21 10:34	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 11/08/21
Date Extracted: 10/20/21

Lab Control Sample Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 745137

Lab Control Sample
KQ2120639-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2-Methylnaphthalene	404	500	81	43-92
Acenaphthene	413	500	83	44-95
Acenaphthylene	420	500	84	44-93
Anthracene	501	500	100	46-100
Benz(a)anthracene	477	500	95	52-105
Benzo(a)pyrene	479	500	96	52-111
Benzo(b)fluoranthene	473	500	95	52-114
Benzo(g,h,i)perylene	471	500	94	45-107
Benzo(k)fluoranthene	465	500	93	52-112
Chrysene	478	500	96	51-110
Dibenz(a,h)anthracene	514	500	103	44-110
Dibenzofuran	392	500	78	44-96
Fluoranthene	417	500	83	49-102
Fluorene	422	500	84	45-98
Indeno(1,2,3-cd)pyrene	536	500	107	44-117
Naphthalene	409	500	82	42-88
Phenanthrene	409	500	82	41-99
Pyrene	442	500	88	48-104



Low Level Semivolatile Organic Compounds by GC/MS

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	440	110	1	11/03/21 20:53	10/19/21	
Bis(2-ethylhexyl) Phthalate	ND U	110	9.8	1	11/03/21 20:53	10/19/21	*
Carbazole	ND U	11	4.2	1	11/03/21 20:53	10/19/21	
Di-n-butyl Phthalate	ND U	22	5.3	1	11/03/21 20:53	10/19/21	
Di-n-octyl Phthalate	ND U	22	3.6	1	11/03/21 20:53	10/19/21	
Dibenzofuran	ND U	11	3.8	1	11/03/21 20:53	10/19/21	*
2,4-Dinitrotoluene	ND U	11	2.8	1	11/03/21 20:53	10/19/21	
2-Methylphenol	ND U	11	4.6	1	11/03/21 20:53	10/19/21	*
4-Methylphenol	ND U	22	5.0	1	11/03/21 20:53	10/19/21	*
Nitrobenzene	ND U	11	3.8	1	11/03/21 20:53	10/19/21	
Pentachlorophenol (PCP)	ND U	110	5.9	1	11/03/21 20:53	10/19/21	*
Phenol	ND U	33	3.5	1	11/03/21 20:53	10/19/21	*
Pyridine	ND U	220	55	1	11/03/21 20:53	10/19/21	*
2,4,5-Trichlorophenol	ND U	11	3.3	1	11/03/21 20:53	10/19/21	*
2,4,6-Trichlorophenol	ND U	11	3.3	1	11/03/21 20:53	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	91	35 - 105	11/03/21 20:53	
2-Fluorophenol	80	22 - 85	11/03/21 20:53	
Nitrobenzene-d5	86	10 - 84	11/03/21 20:53	*
Phenol-d6	90	39 - 109	11/03/21 20:53	
p-Terphenyl-d14	91	30 - 102	11/03/21 20:53	
2,4,6-Tribromophenol	83	10 - 124	11/03/21 20:53	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	450	110	1	11/23/21 12:02	11/8/21	*
Bis(2-ethylhexyl) Phthalate	14 J	110	11	1	11/23/21 12:02	11/8/21	*
Carbazole	ND U	11	4.4	1	11/23/21 12:02	11/8/21	*
Di-n-butyl Phthalate	6.4 J	23	5.5	1	11/23/21 12:02	11/8/21	*
Di-n-octyl Phthalate	ND U	23	3.7	1	11/23/21 12:02	11/8/21	*
Dibenzofuran	ND U	11	3.9	1	11/23/21 12:02	11/8/21	*
2,4-Dinitrotoluene	ND U	11	2.9	1	11/23/21 12:02	11/8/21	*
2-Methylphenol	ND U	11	4.7	1	11/23/21 12:02	11/8/21	*
4-Methylphenol	ND U	23	5.2	1	11/23/21 12:02	11/8/21	*
Nitrobenzene	ND U	11	3.9	1	11/23/21 12:02	11/8/21	*
Pentachlorophenol (PCP)	ND U	110	6.1	1	11/23/21 12:02	11/8/21	*
Phenol	ND U	34	3.6	1	11/23/21 12:02	11/8/21	*
Pyridine	ND U	230	57	1	11/23/21 12:02	11/8/21	*
2,4,5-Trichlorophenol	ND U	11	3.5	1	11/23/21 12:02	11/8/21	*
2,4,6-Trichlorophenol	ND U	11	3.5	1	11/23/21 12:02	11/8/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	64	35 - 105	11/23/21 12:02	
2-Fluorophenol	57	22 - 85	11/23/21 12:02	
Nitrobenzene-d5	69	10 - 84	11/23/21 12:02	
Phenol-d6	67	39 - 109	11/23/21 12:02	
p-Terphenyl-d14	62	30 - 102	11/23/21 12:02	
2,4,6-Tribromophenol	56	10 - 124	11/23/21 12:02	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	500	130	1	11/03/21 21:50	10/19/21	
Bis(2-ethylhexyl) Phthalate	73 J	130	12	1	11/03/21 21:50	10/19/21	*
Carbazole	ND U	13	4.8	1	11/03/21 21:50	10/19/21	
Di-n-butyl Phthalate	ND U	25	6.1	1	11/03/21 21:50	10/19/21	
Di-n-octyl Phthalate	25 J	25	4.1	1	11/03/21 21:50	10/19/21	
Dibenzofuran	ND U	13	4.3	1	11/03/21 21:50	10/19/21	*
2,4-Dinitrotoluene	ND U	13	3.2	1	11/03/21 21:50	10/19/21	
2-Methylphenol	ND U	13	5.2	1	11/03/21 21:50	10/19/21	*
4-Methylphenol	9.6 J	25	5.7	1	11/03/21 21:50	10/19/21	*
Nitrobenzene	ND U	13	4.3	1	11/03/21 21:50	10/19/21	
Pentachlorophenol (PCP)	ND U	130	6.7	1	11/03/21 21:50	10/19/21	*
Phenol	ND U	38	3.9	1	11/03/21 21:50	10/19/21	*
Pyridine	ND U	250	63	1	11/03/21 21:50	10/19/21	*
2,4,5-Trichlorophenol	ND U	13	3.8	1	11/03/21 21:50	10/19/21	*
2,4,6-Trichlorophenol	ND U	13	3.8	1	11/03/21 21:50	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	77	35 - 105	11/03/21 21:50	
2-Fluorophenol	69	22 - 85	11/03/21 21:50	
Nitrobenzene-d5	68	10 - 84	11/03/21 21:50	
Phenol-d6	81	39 - 109	11/03/21 21:50	
p-Terphenyl-d14	92	30 - 102	11/03/21 21:50	
2,4,6-Tribromophenol	82	10 - 124	11/03/21 21:50	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	470	120	1	11/03/21 22:19	10/19/21	
Bis(2-ethylhexyl) Phthalate	26 J	120	11	1	11/03/21 22:19	10/19/21	*
Carbazole	ND U	12	4.5	1	11/03/21 22:19	10/19/21	
Di-n-butyl Phthalate	ND U	24	5.7	1	11/03/21 22:19	10/19/21	
Di-n-octyl Phthalate	ND U	24	3.8	1	11/03/21 22:19	10/19/21	
Dibenzofuran	ND U	12	4.1	1	11/03/21 22:19	10/19/21	*
2,4-Dinitrotoluene	ND U	12	3.0	1	11/03/21 22:19	10/19/21	
2-Methylphenol	ND U	12	4.9	1	11/03/21 22:19	10/19/21	*
4-Methylphenol	45	24	5.4	1	11/03/21 22:19	10/19/21	*
Nitrobenzene	ND U	12	4.1	1	11/03/21 22:19	10/19/21	
Pentachlorophenol (PCP)	ND U	120	6.3	1	11/03/21 22:19	10/19/21	*
Phenol	ND U	35	3.7	1	11/03/21 22:19	10/19/21	*
Pyridine	ND U	240	60	1	11/03/21 22:19	10/19/21	*
2,4,5-Trichlorophenol	ND U	12	3.6	1	11/03/21 22:19	10/19/21	*
2,4,6-Trichlorophenol	ND U	12	3.6	1	11/03/21 22:19	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	79	35 - 105	11/03/21 22:19	
2-Fluorophenol	71	22 - 85	11/03/21 22:19	
Nitrobenzene-d5	75	10 - 84	11/03/21 22:19	
Phenol-d6	78	39 - 109	11/03/21 22:19	
p-Terphenyl-d14	87	30 - 102	11/03/21 22:19	
2,4,6-Tribromophenol	81	10 - 124	11/03/21 22:19	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10

Sample Name: B-36
Lab Code: K2112046-013

Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	2.4	1.1	1	11/05/21 22:05	10/18/21	*
Bis(2-ethylhexyl) Phthalate	0.55	0.47	0.13	1	11/05/21 22:05	10/18/21	
Carbazole	ND U	0.094	0.018	1	11/05/21 22:05	10/18/21	
Di-n-butyl Phthalate	ND U	0.19	0.023	1	11/05/21 22:05	10/18/21	
Di-n-octyl Phthalate	ND U	0.19	0.033	1	11/05/21 22:05	10/18/21	
Dibenzofuran	ND U	0.094	0.018	1	11/05/21 22:05	10/18/21	
2,4-Dinitrotoluene	ND U	0.094	0.018	1	11/05/21 22:05	10/18/21	
2-Methylphenol	ND U	0.24	0.11	1	11/05/21 22:05	10/18/21	
4-Methylphenol	ND U	0.24	0.12	1	11/05/21 22:05	10/18/21	
Nitrobenzene	ND U	0.094	0.028	1	11/05/21 22:05	10/18/21	
Pentachlorophenol (PCP)	ND U	0.47	0.34	1	11/05/21 22:05	10/18/21	*
Phenol	ND U	0.24	0.063	1	11/05/21 22:05	10/18/21	
Pyridine	ND U	2.4	1.4	1	11/05/21 22:05	10/18/21	
2,4,5-Trichlorophenol	ND U	0.24	0.031	1	11/05/21 22:05	10/18/21	
2,4,6-Trichlorophenol	ND U	0.24	0.058	1	11/05/21 22:05	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	68	35 - 105	11/05/21 22:05	
2-Fluorophenol	65	34 - 118	11/05/21 22:05	
Nitrobenzene-d5	65	40 - 117	11/05/21 22:05	
Phenol-d6	67	39 - 109	11/05/21 22:05	
p-Terphenyl-d14	95	48 - 109	11/05/21 22:05	
2,4,6-Tribromophenol	73	35 - 132	11/05/21 22:05	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-39
Lab Code: K2112046-017

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10
Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	2.4	1.1	1	11/05/21 22:33	10/18/21	*
Bis(2-ethylhexyl) Phthalate	0.26 J	0.47	0.13	1	11/05/21 22:33	10/18/21	
Carbazole	ND U	0.094	0.018	1	11/05/21 22:33	10/18/21	
Di-n-butyl Phthalate	ND U	0.19	0.023	1	11/05/21 22:33	10/18/21	
Di-n-octyl Phthalate	ND U	0.19	0.033	1	11/05/21 22:33	10/18/21	
Dibenzofuran	ND U	0.094	0.018	1	11/05/21 22:33	10/18/21	
2,4-Dinitrotoluene	ND U	0.094	0.018	1	11/05/21 22:33	10/18/21	
2-Methylphenol	ND U	0.24	0.11	1	11/05/21 22:33	10/18/21	
4-Methylphenol	ND U	0.24	0.12	1	11/05/21 22:33	10/18/21	
Nitrobenzene	ND U	0.094	0.028	1	11/05/21 22:33	10/18/21	
Pentachlorophenol (PCP)	ND U	0.47	0.34	1	11/05/21 22:33	10/18/21	*
Phenol	ND U	0.24	0.063	1	11/05/21 22:33	10/18/21	
Pyridine	ND U	2.4	1.4	1	11/05/21 22:33	10/18/21	
2,4,5-Trichlorophenol	ND U	0.24	0.031	1	11/05/21 22:33	10/18/21	
2,4,6-Trichlorophenol	ND U	0.24	0.058	1	11/05/21 22:33	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	70	35 - 105	11/05/21 22:33	
2-Fluorophenol	59	34 - 118	11/05/21 22:33	
Nitrobenzene-d5	62	40 - 117	11/05/21 22:33	
Phenol-d6	65	39 - 109	11/05/21 22:33	
p-Terphenyl-d14	93	48 - 109	11/05/21 22:33	
2,4,6-Tribromophenol	74	35 - 132	11/05/21 22:33	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10
Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	520	130	1	11/03/21 22:47	10/19/21	
Bis(2-ethylhexyl) Phthalate	28 J	130	12	1	11/03/21 22:47	10/19/21	*
Carbazole	ND U	13	5.0	1	11/03/21 22:47	10/19/21	
Di-n-butyl Phthalate	ND U	26	6.3	1	11/03/21 22:47	10/19/21	
Di-n-octyl Phthalate	ND U	26	4.2	1	11/03/21 22:47	10/19/21	
Dibenzofuran	ND U	13	4.5	1	11/03/21 22:47	10/19/21	*
2,4-Dinitrotoluene	ND U	13	3.3	1	11/03/21 22:47	10/19/21	
2-Methylphenol	ND U	13	5.4	1	11/03/21 22:47	10/19/21	*
4-Methylphenol	26	26	5.9	1	11/03/21 22:47	10/19/21	*
Nitrobenzene	ND U	13	4.5	1	11/03/21 22:47	10/19/21	
Pentachlorophenol (PCP)	ND U	130	6.9	1	11/03/21 22:47	10/19/21	*
Phenol	ND U	39	4.1	1	11/03/21 22:47	10/19/21	*
Pyridine	ND U	260	65	1	11/03/21 22:47	10/19/21	*
2,4,5-Trichlorophenol	ND U	13	3.9	1	11/03/21 22:47	10/19/21	*
2,4,6-Trichlorophenol	ND U	13	3.9	1	11/03/21 22:47	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	76	35 - 105	11/03/21 22:47	
2-Fluorophenol	68	22 - 85	11/03/21 22:47	
Nitrobenzene-d5	73	10 - 84	11/03/21 22:47	
Phenol-d6	77	39 - 109	11/03/21 22:47	
p-Terphenyl-d14	84	30 - 102	11/03/21 22:47	
2,4,6-Tribromophenol	77	10 - 124	11/03/21 22:47	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	22-85	10-84
B-35 (0-10)	K2112046-003	91	80	86*
B-35 (10-20)	K2112046-006	64	57	69
B-36 (0-10)	K2112046-009	77	69	68
B-36 (10-17.5)	K2112046-012	79	71	75
B-39 (0-10)	K2112046-019	76	68	73
Method Blank	KQ2120361-04	89	76	83
Method Blank	KQ2121852-04	73	73	83
Lab Control Sample	KQ2120361-03	92	80	88*
Lab Control Sample	KQ2121852-03	74	70	84
B-35 (10-20)	KQ2121852-01	60	55	68
B-35 (10-20)	KQ2121852-02	72	69	83

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	30-102	10-124
B-35 (0-10)	K2112046-003	90	91	83
B-35 (10-20)	K2112046-006	67	62	56
B-36 (0-10)	K2112046-009	81	92	82
B-36 (10-17.5)	K2112046-012	78	87	81
B-39 (0-10)	K2112046-019	77	84	77
Method Blank	KQ2120361-04	86	99	80
Method Blank	KQ2121852-04	81	71	61
Lab Control Sample	KQ2120361-03	88	82	90
Lab Control Sample	KQ2121852-03	81	83	71
B-35 (10-20)	KQ2121852-01	65	55	55
B-35 (10-20)	KQ2121852-02	79	75	71

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	34-118	40-117
B-36	K2112046-013	68	65	65
B-39	K2112046-017	70	59	62
Method Blank	KQ2120538-03	76	68	72
Lab Control Sample	KQ2120538-01	89	78	86
Duplicate Lab Control Sample	KQ2120538-02	76	73	76

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	48-109	35-132
B-36	K2112046-013	67	95	73
B-39	K2112046-017	65	93	74
Method Blank	KQ2120538-03	77	102	77
Lab Control Sample	KQ2120538-01	86	108	87
Duplicate Lab Control Sample	KQ2120538-02	76	99	81

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: 10/11/21
Date Received: 10/13/21
Date Analyzed: 11/23/21
Date Extracted: 11/8/21

Duplicate Matrix Spike Summary
Low Level Semivolatile Organic Compounds by GC/MS

Sample Name: B-35 (10-20)
Lab Code: K2112046-006
Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2121852-01			Duplicate Matrix Spike KQ2121852-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Benzoic Acid	ND U	742	851	87	220 J	850	26	10-125	109*	40
Bis(2-ethylhexyl) Phthalate	14 J	209	284	69	277	283	93	23-123	28	40
Carbazole	ND U	223	284	79	271	283	96	10-136	19	40
Di-n-butyl Phthalate	6.4 J	168	284	57	220	283	75	16-130	27	40
Di-n-octyl Phthalate	ND U	219	284	77	265	283	93	25-120	19	40
Dibenzofuran	ND U	217	284	77	266	283	94	15-96	20	40
2,4-Dinitrotoluene	ND U	134	284	47	230	283	81	10-131	52*	40
2-Methylphenol	ND U	219	284	77	262	283	93	10-94	18	40
4-Methylphenol	ND U	257	284	91	314	283	111 *	10-103	20	40
Nitrobenzene	ND U	174	284	61	213	283	75	10-95	20	40
Pentachlorophenol (PCP)	ND U	149	284	53	264	283	93	10-134	56*	40
Phenol	ND U	218	284	77	264	283	93	10-93	19	40
Pyridine	ND U	ND U	567	0 *	287	567	51	10-54	NC	40
2,4,5-Trichlorophenol	ND U	195	284	69	250	283	88	29-88	25	40
2,4,6-Trichlorophenol	ND U	198	284	70	251	283	89	20-96	24	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120361-04

Service Request: K2112046
Date Collected: NA
Date Received: NA

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	400	96	1	11/03/21 16:37	10/19/21	
Bis(2-ethylhexyl) Phthalate	ND U	99	8.9	1	11/03/21 16:37	10/19/21	
Carbazole	ND U	9.9	3.8	1	11/03/21 16:37	10/19/21	
Di-n-butyl Phthalate	ND U	20	4.8	1	11/03/21 16:37	10/19/21	
Di-n-octyl Phthalate	ND U	20	3.2	1	11/03/21 16:37	10/19/21	
Dibenzofuran	ND U	9.9	3.4	1	11/03/21 16:37	10/19/21	
2,4-Dinitrotoluene	ND U	9.9	2.5	1	11/03/21 16:37	10/19/21	
2-Methylphenol	ND U	9.9	4.1	1	11/03/21 16:37	10/19/21	
4-Methylphenol	ND U	20	4.5	1	11/03/21 16:37	10/19/21	
Nitrobenzene	ND U	9.9	3.4	1	11/03/21 16:37	10/19/21	
Pentachlorophenol (PCP)	ND U	99	5.3	1	11/03/21 16:37	10/19/21	
Phenol	ND U	30	3.1	1	11/03/21 16:37	10/19/21	
Pyridine	ND U	200	50	1	11/03/21 16:37	10/19/21	
2,4,5-Trichlorophenol	ND U	9.9	3.0	1	11/03/21 16:37	10/19/21	
2,4,6-Trichlorophenol	ND U	9.9	3.0	1	11/03/21 16:37	10/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	89	35 - 105	11/03/21 16:37	
2-Fluorophenol	76	22 - 85	11/03/21 16:37	
Nitrobenzene-d5	83	10 - 84	11/03/21 16:37	
Phenol-d6	86	39 - 109	11/03/21 16:37	
p-Terphenyl-d14	99	30 - 102	11/03/21 16:37	
2,4,6-Tribromophenol	80	10 - 124	11/03/21 16:37	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120538-03

Service Request: K2112046
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	2.4	1.1	1	11/05/21 19:17	10/18/21	
Bis(2-ethylhexyl) Phthalate	ND U	0.47	0.13	1	11/05/21 19:17	10/18/21	
Carbazole	ND U	0.094	0.018	1	11/05/21 19:17	10/18/21	
Di-n-butyl Phthalate	ND U	0.19	0.023	1	11/05/21 19:17	10/18/21	
Di-n-octyl Phthalate	ND U	0.19	0.033	1	11/05/21 19:17	10/18/21	
Dibenzofuran	ND U	0.094	0.018	1	11/05/21 19:17	10/18/21	
2,4-Dinitrotoluene	ND U	0.094	0.018	1	11/05/21 19:17	10/18/21	
2-Methylphenol	ND U	0.24	0.11	1	11/05/21 19:17	10/18/21	
4-Methylphenol	ND U	0.24	0.12	1	11/05/21 19:17	10/18/21	
Nitrobenzene	ND U	0.094	0.028	1	11/05/21 19:17	10/18/21	
Pentachlorophenol (PCP)	ND U	0.47	0.34	1	11/05/21 19:17	10/18/21	
Phenol	ND U	0.24	0.063	1	11/05/21 19:17	10/18/21	
Pyridine	ND U	2.4	1.4	1	11/05/21 19:17	10/18/21	
2,4,5-Trichlorophenol	ND U	0.24	0.031	1	11/05/21 19:17	10/18/21	
2,4,6-Trichlorophenol	ND U	0.24	0.058	1	11/05/21 19:17	10/18/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	76	35 - 105	11/05/21 19:17	
2-Fluorophenol	68	34 - 118	11/05/21 19:17	
Nitrobenzene-d5	72	40 - 117	11/05/21 19:17	
Phenol-d6	77	39 - 109	11/05/21 19:17	
p-Terphenyl-d14	102	48 - 109	11/05/21 19:17	
2,4,6-Tribromophenol	77	35 - 132	11/05/21 19:17	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121852-04

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	400	96	1	11/23/21 10:08	11/8/21	
Bis(2-ethylhexyl) Phthalate	12 J	100	8.9	1	11/23/21 10:08	11/8/21	
Carbazole	ND U	10	3.8	1	11/23/21 10:08	11/8/21	
Di-n-butyl Phthalate	ND U	20	4.8	1	11/23/21 10:08	11/8/21	
Di-n-octyl Phthalate	ND U	20	3.2	1	11/23/21 10:08	11/8/21	
Dibenzofuran	ND U	10	3.4	1	11/23/21 10:08	11/8/21	
2,4-Dinitrotoluene	ND U	10	2.5	1	11/23/21 10:08	11/8/21	
2-Methylphenol	ND U	10	4.1	1	11/23/21 10:08	11/8/21	
4-Methylphenol	ND U	20	4.5	1	11/23/21 10:08	11/8/21	
Nitrobenzene	ND U	10	3.4	1	11/23/21 10:08	11/8/21	
Pentachlorophenol (PCP)	ND U	100	5.3	1	11/23/21 10:08	11/8/21	
Phenol	ND U	30	3.1	1	11/23/21 10:08	11/8/21	
Pyridine	ND U	200	50	1	11/23/21 10:08	11/8/21	
2,4,5-Trichlorophenol	ND U	10	3.0	1	11/23/21 10:08	11/8/21	
2,4,6-Trichlorophenol	ND U	10	3.0	1	11/23/21 10:08	11/8/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	73	35 - 105	11/23/21 10:08	
2-Fluorophenol	73	22 - 85	11/23/21 10:08	
Nitrobenzene-d5	83	10 - 84	11/23/21 10:08	
Phenol-d6	81	39 - 109	11/23/21 10:08	
p-Terphenyl-d14	71	30 - 102	11/23/21 10:08	
2,4,6-Tribromophenol	61	10 - 124	11/23/21 10:08	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 11/03/21
Date Extracted: 10/19/21

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry
Analysis Lot: 744854

Lab Control Sample
KQ2120361-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol	218	250	87 *	32-81
2,4,6-Trichlorophenol	218	250	87 *	33-79
2,4-Dinitrotoluene	181	250	72	35-93
2-Methylphenol	218	250	87 *	27-74
4-Methylphenol	252	250	101 *	26-79
Benzoic Acid	198 J	750	26	10-34
Bis(2-ethylhexyl) Phthalate	147	250	59	39-113
Carbazole	212	250	85	37-95
Dibenzofuran	220	250	88 *	30-78
Di-n-butyl Phthalate	168	250	67	30-120
Di-n-octyl Phthalate	199	250	80	41-105
Nitrobenzene	163	250	65	28-78
Pentachlorophenol (PCP)	166	250	66	19-103
Phenol	215	250	86 *	27-75
Pyridine	397	500	79 *	10-54

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 11/23/21
Date Extracted: 11/08/21

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry
Analysis Lot: 746145

Lab Control Sample
KQ2121852-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol	224	250	89 *	32-81
2,4,6-Trichlorophenol	228	250	91 *	33-79
2,4-Dinitrotoluene	209	250	84	35-93
2-Methylphenol	238	250	95 *	27-74
4-Methylphenol	284	250	114 *	26-79
Benzoic Acid	387 J	750	52 *	10-34
Bis(2-ethylhexyl) Phthalate	263	250	105	39-113
Carbazole	245	250	98 *	37-95
Dibenzofuran	239	250	95 *	30-78
Di-n-butyl Phthalate	188	250	75	30-120
Di-n-octyl Phthalate	238	250	95	41-105
Nitrobenzene	194	250	78	28-78
Pentachlorophenol (PCP)	230	250	92	19-103
Phenol	241	250	97 *	27-75
Pyridine	425	500	85 *	10-54

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 11/05/21
Date Extracted: 10/18/21

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 745443

Lab Control Sample
KQ2120538-01

Duplicate Lab Control Sample
KQ2120538-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	4.45	5.00	89	4.05	5.00	81	51-116	9	30
2,4,6-Trichlorophenol	4.56	5.00	91	4.08	5.00	82	51-114	11	30
2,4-Dinitrotoluene	3.47	5.00	69	3.24	5.00	65	56-120	7	30
2-Methylphenol	4.24	5.00	85	3.85	5.00	77	45-114	10	30
4-Methylphenol	4.85	5.00	97	4.44	5.00	89	44-120	9	30
Benzoic Acid	9.89	15.0	66	9.92	15.0	66	10-86	<1	30
Bis(2-ethylhexyl) Phthalate	4.16	5.00	83	4.40	5.00	88	42-147	6	30
Carbazole	3.86	5.00	77	3.67	5.00	73	57-112	5	30
Dibenzofuran	4.47	5.00	89	4.05	5.00	81	51-102	10	30
Di-n-butyl Phthalate	3.69	5.00	74	3.42	5.00	68	61-121	8	30
Di-n-octyl Phthalate	4.17	5.00	83	3.98	5.00	80	50-125	5	30
Nitrobenzene	3.30	5.00	66	3.01	5.00	60	43-120	9	30
Pentachlorophenol (PCP)	4.10	5.00	82	3.89	5.00	78	27-112	5	30
Phenol	4.37	5.00	87	3.97	5.00	79	45-112	10	30
Pyridine	7.97	10.0	80	7.12	10.0	71	10-121	11	30



Subcontract Lab Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



November 12, 2021

Service Request No:K2112046

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

Laboratory Results for: EQRB

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 13, 2021
For your reference, these analyses have been assigned our service request number **K2112046**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental



Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client: Coles & Betts
Project: EQRB
Sample Matrix: S/W

Service Request No.: K2112046
Date Received: 10/21/21

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Seven samples were received for analysis at ALS Environmental in Houston on 10/21/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100616 & EQ2100619: A Laboratory Control Spike (LCS) sample was analyzed and reported in addition to a MS/MSD for these extraction batches. The batch precision (MS/DMS) measurements were determined on another order in the extraction batch. The MS/DMS results are not included in this report. 1,2,3,4,7,8,9-HpCDF & 1,2,3,7,8-PeCDF EQ616 LCS recoveries were below QC limits, 1,2,3,4,7,8,9-HpCDF EQ619 recovery was below QC limits. Associated samples in these batches should be considered potentially bias low for these compounds.

B flags – Method Blanks

The Method Blank EQ2100616-01 & EQ2100619-01 contained trace levels of target D/F compounds below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

Y flags – Cleanup Standard

Select sample recoveries for the cleanup standard, 37Cl-2,3,7,8-TCDD are below control limits. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected, and is not used in quantitation of target analytes.

Y flags – Labeled Standards

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with 'Y' flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

2378-TCDF

Samples analyzed on the DB-5MSUI column were analyzed under conditions where sufficient separation between 2,3,7,8-TCDF and its closest eluter was achieved. Confirmation of this result was not required.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- 2378-TCDF from the DB-225 column, when confirmation required
- Non-detected compounds are not included in the 'Total'

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319

Service Request:K2112046

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2112046-003	B-35 (0-10)	10/11/2021	0945
K2112046-006	B-35 (10-20)	10/11/2021	1000
K2112046-009	B-36 (0-10)	10/11/2021	1400
K2112046-012	B-36 (10-17.5)	10/11/2021	1410
K2112046-013	B-36	10/11/2021	1500
K2112046-017	B-39	10/11/2021	1430
K2112046-019	B-39 (0-10)	10/11/2021	1400

Service Request Summary

Folder #: K2112046
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA

Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: CGRAVES
Date Received: 10/13/21
Internal Due Date: 11/2/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

46 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 16 40 ml-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
 8 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 16 1000 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 5 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 5 -N/A N/A
 4 250 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 4 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
 2 125 mL-Plastic Bottle WM CLEAR HNO3 (Diss)
 2 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-DELILAH, K-Misty-1, K-Disposed, K-PETUNIA-09, EHRMS-WIC 10A, K-NOT CREATED, K-MET LTS, In Lab

Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	KELSO					KELSO					KELSO			HOUSTON	KELSO	
				Hg D/7470A	Hg T/7470A	Hg/7471B	Metals D/6020A	Metals T/6020A	BUTYLINS/ALS SOP	HERB/8151A	NW_TPH/NWTPH-Dx	PCB/8082A	Pest OC LL/8081B	Pest OC ULL/8081B	PAH SIM ULL/8270D	PAH SIM/8270D	SVO LL/8270D	PCDD PCDF/8290A	TS/160.3 Modified
K2112046-003	B-35 (0-10)	Soil	10/11/21 0945																
K2112046-006	B-35 (10-20)	Soil	10/11/21 1000																
K2112046-009	B-36 (0-10)	Soil	10/11/21 1400																
K2112046-012	B-36 (10-17.5)	Soil	10/11/21 1410																
K2112046-013	B-36	Water	10/11/21 1500																
K2112046-014	B-36 Trip Blank	Water	10/11/21 1500																
K2112046-017	B-39	Water	10/11/21 1430																
K2112046-018	B-39 Trip Blank	Water	10/11/21 1430																
K2112046-019	B-39 (0-10)	Soil	10/11/21 1400																

Folder Comments:

Composite 001 and 002 to make 003.
 Composite 004 and 005 to make 006.
 Composite 007 and 008 to make 009.
 Composite 010 and 011 to make 012.
 Composite 015 and 016 to make 019.
 Reserve some from each discrete for future analysis.

KELSO		
NW_GAS/NWTPH-Gx	VOC FP/8260C	VOC Unp/8260C

Service Request Summary

Folder #: K2112046
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA

Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: CGRAVES
Date Received: 10/13/21
Internal Due Date: 11/2/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

46 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 16 40 ml-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
 8 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 16 1000 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 5 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 5 -N/A N/A
 4 250 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 4 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
 2 125 mL-Plastic Bottle WM CLEAR HNO3 (Diss)
 2 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-DELILAH, K-Misty-1, K-Disposed, K-PETUNIA-09, EHRMS-WIC 10A, K-NOT CREATED, K-MET LTS, In Lab

Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Metals	Metals D/6020A	2	As Ba Cd Cr Pb Se Ag
Metals	Metals T/6020A	7	As,Ba,Cd,Cr,Pb,Se,Ag
Semivoa GC	Pest OC LL/8081B	7	See attached Form V for target list Report list: 20324
Semivoa GC	HERB/8151A	7	Report list: 18726
Semivoa GC	BUTYLINS/ALS SOP	7	Report list: 17560
Semivoa GC	NW_TPH/NWTPH-Dx	8	Report list: 22364
Semivoa GC	Pest OC ULL/8081B	2	See attached Form V for target list Report list: 20324
Semivoa GC	PCB/8082A	7	Report list: 20420
Semivoa GCMS	PAH SIM ULL/8270D	2	Report list: 18998
Semivoa GCMS	PAH SIM/8270D	7	Report list: 18998
Semivoa GCMS	SVO LL/8270D	8	See attached Form V for target list
Soils Prep	Composite/Composite	2	Composite -004 & -005 to create -006
Soils Prep	Composite/Composite	2	Composite -010 & -011 to create -012
Soils Prep	Composite/Composite	2	Composite -007 & -008 to create -009
Soils Prep	Composite/Composite	2	Composite -015 & -016 to create -019
Soils Prep	Composite/Composite	2	Composite -001 & -002 to create -003
VOA GCMS	VOC FP/8260C	4	Report list: 20915
VOA GCMS	NW_GAS/NWTPH-Gx	10	Report list: 19509
VOA GCMS	VOC Unp/8260C	5	Report list: 20915

Data Qualifiers

Lab Standard

- + Possible Tedlar bag artifact.
- A TIC is a suspected aldol-condensation product
- B Analyte found in the associated method blank as well as in the sample.
- BC Reported results are not blank corrected.
- BH The back section of the tube yielded higher results than the front.
- BT Results indicated possible breakthrough; back section $\geq 10\%$ front section.
- C Result identification confirmed.
- D Compound identified in an analysis at a secondary dilution factor
- D Spike was diluted out
- DE Reported results are corrected for desorption efficiency.
- E Estimated value. Concentration above calibration range
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- H1 Sample analysis performed past holding time. See case narrative.
- H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
- H3 Sample was received and analyzed past holding time.
- H4 Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
- I Internal standard not within the specified limits. See case narrative.
- J Estimated Value. Concentration found below MRL.
- K A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
- K Analyte was detected above the method reporting limit prior to normalization.
- K The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- L1 Laboratory control sample recovery outside the specified limits; results may be biased high.
- L2 Laboratory control sample recovery outside the specified limits; results may be biased low.
- L3 Laboratory control sample recovery outside the specified limits.
- M Matrix interference; results may be biased high.
- M The duplicate injection precision not met.
- M1 Matrix interference due to coelution with a non-target compound; results may be biased high.
- N Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- P Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
- P Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
- Q Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
- R Duplicate Precision not met.
- R1 Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
- S Surrogate recovery not within specified limits.
- S The reported value was determined by the Method of Standard Additions (MSA).
- T Analyte is a tentatively identified compound, result is estimated.
- U Compound was analyzed for, but was not detected (ND).
- V1 The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
- V2 The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
- W Result quantified, but the corresponding peak was detected outside the generated retention time window.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- X See case narrative.
- Y Recovery outside limits
- Y The chromatogram resembles a petroleum product but does not match the calibration standard.
- Z The chromatogram does not resemble a petroleum product.
 - i The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCEntration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Conservation and Natural Resources	TX026932022-1	7/31/2022
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Conservation	04016-2021	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-27	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-28	5/1/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112046

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date: 11/2/21 Analyst: [Signature] Samples: 013, 017

Second Level - Data Review – to be filled by person doing peer review

Date: 11/2/21 Analyst: [Signature] Samples: 013, 017

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112046

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	11/11/21	Analyst:	[Signature]	Samples:	009, 012, 019
-------	----------	----------	-------------	----------	---------------

Second Level - Data Review – to be filled by person doing peer review

Date:	11/12/21	Analyst:	[Signature]	Samples:	009, 012, 019
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ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112046

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
11/11/21	LKL	003, 006

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
11/12/21	W	003, 006



Chain of Custody

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Intra-Network Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

Project Name: EQRB
Project Number: 319
Project Manager: Jill Betts
Company: Coles and Betts Environmental Consulting, LLC
QAP: LAB QAP

PCDD PCDF
8290A

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
K2112046-003	B-35 (0-10)	1	Soil	10/11/21	0945	10/13/21	HOUSTON	II
K2112046-006	B-35 (10-20)	↓	Soil	10/11/21	1000	10/13/21	HOUSTON	II
K2112046-009	B-36 (0-10)		Soil	10/11/21	1400	10/13/21	HOUSTON	II
K2112046-012	B-36 (10-17.5)		Soil	10/11/21	1410	10/13/21	HOUSTON	II
K2112046-013	B-36	2	Water	10/11/21	1500	10/13/21	HOUSTON	II
K2112046-017	B-39	2	Water	10/11/21	1430	10/13/21	HOUSTON	II
K2112046-019	B-39 (0-10)	1	Soil	10/11/21	1400	10/13/21	HOUSTON	II

Folder Comments:

Composite 001 and 002 to make 003.
 Composite 004 and 005 to make 006.
 Composite 007 and 008 to make 009.
 Composite 010 and 011 to make 012.
 Composite 015 and 016 to make 019.
 Reserve some from each discrete for future analysis.

<p>Special Instructions/Comments Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.</p> <p>pH Checked _____</p>	<p>Turnaround Requirements</p> <p><input type="checkbox"/> RUSH (Surcharges Apply)</p> <p>PLEASE CIRCLE WORK DAYS</p> <p style="text-align: center;">1 2 3 4 5</p> <p><input checked="" type="checkbox"/> STANDARD</p> <p>Requested FAX Date: _____</p> <p>Requested Report Date: <u>11/02/21</u></p>	<p>Report Requirements</p> <p><input type="checkbox"/> I. Results Only</p> <p><input checked="" type="checkbox"/> II. Results + QC Summaries</p> <p><input type="checkbox"/> III. Results + QC and Calibration Summaries</p> <p><input type="checkbox"/> IV. Data Validation Report with Raw Data</p> <p>PQL/MDL/J <u>Y</u></p> <p>EDD <u>N</u></p>	<p>Invoice Information</p> <p>PO# 51K2112046</p> <p>Bill to</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------

Relinquished By: *[Signature]* 10/19/21 1100

Received By: J. MAUCHNY 10/21/21 11:40

Airbill Number: _____

Coles Page 228 of 278 Temp 0.7°C 11231 CFO



Cooler Receipt Form

Project Chemist

14

Client/Project AL4-24

Thermometer ID 1211

Date/Time Received: 10-21-21

Initials: JM

Date/Time Logged in: 10-21-21

Initials LG

1. Method of delivery: US Mail Fed Ex UPS DHL Courier Client

2. Samples received in: Cooler Box Envelope Other

3. Were custody seals on coolers? Yes No

Were they intact? Yes No N/A

Were they signed and dated? Yes No N/A

If yes, how many and where?

1-R

4. Packing Material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Sleeves Other

5. Foreign or Regulated Soil? Yes No Location of Sampling: _____

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
<u>9996 2401 4596</u>		<u>10-21-21</u>	<u>1148</u>	<u>JM</u>	<u>0.7</u>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

6. Were custody papers properly filled out (ink, signed, dated, etc)? Yes No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? Yes No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? Yes No

9. Were appropriate bottles/containers and volumes received for the requested tests? Yes No

10. Did sample labels and tags agree with custody documents? Yes No

Notes, Discrepancies, & Resolutions:

Service request Label:



10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 389932
 Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtDioxAq-30
 Prep Method: Method

Status: Prepped
 Prep Date/Time: 10/22/21 10:00

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2101102-001	RW-10132021	.06	8290A/PCDD PCDF			Ground Water	954mL	clear
2	E2101102-002	MW-17-10132021	.01	8290A/PCDD PCDF			Ground Water	1004mL	clear
3	E2101102-003	EB01-10132021	.01	8290A/PCDD PCDF			Ground Water	931mL	clear
4	E2101102-004	EB02-10132021	.01	8290A/PCDD PCDF			Ground Water	953mL	clear
5	E2101104-001	MW-18-10142021	.02	8290A/PCDD PCDF			Ground Water	1000mL	clear
6	E2101104-002	MW-8-10142021	.01	8290A/PCDD PCDF			Ground Water	988mL	clear
7	E2101104-003	FD01-10142021	.01	8290A/PCDD PCDF			Ground Water	988mL	clear
8	E2101104-004	MW-13-10142021	.02	8290A/PCDD PCDF			Ground Water	953mL	clear
9	E2101104-005	FD02-10142021	.02	8290A/PCDD PCDF			Ground Water	967mL	clear
10	EQ2100616-01	MB		8290A/PCDD PCDF			Liquid	1000mL	
11	EQ2100616-02	LCS		8290A/PCDD PCDF			Liquid	1000mL	
12	EQ2100616-03	RW-10132021 MS	.01	8290A/PCDD PCDF			Liquid	959mL	
13	EQ2100616-04	RW-10132021 DMS	.05	8290A/PCDD PCDF			Liquid	951mL	
14	K2112046-013	B-36	.38	8290A/PCDD PCDF			Water	1055mL	cloudy yellow
15	K2112046-017	B-39	.38	8290A/PCDD PCDF			Water	1056mL	cloudy yellow

Spiking Solutions

Name:	8290/1613B Cleanup Working Standard	Inventory ID	219817	Logbook Ref:	tw 10/15/21 219817	Expires On:	02/18/2022
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E2101102-001	100.00µL	E2101102-002	100.00µL	E2101102-003	100.00µL	E2101102-004	100.00µL	E2101104-001	100.00µL	E2101104-002	100.00µL
E2101104-003	100.00µL	E2101104-004	100.00µL	E2101104-005	100.00µL	EQ2100616-01	100.00µL	EQ2100616-02	100.00µL	EQ2100616-03	100.00µL
EQ2100616-04	100.00µL	K2112046-013	100.00µL	K2112046-017	100.00µL						

Name:	1613B Matrix Working Standard	Inventory ID	219968	Logbook Ref:	TW 10/22/21 SN	Expires On:	04/20/2022
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EQ2100616-02	100.00µL	EQ2100616-03	100.00µL	EQ2100616-04	100.00µL
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Name:	1613B Labeled Working Standard	Inventory ID	219992	Logbook Ref:	SN 10/25/21 219992 2-4 ng/ml	Expires On:	02/18/2022
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E2101102-001	1,000.00µL	E2101102-002	1,000.00µL	E2101102-003	1,000.00µL	E2101102-004	1,000.00µL	E2101104-001	1,000.00µL	E2101104-002	1,000.00µL
E2101104-003	1,000.00µL	E2101104-004	1,000.00µL	E2101104-005	1,000.00µL	EQ2100616-01	1,000.00µL	EQ2100616-02	1,000.00µL	EQ2100616-03	1,000.00µL
EQ2100616-04	1,000.00µL	K2112046-013	1,000.00µL	K2112046-017	1,000.00µL						

Preparation Information Benchsheet

Prep Run#: 389932
Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtDioxAq-30
Prep Method: Method

Status: Prepped
Prep Date/Time: 10/22/21 10:00

Preparation Materials

Carbon, High Purity	tw 08/09/21 carbon (218695)	Ethyl Acetate 99.9% Minimum EtOAc	TW 12/15/20 (214517)	Glass Wool	tw 7/8/21 glass wool (218851)
Hexanes 95%	tw 9/1/21 hexane (219045)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	tw 10/6/21 dcm (219683)	Sodium Hydroxide 1N NaOH	tw 08/10/21 (218694)
Silica Gel	tw 06/01/21 silics g (217554)	sulfuric acid	8/12/21 tw (218912)	Toluene 99.9% Minimum	tw 09/09/21 toluene (219187)
ColorpHast pH-Indicator Strips	pH strips tw 21020 (206953)	Chlorine Test Strips	Chlorine test Strips (210298)	Sodium Sulfate Anhydrous Reagent Grade Na2SO4	tw 04/12/21 (217292)
Tridecane (n-Tridecane)	tw 04/ tridecane (216874)				

Preparation Steps

Step: Extraction	Step: Acid Clean	Step: Silica Gel Clean	Step: Final Volume
Started: 10/22/21 10:00	Started: 10/28/21 10:00	Started: 10/28/21 12:00	Started: 10/29/21 09:00
Finished: 10/22/21 16:00	Finished: 10/28/21 11:00	Finished: 10/28/21 15:00	Finished: 10/29/21 11:53
By: SHIVANI NAIDU	By: SHIVANI NAIDU	By: SHIVANI NAIDU	By: SHIVANI NAIDU
Comments	Comments	Comments	Comments

Comments: _____

Reviewed By: SN Date: 10/29/21

Chain of Custody

Relinquished By: _____	Date: _____	<u>Extracts Examined</u>
Received By: _____	Date: _____	Yes No



Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 9.683g
Data File Name: P628138
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 16:43
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628129

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.249	0.571			1
1,2,3,7,8-PeCDD	ND	U	0.123	2.86			1
1,2,3,6,7,8-HxCDD	ND	U	0.114	2.86			1
1,2,3,4,7,8-HxCDD	ND	U	0.138	2.86			1
1,2,3,7,8,9-HxCDD	ND	U	0.115	2.86			1
1,2,3,4,6,7,8-HpCDD	0.622BJ		0.246	2.86	1.01	1.000	1
OCDD	4.70BJ		0.382	5.71	0.93	1.000	1
2,3,7,8-TCDF	ND	U	0.204	0.571			1
1,2,3,7,8-PeCDF	ND	U	0.0914	2.86			1
2,3,4,7,8-PeCDF	ND	U	0.109	2.86			1
1,2,3,6,7,8-HxCDF	ND	U	0.0888	2.86			1
1,2,3,7,8,9-HxCDF	ND	U	0.113	2.86			1
1,2,3,4,7,8-HxCDF	ND	U	0.0814	2.86			1
2,3,4,6,7,8-HxCDF	ND	U	0.0812	2.86			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.125	2.86			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.103	2.86			1
OCDF	ND	U	0.432	5.71			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2112046
Project:	EQRB/319	Date Collected:	10/11/21 09:45
Sample Matrix:	Soil	Date Received:	10/13/21 11:10
Sample Name:	B-35 (0-10)	Units:	ng/Kg
Lab Code:	K2112046-003	Basis:	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	11/06/21 16:43
Prep Method:	Method	Date Extracted:	10/26/21
Sample Amount:	9.683g	Instrument Name:	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P628138	Blank File Name:	P628132
ICAL Date:	10/14/21	Cal Ver. File Name:	P628129

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.249	0.571			1
Total Penta-Dioxins	ND	U	0.123	2.86			1
Total Hexa-Dioxins	ND	U	0.121	2.86			1
Total Hepta-Dioxins	1.44J		0.246	2.86	0.91		1
Total Tetra-Furans	ND	U	0.204	0.571			1
Total Penta-Furans	ND	U	0.0991	2.86			1
Total Hexa-Furans	ND	U	0.0900	2.86			1
Total Hepta-Furans	ND	U	0.112	2.86			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 9.683g
Data File Name: P628138
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 16:43
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628129

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	979.379	49		40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1048.848	52		40-135	1.50	1.167
13C-1,2,3,4,7,8-HxCDD	2000	994.105	50		40-135	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1332.673	67		40-135	1.24	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	841.662	42		40-135	1.08	1.066
13C-OCDD	4000	1087.682	27	Y	40-135	0.96	1.144
13C-2,3,7,8-TCDF	2000	888.681	44		40-135	0.79	0.995
13C-1,2,3,7,8-PeCDF	2000	1221.410	61		40-135	1.55	1.128
13C-2,3,4,7,8-PeCDF	2000	973.323	49		40-135	1.57	1.158
13C-1,2,3,4,7,8-HxCDF	2000	1038.048	52		40-135	0.52	0.973
13C-1,2,3,6,7,8-HxCDF	2000	998.066	50		40-135	0.52	0.976
13C-1,2,3,7,8,9-HxCDF	2000	892.940	45		40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1088.918	54		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	743.671	37	Y	40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1184.396	59		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	407.049	51		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (0-10)
Lab Code: K2112046-003

Service Request: K2112046
Date Collected: 10/11/21 09:45
Date Received: 10/13/21 11:10

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.249	0.571	1	1	
1,2,3,7,8-PeCDD	ND	0.123	2.86	1	1	
1,2,3,6,7,8-HxCDD	ND	0.114	2.86	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.138	2.86	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.115	2.86	1	0.1	
1,2,3,4,6,7,8-HpCDD	0.622	0.246	2.86	1	0.01	0.00622
OCDD	4.70	0.382	5.71	1	0.0003	0.00141
2,3,7,8-TCDF	ND	0.204	0.571	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0914	2.86	1	0.03	
2,3,4,7,8-PeCDF	ND	0.109	2.86	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.0888	2.86	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.113	2.86	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.0814	2.86	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0812	2.86	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.125	2.86	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.103	2.86	1	0.01	
OCDF	ND	0.432	5.71	1	0.0003	
Total TEQ						0.00763

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.385g
Data File Name: P628139
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 17:32
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628129

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.409	0.679			1
1,2,3,7,8-PeCDD	ND	U	0.188	3.40			1
1,2,3,6,7,8-HxCDD	ND	U	0.133	3.40			1
1,2,3,4,7,8-HxCDD	ND	U	0.158	3.40			1
1,2,3,7,8,9-HxCDD	ND	U	0.133	3.40			1
1,2,3,4,6,7,8-HpCDD	0.362BJ		0.275	3.40	1.04	1.000	1
OCDD	1.69BJK		0.510	6.79	0.64	1.000	1
2,3,7,8-TCDF	ND	U	0.298	0.679			1
1,2,3,7,8-PeCDF	ND	U	0.124	3.40			1
2,3,4,7,8-PeCDF	ND	U	0.149	3.40			1
1,2,3,6,7,8-HxCDF	ND	U	0.141	3.40			1
1,2,3,7,8,9-HxCDF	ND	U	0.186	3.40			1
1,2,3,4,7,8-HxCDF	ND	U	0.132	3.40			1
2,3,4,6,7,8-HxCDF	ND	U	0.139	3.40			1
1,2,3,4,6,7,8-HpCDF	0.297BJ		0.183	3.40	0.96	1.001	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.149	3.40			1
OCDF	ND	U	0.682	6.79			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2112046
Project:	EQRB/319	Date Collected:	10/11/21 10:00
Sample Matrix:	Soil	Date Received:	10/13/21 11:10
Sample Name:	B-35 (10-20)	Units:	ng/Kg
Lab Code:	K2112046-006	Basis:	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	11/06/21 17:32
Prep Method:	Method	Date Extracted:	10/26/21
Sample Amount:	8.385g	Instrument Name:	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P628139	Blank File Name:	P628132
ICAL Date:	10/14/21	Cal Ver. File Name:	P628129

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.409	0.679			1
Total Penta-Dioxins	ND	U	0.188	3.40			1
Total Hexa-Dioxins	ND	U	0.140	3.40			1
Total Hepta-Dioxins	0.802J		0.275	3.40	1.18		1
Total Tetra-Furans	ND	U	0.298	0.679			1
Total Penta-Furans	ND	U	0.135	3.40			1
Total Hexa-Furans	ND	U	0.147	3.40			1
Total Hepta-Furans	0.297J		0.162	3.40	0.96		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10
Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.385g
Data File Name: P628139
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 17:32
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628129

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	891.926	45		40-135	0.77	1.019
13C-1,2,3,7,8-PeCDD	2000	962.359	48		40-135	1.53	1.167
13C-1,2,3,4,7,8-HxCDD	2000	894.694	45		40-135	1.26	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1167.059	58		40-135	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	750.999	38	Y	40-135	1.05	1.066
13C-OCDD	4000	1029.019	26	Y	40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	782.411	39	Y	40-135	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	1136.427	57		40-135	1.58	1.129
13C-2,3,4,7,8-PeCDF	2000	917.247	46		40-135	1.59	1.158
13C-1,2,3,4,7,8-HxCDF	2000	947.565	47		40-135	0.51	0.973
13C-1,2,3,6,7,8-HxCDF	2000	911.344	46		40-135	0.54	0.975
13C-1,2,3,7,8,9-HxCDF	2000	791.849	40		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	956.942	48		40-135	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	662.975	33	Y	40-135	0.42	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1048.243	52		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	413.718	52		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-35 (10-20)
Lab Code: K2112046-006

Service Request: K2112046
Date Collected: 10/11/21 10:00
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.409	0.679	1	1	
1,2,3,7,8-PeCDD	ND	0.188	3.40	1	1	
1,2,3,6,7,8-HxCDD	ND	0.133	3.40	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.158	3.40	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.133	3.40	1	0.1	
1,2,3,4,6,7,8-HpCDD	0.362	0.275	3.40	1	0.01	0.00362
OCDD	1.69	0.510	6.79	1	0.0003	0.000507
2,3,7,8-TCDF	ND	0.298	0.679	1	0.1	
1,2,3,7,8-PeCDF	ND	0.124	3.40	1	0.03	
2,3,4,7,8-PeCDF	ND	0.149	3.40	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.141	3.40	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.186	3.40	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.132	3.40	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.139	3.40	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.297	0.183	3.40	1	0.01	0.00297
1,2,3,4,7,8,9-HpCDF	ND	0.149	3.40	1	0.01	
OCDF	ND	0.682	6.79	1	0.0003	
Total TEQ						0.00710

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.016g
Data File Name: P628145
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 22:47
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628142

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.674	0.781			1
1,2,3,7,8-PeCDD	ND	U	0.318	3.90			1
1,2,3,6,7,8-HxCDD	ND	U	0.330	3.90			1
1,2,3,4,7,8-HxCDD	ND	U	0.396	3.90			1
1,2,3,7,8,9-HxCDD	ND	U	0.331	3.90			1
1,2,3,4,6,7,8-HpCDD	1.01	BJK	0.668	3.90	2.14	1.000	1
OCDD	22.8		1.09	7.81	0.89	1.000	1
2,3,7,8-TCDF	ND	U	0.634	0.781			1
1,2,3,7,8-PeCDF	ND	U	0.166	3.90			1
2,3,4,7,8-PeCDF	ND	U	0.204	3.90			1
1,2,3,6,7,8-HxCDF	ND	U	0.186	3.90			1
1,2,3,7,8,9-HxCDF	ND	U	0.240	3.90			1
1,2,3,4,7,8-HxCDF	ND	U	0.177	3.90			1
2,3,4,6,7,8-HxCDF	ND	U	0.183	3.90			1
1,2,3,4,6,7,8-HpCDF	0.542	BJK	0.343	3.90	1.27	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.272	3.90			1
OCDF	1.65	BJK	1.15	7.81	0.61	1.006	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.016g
Data File Name: P628145
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 22:47
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628142

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.674	0.781			1
Total Penta-Dioxins	ND	U	0.318	3.90			1
Total Hexa-Dioxins	ND	U	0.349	3.90			1
Total Hepta-Dioxins	2.44J		0.668	3.90	1.14		1
Total Tetra-Furans	ND	U	0.634	0.781			1
Total Penta-Furans	ND	U	0.183	3.90			1
Total Hexa-Furans	ND	U	0.194	3.90			1
Total Hepta-Furans	ND	U	0.299	3.90			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10
Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.016g
Data File Name: P628145
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 22:47
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628142

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	657.391	33	Y	40-135	0.80	1.019
13C-1,2,3,7,8-PeCDD	2000	777.501	39	Y	40-135	1.56	1.167
13C-1,2,3,4,7,8-HxCDD	2000	694.395	35	Y	40-135	1.23	0.992
13C-1,2,3,6,7,8-HxCDD	2000	922.244	46		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	628.271	31	Y	40-135	1.01	1.066
13C-OCDD	4000	890.606	22	Y	40-135	0.91	1.143
13C-2,3,7,8-TCDF	2000	513.390	26	Y	40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	930.041	47		40-135	1.60	1.128
13C-2,3,4,7,8-PeCDF	2000	741.597	37	Y	40-135	1.60	1.158
13C-1,2,3,4,7,8-HxCDF	2000	735.146	37	Y	40-135	0.51	0.973
13C-1,2,3,6,7,8-HxCDF	2000	720.232	36	Y	40-135	0.53	0.976
13C-1,2,3,7,8,9-HxCDF	2000	618.556	31	Y	40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	746.143	37	Y	40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	546.622	27	Y	40-135	0.43	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	880.630	44		40-135	0.42	1.080
37Cl-2,3,7,8-TCDD	800	318.958	40		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (0-10)
Lab Code: K2112046-009

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.674	0.781	1	1	
1,2,3,7,8-PeCDD	ND	0.318	3.90	1	1	
1,2,3,6,7,8-HxCDD	ND	0.330	3.90	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.396	3.90	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.331	3.90	1	0.1	
1,2,3,4,6,7,8-HpCDD	1.01	0.668	3.90	1	0.01	0.0101
OCDD	22.8	1.09	7.81	1	0.0003	0.00684
2,3,7,8-TCDF	ND	0.634	0.781	1	0.1	
1,2,3,7,8-PeCDF	ND	0.166	3.90	1	0.03	
2,3,4,7,8-PeCDF	ND	0.204	3.90	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.186	3.90	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.240	3.90	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.177	3.90	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.183	3.90	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.542	0.343	3.90	1	0.01	0.00542
1,2,3,4,7,8,9-HpCDF	ND	0.272	3.90	1	0.01	
OCDF	1.65	1.15	7.81	1	0.0003	0.000495
Total TEQ						0.0229

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.335g
Data File Name: P628146
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 23:37
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628142

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.409	0.710			1
1,2,3,7,8-PeCDD	ND	U	0.192	3.55			1
1,2,3,6,7,8-HxCDD	ND	U	0.189	3.55			1
1,2,3,4,7,8-HxCDD	ND	U	0.216	3.55			1
1,2,3,7,8,9-HxCDD	ND	U	0.186	3.55			1
1,2,3,4,6,7,8-HpCDD	0.629	BJK	0.256	3.55	1.47	1.000	1
OCDD	4.53	BJ	0.495	7.10	0.93	1.000	1
2,3,7,8-TCDF	ND	U	0.277	0.710			1
1,2,3,7,8-PeCDF	ND	U	0.135	3.55			1
2,3,4,7,8-PeCDF	ND	U	0.161	3.55			1
1,2,3,6,7,8-HxCDF	ND	U	0.129	3.55			1
1,2,3,7,8,9-HxCDF	ND	U	0.162	3.55			1
1,2,3,4,7,8-HxCDF	ND	U	0.121	3.55			1
2,3,4,6,7,8-HxCDF	ND	U	0.121	3.55			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.176	3.55			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.137	3.55			1
OCDF	0.710	BJK	0.572	7.10	0.67	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.335g
Data File Name: P628146
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 23:37
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628142

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.409	0.710			1
Total Penta-Dioxins	ND	U	0.192	3.55			1
Total Hexa-Dioxins	ND	U	0.196	3.55			1
Total Hepta-Dioxins	ND	U	0.256	3.55			1
Total Tetra-Furans	ND	U	0.277	0.710			1
Total Penta-Furans	ND	U	0.146	3.55			1
Total Hexa-Furans	ND	U	0.132	3.55			1
Total Hepta-Furans	ND	U	0.152	3.55			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.335g
Data File Name: P628146
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 23:37
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628142

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	844.006	42		40-135	0.73	1.019
13C-1,2,3,7,8-PeCDD	2000	991.327	50		40-135	1.56	1.167
13C-1,2,3,4,7,8-HxCDD	2000	922.509	46		40-135	1.32	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1162.945	58		40-135	1.20	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	822.711	41		40-135	1.05	1.066
13C-OCDD	4000	1173.403	29	Y	40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	750.598	38	Y	40-135	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	1173.266	59		40-135	1.58	1.128
13C-2,3,4,7,8-PeCDF	2000	964.646	48		40-135	1.57	1.158
13C-1,2,3,4,7,8-HxCDF	2000	964.366	48		40-135	0.52	0.973
13C-1,2,3,6,7,8-HxCDF	2000	931.515	47		40-135	0.53	0.976
13C-1,2,3,7,8,9-HxCDF	2000	845.557	42		40-135	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	999.790	50		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	728.276	36	Y	40-135	0.45	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1150.568	58		40-135	0.45	1.080
37Cl-2,3,7,8-TCDD	800	378.633	47		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-36 (10-17.5)
Lab Code: K2112046-012

Service Request: K2112046
Date Collected: 10/11/21 14:10
Date Received: 10/13/21 11:10

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.409	0.710	1	1	
1,2,3,7,8-PeCDD	ND	0.192	3.55	1	1	
1,2,3,6,7,8-HxCDD	ND	0.189	3.55	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.216	3.55	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.186	3.55	1	0.1	
1,2,3,4,6,7,8-HpCDD	0.629	0.256	3.55	1	0.01	0.00629
OCDD	4.53	0.495	7.10	1	0.0003	0.00136
2,3,7,8-TCDF	ND	0.277	0.710	1	0.1	
1,2,3,7,8-PeCDF	ND	0.135	3.55	1	0.03	
2,3,4,7,8-PeCDF	ND	0.161	3.55	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.129	3.55	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.162	3.55	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.121	3.55	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.121	3.55	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.176	3.55	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.137	3.55	1	0.01	
OCDF	0.710	0.572	7.10	1	0.0003	0.000213
Total TEQ						0.00786

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-36
Lab Code: K2112046-013

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1055mL
Data File Name: P628217
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 02:07
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	2.55	4.74			1
1,2,3,7,8-PeCDD	ND	U	0.897	23.7			1
1,2,3,6,7,8-HxCDD	ND	U	0.564	23.7			1
1,2,3,4,7,8-HxCDD	ND	U	0.659	23.7			1
1,2,3,7,8,9-HxCDD	ND	U	0.561	23.7			1
1,2,3,4,6,7,8-HpCDD	4.50J		0.649	23.7	1.08	1.001	1
OCDD	31.7BJ		0.989	47.4	0.79	1.000	1
2,3,7,8-TCDF	ND	U	1.79	4.74			1
1,2,3,7,8-PeCDF	ND	U	0.728	23.7			1
2,3,4,7,8-PeCDF	ND	U	0.829	23.7			1
1,2,3,6,7,8-HxCDF	ND	U	0.534	23.7			1
1,2,3,7,8,9-HxCDF	ND	U	0.713	23.7			1
1,2,3,4,7,8-HxCDF	ND	U	0.505	23.7			1
2,3,4,6,7,8-HxCDF	ND	U	0.487	23.7			1
1,2,3,4,6,7,8-HpCDF	1.05BJK		0.460	23.7	1.75	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.364	23.7			1
OCDF	7.31J		0.946	47.4	0.80	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-36
Lab Code: K2112046-013

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1055mL
Data File Name: P628217
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 02:07
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	2.55	4.74			1
Total Penta-Dioxins	ND	U	0.897	23.7			1
Total Hexa-Dioxins	1.36J		0.590	23.7	1.38		1
Total Hepta-Dioxins	4.50J		0.649	23.7	1.08		1
Total Tetra-Furans	ND	U	1.79	4.74			1
Total Penta-Furans	ND	U	0.774	23.7			1
Total Hexa-Furans	ND	U	0.550	23.7			1
Total Hepta-Furans	1.37J		0.402	23.7	1.11		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-36
Lab Code: K2112046-013

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10
Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1055mL
Data File Name: P628217
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 02:07
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628211

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	678.627	34	Y	40-135	0.75	1.019
13C-1,2,3,7,8-PeCDD	2000	905.856	45		40-135	1.56	1.170
13C-1,2,3,4,7,8-HxCDD	2000	953.131	48		40-135	1.25	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1189.383	59		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	989.612	49		40-135	1.04	1.066
13C-OCDD	4000	1709.557	43		40-135	0.89	1.143
13C-2,3,7,8-TCDF	2000	570.618	29	Y	40-135	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	986.842	49		40-135	1.57	1.131
13C-2,3,4,7,8-PeCDF	2000	839.255	42		40-135	1.59	1.161
13C-1,2,3,4,7,8-HxCDF	2000	932.054	47		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	889.025	44		40-135	0.51	0.975
13C-1,2,3,7,8,9-HxCDF	2000	786.532	39	Y	40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	990.915	50		40-135	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	812.606	41		40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1277.258	64		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	284.775	36	Y	40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-36
Lab Code: K2112046-013

Service Request: K2112046
Date Collected: 10/11/21 15:00
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	2.55	4.74	1	1	
1,2,3,7,8-PeCDD	ND	0.897	23.7	1	1	
1,2,3,6,7,8-HxCDD	ND	0.564	23.7	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.659	23.7	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.561	23.7	1	0.1	
1,2,3,4,6,7,8-HpCDD	4.50	0.649	23.7	1	0.01	0.0450
OCDD	31.7	0.989	47.4	1	0.0003	0.00951
2,3,7,8-TCDF	ND	1.79	4.74	1	0.1	
1,2,3,7,8-PeCDF	ND	0.728	23.7	1	0.03	
2,3,4,7,8-PeCDF	ND	0.829	23.7	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.534	23.7	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.713	23.7	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.505	23.7	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.487	23.7	1	0.1	
1,2,3,4,6,7,8-HpCDF	1.05	0.460	23.7	1	0.01	0.0105
1,2,3,4,7,8,9-HpCDF	ND	0.364	23.7	1	0.01	
OCDF	7.31	0.946	47.4	1	0.0003	0.00219
Total TEQ						0.0672

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-39
Lab Code: K2112046-017

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1056mL
Data File Name: P628218
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 02:57
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	2.10	4.73			1
1,2,3,7,8-PeCDD	9.46J		0.872	23.7	1.52	1.000	1
1,2,3,6,7,8-HxCDD	7.85JK		0.683	23.7	1.00	1.000	1
1,2,3,4,7,8-HxCDD	10.9J		0.793	23.7	1.13	1.000	1
1,2,3,7,8,9-HxCDD	8.68J		0.678	23.7	1.40	1.006	1
1,2,3,4,6,7,8-HpCDD	13.0J		0.911	23.7	1.10	1.000	1
OCDD	50.4		1.24	47.3	0.92	1.000	1
2,3,7,8-TCDF	2.69J		1.60	4.73	0.69	1.001	1
1,2,3,7,8-PeCDF	6.91J		0.764	23.7	1.46	1.000	1
2,3,4,7,8-PeCDF	9.21J		0.933	23.7	1.38	1.000	1
1,2,3,6,7,8-HxCDF	9.13J		0.455	23.7	1.40	1.000	1
1,2,3,7,8,9-HxCDF	10.4J		0.661	23.7	1.24	1.000	1
1,2,3,4,7,8-HxCDF	9.05J		0.424	23.7	1.07	1.000	1
2,3,4,6,7,8-HxCDF	8.37JK		0.420	23.7	1.45	1.000	1
1,2,3,4,6,7,8-HpCDF	9.26JK		0.470	23.7	0.80	1.000	1
1,2,3,4,7,8,9-HpCDF	5.63J		0.368	23.7	1.01	1.000	1
OCDF	29.2J		1.41	47.3	0.89	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-39
Lab Code: K2112046-017

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1056mL
Data File Name: P628218
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 02:57
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	2.10	4.73			1
Total Penta-Dioxins	9.46J		0.872	23.7	1.52		1
Total Hexa-Dioxins	19.6J		0.713	23.7	1.13		1
Total Hepta-Dioxins	17.7J		0.911	23.7	0.98		1
Total Tetra-Furans	2.69J		1.60	4.73	0.69		1
Total Penta-Furans	16.1J		0.839	23.7	1.46		1
Total Hexa-Furans	28.5		0.478	23.7	1.07		1
Total Hepta-Furans	5.63J		0.408	23.7	1.01		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-39
Lab Code: K2112046-017

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10
Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1056mL
Data File Name: P628218
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 02:57
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628211

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	922.706	46		40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1064.278	53		40-135	1.53	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1003.071	50		40-135	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1229.701	61		40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	975.755	49		40-135	1.05	1.066
13C-OCDD	4000	1575.493	39	Y	40-135	0.88	1.142
13C-2,3,7,8-TCDF	2000	784.542	39	Y	40-135	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	1197.970	60		40-135	1.56	1.132
13C-2,3,4,7,8-PeCDF	2000	973.448	49		40-135	1.57	1.162
13C-1,2,3,4,7,8-HxCDF	2000	1011.597	51		40-135	0.51	0.972
13C-1,2,3,6,7,8-HxCDF	2000	949.887	47		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	775.045	39	Y	40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1013.135	51		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	830.868	42		40-135	0.43	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1325.985	66		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	367.751	46		40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B-39
Lab Code: K2112046-017

Service Request: K2112046
Date Collected: 10/11/21 14:30
Date Received: 10/13/21 11:10
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	2.10	4.73	1	1	
1,2,3,7,8-PeCDD	9.46	0.872	23.7	1	1	9.46
1,2,3,6,7,8-HxCDD	7.85	0.683	23.7	1	0.1	0.785
1,2,3,4,7,8-HxCDD	10.9	0.793	23.7	1	0.1	1.09
1,2,3,7,8,9-HxCDD	8.68	0.678	23.7	1	0.1	0.868
1,2,3,4,6,7,8-HpCDD	13.0	0.911	23.7	1	0.01	0.130
OCDD	50.4	1.24	47.3	1	0.0003	0.0151
2,3,7,8-TCDF	2.69	1.60	4.73	1	0.1	0.269
1,2,3,7,8-PeCDF	6.91	0.764	23.7	1	0.03	0.207
2,3,4,7,8-PeCDF	9.21	0.933	23.7	1	0.3	2.76
1,2,3,6,7,8-HxCDF	9.13	0.455	23.7	1	0.1	0.913
1,2,3,7,8,9-HxCDF	10.4	0.661	23.7	1	0.1	1.04
1,2,3,4,7,8-HxCDF	9.05	0.424	23.7	1	0.1	0.905
2,3,4,6,7,8-HxCDF	8.37	0.420	23.7	1	0.1	0.837
1,2,3,4,6,7,8-HpCDF	9.26	0.470	23.7	1	0.01	0.0926
1,2,3,4,7,8,9-HpCDF	5.63	0.368	23.7	1	0.01	0.0563
OCDF	29.2	1.41	47.3	1	0.0003	0.00876
Total TEQ						19.4

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.548g
Data File Name: P628147
ICAL Date: 10/14/21

Date Analyzed: 11/07/21 00:27
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628142

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.270	0.767			1
1,2,3,7,8-PeCDD	ND	U	0.200	3.83			1
1,2,3,6,7,8-HxCDD	ND	U	0.107	3.83			1
1,2,3,4,7,8-HxCDD	ND	U	0.131	3.83			1
1,2,3,7,8,9-HxCDD	ND	U	0.109	3.83			1
1,2,3,4,6,7,8-HpCDD	1.14BJ		0.226	3.83	0.93	1.000	1
OCDD	8.97BK		0.530	7.67	0.73	1.000	1
2,3,7,8-TCDF	ND	U	0.222	0.767			1
1,2,3,7,8-PeCDF	ND	U	0.104	3.83			1
2,3,4,7,8-PeCDF	ND	U	0.126	3.83			1
1,2,3,6,7,8-HxCDF	ND	U	0.119	3.83			1
1,2,3,7,8,9-HxCDF	ND	U	0.154	3.83			1
1,2,3,4,7,8-HxCDF	ND	U	0.112	3.83			1
2,3,4,6,7,8-HxCDF	ND	U	0.125	3.83			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.109	3.83			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0874	3.83			1
OCDF	0.569BJK		0.445	7.67	0.73	1.006	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2112046
Project:	EQRB/319	Date Collected:	10/11/21 14:00
Sample Matrix:	Soil	Date Received:	10/13/21 11:10
Sample Name:	B-39 (0-10)	Units:	ng/Kg
Lab Code:	K2112046-019	Basis:	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	11/07/21 00:27
Prep Method:	Method	Date Extracted:	10/26/21
Sample Amount:	8.548g	Instrument Name:	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P628147	Blank File Name:	P628132
ICAL Date:	10/14/21	Cal Ver. File Name:	P628142

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.270	0.767			1
Total Penta-Dioxins	ND	U	0.200	3.83			1
Total Hexa-Dioxins	ND	U	0.114	3.83			1
Total Hepta-Dioxins	1.14J		0.226	3.83	0.93		1
Total Tetra-Furans	ND	U	0.222	0.767			1
Total Penta-Furans	ND	U	0.113	3.83			1
Total Hexa-Furans	ND	U	0.126	3.83			1
Total Hepta-Furans	ND	U	0.0959	3.83			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 8.548g
Data File Name: P628147
ICAL Date: 10/14/21

Date Analyzed: 11/07/21 00:27
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628142

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1218.394	61		40-135	0.78	1.019
13C-1,2,3,7,8-PeCDD	2000	1273.360	64		40-135	1.53	1.167
13C-1,2,3,4,7,8-HxCDD	2000	1107.461	55		40-135	1.25	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1459.915	73		40-135	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	961.122	48		40-135	1.08	1.066
13C-OCDD	4000	1366.587	34	Y	40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	1071.121	54		40-135	0.80	0.994
13C-1,2,3,7,8-PeCDF	2000	1532.823	77		40-135	1.58	1.129
13C-2,3,4,7,8-PeCDF	2000	1212.406	61		40-135	1.59	1.158
13C-1,2,3,4,7,8-HxCDF	2000	1203.719	60		40-135	0.53	0.973
13C-1,2,3,6,7,8-HxCDF	2000	1157.606	58		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1050.180	53		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1167.143	58		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	877.779	44		40-135	0.44	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1381.268	69		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	485.881	61		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-39 (0-10)
Lab Code: K2112046-019

Service Request: K2112046
Date Collected: 10/11/21 14:00
Date Received: 10/13/21 11:10
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.270	0.767	1	1	
1,2,3,7,8-PeCDD	ND	0.200	3.83	1	1	
1,2,3,6,7,8-HxCDD	ND	0.107	3.83	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.131	3.83	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.109	3.83	1	0.1	
1,2,3,4,6,7,8-HpCDD	1.14	0.226	3.83	1	0.01	0.0114
OCDD	8.97	0.530	7.67	1	0.0003	0.00269
2,3,7,8-TCDF	ND	0.222	0.767	1	0.1	
1,2,3,7,8-PeCDF	ND	0.104	3.83	1	0.03	
2,3,4,7,8-PeCDF	ND	0.126	3.83	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.119	3.83	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.154	3.83	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.112	3.83	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.125	3.83	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.109	3.83	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.0874	3.83	1	0.01	
OCDF	0.569	0.445	7.67	1	0.0003	0.000171
Total TEQ						0.0143

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: EQ2100616-01

Service Request: K2112046
Date Collected: NA
Date Received: NA

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628052
ICAL Date: 10/14/21

Date Analyzed: 11/03/21 14:08
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628050

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	1.66	5.00			1
1,2,3,7,8-PeCDD	ND	U	0.665	25.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.915	25.0			1
1,2,3,4,7,8-HxCDD	ND	U	1.06	25.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.904	25.0			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.902	25.0			1
OCDD	3.70	JK	1.75	50.0	1.09	1.000	1
2,3,7,8-TCDF	ND	U	1.88	5.00			1
1,2,3,7,8-PeCDF	ND	U	0.508	25.0			1
2,3,4,7,8-PeCDF	ND	U	0.611	25.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.670	25.0			1
1,2,3,7,8,9-HxCDF	ND	U	0.843	25.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.654	25.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.634	25.0			1
1,2,3,4,6,7,8-HpCDF	0.620	JK	0.417	25.0	0.72	1.000	1
1,2,3,4,7,8,9-HpCDF	0.515	J	0.358	25.0	0.91	1.000	1
OCDF	ND	U	1.52	50.0			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: EQ2100616-01

Service Request: K2112046
Date Collected: NA
Date Received: NA

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628052
ICAL Date: 10/14/21

Date Analyzed: 11/03/21 14:08
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628050

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	1.66	5.00			1
Total Penta-Dioxins	ND	U	0.665	25.0			1
Total Hexa-Dioxins	ND	U	0.951	25.0			1
Total Hepta-Dioxins	ND	U	0.902	25.0			1
Total Tetra-Furans	ND	U	1.88	5.00			1
Total Penta-Furans	ND	U	0.553	25.0			1
Total Hexa-Furans	ND	U	0.695	25.0			1
Total Hepta-Furans	0.515J		0.383	25.0	0.91		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: EQ2100616-01

Service Request: K2112046
Date Collected: NA
Date Received: NA

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628052
ICAL Date: 10/14/21

Date Analyzed: 11/03/21 14:08
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628050

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1254.432	63		40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1475.814	74		40-135	1.53	1.167
13C-1,2,3,4,7,8-HxCDD	2000	1320.550	66		40-135	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1678.921	84		40-135	1.24	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1399.759	70		40-135	1.07	1.066
13C-OCDD	4000	2896.116	72		40-135	0.91	1.143
13C-2,3,7,8-TCDF	2000	1052.466	53		40-135	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	1669.385	83		40-135	1.59	1.128
13C-2,3,4,7,8-PeCDF	2000	1339.489	67		40-135	1.61	1.158
13C-1,2,3,4,7,8-HxCDF	2000	1349.904	67		40-135	0.53	0.973
13C-1,2,3,6,7,8-HxCDF	2000	1347.976	67		40-135	0.53	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1255.752	63		40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1418.421	71		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1272.352	64		40-135	0.45	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1831.723	92		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	472.920	59		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100619-01

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.234g

Date Analyzed: 11/06/21 11:43
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628129

Data File Name: P628132
ICAL Date: 10/14/21

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.564	0.564			1
1,2,3,7,8-PeCDD	ND	U	0.173	2.44			1
1,2,3,6,7,8-HxCDD	ND	U	0.106	2.44			1
1,2,3,4,7,8-HxCDD	ND	U	0.125	2.44			1
1,2,3,7,8,9-HxCDD	ND	U	0.105	2.44			1
1,2,3,4,6,7,8-HpCDD	0.277JK		0.176	2.44	1.39	1.000	1
OCDD	1.91J		0.270	4.89	0.94	1.000	1
2,3,7,8-TCDF	ND	U	0.518	0.518			1
1,2,3,7,8-PeCDF	ND	U	0.122	2.44			1
2,3,4,7,8-PeCDF	ND	U	0.132	2.44			1
1,2,3,6,7,8-HxCDF	ND	U	0.0948	2.44			1
1,2,3,7,8,9-HxCDF	0.203J		0.132	2.44	1.42	1.000	1
1,2,3,4,7,8-HxCDF	ND	U	0.0914	2.44			1
2,3,4,6,7,8-HxCDF	ND	U	0.0904	2.44			1
1,2,3,4,6,7,8-HpCDF	0.247J		0.109	2.44	1.07	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.115	2.44			1
OCDF	0.475JK		0.385	4.89	0.74	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100619-01

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.234g

Data File Name: P628132
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 11:43
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628129

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.564	0.564			1
Total Penta-Dioxins	ND	U	0.173	2.44			1
Total Hexa-Dioxins	ND	U	0.111	2.44			1
Total Hepta-Dioxins	ND	U	0.176	2.44			1
Total Tetra-Furans	ND	U	0.518	0.518			1
Total Penta-Furans	ND	U	0.126	2.44			1
Total Hexa-Furans	0.203J		0.101	2.44	1.42		1
Total Hepta-Furans	0.247J		0.112	2.44	1.07		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100619-01

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.234g

Date Analyzed: 11/06/21 11:43
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628129

Data File Name: P628132
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	562.835	28	Y	40-135	0.78	1.019
13C-1,2,3,7,8-PeCDD	2000	1046.202	52		40-135	1.54	1.168
13C-1,2,3,4,7,8-HxCDD	2000	1142.435	57		40-135	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1548.611	77		40-135	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1193.401	60		40-135	1.12	1.066
13C-OCDD	4000	1839.368	46		40-135	0.88	1.143
13C-2,3,7,8-TCDF	2000	401.594	20	Y	40-135	0.78	0.995
13C-1,2,3,7,8-PeCDF	2000	1033.688	52		40-135	1.57	1.129
13C-2,3,4,7,8-PeCDF	2000	905.811	45		40-135	1.60	1.159
13C-1,2,3,4,7,8-HxCDF	2000	1126.730	56		40-135	0.51	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1172.295	59		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	982.702	49		40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1229.865	61		40-135	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1160.744	58		40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1432.346	72		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	216.910	27	Y	40-135	NA	1.020



Accuracy & Precision

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Analyzed: 11/04/21
Date Extracted: 10/22/21

Lab Control Sample Summary

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: pg/L
Basis: NA
Analysis Lot: 745097

Lab Control Sample
EQ2100616-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,2,3,4,6,7,8-HpCDD	766	1000	77	70-130
1,2,3,4,7,8-HxCDD	804	1000	80	70-130
1,2,3,6,7,8-HxCDD	707	1000	71	70-130
1,2,3,7,8,9-HxCDD	748	1000	75	70-130
1,2,3,7,8-PeCDD	778	1000	78	70-130
2,3,7,8-TCDD	146	200	73	70-130
OCDD	1590	2000	79	70-130
1,2,3,4,6,7,8-HpCDF	831	1000	83	70-130
1,2,3,4,7,8,9-HpCDF	533	1000	53 *	70-130
1,2,3,4,7,8-HxCDF	765	1000	76	70-130
1,2,3,6,7,8-HxCDF	815	1000	82	70-130
1,2,3,7,8,9-HxCDF	783	1000	78	70-130
1,2,3,7,8-PeCDF	613	1000	61 *	70-130
2,3,4,6,7,8-HxCDF	763	1000	76	70-130
2,3,4,7,8-PeCDF	784	1000	78	70-130
2,3,7,8-TCDF	143	200	72	70-130
OCDF	1480	2000	74	70-130

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100616-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628070
ICAL Date: 10/14/21

Date Analyzed: 11/04/21 05:39
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628061

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	146		1.59	5.00	0.77	1.000	1
1,2,3,7,8-PeCDD	778		0.640	25.0	1.55	1.000	1
1,2,3,6,7,8-HxCDD	707		0.431	25.0	1.23	1.000	1
1,2,3,4,7,8-HxCDD	804		0.517	25.0	1.29	1.000	1
1,2,3,7,8,9-HxCDD	748		0.433	25.0	1.33	1.006	1
1,2,3,4,6,7,8-HpCDD	766		0.906	25.0	1.01	1.000	1
OCDD	1590		1.34	50.0	0.90	1.000	1
2,3,7,8-TCDF	143		1.20	5.00	0.79	1.001	1
1,2,3,7,8-PeCDF	613		0.381	25.0	1.51	1.001	1
2,3,4,7,8-PeCDF	784		0.453	25.0	1.61	1.000	1
1,2,3,6,7,8-HxCDF	815		0.464	25.0	1.26	1.000	1
1,2,3,7,8,9-HxCDF	783		0.572	25.0	1.29	1.000	1
1,2,3,4,7,8-HxCDF	765		0.446	25.0	1.27	1.000	1
2,3,4,6,7,8-HxCDF	763		0.426	25.0	1.22	1.000	1
1,2,3,4,6,7,8-HpCDF	831		1.76	25.0	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	533		1.54	25.0	1.03	1.000	1
OCDF	1480		0.934	50.0	0.90	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100616-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628070
ICAL Date: 10/14/21

Date Analyzed: 11/04/21 05:39
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628061

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	146		1.59	5.00	0.77		1
Total Penta-Dioxins	782		0.640	25.0	1.55		1
Total Hexa-Dioxins	2260		0.456	25.0	1.29		1
Total Hepta-Dioxins	766		0.906	25.0	1.01		1
Total Tetra-Furans	144		1.20	5.00	0.79		1
Total Penta-Furans	1400		0.413	25.0	1.35		1
Total Hexa-Furans	3130		0.473	25.0	1.27		1
Total Hepta-Furans	1360		1.62	25.0	1.01		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100616-02

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628070
ICAL Date: 10/14/21

Date Analyzed: 11/04/21 05:39
Date Extracted: 10/22/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628052
Cal Ver. File Name: P628061

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1304.341	65		40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1363.775	68		40-135	1.52	1.167
13C-1,2,3,4,7,8-HxCDD	2000	1203.052	60		40-135	1.26	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1568.315	78		40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1300.433	65		40-135	1.06	1.066
13C-OCDD	4000	2663.652	67		40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	1024.761	51		40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1529.611	76		40-135	1.59	1.128
13C-2,3,4,7,8-PeCDF	2000	1234.808	62		40-135	1.57	1.158
13C-1,2,3,4,7,8-HxCDF	2000	1206.368	60		40-135	0.52	0.973
13C-1,2,3,6,7,8-HxCDF	2000	1163.256	58		40-135	0.51	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1124.174	56		40-135	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1293.784	65		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1160.060	58		40-135	0.44	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1736.547	87		40-135	0.45	1.080
37Cl-2,3,7,8-TCDD	800	486.159	61		40-135	NA	1.019

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Analyzed: 11/06/21
Date Extracted: 10/26/21

Lab Control Sample Summary

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: ng/Kg
Basis: Dry
Analysis Lot: 745959

Lab Control Sample

EQ2100619-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,2,3,4,6,7,8-HpCDD	92.0	98.6	93	70-130
1,2,3,4,7,8-HxCDD	96.5	98.6	98	70-130
1,2,3,6,7,8-HxCDD	86.6	98.6	88	70-130
1,2,3,7,8,9-HxCDD	89.6	98.6	91	70-130
1,2,3,7,8-PeCDD	89.5	98.6	91	70-130
2,3,7,8-TCDD	16.9	19.7	86	70-130
OCDD	185	197	94	70-130
1,2,3,4,6,7,8-HpCDF	95.8	98.6	97	70-130
1,2,3,4,7,8,9-HpCDF	63.0	98.6	64 *	70-130
1,2,3,4,7,8-HxCDF	88.8	98.6	90	70-130
1,2,3,6,7,8-HxCDF	96.2	98.6	98	70-130
1,2,3,7,8,9-HxCDF	94.3	98.6	96	70-130
1,2,3,7,8-PeCDF	71.7	98.6	73	70-130
2,3,4,6,7,8-HxCDF	87.6	98.6	89	70-130
2,3,4,7,8-PeCDF	92.3	98.6	94	70-130
2,3,7,8-TCDF	16.4	19.7	83	70-130
OCDF	167	197	85	70-130

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100619-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.141g

Data File Name: P628140
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 18:22
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628129

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	16.9		0.362	0.493	0.71	1.001	1
1,2,3,7,8-PeCDD	89.5		0.149	2.47	1.57	1.000	1
1,2,3,6,7,8-HxCDD	86.6		0.0907	2.47	1.25	1.000	1
1,2,3,4,7,8-HxCDD	96.5		0.116	2.47	1.20	1.000	1
1,2,3,7,8,9-HxCDD	89.6		0.0932	2.47	1.28	1.006	1
1,2,3,4,6,7,8-HpCDD	92.0		0.109	2.47	1.10	1.000	1
OCDD	185		0.211	4.93	0.88	1.000	1
2,3,7,8-TCDF	16.4		0.345	0.493	0.75	1.001	1
1,2,3,7,8-PeCDF	71.7		0.126	2.47	1.55	1.000	1
2,3,4,7,8-PeCDF	92.3		0.141	2.47	1.54	1.000	1
1,2,3,6,7,8-HxCDF	96.2		0.0696	2.47	1.25	1.000	1
1,2,3,7,8,9-HxCDF	94.3		0.0945	2.47	1.22	1.000	1
1,2,3,4,7,8-HxCDF	88.8		0.0663	2.47	1.24	1.000	1
2,3,4,6,7,8-HxCDF	87.6		0.0662	2.47	1.19	1.000	1
1,2,3,4,6,7,8-HpCDF	95.8		0.256	2.47	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	63.0		0.252	2.47	0.99	1.000	1
OCDF	167		0.193	4.93	0.89	1.006	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100619-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.141g

Data File Name: P628140
ICAL Date: 10/14/21

Date Analyzed: 11/06/21 18:22
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628129

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	16.9		0.362	0.493	0.71		1
Total Penta-Dioxins	89.5		0.149	2.47	1.57		1
Total Hexa-Dioxins	273		0.0981	2.47	1.20		1
Total Hepta-Dioxins	92.0		0.109	2.47	1.10		1
Total Tetra-Furans	16.4		0.345	0.493	0.75		1
Total Penta-Furans	165		0.133	2.47	1.55		1
Total Hexa-Furans	367		0.0729	2.47	1.24		1
Total Hepta-Furans	159		0.253	2.47	1.05		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112046
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100619-02

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.141g

Date Analyzed: 11/06/21 18:22
Date Extracted: 10/26/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628132
Cal Ver. File Name: P628129

Data File Name: P628140
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	767.716	38	Y	40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1146.075	57		40-135	1.52	1.167
13C-1,2,3,4,7,8-HxCDD	2000	1155.634	58		40-135	1.25	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1635.043	82		40-135	1.28	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1215.253	61		40-135	1.07	1.066
13C-OCDD	4000	2160.998	54		40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	597.601	30	Y	40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1197.771	60		40-135	1.57	1.129
13C-2,3,4,7,8-PeCDF	2000	1014.896	51		40-135	1.56	1.158
13C-1,2,3,4,7,8-HxCDF	2000	1219.096	61		40-135	0.52	0.973
13C-1,2,3,6,7,8-HxCDF	2000	1249.327	62		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1056.579	53		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1305.872	65		40-135	0.50	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1180.049	59		40-135	0.44	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1508.851	75		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	311.963	39	Y	40-135	NA	1.019



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January 05, 2022

Analytical Report for Service Request No: K2112198

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

RE: EQRB / 319

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 18, 2021
For your reference, these analyses have been assigned our service request number **K2112198**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals
Butyltins
Semi-Volatile Petroleum Products by GCFID
Volatile Petroleum Products by GCFID
Ultra Low Level Organochlorine Pesticides
Low Level Organochlorine Pesticides
Polychlorinated Biphenyls (PCBs)
Chlorinated Herbicides by GC
Volatile Organic Compounds by GC MS, Unpreserved
Volatile Organic Compounds
Polynuclear Aromatic Hydrocarbon by GCMS SIM Ultra Low Level
Polycyclic Aromatic Hydrocarbons
Low Level Semivolatile Organic Compounds by GCMS
Subcontract Lab Results

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB
Sample Matrix: Soil, Water

Service Request: K2112198
Date Received: 10/18/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Four soil, water samples were received for analysis at ALS Environmental on 10/18/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 11/17/2021: The upper control criterion was exceeded for Bis(2-ethylhexyl) Phthalate in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8270D, 11/17/2021: The upper control criterion was exceeded for multiple analytes in Laboratory Control Sample (LCS). The analytes in question were not detected in the associated field samples. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method 8270D, 11/23/2021: A couple analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

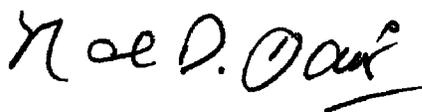
Method 8270D, 11/23/2021: The upper control criterion was exceeded for multiple analytes in Laboratory Control Sample (LCS). The analytes in question were not detected in the associated field samples above the MRL. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method 8270D, 11/08/2021: A couple analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 11/08/2021: The spike recovery of Di-n-butyl Phthalate for Laboratory Control Sample (LCS) KQ2120705-01 was outside the lower control criterion. The analyte in question was not detected in the associated field samples. The error associated with reduced recovery indicated a potential low bias. The data was flagged to indicate the problem.

Method 8270D, 11/08/2021: The Relative Percent Difference (RPD) for Benzoic Acid in the replicate Laboratory Control Sample (LCS/DLCS) KQ2120705-01/-02 was outside control criteria. The spike recoveries in the replicate Laboratory Control Sample (LCS/DLCS) were within acceptance limits, indicating the analytical batch was in control. No further corrective action was taken.

The extraction of the field sample was initially performed on 10/21/21. The extraction batch replicate Laboratory Control Samples (LCS/DLCS) KQ2120748-01 and KQ2120748-02 were outside the lower acceptance limits producing low positive controls. Efforts were made to re-extract the sample as soon as possible after the issue was discovered. However, the re-extraction of the sample was performed past the recommended holding time. The results from the re-extraction were reported. The data was flagged to indicate the holding time violation.

Approved by 

Date 01/05/2022

The result reported for Benzo(b)fluoranthene in the field sample may contain a slight bias. The chromatogram indicated the presence of non-target background components. The matrix interference may have resulted in a slight high bias in the affected sample. The result was flagged with "X" to indicate the issue.

Semivoa GC:

Method 8081B, 11/27/2021: The lower control criterion was exceeded for surrogate Tetrachloro-m-xylene (TCMX) in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence show a low bias for this analyte, however results are still within ALS criteria. The secondary surrogate, Decachlorobiphenyl, was within control criteria. The samples were reanalyzed with a passing CCV and TCMX was still within ALS criteria. Results from the initial run were reported. No further corrective action was required.

Method 8081B, 11/27/2021: The upper control criterion was exceeded for Toxaphene in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8081B, 11/27/2021: The control criterion was exceeded for 4,4'-DDT in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte in question. Since the analyte was not present on the column in control the potential bias was negated, the data quality was not affected. No further corrective action was required.

Method 8081B, 12/09/2021: The analysis of several samples were initially performed on 11/26/21. Due to a low failing CCV for Tetrachloro-m-xylene (TCMX), the samples required reanalysis. Efforts were made to reanalyze the samples as soon as possible after the analytical system was back in control. The results from the reanalysis were reported for TCMX. The data was flagged to indicate the holding time violation.

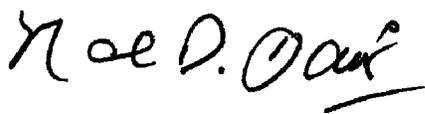
Method 8081B, 11/26/2021: The lower control criterion was exceeded for surrogate tetrachloro-m-xylene (TCMX) in Continuing Calibration Verification (CCV) KQ2124278-04. The field samples analyzed in this sequence show a low bias for this analyte, however results are still within ALS criteria. The secondary surrogate, decachlorobiphenyl, was within control criteria. No further corrective action was taken.

Method 8081B, 11/26/2021: The lower control criterion was exceeded for 4,4'-DDT in the Continuing Calibration Verification (CCV) by 2%. The field samples analyzed in this sequence have a slight low bias for the analyte in question. The data was not significantly affected. No further corrective action was taken.

Method 8082A: The analysis of 8082A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for Aroclor 1260 and 1268. The data quality was not affected. No further corrective action was necessary.

Method 8082A: The upper control criterion was exceeded for Aroclor 1016 and 1260 in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8082A: The analysis of 8082A requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Decachlorobiphenyl. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

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Date 01/05/2022

Method 8082A, :The upper control criterion was exceeded for Aroclor 1260 in Continuing Calibration Verification (CCV) KWG210367-01 and -03. The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8151A, 11/30/2021:The analysis of 8151A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for 2,4-D and Dichlorprop. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 11/30/2021:The upper control criterion was exceeded for MCPA and MCPP in Continuing Calibration Verification (CCV) . The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8151A, 11/23/2021:The analysis of 8151A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for 2,4-D and Dichlorprop. The data quality was not affected. No further corrective action was necessary.

Method ALS SOP Butyltins, 11/01/2021:The analysis of ALS SOP Butyltins requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Tri-n-propyltin. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method ALS SOP Butyltins, 11/02/2021:The analysis of ALS SOP Butyltins requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Tri-n-propyltin. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method ALS SOP Butyltins, 11/02/2021:The upper control criterion was exceeded for various analytes in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method NWTPH-Dx:The upper control criterion was exceeded for Diesel and Residual Range Organics in various Continuing Calibration Verifications (CCVs). The field samples analyzed in this sequence did not contain the analyte in question above the MRL. Since the apparent problem indicated a potential high bias, the data quality was not significantly affected. No further corrective action was required.

Metals:

Method 6020A, 10/27/2021: The matrix spike recovery of Arsenic and Selenium for sample B31 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential low bias in this matrix. No further corrective action was appropriate.

Subcontracted Analytical Parameters:

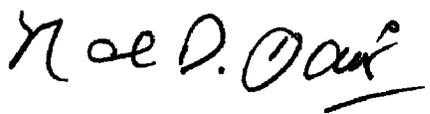
Dioxins and Furans by EPA Method 8290

The analysis for Dioxins and Furans was performed at ALS Houston, Texas Laboratory. The data for this analysis is included in the corresponding section of this report.

Volatiles by GC/MS:

Method 8260C, 10/25/2021:Samples were received with insufficient holding time. The analysis was performed as soon as possible after receipt by the laboratory. The data was flagged to indicate the holding time violation.

Method 8260C, 10/25/2021:Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not

Approved by 

Date 01/05/2022



Chain of Custody

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102112198

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC 5741 NE Flanders St., Portland, OR 97213 office: 503-477-6150 mobile: 503-819-2835	Laboratory ALS Labs Lab Project No. _____	CHAIN OF CUSTODY Chain of Custody No. <u>101</u>
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Project Manager: <u>Jill Betts</u> Project No.: <u>319</u> Project Name: <u>EQRB</u> Collected by: <u>Robert Schettler</u>	Liquid with Sediment Sample Test Filtrate _____ Test Sediment _____ Test Both _____ Multi-Phase Sample Test One (which) _____ Test Separately _____ Shake _____	Samples Received at 4C (Y or N) _____ Appropriate Containers Used (Y or N) _____ Provide Verbal Results (Y or N) <u>No</u> Provide Preliminary Results <u>Yes</u>
-------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Comments Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail. <i>See Composite notes below</i>	Matrix Soil _____ Water _____ Other _____ Number of Containers _____	Analyses to be Performed	
		NWTPH-Gx NWTPH-Dx VOCs by EPA Method 8260B PAHs by EPA Method 8270SIM Low Level SVOCs by EPA Method 8270D Low Level Organochlorine Pesticides by EPA Method 8081B PCBs by EPA Method 8082A PCDD and PCDFs by EPA Method 8290A Butyltins Total RCRA 8 Metals by EPA Method 200/6020A/7471B RUSH	

Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	Total RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH	Remarks	
		10/15/21	1030	B-31 0-5	X			4													
		10/15/21	1030	B-31 5-10	X			4													
		10/15/21	1100	B-31 10-15	X			4													
		10/15/21	1100	B-31 20-25	X			4													
		10/15/21	1120	B31	X			25	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Dissolved metals
				B-31 (0-15; 20-25)					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	field filtered
				(D-31 0-5)																	
				B-31 5-10																	
				B-31 10-15																	
				B-31 20-25																	

Relinquished by: <u>Robert Schettler</u> Company: <u>Apex Companies</u>	Date: <u>10/18/21</u>	Time: <u>0917</u>	Received by: <u>[Signature]</u> <u>ALS</u> Company: <u>ALS</u>	Date: <u>10/18/21</u>	Time: <u>0917</u>
Relinquished by: <u>[Signature]</u> <u>ALS</u> Company: <u>ALS</u>	Date: <u>10/18/21</u>	Time: <u>1020</u>	Received by: <u>[Signature]</u> <u>ALS</u> Company: <u>ALS</u>	Date: <u>10/18/21</u>	Time: <u>1020</u>
Relinquished by: _____ Company: _____	Date: _____	Time: _____	Received by: _____ Company: _____	Date: _____	Time: _____

PM MIT

Cooler Receipt and Preservation Form

Client Cole & belts Service Request K21 12/98
Received: 10/18/21 Opened: 10/18/21 By: AP Unloaded: 10/18/21 By: AP

- Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 - Samples were received in: (circle) Cooler Box Envelope Other NA
 - Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID/NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
4.5		1801					
5.3		1801					

- Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves _____
- Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- Were samples received in good condition (unbroken) NA Y N
- Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- Did all sample labels and tags agree with custody papers? NA Y N
- Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- Were VOA vials received without headspace? Indicate in the table below. NA Y N
- Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Did not receive B-31 10-15 AP
Received 4 jars for B-31 10-15 empty. Received 1
trip blank not on COC



Total Solids

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1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Analysis Method: 160.3 Modified
Prep Method: None

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Units: Percent
Basis: As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
B 0-10 C	K2112198-003	79.1	-	-	1	10/22/21 12:13	
B-31 20-25 C	K2112198-005	82.1	-	-	1	10/22/21 12:13	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 10/22/21

Replicate Sample Summary
Inorganic Parameters

Sample Name: B 0-10 C
Lab Code: K2112198-003

Units: Percent
Basis: As Received

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K2112198-003DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	79.1	78.8	79.0	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B 0-10 C
Lab Code: K2112198-003

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	1.46	mg/Kg	0.57	0.07	5	11/02/21 12:42	11/01/21	
Barium	6020A	54.1	mg/Kg	0.057	0.023	5	11/02/21 12:42	11/01/21	
Cadmium	6020A	0.049	mg/Kg	0.023	0.008	5	11/02/21 12:42	11/01/21	
Chromium	6020A	11.0	mg/Kg	0.23	0.07	5	11/02/21 12:42	11/01/21	
Lead	6020A	4.71	mg/Kg	0.057	0.023	5	11/02/21 12:42	11/01/21	
Mercury	7471B	0.015 J	mg/Kg	0.022	0.006	1	10/27/21 15:17	10/25/21	
Selenium	6020A	0.1 J	mg/Kg	1.1	0.1	5	11/02/21 14:34	11/01/21	
Silver	6020A	0.025	mg/Kg	0.023	0.005	5	11/02/21 12:42	11/01/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	1.83	mg/Kg	0.56	0.07	5	11/02/21 12:30	11/01/21	
Barium	6020A	71.0	mg/Kg	0.056	0.022	5	11/02/21 12:30	11/01/21	
Cadmium	6020A	0.051	mg/Kg	0.022	0.008	5	11/02/21 12:30	11/01/21	
Chromium	6020A	12.1	mg/Kg	0.22	0.07	5	11/02/21 12:30	11/01/21	
Lead	6020A	2.30	mg/Kg	0.056	0.022	5	11/02/21 12:30	11/01/21	
Mercury	7471B	0.009 J	mg/Kg	0.021	0.005	1	10/27/21 15:23	10/25/21	
Selenium	6020A	0.1 J	mg/Kg	1.1	0.1	5	11/02/21 14:25	11/01/21	
Silver	6020A	0.029	mg/Kg	0.022	0.004	5	11/02/21 12:30	11/01/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B31
Lab Code: K2112198-006

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	0.39 J	ug/L	0.50	0.09	1	10/27/21 17:36	10/21/21	
Barium	6020A	7.90	ug/L	0.050	0.020	1	10/27/21 17:36	10/21/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	10/27/21 17:36	10/21/21	
Chromium	6020A	0.17 J	ug/L	0.20	0.03	1	10/27/21 17:36	10/21/21	
Lead	6020A	0.030	ug/L	0.020	0.006	1	10/27/21 17:36	10/21/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/27/21 13:33	10/26/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 17:36	10/21/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/27/21 17:36	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B31
Lab Code: K2112198-006

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	6.6	ug/L	1.0	0.2	1	10/27/21 17:25	10/21/21	
Barium	6020A	558	ug/L	0.10	0.04	1	10/27/21 17:25	10/21/21	
Cadmium	6020A	0.747	ug/L	0.040	0.016	1	10/27/21 17:25	10/21/21	
Chromium	6020A	78.7	ug/L	0.40	0.06	1	10/27/21 17:25	10/21/21	
Lead	6020A	20.2	ug/L	0.040	0.012	1	10/27/21 17:25	10/21/21	
Mercury	7470A	0.14 J	ug/L	0.80	0.08	1	10/27/21 13:26	10/26/21	
Selenium	6020A	0.6 J	ug/L	2.0	0.4	1	10/27/21 17:25	10/21/21	
Silver	6020A	0.229	ug/L	0.040	0.018	1	10/27/21 17:25	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120695-01

Service Request: K2112198
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	ug/L	0.50	0.09	1	10/27/21 17:20	10/21/21	
Barium	6020A	ND U	ug/L	0.050	0.020	1	10/27/21 17:20	10/21/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	10/27/21 17:20	10/21/21	
Chromium	6020A	ND U	ug/L	0.20	0.03	1	10/27/21 17:20	10/21/21	
Lead	6020A	ND U	ug/L	0.020	0.006	1	10/27/21 17:20	10/21/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 17:20	10/21/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/27/21 17:20	10/21/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2121382-03

Service Request: K2112198
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	mg/Kg	0.5	0.06	5	11/02/21 12:25	11/01/21	
Barium	6020A	ND U	mg/Kg	0.05	0.020	5	11/02/21 12:25	11/01/21	
Cadmium	6020A	ND U	mg/Kg	0.020	0.007	5	11/02/21 12:25	11/01/21	
Chromium	6020A	ND U	mg/Kg	0.20	0.06	5	11/02/21 12:25	11/01/21	
Lead	6020A	ND U	mg/Kg	0.05	0.020	5	11/02/21 12:25	11/01/21	
Selenium	6020A	ND U	mg/Kg	1.0	0.09	5	11/02/21 14:21	11/01/21	
Silver	6020A	0.007 J	mg/Kg	0.020	0.004	5	11/02/21 12:25	11/01/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120892-01

Service Request: K2112198
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/27/21 13:23	10/26/21	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120852-03

Service Request: K2112198
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7471B	ND U	mg/Kg	0.02	0.005	1	10/27/21 15:14	10/25/21	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 10/27/21

Replicate Sample Summary
Total Metals

Sample Name: B31
Lab Code: K2112198-006

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2120695-03 Result			
Arsenic	6020A	1.0	0.2	6.6	7.1	6.9	7	20
Barium	6020A	0.10	0.04	558	569	564	2	20
Cadmium	6020A	0.040	0.016	0.747	0.753	0.750	<1	20
Chromium	6020A	0.40	0.06	78.7	81.3	80.0	3	20
Lead	6020A	0.040	0.012	20.2	20.9	20.6	3	20
Selenium	6020A	2.0	0.4	0.6 J	0.6 J	0.6	<1	20
Silver	6020A	0.040	0.018	0.229	0.198	0.214	15	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 11/02/21

Replicate Sample Summary
Total Metals

Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2121382-01 Result			
Arsenic	6020A	0.45	0.05	1.83	1.74	1.79	5	20
Barium	6020A	0.045	0.018	71.0	73.2	72.1	3	20
Cadmium	6020A	0.018	0.006	0.051	0.051	0.051	<1	20
Chromium	6020A	0.18	0.05	12.1	11.7	11.9	4	20
Lead	6020A	0.045	0.018	2.30	2.24	2.27	3	20
Selenium	6020A	0.89	0.08	0.12 J	ND U	NC	NC	20
Silver	6020A	0.018	0.004	0.029	0.023	0.026	23 #	20

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 10/27/21

Replicate Sample Summary

Total Metals

Sample Name: B31
Lab Code: K2112198-006

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2120892-03 Result			
Mercury	7470A	0.80	0.08	0.14 J	0.15 J	0.15	7	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 10/27/21

Replicate Sample Summary

Total Metals

Sample Name: B 0-10 C
Lab Code: K2112198-003

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2120852-01 Result			
Mercury	7471B	0.022	0.006	0.015 J	0.018 J	0.017	15	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 10/27/21
Date Extracted: 10/21/21

Matrix Spike Summary
Total Metals

Sample Name: B31
Lab Code: K2112198-006
Analysis Method: 6020A
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2120695-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6.6	63.5	100	57 N	75-125
Barium	558	789	200	115	75-125
Cadmium	0.747	51.8	50.0	102	75-125
Chromium	78.7	101	20.0	113	75-125
Lead	20.2	115	100	95	75-125
Selenium	0.6 J	63.7	100	63 N	75-125
Silver	0.229	25.0	25.0	99	75-125

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 11/2/21
Date Extracted: 11/1/21

Matrix Spike Summary
Total Metals

Sample Name: B-31 20-25 C
Lab Code: K2112198-005
Analysis Method: 6020A
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2121382-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	1.83	100	106	92	75-125
Barium	71.0	282	212	99	75-125
Cadmium	0.051	10.2	10.6	96	75-125
Chromium	12.1	52.5	42.4	95	75-125
Lead	2.30	113	106	104	75-125
Selenium	0.1 J	109	106	103	75-125
Silver	0.029	9.73	10.6	91	75-125

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Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 10/27/21
Date Extracted: 10/26/21

Matrix Spike Summary
Total Metals

Sample Name: B31
Lab Code: K2112198-006
Analysis Method: 7470A
Prep Method: Method

Units: ug/L
Basis: NA

Matrix Spike
KQ2120892-04

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	0.14 J	20.4	20.0	101	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 10/27/21
Date Extracted: 10/25/21

Matrix Spike Summary
Total Metals

Sample Name: B 0-10 C
Lab Code: K2112198-003
Analysis Method: 7471B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2120852-02

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	0.015 J	0.570	0.554	100	80-120

Results flagged with an asterisk (*) indicate values outside control criteria.

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Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 10/27/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2120695-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	48.3	50.0	97	80-120
Barium	6020A	102	100	102	80-120
Cadmium	6020A	25.4	25.0	102	80-120
Chromium	6020A	9.95	10.0	100	80-120
Lead	6020A	49.9	50.0	100	80-120
Selenium	6020A	53.3	50.0	107	80-120
Silver	6020A	12.5	12.5	100	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 11/02/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2121382-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	169	178	95	64-119
Barium	6020A	146	145	100	71-119
Cadmium	6020A	146	151	97	67-111
Chromium	6020A	119	126	94	65-121
Lead	6020A	80.3	76.1	106	70-134
Selenium	6020A	178	189	94	62-121
Silver	6020A	25.6	25.6	100	65-129

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 10/27/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2120892-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	4.91	5.00	98	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 10/27/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2120852-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7471B	0.504	0.500	101	80-120



Butyltins

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20

Sample Name: B 0-10 C
Lab Code: K2112198-003

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.2	0.33	1	11/01/21 15:42	10/27/21	
Di-n-butyltin Cation	ND U	1.2	0.24	1	11/01/21 15:42	10/27/21	
Tri-n-butyltin Cation	ND U	1.2	0.54	1	11/01/21 15:42	10/27/21	
Tetra-n-butyltin	ND U	1.2	0.55	1	11/01/21 15:42	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	57	10 - 152	11/01/21 15:42	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.2	0.32	1	11/01/21 15:10	10/27/21	
Di-n-butyltin Cation	ND U	1.2	0.24	1	11/01/21 15:10	10/27/21	
Tri-n-butyltin Cation	ND U	1.2	0.53	1	11/01/21 15:10	10/27/21	
Tetra-n-butyltin	ND U	1.2	0.54	1	11/01/21 15:10	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	32	10 - 152	11/01/21 15:10	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Sample Name: B31
Lab Code: K2112198-006

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.050	0.029	1	11/02/21 12:50	10/19/21	
Di-n-butyltin Cation	ND U	0.050	0.0073	1	11/02/21 12:50	10/19/21	
Tri-n-butyltin Cation	ND U	0.050	0.012	1	11/02/21 12:50	10/19/21	
Tetra-n-butyltin	ND U	0.050	0.038	1	11/02/21 12:50	10/19/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	106	10 - 195	11/02/21 12:50	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: Method

Sample Name	Lab Code	Tri-n-propyltin
		10-152
B 0-10 C	K2112198-003	57
B-31 20-25 C	K2112198-005	32
Method Blank	KQ2120754-04	104
Lab Control Sample	KQ2120754-03	109

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: EPA 3520C

Sample Name	Lab Code	Tri-n-propyltin
		10-195
B31	K2112198-006	106
Method Blank	KQ2120611-04	62
Lab Control Sample	KQ2120611-03	119

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120611-04

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.050	0.029	1	10/27/21 07:12	10/19/21	
Di-n-butyltin Cation	0.0078 J	0.050	0.0073	1	10/27/21 07:12	10/19/21	
Tri-n-butyltin Cation	ND U	0.050	0.012	1	10/27/21 07:12	10/19/21	
Tetra-n-butyltin	ND U	0.050	0.038	1	10/27/21 07:12	10/19/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	62	10 - 195	10/27/21 07:12	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120754-04

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.98	0.26	1	11/01/21 13:16	10/27/21	
Di-n-butyltin Cation	0.24 J	0.98	0.19	1	11/01/21 13:16	10/27/21	
Tri-n-butyltin Cation	0.61 J	0.98	0.43	1	11/01/21 13:16	10/27/21	
Tetra-n-butyltin	ND U	0.98	0.44	1	11/01/21 13:16	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	104	10 - 152	11/01/21 13:16	

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 10/27/21
Date Extracted: 10/19/21

Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 744033

Lab Control Sample
KQ2120611-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Di-n-butyltin Cation	0.226 P	0.383	59	10-200
n-Butyltin Cation	0.282	0.312	90	10-200
Tetra-n-butyltin	0.374	0.500	75	10-200
Tri-n-butyltin Cation	0.487	0.446	109	10-200

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 11/01/21
Date Extracted: 10/27/21

Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 744774

Lab Control Sample
KQ2120754-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Di-n-butyltin Cation	20.4	19.2	106	10-190
n-Butyltin Cation	15.4	15.6	99	10-200
Tetra-n-butyltin	23.3	25.0	93	10-194
Tri-n-butyltin Cation	22.9	22.3	103	10-186

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2120611-03

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.226	0.562	85	P	1	10/27/21 07:29
Tetra-n-butyltin	0.038	0.374	0.506	30		1	10/27/21 07:29
Tri-n-butyltin Cation	0.012	0.487	0.682	33		1	10/27/21 07:29
n-Butyltin Cation	0.029	0.282	0.362	25		1	10/27/21 07:29

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120611-04

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.0078	0.011	34	J	1	10/27/21 07:12

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120754-03

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	20.4	25.6	23		1	11/01/21 13:32
Tetra-n-butyltin	0.44	23.3	29.7	24		1	11/01/21 13:32
Tri-n-butyltin Cation	0.43	22.9	31.0	30		1	11/01/21 13:32
n-Butyltin Cation	0.26	15.4	21.8	34		1	11/01/21 13:32

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120754-04

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	0.24	0.29	19	J	1	11/01/21 13:16
Tri-n-butyltin Cation	0.43	0.61	0.76	22	J	1	11/01/21 13:16



Semi-Volatile Petroleum Products by GC/FID

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B 0-10 C
Lab Code: K2112198-003

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20
Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	4.3 J	32	2.3	1	10/29/21 13:32	10/26/21	
Residual Range Organics (C25 - C36 RRO)	17 J	130	5.0	1	10/29/21 13:32	10/26/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	118	50 - 150	10/29/21 13:32	
n-Triacontane	122	50 - 150	10/29/21 13:32	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20
Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	2.8 J	30	2.2	1	10/29/21 14:17	10/26/21	
Residual Range Organics (C25 - C36 RRO)	8.8 J	120	4.8	1	10/29/21 14:17	10/26/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	83	50 - 150	10/29/21 14:17	
n-Triacontane	89	50 - 150	10/29/21 14:17	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Sample Name: B31
Lab Code: K2112198-006

Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	250 J	250	11	1	11/02/21 19:21	10/29/21	*
Residual Range Organics (C25 - C36 RRO)	260 J	500	19	1	11/02/21 19:21	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	81	50 - 150	11/02/21 19:21	
n-Triacontane	88	50 - 150	11/02/21 19:21	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B 0-10 C	K2112198-003	118	122
B-31 20-25 C	K2112198-005	83	89
B 0-10 C	KQ2121032-01	109	115
Method Blank	KQ2121032-04	112	117
Lab Control Sample	KQ2121032-03	114	117

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B31	K2112198-006	81	88
Method Blank	KQ2121357-03	93	92
Lab Control Sample	KQ2121357-01	94	92
Duplicate Lab Control Sample	KQ2121357-02	99	98

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 10/29/21

Replicate Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Sample Name: B 0-10 C
Lab Code: K2112198-003

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2121032-01 Result			
Diesel Range Organics (C12 - C25 DRO)	NWTPH-Dx	31	2.3	4.3 J	3.8 J	4.05	14	40
Residual Range Organics (C25 - C36 RRO)	NWTPH-Dx	120	4.9	17 J	13 J	15.0	27	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121032-04

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	3.7 J	25	1.8	1	10/29/21 13:10	10/26/21	
Residual Range Organics (C25 - C36 RRO)	13 J	98	3.9	1	10/29/21 13:10	10/26/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	112	50 - 150	10/29/21 13:10	
n-Triacontane	117	50 - 150	10/29/21 13:10	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121357-03

Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	19 J	250	11	1	11/02/21 18:58	10/29/21	
Residual Range Organics (C25 - C36 RRO)	27 J	500	19	1	11/02/21 18:58	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	93	50 - 150	11/02/21 18:58	
n-Triacontane	92	50 - 150	11/02/21 18:58	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 10/29/21
Date Extracted: 10/26/21

Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Units: mg/Kg
Basis: Dry
Analysis Lot: 744370

Lab Control Sample
KQ2121032-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Diesel Range Organics (C12 - C25 DRO)	306	267	115	42-134
Residual Range Organics (C25 - C36 RRO)	148	133	111	48-141

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 11/02/21
Date Extracted: 10/29/21

Duplicate Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Units: ug/L
Basis: NA
Analysis Lot: 744632

Analyte Name	Lab Control Sample KQ2121357-01			Duplicate Lab Control Sample KQ2121357-02			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Diesel Range Organics (C12 - C25 DRO)	2880	3200	90	3110	3200	97	46-140	8	30
Residual Range Organics (C25 - C36 RRO)	1230	1600	77	1290	1600	81	45-159	4	30



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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B 0-10 C
Lab Code: K2112198-003

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20
Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	13	1.7	104.75	10/26/21 00:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	74	50 - 150	10/26/21 00:34	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	14	1.7	111.18	10/26/21 00:58	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	50 - 150	10/26/21 00:58	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Sample Name: B31
Lab Code: K2112198-006

Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	49.5 J	250	12.0	1	10/25/21 13:18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	103	50 - 150	10/25/21 13:18	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene
		50-150
B 0-10 C	K2112198-003	74
B-31 20-25 C	K2112198-005	89
Method Blank	KQ2121047-03	89
Method Blank	KQ2121047-09	89
Lab Control Sample	KQ2121047-04	94
Duplicate Lab Control Sample	KQ2121047-05	94

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	1,4-Difluorobenzene
		50-150
B31	K2112198-006	103
Method Blank	KQ2120959-06	103
Lab Control Sample	KQ2120959-07	102
Duplicate Lab Control Sample	KQ2120959-08	102

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120959-06

Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	250	12.0	1	10/25/21 10:58	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	103	50 - 150	10/25/21 10:58	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121047-03

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	10/25/21 17:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	50 - 150	10/25/21 17:34	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121047-09

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	10/26/21 00:11	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	50 - 150	10/26/21 00:11	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 743621

Lab Control Sample
KQ2120959-07

Duplicate Lab Control Sample
KQ2120959-08

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Gasoline Range Organics (Toluene-Naphthalene GRO)	484	500	97	477	500	95	80-119	2	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: mg/Kg
Basis: Dry
Analysis Lot: 743674

Lab Control Sample
KQ2121047-04

Duplicate Lab Control Sample
KQ2121047-05

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Gasoline Range Organics (Toluene-Naphthalene GRO)	19.5	25.0	78	19.5	25.0	78	76-114	<1	40



Ultra Low Level Organochlorine Pesticides by GC/ECD

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Sample Name: B31
Lab Code: K2112198-006

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND Ui	2.0	1.5	1	11/26/21 00:25	10/22/21	
alpha-BHC	0.35 JP	1.0	0.25	1	11/26/21 00:25	10/22/21	
beta-BHC	ND Ui	1.2	1.2	1	11/26/21 00:25	10/22/21	
delta-BHC	ND U	1.0	0.27	1	11/26/21 00:25	10/22/21	
gamma-BHC (Lindane)	ND U	2.0	0.60	1	11/26/21 00:25	10/22/21	
cis-Chlordane	ND U	1.0	0.36	1	11/26/21 00:25	10/22/21	
trans-Chlordane	ND U	2.0	0.54	1	11/26/21 00:25	10/22/21	
4,4'-DDD	ND U	2.0	0.57	1	11/26/21 00:25	10/22/21	
4,4'-DDE	ND U	1.0	0.46	1	11/26/21 00:25	10/22/21	
4,4'-DDT	6.7	2.0	0.75	1	11/26/21 00:25	10/22/21	*
Dieldrin	ND U	1.0	0.44	1	11/26/21 00:25	10/22/21	
Endosulfan I	ND U	1.0	0.36	1	11/26/21 00:25	10/22/21	
Endosulfan II	ND U	1.0	0.34	1	11/26/21 00:25	10/22/21	
Endosulfan Sulfate	ND Ui	1.0	0.94	1	11/26/21 00:25	10/22/21	
Endrin	ND Ui	1.0	0.56	1	11/26/21 00:25	10/22/21	
Endrin Aldehyde	ND Ui	1.0	0.79	1	11/26/21 00:25	10/22/21	
Endrin Ketone	ND U	2.0	0.70	1	11/26/21 00:25	10/22/21	
Heptachlor	ND U	2.0	0.61	1	11/26/21 00:25	10/22/21	
Heptachlor Epoxide	ND U	1.0	0.29	1	11/26/21 00:25	10/22/21	
Methoxychlor	ND U	2.0	0.85	1	11/26/21 00:25	10/22/21	
Toxaphene	ND U	100	49	1	11/26/21 00:25	10/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	15	10 - 139	11/26/21 00:25	
Tetrachloro-m-xylene	39	32 - 151	11/26/21 00:25	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Extraction Method: EPA 3511

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-139	32-151
B31	K2112198-006	15	39
Method Blank	KQ2120847-05	77	42
Lab Control Sample	KQ2120847-01	97	53
Duplicate Lab Control Sample	KQ2120847-02	98	52
Lab Control Sample	KQ2120847-03	99	53
Duplicate Lab Control Sample	KQ2120847-04	104	55

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120847-05

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.77	1	11/25/21 16:34	10/22/21	
alpha-BHC	ND Ui	1.0	0.32	1	11/25/21 16:34	10/22/21	
beta-BHC	ND Ui	1.7	1.7	1	11/25/21 16:34	10/22/21	
delta-BHC	ND U	1.0	0.27	1	11/25/21 16:34	10/22/21	
gamma-BHC (Lindane)	ND U	2.0	0.60	1	11/25/21 16:34	10/22/21	
cis-Chlordane	ND U	1.0	0.36	1	11/25/21 16:34	10/22/21	
trans-Chlordane	ND U	2.0	0.54	1	11/25/21 16:34	10/22/21	
4,4'-DDD	ND U	2.0	0.57	1	11/25/21 16:34	10/22/21	
4,4'-DDE	ND U	1.0	0.46	1	11/25/21 16:34	10/22/21	
4,4'-DDT	ND U	2.0	0.75	1	11/25/21 16:34	10/22/21	
Dieldrin	ND U	1.0	0.44	1	11/25/21 16:34	10/22/21	
Endosulfan I	ND U	1.0	0.36	1	11/25/21 16:34	10/22/21	
Endosulfan II	ND U	1.0	0.34	1	11/25/21 16:34	10/22/21	
Endosulfan Sulfate	ND U	1.0	0.47	1	11/25/21 16:34	10/22/21	
Endrin	ND U	1.0	0.42	1	11/25/21 16:34	10/22/21	
Endrin Aldehyde	ND U	1.0	0.47	1	11/25/21 16:34	10/22/21	
Endrin Ketone	ND U	2.0	0.70	1	11/25/21 16:34	10/22/21	
Heptachlor	ND U	2.0	0.61	1	11/25/21 16:34	10/22/21	
Heptachlor Epoxide	ND U	1.0	0.29	1	11/25/21 16:34	10/22/21	
Methoxychlor	ND U	2.0	0.85	1	11/25/21 16:34	10/22/21	
Toxaphene	ND U	100	49	1	11/25/21 16:34	10/22/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	77	10 - 139	11/25/21 16:34	
Tetrachloro-m-xylene	42	32 - 151	11/25/21 16:34	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 11/25/21
Date Extracted: 10/22/21

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 748478

Lab Control Sample
KQ2120847-01

Duplicate Lab Control Sample
KQ2120847-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec	RPD	RPD Limit
							Limits		
4,4'-DDD	31.5	25.0	126	32.6	25.0	130	35-158	3	30
4,4'-DDE	23.5	25.0	94	25.0	25.0	100	53-129	6	30
4,4'-DDT	28.6 P	25.0	114	29.5 P	25.0	118	43-164	3	30
Aldrin	24.0	25.0	96	25.0	25.0	100	37-135	4	30
alpha-BHC	24.1	25.0	97	24.3	25.0	97	48-148	<1	30
beta-BHC	26.8 P	25.0	107	27.9	25.0	111	37-133	4	30
cis-Chlordane	27.9	25.0	112	28.5	25.0	114	54-127	2	30
delta-BHC	28.5	25.0	114	28.7	25.0	115	44-128	<1	30
Dieldrin	27.1	25.0	108	27.8	25.0	111	51-122	3	30
Endosulfan I	23.0	25.0	92	23.6	25.0	95	44-135	3	30
Endosulfan II	28.4	25.0	114	28.2	25.0	113	37-180	<1	30
Endosulfan Sulfate	31.2	25.0	125	33.5	25.0	134	42-144	7	30
Endrin	32.1	25.0	129	32.1	25.0	128	52-133	<1	30
Endrin Aldehyde	27.8 P	25.0	111	30.7 P	25.0	123	49-126	10	30
Endrin Ketone	14.5 P	25.0	58	18.3 P	25.0	73	54-131	23	30
gamma-BHC (Lindane)	28.7	25.0	115	29.2	25.0	117	51-140	2	30
Heptachlor	29.2	25.0	117	30.2	25.0	121	33-161	3	30
Heptachlor Epoxide	28.4	25.0	114	29.2	25.0	117	51-125	3	30
Methoxychlor	41.6	25.0	166	41.6	25.0	166	38-194	<1	30
trans-Chlordane	27.9	25.0	112	28.4	25.0	114	54-126	2	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 11/25/21
Date Extracted: 10/22/21

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 748478

Lab Control Sample
KQ2120847-03

Duplicate Lab Control Sample
KQ2120847-04

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Toxaphene	1270	1000	127	1450	1000	145	44-190	13	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: B31
Lab Code: K2112198-006

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDT	0.75	6.7	6.8	1		1	11/26/21 00:25
alpha-BHC	0.25	0.35	1.0	96	JP	1	11/26/21 00:25

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2120847-01

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	31.5	34.1	8		1	11/25/21 17:13
4,4'-DDE	0.46	23.5	29.1	21		1	11/25/21 17:13
4,4'-DDT	0.75	28.6	92.9	106	P	1	11/25/21 17:13
Aldrin	0.77	24.0	25.8	7		1	11/25/21 17:13
Dieldrin	0.44	27.1	29.0	7		1	11/25/21 17:13
Endosulfan I	0.36	23.0	26.1	13		1	11/25/21 17:13
Endosulfan II	0.34	28.4	32.2	13		1	11/25/21 17:13
Endosulfan Sulfate	0.47	31.2	34.2	9		1	11/25/21 17:13
Endrin	0.42	32.1	32.6	2		1	11/25/21 17:13
Endrin Aldehyde	0.47	27.8	100	113	P	1	11/25/21 17:13
Endrin Ketone	0.70	14.5	34.2	81	P	1	11/25/21 17:13
Heptachlor	0.61	29.2	42.0	36		1	11/25/21 17:13
Heptachlor Epoxide	0.29	28.4	28.6	<1		1	11/25/21 17:13
Methoxychlor	0.85	41.6	56.0	30		1	11/25/21 17:13
alpha-BHC	0.25	24.1	23.5	3		1	11/25/21 17:13
beta-BHC	0.17	26.8	40.9	42	P	1	11/25/21 17:13
cis-Chlordane	0.36	27.9	28.8	3		1	11/25/21 17:13
delta-BHC	0.27	28.5	30.7	7		1	11/25/21 17:13
gamma-BHC (Lindane)	0.60	28.7	30.7	7		1	11/25/21 17:13
trans-Chlordane	0.54	27.9	31.1	11		1	11/25/21 17:13

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2120847-02

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	32.6	33.7	3		1	11/25/21 17:53
4,4'-DDE	0.46	25.0	25.1	<1		1	11/25/21 17:53
4,4'-DDT	0.75	29.5	68.3	79	P	1	11/25/21 17:53
Aldrin	0.77	25.0	26.9	7		1	11/25/21 17:53
Dieldrin	0.44	27.8	29.3	5		1	11/25/21 17:53
Endosulfan I	0.36	23.6	25.8	9		1	11/25/21 17:53
Endosulfan II	0.34	28.2	30.9	9		1	11/25/21 17:53
Endosulfan Sulfate	0.47	33.5	35.1	5		1	11/25/21 17:53
Endrin	0.42	32.1	32.4	<1		1	11/25/21 17:53
Endrin Aldehyde	0.47	30.7	69.9	78	P	1	11/25/21 17:53
Endrin Ketone	0.70	18.3	34.1	60	P	1	11/25/21 17:53
Heptachlor	0.61	30.2	40.1	28		1	11/25/21 17:53
Heptachlor Epoxide	0.29	29.2	31.4	7		1	11/25/21 17:53
Methoxychlor	0.85	41.6	53.4	25		1	11/25/21 17:53
alpha-BHC	0.25	24.3	24.7	2		1	11/25/21 17:53
beta-BHC	0.17	27.9	35.8	25		1	11/25/21 17:53
cis-Chlordane	0.36	28.5	29.0	2		1	11/25/21 17:53
delta-BHC	0.27	28.7	31.2	8		1	11/25/21 17:53
gamma-BHC (Lindane)	0.60	29.2	29.9	2		1	11/25/21 17:53
trans-Chlordane	0.54	28.4	31.5	10		1	11/25/21 17:53

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2120847-03

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1270	1430	12		1	11/25/21 23:06

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2120847-04

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1450	1510	4		1	11/25/21 23:45



Low Level Organochlorine Pesticides by GC

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20

Sample Name: B 0-10 C
Lab Code: K2112198-003

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.1	0.62	1	11/27/21 14:59	10/26/21	
alpha-BHC	ND U	1.0	0.31	1	11/27/21 14:59	10/26/21	
beta-BHC	ND Ui	1.2	1.2	1	11/27/21 14:59	10/26/21	
delta-BHC	ND U	1.0	0.30	1	11/27/21 14:59	10/26/21	
gamma-BHC (Lindane)	0.45 J	1.0	0.33	1	11/27/21 14:59	10/26/21	
cis-Chlordane	ND U	1.0	0.43	1	11/27/21 14:59	10/26/21	
trans-Chlordane	ND U	1.0	0.40	1	11/27/21 14:59	10/26/21	
4,4'-DDD	ND U	2.1	0.63	1	11/27/21 14:59	10/26/21	
4,4'-DDE	ND U	1.0	0.42	1	11/27/21 14:59	10/26/21	
4,4'-DDT	ND Ui	2.1	0.93	1	11/27/21 14:59	10/26/21	*
Dieldrin	ND U	1.0	0.24	1	11/27/21 14:59	10/26/21	
Endosulfan I	ND U	1.0	0.39	1	11/27/21 14:59	10/26/21	
Endosulfan II	ND U	2.1	0.73	1	11/27/21 14:59	10/26/21	
Endosulfan Sulfate	ND U	2.1	1.1	1	11/27/21 14:59	10/26/21	
Endrin	ND U	1.0	0.34	1	11/27/21 14:59	10/26/21	
Endrin Aldehyde	ND U	2.1	0.94	1	11/27/21 14:59	10/26/21	
Endrin Ketone	ND U	1.0	0.48	1	11/27/21 14:59	10/26/21	
Heptachlor	ND Ui	1.0	0.99	1	11/27/21 14:59	10/26/21	
Heptachlor Epoxide	ND U	2.1	0.70	1	11/27/21 14:59	10/26/21	
Methoxychlor	ND U	2.1	0.75	1	11/27/21 14:59	10/26/21	
Toxaphene	ND Ui	750	750	1	11/27/21 14:59	10/26/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	70	10 - 134	11/27/21 14:59	
Tetrachloro-m-xylene	39	10 - 121	11/27/21 14:59	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.2	0.64	1	11/27/21 15:39	10/26/21	
alpha-BHC	ND U	1.1	0.32	1	11/27/21 15:39	10/26/21	
beta-BHC	ND Ui	1.1	1.1	1	11/27/21 15:39	10/26/21	
delta-BHC	ND U	1.1	0.31	1	11/27/21 15:39	10/26/21	
gamma-BHC (Lindane)	ND U	1.1	0.34	1	11/27/21 15:39	10/26/21	
cis-Chlordane	ND U	1.1	0.45	1	11/27/21 15:39	10/26/21	
trans-Chlordane	ND U	1.1	0.41	1	11/27/21 15:39	10/26/21	
4,4'-DDD	ND Ui	2.2	0.75	1	11/27/21 15:39	10/26/21	
4,4'-DDE	ND U	1.1	0.44	1	11/27/21 15:39	10/26/21	
4,4'-DDT	ND U	2.2	0.66	1	11/27/21 15:39	10/26/21	*
Dieldrin	ND U	1.1	0.24	1	11/27/21 15:39	10/26/21	
Endosulfan I	ND U	1.1	0.40	1	11/27/21 15:39	10/26/21	
Endosulfan II	ND U	2.2	0.75	1	11/27/21 15:39	10/26/21	
Endosulfan Sulfate	ND U	2.2	1.1	1	11/27/21 15:39	10/26/21	
Endrin	ND U	1.1	0.35	1	11/27/21 15:39	10/26/21	
Endrin Aldehyde	ND U	2.2	0.96	1	11/27/21 15:39	10/26/21	
Endrin Ketone	ND U	1.1	0.49	1	11/27/21 15:39	10/26/21	
Heptachlor	ND Ui	1.3	1.3	1	11/27/21 15:39	10/26/21	
Heptachlor Epoxide	ND U	2.2	0.72	1	11/27/21 15:39	10/26/21	
Methoxychlor	ND U	2.2	0.77	1	11/27/21 15:39	10/26/21	
Toxaphene	ND Ui	110	52	1	11/27/21 15:39	10/26/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	71	10 - 134	11/27/21 15:39	
Tetrachloro-m-xylene	40	10 - 121	11/27/21 15:39	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-134	10-121
B 0-10 C	K2112198-003	70	39
B-31 20-25 C	K2112198-005	71	40
Method Blank	KQ2120871-08	51	46
Lab Control Sample	KQ2120871-07	63	58
Lab Control Sample	KQ2120871-09	61	63
Lab Control Sample	KQ2120871-10	23	19

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120871-08

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.59	1	11/11/21 23:37	10/26/21	
alpha-BHC	ND U	1.0	0.29	1	11/11/21 23:37	10/26/21	
beta-BHC	ND U	1.0	0.27	1	11/11/21 23:37	10/26/21	
delta-BHC	ND U	1.0	0.28	1	11/11/21 23:37	10/26/21	
gamma-BHC (Lindane)	ND U	1.0	0.31	1	11/11/21 23:37	10/26/21	
cis-Chlordane	ND U	1.0	0.41	1	11/11/21 23:37	10/26/21	
trans-Chlordane	ND U	1.0	0.38	1	11/11/21 23:37	10/26/21	
4,4'-DDD	ND U	2.0	0.60	1	11/11/21 23:37	10/26/21	
4,4'-DDE	ND U	1.0	0.40	1	11/11/21 23:37	10/26/21	
4,4'-DDT	ND Ui	2.0	0.64	1	11/11/21 23:37	10/26/21	
Dieldrin	0.30 J	0.96	0.22	1	11/11/21 23:37	10/26/21	
Endosulfan I	ND U	1.0	0.37	1	11/11/21 23:37	10/26/21	
Endosulfan II	ND U	2.0	0.69	1	11/11/21 23:37	10/26/21	
Endosulfan Sulfate	ND U	2.0	0.99	1	11/11/21 23:37	10/26/21	
Endrin	ND U	1.0	0.32	1	11/11/21 23:37	10/26/21	
Endrin Aldehyde	ND U	2.0	0.89	1	11/11/21 23:37	10/26/21	
Endrin Ketone	ND U	1.0	0.45	1	11/11/21 23:37	10/26/21	
Heptachlor	ND Ui	1.0	0.56	1	11/11/21 23:37	10/26/21	
Heptachlor Epoxide	ND U	2.0	0.66	1	11/11/21 23:37	10/26/21	
Methoxychlor	ND U	2.0	0.71	1	11/11/21 23:37	10/26/21	
Toxaphene	ND U	100	34	1	11/11/21 23:37	10/26/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	51	10 - 134	11/11/21 23:37	
Tetrachloro-m-xylene	46	10 - 121	11/11/21 23:37	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 11/12/21
Date Extracted: 10/26/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 745894

Lab Control Sample
KQ2120871-07

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
4,4'-DDD	21.6 P	25.0	87	10-180
4,4'-DDE	18.2	25.0	73	17-94
4,4'-DDT	23.7	25.0	95	17-104
Aldrin	17.0	25.0	68	18-89
alpha-BHC	16.8	25.0	67	16-96
beta-BHC	19.0	25.0	76	16-106
cis-Chlordane	17.4	25.0	70	20-93
delta-BHC	18.5	25.0	74	20-95
Dieldrin	16.4	25.0	65	19-88
Endosulfan I	13.2	25.0	53	16-87
Endosulfan II	16.5 P	25.0	66	15-117
Endosulfan Sulfate	19.2	25.0	77	17-98
Endrin	18.2	25.0	73	10-107
Endrin Aldehyde	17.7	25.0	71	21-94
Endrin Ketone	20.2	25.0	81	19-97
gamma-BHC (Lindane)	17.3	25.0	69	17-97
Heptachlor	20.0 P	25.0	80	13-111
Heptachlor Epoxide	17.5	25.0	70	18-92
Methoxychlor	25.8 P	25.0	103	17-122
trans-Chlordane	10.6 P	25.0	42	10-103

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 11/12/21
Date Extracted: 10/26/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 745894

Lab Control Sample
KQ2120871-10

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Toxaphene	1250	1000	125 *	16-114

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B 0-10 C
Lab Code: K2112198-003

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21

Units: ug/Kg
Basis: Dry
Percent Solids: 79.1

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	0.33	0.45	0.49	9	J	1	11/27/21 14:59

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2120871-07

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.60	21.6	49.4	78	P	1	11/12/21 00:07
4,4'-DDE	0.40	18.2	19.1	5		1	11/12/21 00:07
4,4'-DDT	0.61	23.7	33.1	33		1	11/12/21 00:07
Aldrin	0.59	17.0	17.6	3		1	11/12/21 00:07
Dieldrin	0.22	16.4	18.0	9		1	11/12/21 00:07
Endosulfan I	0.37	13.2	14.6	10		1	11/12/21 00:07
Endosulfan II	0.69	16.5	25.1	41	P	1	11/12/21 00:07
Endosulfan Sulfate	0.99	19.2	19.9	4		1	11/12/21 00:07
Endrin	0.32	18.2	19.7	8		1	11/12/21 00:07
Endrin Aldehyde	0.89	17.7	19.4	9		1	11/12/21 00:07
Endrin Ketone	0.45	20.2	21.2	5		1	11/12/21 00:07
Heptachlor	0.39	20.0	40.1	67	P	1	11/12/21 00:07
Heptachlor Epoxide	0.66	17.5	17.7	1		1	11/12/21 00:07
Methoxychlor	0.71	25.8	101	119	P	1	11/12/21 00:07
alpha-BHC	0.29	16.8	17.9	6		1	11/12/21 00:07
beta-BHC	0.27	19.0	19.2	1		1	11/12/21 00:07
cis-Chlordane	0.41	17.4	19.1	9		1	11/12/21 00:07
delta-BHC	0.28	18.5	19.6	6		1	11/12/21 00:07
gamma-BHC (Lindane)	0.31	17.3	19.0	9		1	11/12/21 00:07
trans-Chlordane	0.38	10.6	20.8	65	P	1	11/12/21 00:07

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120871-08

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Dieldrin	0.22	0.30	0.34	13	J	1	11/11/21 23:37

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120871-10

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	34	1250	1660	28		1	11/12/21 01:10



Polychlorinated Biphenyls (PCBs)

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/2021
Date Received: 10/18/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B31
Lab Code: K2112198-006
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	0.20	0.11	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1221	ND	Ui	0.40	0.16	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1232	ND	Ui	0.20	0.13	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1242	ND	Ui	0.20	0.041	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1248	ND	Ui	0.20	0.063	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1254	ND	Ui	0.20	0.029	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1260	ND	Ui	0.20	0.029	1	10/25/21	12/09/21	KWG2102829	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	16	10-140	12/09/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG2102829-3
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.028	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1221	ND	U	0.40	0.028	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1232	ND	U	0.20	0.028	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1242	ND	U	0.20	0.028	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1248	ND	U	0.20	0.028	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1254	ND	U	0.20	0.028	1	10/25/21	12/09/21	KWG2102829	
Aroclor 1260	ND	U	0.20	0.028	1	10/25/21	12/09/21	KWG2102829	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	88	10-140	12/09/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/2021
Date Received: 10/18/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B 0-10 C
Lab Code: K2112198-003
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	11	3.1	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1221	ND	U	21	3.1	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1232	ND	U	11	3.1	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1242	ND	U	11	3.1	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1248	ND	U	11	3.1	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1254	ND	U	11	3.1	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1260	ND	U	11	3.1	1	10/26/21	12/20/21	KWG2102832	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	88	20-155	12/20/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/2021
Date Received: 10/18/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-31 20-25 C
Lab Code: K2112198-005
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	12	3.3	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1221	ND	U	23	3.3	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1232	ND	U	12	3.3	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1242	ND	U	12	3.3	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1248	ND	U	12	3.3	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1254	ND	U	12	3.3	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1260	ND	U	12	3.3	1	10/26/21	12/20/21	KWG2102832	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	85	20-155	12/20/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG2102832-3
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	2.9	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1221	ND	U	17	2.9	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1232	ND	U	10	2.9	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1242	ND	U	10	2.9	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1248	ND	U	10	2.9	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1254	ND	U	10	2.9	1	10/26/21	12/20/21	KWG2102832	
Aroclor 1260	ND	U	10	2.9	1	10/26/21	12/20/21	KWG2102832	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	62	20-155	12/20/21	Acceptable

Comments: _____

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198

**Surrogate Recovery Summary
 Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3511
Analysis Method: 8082A

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
B31	K2112198-006	16
Method Blank	KWG2102829-3	88
Lab Control Sample	KWG2102829-1	80
Duplicate Lab Control Sample	KWG2102829-2	101

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 10-140

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198

**Surrogate Recovery Summary
 Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
B 0-10 C	K2112198-003	88
B-31 20-25 C	K2112198-005	85
Method Blank	KWG2102832-3	62
B 0-10 CMS	KWG2102832-1	88
B 0-10 CDMS	KWG2102832-2	85
Lab Control Sample	KWG2102832-4	101

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 20-155

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Extracted: 10/26/2021
Date Analyzed: 12/20/2021 - 12/21/2021

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name: B 0-10 C
Lab Code: K2112198-003
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102832

Analyte Name	Sample Result	B 0-10 CMS KWG2102832-1 Matrix Spike			B 0-10 CDMS KWG2102832-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Aroclor 1016	ND	97.3	122	80	94.4	115	82	44-119	3	40
Aroclor 1260	ND	115	122	95	105	115	91	56-130	9	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Extracted: 10/25/2021
Date Analyzed: 12/09/2021

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG2102829

Analyte Name	Lab Control Sample KWG2102829-1 Lab Control Spike			Duplicate Lab Control Sample KWG2102829-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Aroclor 1016	2.12	2.50	85	2.20	2.50	88	31-164	4	30
Aroclor 1260	2.37	2.50	95	2.64	2.50	106	34-182	11	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Extracted: 10/26/2021
Date Analyzed: 12/20/2021

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102832

Lab Control Sample
 KWG2102832-4
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Aroclor 1016	92.5	100	92	44-119
Aroclor 1260	110	100	110	56-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Chlorinated Herbicides by GC

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B 0-10 C
Lab Code: K2112198-003

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	63	5.1	1	11/30/21 05:48	10/25/21	
2,4,5-TP (Silvex)	ND U	63	3.1	1	11/30/21 05:48	10/25/21	
2,4-D	ND U	63	9.7	1	11/30/21 05:48	10/25/21	*
2,4-DB	ND U	63	6.8	1	11/30/21 05:48	10/25/21	
Dalapon	ND U	63	7.0	1	11/30/21 05:48	10/25/21	
Dicamba	ND U	63	5.5	1	11/30/21 05:48	10/25/21	
Dichlorprop	ND U	63	4.3	1	11/30/21 05:48	10/25/21	*
Dinoseb	ND U	63	3.4	1	11/30/21 05:48	10/25/21	
MCPA	ND U	6300	410	1	11/30/21 05:48	10/25/21	
MCPP	ND U	6300	580	1	11/30/21 05:48	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	68	26 - 127	11/30/21 05:48	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	60	4.9	1	11/30/21 06:14	10/25/21	
2,4,5-TP (Silvex)	ND U	60	2.9	1	11/30/21 06:14	10/25/21	
2,4-D	ND U	60	9.3	1	11/30/21 06:14	10/25/21	*
2,4-DB	ND Ui	60	34	1	11/30/21 06:14	10/25/21	
Dalapon	ND U	60	6.7	1	11/30/21 06:14	10/25/21	
Dicamba	ND U	60	5.2	1	11/30/21 06:14	10/25/21	
Dichlorprop	ND U	60	4.2	1	11/30/21 06:14	10/25/21	*
Dinoseb	ND U	60	3.3	1	11/30/21 06:14	10/25/21	
MCPA	ND U	6000	390	1	11/30/21 06:14	10/25/21	
MCP	ND U	6000	560	1	11/30/21 06:14	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	72	26 - 127	11/30/21 06:14	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B31
Lab Code: K2112198-006

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20
Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/23/21 11:08	10/20/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/23/21 11:08	10/20/21	
2,4-D	ND Ui	0.38	0.14	1	11/23/21 11:08	10/20/21	*
2,4-DB	ND Ui	0.38	0.26	1	11/23/21 11:08	10/20/21	
Dalapon	ND U	0.38	0.28	1	11/23/21 11:08	10/20/21	
Dicamba	ND Ui	0.19	0.035	1	11/23/21 11:08	10/20/21	
Dichlorprop	ND U	0.38	0.030	1	11/23/21 11:08	10/20/21	*
Dinoseb	ND U	0.19	0.015	1	11/23/21 11:08	10/20/21	
MCPA	ND U	94	8.7	1	11/23/21 11:08	10/20/21	
MCP	ND U	94	14	1	11/23/21 11:08	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	46	17 - 113	11/23/21 11:08	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 26-127
B 0-10 C	K2112198-003	68
B-31 20-25 C	K2112198-005	72
Method Blank	KQ2120356-04	74
Lab Control Sample	KQ2120356-03	74

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 17-113
B31	K2112198-006	46
Method Blank	KQ2120670-03	64
Lab Control Sample	KQ2120670-01	62
Duplicate Lab Control Sample	KQ2120670-02	66

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120356-04

Service Request: K2112198
Date Collected: NA
Date Received: NA
Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	50	4.0	1	11/30/21 21:47	10/25/21	
2,4,5-TP (Silvex)	ND U	50	2.4	1	11/30/21 21:47	10/25/21	
2,4-D	ND U	50	7.7	1	11/30/21 21:47	10/25/21	
2,4-DB	ND Ui	50	23	1	11/30/21 21:47	10/25/21	
Dalapon	ND U	50	5.5	1	11/30/21 21:47	10/25/21	
Dicamba	ND U	50	4.3	1	11/30/21 21:47	10/25/21	
Dichlorprop	ND U	50	3.4	1	11/30/21 21:47	10/25/21	
Dinoseb	ND U	50	2.7	1	11/30/21 21:47	10/25/21	
MCPA	ND U	5000	320	1	11/30/21 21:47	10/25/21	
MCPP	ND U	5000	460	1	11/30/21 21:47	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	74	26 - 127	11/30/21 21:47	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120670-03

Service Request: K2112198
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/23/21 09:51	10/20/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/23/21 09:51	10/20/21	
2,4-D	ND U	0.38	0.036	1	11/23/21 09:51	10/20/21	
2,4-DB	ND U	0.38	0.10	1	11/23/21 09:51	10/20/21	
Dalapon	ND Ui	0.41	0.41	1	11/23/21 09:51	10/20/21	
Dicamba	ND U	0.19	0.025	1	11/23/21 09:51	10/20/21	
Dichlorprop	ND U	0.38	0.030	1	11/23/21 09:51	10/20/21	
Dinoseb	ND U	0.19	0.015	1	11/23/21 09:51	10/20/21	
MCPA	ND U	94	8.7	1	11/23/21 09:51	10/20/21	
MCP	ND U	94	14	1	11/23/21 09:51	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	64	17 - 113	11/23/21 09:51	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 11/30/21
Date Extracted: 10/25/21

Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 747806

Lab Control Sample
KQ2120356-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-T	129	167	77	44-125
2,4,5-TP (Silvex)	133	167	80	46-125
2,4-D	129	167	77	46-120
2,4-DB	174	167	105	30-126
Dalapon	76.5	167	46	13-100
Dicamba	129	167	77	43-119
Dichlorprop	121	167	73	47-108
Dinoseb	107	167	64	25-110
MCPA	17700	16700	106	40-128
MCPD	17900	16700	108	49-134

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 11/23/21
Date Extracted: 10/20/21

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/L
Basis: NA
Analysis Lot: 747173

Lab Control Sample
KQ2120670-01

Duplicate Lab Control Sample
KQ2120670-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-T	1.61	2.50	64	1.62	2.50	65	30-120	<1	30
2,4,5-TP (Silvex)	1.66	2.50	66	1.67	2.50	67	37-114	<1	30
2,4-D	1.59	2.50	64	1.61	2.50	64	35-110	1	30
2,4-DB	1.61	2.50	64	1.90	2.50	76	10-134	17	30
Dalapon	0.794 P	2.50	32	0.955 P	2.50	38	14-110	18	30
Dicamba	1.65	2.50	66	1.66	2.50	66	30-108	<1	30
Dichlorprop	1.54	2.50	62	1.56	2.50	62	29-104	1	30
Dinoseb	1.30	2.50	52	1.38	2.50	55	11-105	6	30
MCPA	207	250	83	210	250	84	21-117	2	30
MCPD	197	250	79	208	250	83	16-141	6	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120356-03

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	4.0	129	142	10		1	11/30/21 22:13
2,4,5-TP (Silvex)	2.4	133	148	11		1	11/30/21 22:13
2,4-D	7.7	129	145	12		1	11/30/21 22:13
2,4-DB	5.4	174	181	4		1	11/30/21 22:13
Dalapon	5.5	76.5	99.6	26		1	11/30/21 22:13
Dicamba	4.3	129	148	14		1	11/30/21 22:13
Dichlorprop	3.4	121	159	27		1	11/30/21 22:13
Dinoseb	2.7	107	124	15		1	11/30/21 22:13
MCPA	320	17700	16300	8		1	11/30/21 22:13
MCPP	460	17900	15200	16		1	11/30/21 22:13

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2120670-01

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.61	1.72	7		1	11/23/21 10:17
2,4,5-TP (Silvex)	0.045	1.66	1.85	11		1	11/23/21 10:17
2,4-D	0.036	1.59	1.76	10		1	11/23/21 10:17
2,4-DB	0.10	1.61	2.39	39		1	11/23/21 10:17
Dalapon	0.28	0.794	1.70	73	P	1	11/23/21 10:17
Dicamba	0.025	1.65	1.78	8		1	11/23/21 10:17
Dichlorprop	0.030	1.54	1.83	17		1	11/23/21 10:17
Dinoseb	0.015	1.30	1.48	13		1	11/23/21 10:17
MCPA	8.7	207	225	8		1	11/23/21 10:17
MCPP	14	197	215	9		1	11/23/21 10:17

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2120670-02

Service Request: K2112198
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.62	1.73	7		1	11/23/21 10:42
2,4,5-TP (Silvex)	0.045	1.67	1.87	11		1	11/23/21 10:42
2,4-D	0.036	1.61	1.81	12		1	11/23/21 10:42
2,4-DB	0.10	1.90	2.39	23		1	11/23/21 10:42
Dalapon	0.28	0.955	1.49	44	P	1	11/23/21 10:42
Dicamba	0.025	1.66	1.80	8		1	11/23/21 10:42
Dichlorprop	0.030	1.56	1.84	16		1	11/23/21 10:42
Dinoseb	0.015	1.38	1.56	12		1	11/23/21 10:42
MCPA	8.7	210	219	4		1	11/23/21 10:42
MCPP	14	208	221	6		1	11/23/21 10:42



Volatile Organic Compounds by GC/MS, Unpreserved

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20

Sample Name: B 0-10 C
Lab Code: K2112198-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.8	0.13	1	10/25/21 16:00	*
1,1,1-Trichloroethane (TCA)	ND U	5.8	0.13	1	10/25/21 16:00	*
1,1,2,2-Tetrachloroethane	ND U	5.8	0.16	1	10/25/21 16:00	*
1,1,2-Trichloroethane	ND U	5.8	0.18	1	10/25/21 16:00	*
1,1-Dichloroethane	ND U	5.8	0.14	1	10/25/21 16:00	*
1,1-Dichloroethene	ND U	5.8	0.29	1	10/25/21 16:00	*
1,1-Dichloropropene	ND U	5.8	0.16	1	10/25/21 16:00	*
1,2,3-Trichlorobenzene	1.3 J	23	0.23	1	10/25/21 16:00	*
1,2,3-Trichloropropane	ND U	5.8	0.53	1	10/25/21 16:00	*
1,2,4-Trichlorobenzene	ND U	23	0.16	1	10/25/21 16:00	*
1,2,4-Trimethylbenzene	ND U	23	0.063	1	10/25/21 16:00	*
1,2-Dibromo-3-chloropropane	ND U	23	0.47	1	10/25/21 16:00	*
1,2-Dibromoethane (EDB)	ND U	23	0.11	1	10/25/21 16:00	*
1,2-Dichlorobenzene	ND U	5.8	0.090	1	10/25/21 16:00	*
1,2-Dichloroethane (EDC)	ND U	5.8	0.082	1	10/25/21 16:00	*
1,2-Dichloropropane	ND U	5.8	0.16	1	10/25/21 16:00	*
1,3,5-Trimethylbenzene	ND U	23	0.11	1	10/25/21 16:00	*
1,3-Dichlorobenzene	ND U	5.8	0.11	1	10/25/21 16:00	*
1,3-Dichloropropane	ND U	5.8	0.14	1	10/25/21 16:00	*
1,4-Dichlorobenzene	ND U	5.8	0.10	1	10/25/21 16:00	*
2,2-Dichloropropane	ND U	5.8	0.12	1	10/25/21 16:00	*
2-Butanone (MEK)	ND U	23	1.1	1	10/25/21 16:00	*
2-Chlorotoluene	ND U	23	0.14	1	10/25/21 16:00	*
2-Hexanone	ND U	23	1.1	1	10/25/21 16:00	*
4-Chlorotoluene	ND U	23	0.11	1	10/25/21 16:00	*
4-Isopropyltoluene	ND U	23	0.075	1	10/25/21 16:00	*
4-Methyl-2-pentanone (MIBK)	ND U	23	2.1	1	10/25/21 16:00	*
Acetone	12 J	23	3.4	1	10/25/21 16:00	*
Benzene	ND U	5.8	0.063	1	10/25/21 16:00	*
Bromobenzene	ND U	5.8	0.11	1	10/25/21 16:00	*
Bromochloromethane	ND U	5.8	0.28	1	10/25/21 16:00	*
Bromodichloromethane	ND U	5.8	0.19	1	10/25/21 16:00	*
Bromoform	ND U	5.8	0.17	1	10/25/21 16:00	*
Bromomethane	ND U	5.8	0.24	1	10/25/21 16:00	*
Carbon Disulfide	ND U	5.8	0.11	1	10/25/21 16:00	*
Carbon Tetrachloride	ND U	5.8	0.11	1	10/25/21 16:00	*
Chlorobenzene	ND U	5.8	0.076	1	10/25/21 16:00	*
Chloroethane	ND U	5.8	0.86	1	10/25/21 16:00	*
Chloroform	ND U	5.8	0.13	1	10/25/21 16:00	*
Chloromethane	ND U	5.8	0.21	1	10/25/21 16:00	*
Dibromochloromethane	ND U	5.8	0.21	1	10/25/21 16:00	*

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20

Sample Name: B 0-10 C
Lab Code: K2112198-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.8	0.33	1	10/25/21 16:00	*
Dichlorodifluoromethane	ND U	5.8	0.14	1	10/25/21 16:00	*
Ethylbenzene	ND U	5.8	0.11	1	10/25/21 16:00	*
Hexachlorobutadiene	ND U	23	0.47	1	10/25/21 16:00	*
Isopropylbenzene	ND U	23	0.094	1	10/25/21 16:00	*
Methylene Chloride	1.8 J	12	0.19	1	10/25/21 16:00	*
Naphthalene	1.8 J	23	0.16	1	10/25/21 16:00	*
Styrene	ND U	5.8	0.17	1	10/25/21 16:00	*
Tetrachloroethene (PCE)	ND U	5.8	0.19	1	10/25/21 16:00	*
Toluene	ND U	5.8	0.18	1	10/25/21 16:00	*
Trichloroethene (TCE)	ND U	5.8	0.18	1	10/25/21 16:00	*
Trichlorofluoromethane	ND U	5.8	0.099	1	10/25/21 16:00	*
Vinyl Chloride	ND U	5.8	0.21	1	10/25/21 16:00	*
cis-1,2-Dichloroethene	ND U	5.8	0.14	1	10/25/21 16:00	*
cis-1,3-Dichloropropene	ND U	5.8	0.16	1	10/25/21 16:00	*
m,p-Xylenes	ND U	5.8	0.12	1	10/25/21 16:00	*
n-Butylbenzene	ND U	23	0.081	1	10/25/21 16:00	*
n-Propylbenzene	ND U	23	0.16	1	10/25/21 16:00	*
o-Xylene	ND U	5.8	0.094	1	10/25/21 16:00	*
sec-Butylbenzene	ND U	23	0.086	1	10/25/21 16:00	*
tert-Butylbenzene	ND U	23	0.17	1	10/25/21 16:00	*
trans-1,2-Dichloroethene	ND U	5.8	0.14	1	10/25/21 16:00	*
trans-1,3-Dichloropropene	ND U	5.8	0.13	1	10/25/21 16:00	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	61 - 133	10/25/21 16:00	
Dibromofluoromethane	113	59 - 134	10/25/21 16:00	
Toluene-d8	98	77 - 122	10/25/21 16:00	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	6.3	0.14	1	10/25/21 16:21	*
1,1,1-Trichloroethane (TCA)	ND U	6.3	0.14	1	10/25/21 16:21	*
1,1,2,2-Tetrachloroethane	ND U	6.3	0.17	1	10/25/21 16:21	*
1,1,2-Trichloroethane	ND U	6.3	0.19	1	10/25/21 16:21	*
1,1-Dichloroethane	ND U	6.3	0.16	1	10/25/21 16:21	*
1,1-Dichloroethene	ND U	6.3	0.32	1	10/25/21 16:21	*
1,1-Dichloropropene	ND U	6.3	0.17	1	10/25/21 16:21	*
1,2,3-Trichlorobenzene	ND U	25	0.25	1	10/25/21 16:21	*
1,2,3-Trichloropropane	ND U	6.3	0.57	1	10/25/21 16:21	*
1,2,4-Trichlorobenzene	ND U	25	0.17	1	10/25/21 16:21	*
1,2,4-Trimethylbenzene	ND U	25	0.069	1	10/25/21 16:21	*
1,2-Dibromo-3-chloropropane	ND U	25	0.51	1	10/25/21 16:21	*
1,2-Dibromoethane (EDB)	ND U	25	0.12	1	10/25/21 16:21	*
1,2-Dichlorobenzene	ND U	6.3	0.098	1	10/25/21 16:21	*
1,2-Dichloroethane (EDC)	ND U	6.3	0.089	1	10/25/21 16:21	*
1,2-Dichloropropane	ND U	6.3	0.17	1	10/25/21 16:21	*
1,3,5-Trimethylbenzene	ND U	25	0.12	1	10/25/21 16:21	*
1,3-Dichlorobenzene	ND U	6.3	0.12	1	10/25/21 16:21	*
1,3-Dichloropropane	ND U	6.3	0.16	1	10/25/21 16:21	*
1,4-Dichlorobenzene	ND U	6.3	0.11	1	10/25/21 16:21	*
2,2-Dichloropropane	ND U	6.3	0.13	1	10/25/21 16:21	*
2-Butanone (MEK)	ND U	25	1.2	1	10/25/21 16:21	*
2-Chlorotoluene	ND U	25	0.16	1	10/25/21 16:21	*
2-Hexanone	ND U	25	1.2	1	10/25/21 16:21	*
4-Chlorotoluene	ND U	25	0.12	1	10/25/21 16:21	*
4-Isopropyltoluene	ND U	25	0.081	1	10/25/21 16:21	*
4-Methyl-2-pentanone (MIBK)	ND U	25	2.3	1	10/25/21 16:21	*
Acetone	8.4 J	25	3.7	1	10/25/21 16:21	*
Benzene	ND U	6.3	0.069	1	10/25/21 16:21	*
Bromobenzene	ND U	6.3	0.12	1	10/25/21 16:21	*
Bromochloromethane	ND U	6.3	0.31	1	10/25/21 16:21	*
Bromodichloromethane	ND U	6.3	0.21	1	10/25/21 16:21	*
Bromoform	ND U	6.3	0.18	1	10/25/21 16:21	*
Bromomethane	ND U	6.3	0.26	1	10/25/21 16:21	*
Carbon Disulfide	ND U	6.3	0.12	1	10/25/21 16:21	*
Carbon Tetrachloride	ND U	6.3	0.12	1	10/25/21 16:21	*
Chlorobenzene	ND U	6.3	0.083	1	10/25/21 16:21	*
Chloroethane	ND U	6.3	0.94	1	10/25/21 16:21	*
Chloroform	ND U	6.3	0.14	1	10/25/21 16:21	*
Chloromethane	ND U	6.3	0.23	1	10/25/21 16:21	*
Dibromochloromethane	ND U	6.3	0.23	1	10/25/21 16:21	*

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	6.3	0.36	1	10/25/21 16:21	*
Dichlorodifluoromethane	ND U	6.3	0.16	1	10/25/21 16:21	*
Ethylbenzene	ND U	6.3	0.12	1	10/25/21 16:21	*
Hexachlorobutadiene	ND U	25	0.51	1	10/25/21 16:21	*
Isopropylbenzene	ND U	25	0.11	1	10/25/21 16:21	*
Methylene Chloride	2.0 J	13	0.21	1	10/25/21 16:21	*
Naphthalene	ND U	25	0.17	1	10/25/21 16:21	*
Styrene	ND U	6.3	0.18	1	10/25/21 16:21	*
Tetrachloroethene (PCE)	ND U	6.3	0.21	1	10/25/21 16:21	*
Toluene	ND U	6.3	0.19	1	10/25/21 16:21	*
Trichloroethene (TCE)	ND U	6.3	0.19	1	10/25/21 16:21	*
Trichlorofluoromethane	ND U	6.3	0.11	1	10/25/21 16:21	*
Vinyl Chloride	ND U	6.3	0.23	1	10/25/21 16:21	*
cis-1,2-Dichloroethene	ND U	6.3	0.16	1	10/25/21 16:21	*
cis-1,3-Dichloropropene	ND U	6.3	0.17	1	10/25/21 16:21	*
m,p-Xylenes	ND U	6.3	0.13	1	10/25/21 16:21	*
n-Butylbenzene	ND U	25	0.088	1	10/25/21 16:21	*
n-Propylbenzene	ND U	25	0.17	1	10/25/21 16:21	*
o-Xylene	ND U	6.3	0.11	1	10/25/21 16:21	*
sec-Butylbenzene	ND U	25	0.094	1	10/25/21 16:21	*
tert-Butylbenzene	ND U	25	0.18	1	10/25/21 16:21	*
trans-1,2-Dichloroethene	ND U	6.3	0.16	1	10/25/21 16:21	*
trans-1,3-Dichloropropene	ND U	6.3	0.14	1	10/25/21 16:21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	61 - 133	10/25/21 16:21	
Dibromofluoromethane	101	59 - 134	10/25/21 16:21	
Toluene-d8	101	77 - 122	10/25/21 16:21	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		61-133	59-134	77-122
B 0-10 C	K2112198-003	96	113	98
B-31 20-25 C	K2112198-005	97	101	101
Method Blank	KQ2121180-05	95	99	99
Lab Control Sample	KQ2121180-03	98	115	101
Duplicate Lab Control Sample	KQ2121180-04	100	103	102
B-31 20-25 C	KQ2121180-06	98	106	103
B-31 20-25 C	KQ2121180-07	99	101	101

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: B-31 20-25 C
Lab Code: K2112198-005
Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2121180-06			Duplicate Matrix Spike KQ2121180-07			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	ND U	52.5	60.5	87	46.3	57.2	81	16-131	13	40
1,1,1-Trichloroethane (TCA)	ND U	54.3	60.5	90	47.4	57.2	83	26-144	14	40
1,1,2,2-Tetrachloroethane	ND U	40.4	60.5	67	37.8	57.2	66	10-153	7	40
1,1,2-Trichloroethane	ND U	48.3	60.5	80	43.7	57.2	76	35-130	10	40
1,1-Dichloroethane	ND U	48.7	60.5	80	50.0	57.2	87	31-135	3	40
1,1-Dichloroethene	ND U	58.2	60.5	96	50.4	57.2	88	31-153	14	40
1,1-Dichloropropene	ND U	52.2	60.5	86	45.6	57.2	80	25-143	14	40
1,2,3-Trichlorobenzene	ND U	42.1	60.5	70	39.6	57.2	69	10-118	6	40
1,2,3-Trichloropropane	ND U	41.3	60.5	68	39.9	57.2	70	23-149	3	40
1,2,4-Trichlorobenzene	ND U	44.3	60.5	73	41.1	57.2	72	10-121	7	40
1,2,4-Trimethylbenzene	ND U	46.7	60.5	77	42.1	57.2	74	10-142	10	40
1,2-Dibromo-3-chloropropane	ND U	43.1	60.5	71	42.2	57.2	74	10-146	2	40
1,2-Dibromoethane (EDB)	ND U	52.9	60.5	87	48.0	57.2	84	26-131	10	40
1,2-Dichlorobenzene	ND U	45.4	60.5	75	41.9	57.2	73	10-124	8	40
1,2-Dichloroethane (EDC)	ND U	50.9	60.5	84	45.7	57.2	80	32-134	11	40
1,2-Dichloropropane	ND U	46.6	60.5	77	41.9	57.2	73	31-132	10	40
1,3,5-Trimethylbenzene	ND U	46.3	60.5	77	41.8	57.2	73	10-160	10	40
1,3-Dichlorobenzene	ND U	44.5	60.5	73	40.1	57.2	70	10-126	10	40
1,3-Dichloropropane	ND U	49.6	60.5	82	44.7	57.2	78	32-133	10	40
1,4-Dichlorobenzene	ND U	44.2	60.5	73	40.1	57.2	70	10-123	10	40
2,2-Dichloropropane	ND U	50.9	60.5	84	45.1	57.2	79	34-140	12	40
2-Butanone (MEK)	ND U	85.0	121	70	77.4	114	68	27-113	9	40
2-Chlorotoluene	ND U	44.0	60.5	73	39.8	57.2	70	10-140	10	40
2-Hexanone	ND U	87.2	121	72	82.0	114	72	15-162	6	40
4-Chlorotoluene	ND U	44.3	60.5	73	40.1	57.2	70	10-134	10	40
4-Isopropyltoluene	ND U	47.3	60.5	78	42.4	57.2	74	10-126	11	40
4-Methyl-2-pentanone (MIBK)	ND U	84.2	121	70	77.3	114	68	30-129	9	40
Acetone	8.4 J	98.3	121	74	87.2	114	69	18-117	12	40
Benzene	ND U	48.7	60.5	80	42.6	57.2	74	30-137	13	40
Bromobenzene	ND U	47.6	60.5	79	43.1	57.2	75	13-134	10	40
Bromochloromethane	ND U	54.5	60.5	90	48.7	57.2	85	34-132	11	40
Bromodichloromethane	ND U	46.8	60.5	77	41.2	57.2	72	14-146	13	40
Bromoform	ND U	49.6	60.5	82	44.5	57.2	78	10-139	11	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: B-31 20-25 C
Lab Code: K2112198-005
Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2121180-06			Duplicate Matrix Spike KQ2121180-07			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Bromomethane	ND U	54.2	60.5	90	50.2	57.2	88	10-160	8	40
Carbon Disulfide	ND U	54.4	60.5	90	48.2	57.2	84	18-140	12	40
Carbon Tetrachloride	ND U	56.6	60.5	94	48.9	57.2	85	10-144	15	40
Chlorobenzene	ND U	48.5	60.5	80	44.2	57.2	77	15-124	9	40
Chloroethane	ND U	56.5	60.5	93	49.8	57.2	87	15-149	13	40
Chloroform	ND U	51.3	60.5	85	45.2	57.2	79	43-133	13	40
Chloromethane	ND U	52.7	60.5	87	47.9	57.2	84	30-133	10	40
Dibromochloromethane	ND U	52.5	60.5	87	48.9	57.2	85	21-132	7	40
Dibromomethane	ND U	51.3	60.5	85	45.6	57.2	80	41-127	12	40
Dichlorodifluoromethane	ND U	67.6	60.5	112	58.6	57.2	102	14-158	14	40
Ethylbenzene	ND U	51.9	60.5	86	46.0	57.2	80	13-128	12	40
Hexachlorobutadiene	ND U	48.8	60.5	81	41.2	57.2	72	10-114	17	40
Isopropylbenzene	ND U	49.9	60.5	82	44.4	57.2	78	10-153	12	40
Methylene Chloride	2.0 J	52.2	60.5	83	46.2	57.2	77	36-123	12	40
Naphthalene	ND U	41.8	60.5	69	40.3	57.2	70	10-127	4	40
Styrene	ND U	52.2	60.5	86	45.3	57.2	79	10-130	14	40
Tetrachloroethene (PCE)	ND U	53.8	60.5	89	47.4	57.2	83	10-132	13	40
Toluene	ND U	49.3	60.5	81	43.2	57.2	75	24-142	13	40
Trichloroethene (TCE)	ND U	50.5	60.5	83	44.3	57.2	77	18-145	13	40
Trichlorofluoromethane	ND U	62.9	60.5	104	53.8	57.2	94	20-137	16	40
Vinyl Chloride	ND U	58.1	60.5	96	51.0	57.2	89	31-140	13	40
cis-1,2-Dichloroethene	ND U	50.8	60.5	84	44.3	57.2	77	32-137	14	40
cis-1,3-Dichloropropene	ND U	46.2	60.5	76	42.3	57.2	74	20-132	9	40
m,p-Xylenes	ND U	103	121	85	92.1	114	80	10-139	11	40
n-Butylbenzene	ND U	46.2	60.5	76	41.2	57.2	72	10-125	12	40
n-Propylbenzene	ND U	47.3	60.5	78	42.3	57.2	74	10-145	11	40
o-Xylene	ND U	50.0	60.5	83	44.7	57.2	78	10-146	11	40
sec-Butylbenzene	ND U	45.9	60.5	76	40.6	57.2	71	10-141	12	40
tert-Butylbenzene	ND U	46.0	60.5	76	41.1	57.2	72	10-152	11	40
trans-1,2-Dichloroethene	ND U	49.0	60.5	81	49.4	57.2	86	29-139	<1	40
trans-1,3-Dichloropropene	ND U	48.1	60.5	80	44.7	57.2	78	19-125	7	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121180-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.0	0.11	1	10/25/21 14:57	
1,1,1-Trichloroethane (TCA)	ND U	5.0	0.11	1	10/25/21 14:57	
1,1,2,2-Tetrachloroethane	ND U	5.0	0.13	1	10/25/21 14:57	
1,1,2-Trichloroethane	ND U	5.0	0.15	1	10/25/21 14:57	
1,1-Dichloroethane	ND U	5.0	0.12	1	10/25/21 14:57	
1,1-Dichloroethene	ND U	5.0	0.25	1	10/25/21 14:57	
1,1-Dichloropropene	ND U	5.0	0.13	1	10/25/21 14:57	
1,2,3-Trichlorobenzene	ND U	20	0.19	1	10/25/21 14:57	
1,2,3-Trichloropropane	ND U	5.0	0.45	1	10/25/21 14:57	
1,2,4-Trichlorobenzene	ND U	20	0.13	1	10/25/21 14:57	
1,2,4-Trimethylbenzene	ND U	20	0.054	1	10/25/21 14:57	
1,2-Dibromo-3-chloropropane	ND U	20	0.40	1	10/25/21 14:57	
1,2-Dibromoethane (EDB)	ND U	20	0.094	1	10/25/21 14:57	
1,2-Dichlorobenzene	ND U	5.0	0.077	1	10/25/21 14:57	
1,2-Dichloroethane (EDC)	ND U	5.0	0.070	1	10/25/21 14:57	
1,2-Dichloropropane	ND U	5.0	0.13	1	10/25/21 14:57	
1,3,5-Trimethylbenzene	ND U	20	0.092	1	10/25/21 14:57	
1,3-Dichlorobenzene	ND U	5.0	0.094	1	10/25/21 14:57	
1,3-Dichloropropane	ND U	5.0	0.12	1	10/25/21 14:57	
1,4-Dichlorobenzene	ND U	5.0	0.086	1	10/25/21 14:57	
2,2-Dichloropropane	ND U	5.0	0.098	1	10/25/21 14:57	
2-Butanone (MEK)	ND U	20	0.90	1	10/25/21 14:57	
2-Chlorotoluene	ND U	20	0.12	1	10/25/21 14:57	
2-Hexanone	ND U	20	0.93	1	10/25/21 14:57	
4-Chlorotoluene	ND U	20	0.088	1	10/25/21 14:57	
4-Isopropyltoluene	ND U	20	0.064	1	10/25/21 14:57	
4-Methyl-2-pentanone (MIBK)	ND U	20	1.8	1	10/25/21 14:57	
Acetone	6.7 J	20	2.9	1	10/25/21 14:57	
Benzene	ND U	5.0	0.054	1	10/25/21 14:57	
Bromobenzene	ND U	5.0	0.088	1	10/25/21 14:57	
Bromochloromethane	ND U	5.0	0.24	1	10/25/21 14:57	
Bromodichloromethane	ND U	5.0	0.16	1	10/25/21 14:57	
Bromoform	ND U	5.0	0.14	1	10/25/21 14:57	
Bromomethane	ND U	5.0	0.20	1	10/25/21 14:57	
Carbon Disulfide	ND U	5.0	0.092	1	10/25/21 14:57	
Carbon Tetrachloride	ND U	5.0	0.094	1	10/25/21 14:57	
Chlorobenzene	ND U	5.0	0.065	1	10/25/21 14:57	
Chloroethane	ND U	5.0	0.74	1	10/25/21 14:57	
Chloroform	ND U	5.0	0.11	1	10/25/21 14:57	
Chloromethane	ND U	5.0	0.18	1	10/25/21 14:57	
Dibromochloromethane	ND U	5.0	0.18	1	10/25/21 14:57	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121180-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.0	0.28	1	10/25/21 14:57	
Dichlorodifluoromethane	ND U	5.0	0.12	1	10/25/21 14:57	
Ethylbenzene	ND U	5.0	0.094	1	10/25/21 14:57	
Hexachlorobutadiene	ND U	20	0.40	1	10/25/21 14:57	
Isopropylbenzene	ND U	20	0.081	1	10/25/21 14:57	
Methylene Chloride	1.2 J	10	0.16	1	10/25/21 14:57	
Naphthalene	ND U	20	0.13	1	10/25/21 14:57	
Styrene	ND U	5.0	0.14	1	10/25/21 14:57	
Tetrachloroethene (PCE)	ND U	5.0	0.16	1	10/25/21 14:57	
Toluene	ND U	5.0	0.15	1	10/25/21 14:57	
Trichloroethene (TCE)	ND U	5.0	0.15	1	10/25/21 14:57	
Trichlorofluoromethane	ND U	5.0	0.085	1	10/25/21 14:57	
Vinyl Chloride	ND U	5.0	0.18	1	10/25/21 14:57	
cis-1,2-Dichloroethene	ND U	5.0	0.12	1	10/25/21 14:57	
cis-1,3-Dichloropropene	ND U	5.0	0.13	1	10/25/21 14:57	
m,p-Xylenes	ND U	5.0	0.10	1	10/25/21 14:57	
n-Butylbenzene	ND U	20	0.069	1	10/25/21 14:57	
n-Propylbenzene	ND U	20	0.13	1	10/25/21 14:57	
o-Xylene	ND U	5.0	0.081	1	10/25/21 14:57	
sec-Butylbenzene	ND U	20	0.074	1	10/25/21 14:57	
tert-Butylbenzene	ND U	20	0.14	1	10/25/21 14:57	
trans-1,2-Dichloroethene	ND U	5.0	0.12	1	10/25/21 14:57	
trans-1,3-Dichloropropene	ND U	5.0	0.11	1	10/25/21 14:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	61 - 133	10/25/21 14:57	
Dibromofluoromethane	99	59 - 134	10/25/21 14:57	
Toluene-d8	99	77 - 122	10/25/21 14:57	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 743676

Analyte Name	Lab Control Sample KQ2121180-03			Duplicate Lab Control Sample KQ2121180-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	48.1	50.0	96	47.8	50.0	96	71-119	<1	40
1,1,1-Trichloroethane (TCA)	54.6	50.0	109	49.5	50.0	99	59-146	10	40
1,1,2,2-Tetrachloroethane	38.2	50.0	76	40.1	50.0	80	60-128	5	40
1,1,2-Trichloroethane	44.2	50.0	88	44.3	50.0	89	72-118	<1	40
1,1-Dichloroethane	50.7	50.0	101	44.3	50.0	89	59-137	14	40
1,1-Dichloroethene	52.2	50.0	104	51.8	50.0	104	64-152	<1	40
1,1-Dichloropropene	53.8	50.0	108	46.3	50.0	93	52-142	15	40
1,2,3-Trichlorobenzene	42.9	50.0	86	40.9	50.0	82	52-138	5	40
1,2,3-Trichloropropane	39.6	50.0	79	41.5	50.0	83	53-134	5	40
1,2,4-Trichlorobenzene	44.2	50.0	88	42.0	50.0	84	57-136	5	40
1,2,4-Trimethylbenzene	43.7	50.0	87	42.9	50.0	86	65-132	2	40
1,2-Dibromo-3-chloropropane	44.2	50.0	88	44.3	50.0	89	55-127	<1	40
1,2-Dibromoethane (EDB)	49.1	50.0	98	49.0	50.0	98	71-116	<1	40
1,2-Dichlorobenzene	42.6	50.0	85	42.3	50.0	85	67-124	<1	40
1,2-Dichloroethane (EDC)	45.9	50.0	92	47.4	50.0	95	65-121	3	40
1,2-Dichloropropane	41.9	50.0	84	42.8	50.0	86	71-121	2	40
1,3,5-Trimethylbenzene	42.3	50.0	85	42.6	50.0	85	66-132	<1	40
1,3-Dichlorobenzene	42.1	50.0	84	41.2	50.0	82	69-128	2	40
1,3-Dichloropropane	45.2	50.0	90	46.2	50.0	92	72-118	2	40
1,4-Dichlorobenzene	42.0	50.0	84	41.3	50.0	83	69-125	2	40
2,2-Dichloropropane	55.3	50.0	111	49.4	50.0	99	50-138	11	40
2-Butanone (MEK)	98.4	100	98	83.7	100	84	54-116	16	40
2-Chlorotoluene	40.8	50.0	82	41.0	50.0	82	65-129	<1	40
2-Hexanone	84.6	100	85	92.7	100	93	67-121	9	40
4-Chlorotoluene	41.5	50.0	83	40.7	50.0	81	51-134	2	40
4-Isopropyltoluene	44.7	50.0	89	43.8	50.0	88	61-132	2	40
4-Methyl-2-pentanone (MIBK)	83.5	100	84	83.0	100	83	69-126	<1	40
Acetone	95.9	100	96	98.4	100	98	32-135	3	40
Benzene	42.9	50.0	86	43.6	50.0	87	68-122	2	40
Bromobenzene	44.4	50.0	89	43.8	50.0	88	71-124	1	40
Bromochloromethane	55.3	50.0	111	49.2	50.0	98	65-131	12	40
Bromodichloromethane	41.8	50.0	84	43.0	50.0	86	61-143	3	40
Bromoform	46.6	50.0	93	49.6	50.0	99	62-134	6	40
Bromomethane	48.5	50.0	97	51.1	50.0	102	22-180	5	40
Carbon Disulfide	49.4	50.0	99	50.3	50.0	101	55-141	2	40
Carbon Tetrachloride	57.1	50.0	114	51.7	50.0	103	51-135	10	40
Chlorobenzene	45.4	50.0	91	45.1	50.0	90	70-116	<1	40
Chloroethane	50.6	50.0	101	51.3	50.0	103	51-122	1	40
Chloroform	52.3	50.0	105	47.2	50.0	94	61-137	10	40
Chloromethane	47.8	50.0	96	47.8	50.0	96	37-146	<1	40
cis-1,2-Dichloroethene	52.4	50.0	105	45.7	50.0	91	62-138	14	40

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 743676

Analyte Name	Lab Control Sample KQ2121180-03			Duplicate Lab Control Sample KQ2121180-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	42.8	50.0	86	43.2	50.0	86	58-138	<1	40
Dibromochloromethane	49.7	50.0	99	50.7	50.0	101	69-120	2	40
Dibromomethane	46.0	50.0	92	46.7	50.0	93	68-125	1	40
Dichlorodifluoromethane	61.2	50.0	122	60.2	50.0	120	38-160	2	40
Ethylbenzene	48.6	50.0	97	47.4	50.0	95	70-118	2	40
Hexachlorobutadiene	48.9	50.0	98	47.3	50.0	95	54-140	3	40
Isopropylbenzene	46.3	50.0	93	46.5	50.0	93	67-133	<1	40
m,p-Xylenes	95.4	100	95	94.4	100	94	69-127	1	40
Methylene Chloride	45.2	50.0	90	46.6	50.0	93	65-122	3	40
Naphthalene	42.4	50.0	85	42.7	50.0	85	54-134	<1	40
n-Butylbenzene	44.1	50.0	88	42.9	50.0	86	53-139	3	40
n-Propylbenzene	44.1	50.0	88	43.3	50.0	87	57-143	2	40
o-Xylene	45.7	50.0	91	45.7	50.0	91	69-124	<1	40
sec-Butylbenzene	42.8	50.0	86	42.2	50.0	84	55-146	1	40
Styrene	47.8	50.0	96	47.3	50.0	95	62-135	<1	40
tert-Butylbenzene	43.0	50.0	86	42.9	50.0	86	67-131	<1	40
Tetrachloroethene (PCE)	49.3	50.0	99	48.5	50.0	97	66-126	2	40
Toluene	44.3	50.0	89	44.8	50.0	90	75-117	1	40
trans-1,2-Dichloroethene	51.4	50.0	103	51.2	50.0	102	63-127	<1	40
trans-1,3-Dichloropropene	45.3	50.0	91	46.9	50.0	94	63-121	3	40
Trichloroethene (TCE)	46.0	50.0	92	46.1	50.0	92	67-126	<1	40
Trichlorofluoromethane	56.9	50.0	114	55.8	50.0	112	51-140	2	40
Vinyl Chloride	50.8	50.0	102	52.3	50.0	105	54-127	3	40



Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Sample Name: B31
Lab Code: K2112198-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	9.0 J	20	3.3	1	10/22/21 14:54	*
Benzene	ND U	0.50	0.062	1	10/22/21 14:54	
Bromobenzene	ND U	2.0	0.12	1	10/22/21 14:54	
Bromochloromethane	ND U	0.50	0.16	1	10/22/21 14:54	
Bromodichloromethane	ND U	0.50	0.091	1	10/22/21 14:54	
Bromoform	ND U	0.50	0.16	1	10/22/21 14:54	
Bromomethane	ND U	0.50	0.16	1	10/22/21 14:54	
2-Butanone (MEK)	ND U	20	1.9	1	10/22/21 14:54	*
n-Butylbenzene	ND U	4.0	0.054	1	10/22/21 14:54	
sec-Butylbenzene	ND U	2.0	0.062	1	10/22/21 14:54	
tert-Butylbenzene	ND U	2.0	0.059	1	10/22/21 14:54	
Carbon Disulfide	ND U	0.50	0.069	1	10/22/21 14:54	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/22/21 14:54	
Chlorobenzene	ND U	0.50	0.11	1	10/22/21 14:54	
Chloroethane	ND U	0.50	0.16	1	10/22/21 14:54	
Chloroform	ND U	0.50	0.072	1	10/22/21 14:54	
Chloromethane	ND U	0.50	0.068	1	10/22/21 14:54	*
2-Chlorotoluene	ND U	2.0	0.10	1	10/22/21 14:54	
4-Chlorotoluene	ND U	2.0	0.13	1	10/22/21 14:54	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/22/21 14:54	
Dibromochloromethane	ND U	0.50	0.14	1	10/22/21 14:54	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/22/21 14:54	
Dibromomethane	ND U	0.50	0.15	1	10/22/21 14:54	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/22/21 14:54	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/22/21 14:54	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/22/21 14:54	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/22/21 14:54	
1,1-Dichloroethane	ND U	0.50	0.077	1	10/22/21 14:54	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/22/21 14:54	
1,1-Dichloroethene	ND U	0.50	0.080	1	10/22/21 14:54	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/22/21 14:54	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/22/21 14:54	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/22/21 14:54	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/22/21 14:54	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/22/21 14:54	*
1,1-Dichloropropene	ND U	0.50	0.089	1	10/22/21 14:54	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/22/21 14:54	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/22/21 14:54	
Ethylbenzene	ND U	0.50	0.050	1	10/22/21 14:54	
Hexachlorobutadiene	ND U	2.0	0.11	1	10/22/21 14:54	
2-Hexanone	ND U	20	2.7	1	10/22/21 14:54	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Sample Name: B31
Lab Code: K2112198-006

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/22/21 14:54	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/22/21 14:54	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/22/21 14:54	
Methylene Chloride	ND U	2.0	0.10	1	10/22/21 14:54	
Naphthalene	ND U	2.0	0.088	1	10/22/21 14:54	
n-Propylbenzene	ND U	2.0	0.054	1	10/22/21 14:54	
Styrene	ND U	0.50	0.089	1	10/22/21 14:54	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/22/21 14:54	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/22/21 14:54	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/22/21 14:54	
Toluene	0.13 J	0.50	0.054	1	10/22/21 14:54	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	10/22/21 14:54	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	10/22/21 14:54	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/22/21 14:54	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/22/21 14:54	
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/22/21 14:54	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/22/21 14:54	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/22/21 14:54	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/22/21 14:54	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/22/21 14:54	
Vinyl Chloride	ND U	0.50	0.075	1	10/22/21 14:54	
o-Xylene	ND U	0.50	0.074	1	10/22/21 14:54	
m,p-Xylenes	ND U	0.50	0.11	1	10/22/21 14:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	68 - 117	10/22/21 14:54	
Dibromofluoromethane	104	73 - 122	10/22/21 14:54	
Toluene-d8	100	65 - 144	10/22/21 14:54	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Sample Name: Trip Blank
Lab Code: K2112198-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	7.4 J	20	3.3	1	10/22/21 15:17	*
Benzene	ND U	0.50	0.062	1	10/22/21 15:17	
Bromobenzene	ND U	2.0	0.12	1	10/22/21 15:17	
Bromochloromethane	ND U	0.50	0.16	1	10/22/21 15:17	
Bromodichloromethane	ND U	0.50	0.091	1	10/22/21 15:17	
Bromoform	ND U	0.50	0.16	1	10/22/21 15:17	
Bromomethane	ND U	0.50	0.16	1	10/22/21 15:17	
2-Butanone (MEK)	ND U	20	1.9	1	10/22/21 15:17	*
n-Butylbenzene	ND U	4.0	0.054	1	10/22/21 15:17	
sec-Butylbenzene	ND U	2.0	0.062	1	10/22/21 15:17	
tert-Butylbenzene	ND U	2.0	0.059	1	10/22/21 15:17	
Carbon Disulfide	ND U	0.50	0.069	1	10/22/21 15:17	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/22/21 15:17	
Chlorobenzene	ND U	0.50	0.11	1	10/22/21 15:17	
Chloroethane	ND U	0.50	0.16	1	10/22/21 15:17	
Chloroform	ND U	0.50	0.072	1	10/22/21 15:17	
Chloromethane	ND U	0.50	0.068	1	10/22/21 15:17	*
2-Chlorotoluene	ND U	2.0	0.10	1	10/22/21 15:17	
4-Chlorotoluene	ND U	2.0	0.13	1	10/22/21 15:17	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/22/21 15:17	
Dibromochloromethane	ND U	0.50	0.14	1	10/22/21 15:17	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/22/21 15:17	
Dibromomethane	ND U	0.50	0.15	1	10/22/21 15:17	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/22/21 15:17	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/22/21 15:17	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/22/21 15:17	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/22/21 15:17	
1,1-Dichloroethane	ND U	0.50	0.077	1	10/22/21 15:17	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/22/21 15:17	
1,1-Dichloroethene	ND U	0.50	0.080	1	10/22/21 15:17	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/22/21 15:17	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/22/21 15:17	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/22/21 15:17	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/22/21 15:17	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/22/21 15:17	*
1,1-Dichloropropene	ND U	0.50	0.089	1	10/22/21 15:17	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/22/21 15:17	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/22/21 15:17	
Ethylbenzene	ND U	0.50	0.050	1	10/22/21 15:17	
Hexachlorobutadiene	ND U	2.0	0.11	1	10/22/21 15:17	
2-Hexanone	ND U	20	2.7	1	10/22/21 15:17	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Sample Name: Trip Blank
Lab Code: K2112198-007

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/22/21 15:17	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/22/21 15:17	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/22/21 15:17	
Methylene Chloride	ND U	2.0	0.10	1	10/22/21 15:17	
Naphthalene	ND U	2.0	0.088	1	10/22/21 15:17	
n-Propylbenzene	ND U	2.0	0.054	1	10/22/21 15:17	
Styrene	ND U	0.50	0.089	1	10/22/21 15:17	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/22/21 15:17	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/22/21 15:17	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/22/21 15:17	
Toluene	0.50	0.50	0.054	1	10/22/21 15:17	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	10/22/21 15:17	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	10/22/21 15:17	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/22/21 15:17	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/22/21 15:17	
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/22/21 15:17	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/22/21 15:17	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/22/21 15:17	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/22/21 15:17	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/22/21 15:17	
Vinyl Chloride	ND U	0.50	0.075	1	10/22/21 15:17	
o-Xylene	ND U	0.50	0.074	1	10/22/21 15:17	
m,p-Xylenes	ND U	0.50	0.11	1	10/22/21 15:17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	68 - 117	10/22/21 15:17	
Dibromofluoromethane	104	73 - 122	10/22/21 15:17	
Toluene-d8	99	65 - 144	10/22/21 15:17	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
B31	K2112198-006	95	104	100
Trip Blank	K2112198-007	94	104	99
Method Blank	KQ2121024-05	95	105	99
Lab Control Sample	KQ2121024-03	101	101	102
Duplicate Lab Control Sample	KQ2121024-04	101	100	100

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121024-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	ND U	20	3.3	1	10/22/21 11:51	
Benzene	ND U	0.50	0.062	1	10/22/21 11:51	
Bromobenzene	ND U	2.0	0.12	1	10/22/21 11:51	
Bromochloromethane	ND U	0.50	0.16	1	10/22/21 11:51	
Bromodichloromethane	ND U	0.50	0.091	1	10/22/21 11:51	
Bromoform	ND U	0.50	0.16	1	10/22/21 11:51	
Bromomethane	ND U	0.50	0.16	1	10/22/21 11:51	
2-Butanone (MEK)	ND U	20	1.9	1	10/22/21 11:51	
n-Butylbenzene	ND U	4.0	0.054	1	10/22/21 11:51	
sec-Butylbenzene	ND U	2.0	0.062	1	10/22/21 11:51	
tert-Butylbenzene	ND U	2.0	0.059	1	10/22/21 11:51	
Carbon Disulfide	ND U	0.50	0.069	1	10/22/21 11:51	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/22/21 11:51	
Chlorobenzene	ND U	0.50	0.11	1	10/22/21 11:51	
Chloroethane	ND U	0.50	0.16	1	10/22/21 11:51	
Chloroform	ND U	0.50	0.072	1	10/22/21 11:51	
Chloromethane	ND U	0.50	0.068	1	10/22/21 11:51	
2-Chlorotoluene	ND U	2.0	0.10	1	10/22/21 11:51	
4-Chlorotoluene	ND U	2.0	0.13	1	10/22/21 11:51	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/22/21 11:51	
Dibromochloromethane	ND U	0.50	0.14	1	10/22/21 11:51	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/22/21 11:51	
Dibromomethane	ND U	0.50	0.15	1	10/22/21 11:51	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/22/21 11:51	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/22/21 11:51	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/22/21 11:51	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/22/21 11:51	
1,1-Dichloroethane	ND U	0.50	0.077	1	10/22/21 11:51	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/22/21 11:51	
1,1-Dichloroethene	ND U	0.50	0.080	1	10/22/21 11:51	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/22/21 11:51	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/22/21 11:51	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/22/21 11:51	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/22/21 11:51	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/22/21 11:51	
1,1-Dichloropropene	ND U	0.50	0.089	1	10/22/21 11:51	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/22/21 11:51	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/22/21 11:51	
Ethylbenzene	ND U	0.50	0.050	1	10/22/21 11:51	
Hexachlorobutadiene	ND U	2.0	0.11	1	10/22/21 11:51	
2-Hexanone	ND U	20	2.7	1	10/22/21 11:51	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121024-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/22/21 11:51	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/22/21 11:51	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/22/21 11:51	
Methylene Chloride	0.12 J	2.0	0.10	1	10/22/21 11:51	
Naphthalene	ND U	2.0	0.088	1	10/22/21 11:51	
n-Propylbenzene	ND U	2.0	0.054	1	10/22/21 11:51	
Styrene	ND U	0.50	0.089	1	10/22/21 11:51	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/22/21 11:51	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/22/21 11:51	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/22/21 11:51	
Toluene	ND U	0.50	0.054	1	10/22/21 11:51	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	10/22/21 11:51	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	10/22/21 11:51	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/22/21 11:51	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/22/21 11:51	
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/22/21 11:51	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/22/21 11:51	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/22/21 11:51	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/22/21 11:51	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/22/21 11:51	
Vinyl Chloride	ND U	0.50	0.075	1	10/22/21 11:51	
o-Xylene	ND U	0.50	0.074	1	10/22/21 11:51	
m,p-Xylenes	ND U	0.50	0.11	1	10/22/21 11:51	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	68 - 117	10/22/21 11:51	
Dibromofluoromethane	105	73 - 122	10/22/21 11:51	
Toluene-d8	99	65 - 144	10/22/21 11:51	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 10/22/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 743461

Analyte Name	Lab Control Sample KQ2121024-03			Duplicate Lab Control Sample KQ2121024-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	10.5	10.0	105	10.5	10.0	105	66-124	<1	30
1,1,1-Trichloroethane (TCA)	11.0	10.0	110	11.2	10.0	112	59-136	2	30
1,1,2,2-Tetrachloroethane	8.94	10.0	89	9.09	10.0	91	70-127	2	30
1,1,2-Trichloroethane	8.74	10.0	87	9.29	10.0	93	74-118	6	30
1,1-Dichloroethane	9.56	10.0	96	9.51	10.0	95	68-132	<1	30
1,1-Dichloroethene	8.83	10.0	88	8.87	10.0	89	66-129	<1	30
1,1-Dichloropropene	9.55	10.0	96	9.68	10.0	97	59-134	1	30
1,2,3-Trichlorobenzene	8.90	10.0	89	9.24	10.0	92	68-120	4	30
1,2,3-Trichloropropane	9.15	10.0	92	8.77	10.0	88	69-123	4	30
1,2,4-Trichlorobenzene	8.74	10.0	87	9.10	10.0	91	58-126	4	30
1,2,4-Trimethylbenzene	10.2	10.0	102	9.95	10.0	100	63-122	2	30
1,2-Dibromo-3-chloropropane	8.82	10.0	88	9.30	10.0	93	55-132	5	30
1,2-Dibromoethane (EDB)	9.26	10.0	93	9.53	10.0	95	74-118	3	30
1,2-Dichlorobenzene	8.90	10.0	89	9.18	10.0	92	72-115	3	30
1,2-Dichloroethane (EDC)	9.35	10.0	94	9.31	10.0	93	56-142	<1	30
1,2-Dichloropropane	8.81	10.0	88	9.07	10.0	91	67-126	3	30
1,3,5-Trimethylbenzene	10.8	10.0	108	10.7	10.0	107	62-126	<1	30
1,3-Dichlorobenzene	8.75	10.0	88	8.76	10.0	88	70-116	<1	30
1,3-Dichloropropane	9.18	10.0	92	9.41	10.0	94	75-116	2	30
1,4-Dichlorobenzene	8.91	10.0	89	8.61	10.0	86	73-115	3	30
2,2-Dichloropropane	12.9	10.0	129	13.0	10.0	130	37-145	<1	30
2-Butanone (MEK)	37.5	50.0	75	39.7	50.0	79	71-149	6	30
2-Chlorotoluene	9.70	10.0	97	9.49	10.0	95	55-131	2	30
2-Hexanone	38.5	50.0	77	41.9	50.0	84	59-131	9	30
4-Chlorotoluene	9.39	10.0	94	9.19	10.0	92	66-121	2	30
4-Isopropyltoluene	10.7	10.0	107	10.5	10.0	105	61-128	2	30
4-Methyl-2-pentanone (MIBK)	42.3	50.0	85	44.7	50.0	89	64-134	5	30
Acetone	36.4	50.0	73	38.4	50.0	77	68-135	5	30
Benzene	9.48	10.0	95	9.63	10.0	96	69-124	2	30
Bromobenzene	9.66	10.0	97	9.57	10.0	96	72-116	<1	30
Bromochloromethane	9.74	10.0	97	9.74	10.0	97	75-131	<1	30
Bromodichloromethane	9.29	10.0	93	9.46	10.0	95	63-129	2	30
Bromoform	9.54	10.0	95	10.4	10.0	104	52-144	9	30
Bromomethane	7.79	10.0	78	7.94	10.0	79	35-113	2	30
Carbon Disulfide	15.0	20.0	75	15.1	20.0	75	46-144	<1	30
Carbon Tetrachloride	10.5	10.0	105	10.7	10.0	107	55-140	2	30
Chlorobenzene	9.52	10.0	95	9.61	10.0	96	72-116	<1	30
Chloroethane	7.83	10.0	78	7.52	10.0	75	58-134	4	30
Chloroform	9.00	10.0	90	9.29	10.0	93	70-129	3	30
Chloromethane	6.80	10.0	68	6.35	10.0	64	34-130	7	30
cis-1,2-Dichloroethene	9.24	10.0	92	9.45	10.0	95	71-118	2	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 10/22/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 743461

Analyte Name	Lab Control Sample KQ2121024-03			Duplicate Lab Control Sample KQ2121024-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	10.5	10.0	105	10.9	10.0	109	62-132	3	30
Dibromochloromethane	9.79	10.0	98	9.83	10.0	98	67-126	<1	30
Dibromomethane	8.98	10.0	90	9.49	10.0	95	69-128	6	30
Dichlorodifluoromethane	6.58	10.0	66	6.55	10.0	66	32-124	<1	30
Ethylbenzene	10.4	10.0	104	10.4	10.0	104	67-121	<1	30
Hexachlorobutadiene	10.1	10.0	101	10.4	10.0	104	57-119	3	30
Isopropylbenzene	10.9	10.0	109	11.0	10.0	110	67-129	1	30
m,p-Xylenes	21.0	20.0	105	21.3	20.0	107	69-121	2	30
Methylene Chloride	8.75	10.0	88	8.35	10.0	84	71-122	5	30
Naphthalene	8.62	10.0	86	9.31	10.0	93	64-126	8	30
n-Butylbenzene	9.96	10.0	100	9.83	10.0	98	55-130	1	30
n-Propylbenzene	10.2	10.0	102	10.0	10.0	100	61-124	2	30
o-Xylene	10.3	10.0	103	10.8	10.0	108	71-119	5	30
sec-Butylbenzene	10.9	10.0	109	10.8	10.0	108	59-128	1	30
Styrene	9.90	10.0	99	9.86	10.0	99	74-121	<1	30
tert-Butylbenzene	11.0	10.0	110	11.0	10.0	110	61-127	<1	30
Tetrachloroethene (PCE)	10.5	10.0	105	10.6	10.0	106	62-126	<1	30
Toluene	9.65	10.0	97	9.73	10.0	97	69-124	<1	30
trans-1,2-Dichloroethene	9.09	10.0	91	9.48	10.0	95	67-125	4	30
trans-1,3-Dichloropropene	10.8	10.0	108	11.0	10.0	110	59-125	2	30
Trichloroethene (TCE)	9.34	10.0	93	9.36	10.0	94	67-128	<1	30
Trichlorofluoromethane (CFC 11)	9.93	10.0	99	9.88	10.0	99	52-141	<1	30
Vinyl Chloride	7.93	10.0	79	8.05	10.0	81	55-123	2	30



Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Sample Name: B31
Lab Code: K2112198-006

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	3.2	0.40	1	11/17/21 18:21	11/9/21	*
Acenaphthene	ND U	3.2	0.36	1	11/17/21 18:21	11/9/21	*
Acenaphthylene	ND U	3.2	0.37	1	11/17/21 18:21	11/9/21	*
Anthracene	1.3 J	3.2	0.29	1	11/17/21 18:21	11/9/21	*
Benz(a)anthracene	0.74 J	3.2	0.34	1	11/17/21 18:21	11/9/21	*
Benzo(a)pyrene	ND U	3.2	0.41	1	11/17/21 18:21	11/9/21	*
Benzo(b)fluoranthene	44 X	3.2	0.25	1	11/17/21 18:21	11/9/21	*
Benzo(g,h,i)perylene	1.1 J	3.2	0.36	1	11/17/21 18:21	11/9/21	*
Benzo(k)fluoranthene	88	3.2	0.41	1	11/17/21 18:21	11/9/21	*
Chrysene	1.5 J	3.2	0.65	1	11/17/21 18:21	11/9/21	*
Dibenz(a,h)anthracene	ND U	3.2	0.45	1	11/17/21 18:21	11/9/21	*
Dibenzofuran	ND U	3.2	0.42	1	11/17/21 18:21	11/9/21	*
Fluoranthene	3.7	3.2	0.46	1	11/17/21 18:21	11/9/21	*
Fluorene	1.8 J	3.2	0.42	1	11/17/21 18:21	11/9/21	*
Indeno(1,2,3-cd)pyrene	ND U	3.2	0.44	1	11/17/21 18:21	11/9/21	*
Naphthalene	6.8	3.2	0.71	1	11/17/21 18:21	11/9/21	*
Phenanthrene	6.0	3.2	0.72	1	11/17/21 18:21	11/9/21	*
Pyrene	5.5	3.2	0.78	1	11/17/21 18:21	11/9/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	78	39 - 123	11/17/21 18:21	
Fluorene-d10	77	28 - 125	11/17/21 18:21	
Terphenyl-d14	71	22 - 127	11/17/21 18:21	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		39-123	28-125	22-127
B31	K2112198-006	78	77	71
Method Blank	KQ2122015-03	90	80	89
Lab Control Sample	KQ2122015-01	85	73	82
Duplicate Lab Control Sample	KQ2122015-02	83	74	81

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2122015-03

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	3.2	0.40	1	11/17/21 16:31	11/9/21	
Acenaphthene	ND U	3.2	0.36	1	11/17/21 16:31	11/9/21	
Acenaphthylene	ND U	3.2	0.37	1	11/17/21 16:31	11/9/21	
Anthracene	ND U	3.2	0.29	1	11/17/21 16:31	11/9/21	
Benz(a)anthracene	ND U	3.2	0.34	1	11/17/21 16:31	11/9/21	
Benzo(a)pyrene	ND U	3.2	0.41	1	11/17/21 16:31	11/9/21	
Benzo(b)fluoranthene	ND U	3.2	0.25	1	11/17/21 16:31	11/9/21	
Benzo(g,h,i)perylene	ND U	3.2	0.36	1	11/17/21 16:31	11/9/21	
Benzo(k)fluoranthene	ND U	3.2	0.41	1	11/17/21 16:31	11/9/21	
Chrysene	ND U	3.2	0.65	1	11/17/21 16:31	11/9/21	
Dibenz(a,h)anthracene	ND U	3.2	0.45	1	11/17/21 16:31	11/9/21	
Dibenzofuran	ND U	3.2	0.42	1	11/17/21 16:31	11/9/21	
Fluoranthene	ND U	3.2	0.46	1	11/17/21 16:31	11/9/21	
Fluorene	ND U	3.2	0.42	1	11/17/21 16:31	11/9/21	
Indeno(1,2,3-cd)pyrene	ND U	3.2	0.44	1	11/17/21 16:31	11/9/21	
Naphthalene	ND U	3.2	0.71	1	11/17/21 16:31	11/9/21	
Phenanthrene	1.2 J	3.2	0.72	1	11/17/21 16:31	11/9/21	
Pyrene	ND U	3.2	0.78	1	11/17/21 16:31	11/9/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	90	39 - 123	11/17/21 16:31	
Fluorene-d10	80	28 - 125	11/17/21 16:31	
Terphenyl-d14	89	22 - 127	11/17/21 16:31	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 11/17/21
Date Extracted: 11/09/21

Duplicate Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ng/L
Basis: NA
Analysis Lot: 746531

Lab Control Sample
KQ2122015-01

Duplicate Lab Control Sample
KQ2122015-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2-Methylnaphthalene	387	500	77	399	500	80	42-108	3	30
Acenaphthene	390	500	78	400	500	80	58-98	3	30
Acenaphthylene	396	500	79	412	500	82	61-102	4	30
Anthracene	404	500	81	411	500	82	65-98	2	30
Benz(a)anthracene	417	500	83	413	500	83	67-96	<1	30
Benzo(a)pyrene	438	500	88	440	500	88	68-107	<1	30
Benzo(b)fluoranthene	462	500	92	463	500	93	69-104	<1	30
Benzo(g,h,i)perylene	436	500	87	436	500	87	61-110	<1	30
Benzo(k)fluoranthene	448	500	90	448	500	90	68-108	<1	30
Chrysene	391	500	78	387	500	77	67-105	<1	30
Dibenz(a,h)anthracene	446	500	89	445	500	89	54-118	<1	30
Dibenzofuran	378	500	76	392	500	78	52-103	4	30
Fluoranthene	437	500	87	445	500	89	63-106	2	30
Fluorene	378	500	76	394	500	79	59-97	4	30
Indeno(1,2,3-cd)pyrene	463	500	93	462	500	92	61-115	<1	30
Naphthalene	390	500	78	414	500	83	59-95	6	30
Phenanthrene	412	500	82	414	500	83	61-100	<1	30
Pyrene	404	500	81	403	500	81	64-104	<1	30



Polycyclic Aromatic Hydrocarbons by GC/MS SIM

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20

Sample Name: B 0-10 C
Lab Code: K2112198-003

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.87 J	6.3	0.47	1	11/11/21 20:41	10/26/21	
Acenaphthene	0.39 J	6.3	0.38	1	11/11/21 20:41	10/26/21	
Acenaphthylene	0.58 J	6.3	0.36	1	11/11/21 20:41	10/26/21	
Anthracene	0.71 J	6.3	0.37	1	11/11/21 20:41	10/26/21	
Benz(a)anthracene	2.2 J	6.3	0.30	1	11/11/21 20:41	10/26/21	
Benzo(a)pyrene	2.5 J	6.3	0.48	1	11/11/21 20:41	10/26/21	
Benzo(b)fluoranthene	2.4 J	6.3	0.48	1	11/11/21 20:41	10/26/21	
Benzo(g,h,i)perylene	2.3 J	6.3	0.51	1	11/11/21 20:41	10/26/21	
Benzo(k)fluoranthene	2.0 J	6.3	0.31	1	11/11/21 20:41	10/26/21	
Chrysene	2.1 J	6.3	0.40	1	11/11/21 20:41	10/26/21	
Dibenz(a,h)anthracene	1.4 J	6.3	0.30	1	11/11/21 20:41	10/26/21	
Dibenzofuran	0.87 J	6.3	0.76	1	11/11/21 20:41	10/26/21	
Fluoranthene	2.6 J	6.3	0.80	1	11/11/21 20:41	10/26/21	
Fluorene	0.77 J	6.3	0.72	1	11/11/21 20:41	10/26/21	
Indeno(1,2,3-cd)pyrene	1.9 J	6.3	0.46	1	11/11/21 20:41	10/26/21	
Naphthalene	1.5 J	6.3	0.60	1	11/11/21 20:41	10/26/21	
Phenanthrene	2.1 J	6.3	0.75	1	11/11/21 20:41	10/26/21	
Pyrene	2.7 J	6.3	0.41	1	11/11/21 20:41	10/26/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	46	28 - 112	11/11/21 20:41	
Fluorene-d10	43	34 - 106	11/11/21 20:41	
Terphenyl-d14	51	32 - 122	11/11/21 20:41	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	1.1 J	5.9	0.44	1	11/11/21 21:08	10/26/21	
Acenaphthene	0.53 J	5.9	0.36	1	11/11/21 21:08	10/26/21	
Acenaphthylene	0.45 J	5.9	0.33	1	11/11/21 21:08	10/26/21	
Anthracene	ND U	5.9	0.35	1	11/11/21 21:08	10/26/21	
Benz(a)anthracene	0.55 J	5.9	0.27	1	11/11/21 21:08	10/26/21	
Benzo(a)pyrene	ND U	5.9	0.45	1	11/11/21 21:08	10/26/21	
Benzo(b)fluoranthene	ND U	5.9	0.45	1	11/11/21 21:08	10/26/21	
Benzo(g,h,i)perylene	ND U	5.9	0.47	1	11/11/21 21:08	10/26/21	
Benzo(k)fluoranthene	ND U	5.9	0.29	1	11/11/21 21:08	10/26/21	
Chrysene	ND U	5.9	0.37	1	11/11/21 21:08	10/26/21	
Dibenz(a,h)anthracene	ND U	5.9	0.27	1	11/11/21 21:08	10/26/21	
Dibenzofuran	0.80 J	5.9	0.71	1	11/11/21 21:08	10/26/21	
Fluoranthene	ND U	5.9	0.74	1	11/11/21 21:08	10/26/21	
Fluorene	ND U	5.9	0.67	1	11/11/21 21:08	10/26/21	
Indeno(1,2,3-cd)pyrene	ND U	5.9	0.43	1	11/11/21 21:08	10/26/21	
Naphthalene	1.6 J	5.9	0.56	1	11/11/21 21:08	10/26/21	
Phenanthrene	1.5 J	5.9	0.70	1	11/11/21 21:08	10/26/21	
Pyrene	0.66 J	5.9	0.38	1	11/11/21 21:08	10/26/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	59	28 - 112	11/11/21 21:08	
Fluorene-d10	57	34 - 106	11/11/21 21:08	
Terphenyl-d14	66	32 - 122	11/11/21 21:08	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Extraction Method: EPA 3546

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		28-112	34-106	32-122
B 0-10 C	K2112198-003	46	43	51
B-31 20-25 C	K2112198-005	59	57	66
Method Blank	KQ2120860-04	59	59	64
Lab Control Sample	KQ2120860-03	61	55	61
B 0-10 C	KQ2120860-01	57	50	56
B 0-10 C	KQ2120860-02	65	58	68

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21
Date Received: 10/18/21
Date Analyzed: 11/11/21
Date Extracted: 10/26/21

Duplicate Matrix Spike Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Sample Name: B 0-10 C
Lab Code: K2112198-003
Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike KQ2120860-01		Duplicate Matrix Spike KQ2120860-02		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
2-Methylnaphthalene	0.87 J	288	603	48	337	631	53	28-98	16	40
Acenaphthene	0.39 J	331	603	55	388	631	61	30-101	16	40
Acenaphthylene	0.58 J	331	603	55	393	631	62	32-97	17	40
Anthracene	0.71 J	364	603	60	432	631	68	27-116	17	40
Benz(a)anthracene	2.2 J	362	603	60	436	631	69	27-127	18	40
Benzo(a)pyrene	2.5 J	353	603	58	426	631	67	25-129	19	40
Benzo(b)fluoranthene	2.4 J	358	603	59	434	631	68	21-130	19	40
Benzo(g,h,i)perylene	2.3 J	332	603	55	400	631	63	17-130	19	40
Benzo(k)fluoranthene	2.0 J	370	603	61	446	631	70	22-126	19	40
Chrysene	2.1 J	385	603	63	456	631	72	25-132	17	40
Dibenz(a,h)anthracene	1.4 J	333	603	55	403	631	64	32-116	19	40
Dibenzofuran	0.87 J	346	603	57	393	631	62	28-105	13	40
Fluoranthene	2.6 J	379	603	62	435	631	69	10-138	14	40
Fluorene	0.77 J	342	603	56	406	631	64	23-116	17	40
Indeno(1,2,3-cd)pyrene	1.9 J	310	603	51	383	631	60	17-138	21	40
Naphthalene	1.5 J	309	603	51	365	631	58	29-88	17	40
Phenanthrene	2.1 J	342	603	56	405	631	64	10-128	17	40
Pyrene	2.7 J	351	603	58	451	631	71	16-134	25	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120860-04

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.77 J	4.8	0.37	1	11/11/21 18:56	10/26/21	
Acenaphthene	0.60 J	4.8	0.30	1	11/11/21 18:56	10/26/21	
Acenaphthylene	0.41 J	4.8	0.28	1	11/11/21 18:56	10/26/21	
Anthracene	ND U	4.8	0.29	1	11/11/21 18:56	10/26/21	
Benz(a)anthracene	0.53 J	4.8	0.23	1	11/11/21 18:56	10/26/21	
Benzo(a)pyrene	ND U	4.8	0.38	1	11/11/21 18:56	10/26/21	
Benzo(b)fluoranthene	ND U	4.8	0.38	1	11/11/21 18:56	10/26/21	
Benzo(g,h,i)perylene	ND U	4.8	0.40	1	11/11/21 18:56	10/26/21	
Benzo(k)fluoranthene	ND U	4.8	0.24	1	11/11/21 18:56	10/26/21	
Chrysene	ND U	4.8	0.31	1	11/11/21 18:56	10/26/21	
Dibenz(a,h)anthracene	ND U	4.8	0.23	1	11/11/21 18:56	10/26/21	
Dibenzofuran	0.75 J	4.8	0.60	1	11/11/21 18:56	10/26/21	
Fluoranthene	0.84 J	4.8	0.63	1	11/11/21 18:56	10/26/21	
Fluorene	0.58 J	4.8	0.57	1	11/11/21 18:56	10/26/21	
Indeno(1,2,3-cd)pyrene	ND U	4.8	0.36	1	11/11/21 18:56	10/26/21	
Naphthalene	1.3 J	4.8	0.47	1	11/11/21 18:56	10/26/21	
Phenanthrene	1.3 J	4.8	0.59	1	11/11/21 18:56	10/26/21	
Pyrene	0.74 J	4.8	0.32	1	11/11/21 18:56	10/26/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	59	28 - 112	11/11/21 18:56	
Fluorene-d10	59	34 - 106	11/11/21 18:56	
Terphenyl-d14	64	32 - 122	11/11/21 18:56	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 11/11/21
Date Extracted: 10/26/21

Lab Control Sample Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 745852

Lab Control Sample
KQ2120860-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2-Methylnaphthalene	265	500	53	43-92
Acenaphthene	299	500	60	44-95
Acenaphthylene	301	500	60	44-93
Anthracene	328	500	66	46-100
Benz(a)anthracene	340	500	68	52-105
Benzo(a)pyrene	331	500	66	52-111
Benzo(b)fluoranthene	340	500	68	52-114
Benzo(g,h,i)perylene	315	500	63	45-107
Benzo(k)fluoranthene	349	500	70	52-112
Chrysene	358	500	72	51-110
Dibenz(a,h)anthracene	318	500	64	44-110
Dibenzofuran	301	500	60	44-96
Fluoranthene	336	500	67	49-102
Fluorene	308	500	62	45-98
Indeno(1,2,3-cd)pyrene	302	500	60	44-117
Naphthalene	287	500	57	42-88
Phenanthrene	309	500	62	41-99
Pyrene	322	500	64	48-104



Low Level Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20

Sample Name: B 0-10 C
Lab Code: K2112198-003

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	500	130	1	11/15/21 21:39	10/25/21	
Bis(2-ethylhexyl) Phthalate	ND U	130	12	1	11/15/21 21:39	10/25/21	
Carbazole	ND U	13	4.8	1	11/15/21 21:39	10/25/21	
Di-n-butyl Phthalate	ND U	25	6.1	1	11/15/21 21:39	10/25/21	*
Di-n-octyl Phthalate	ND U	25	4.1	1	11/15/21 21:39	10/25/21	
Dibenzofuran	ND U	13	4.3	1	11/15/21 21:39	10/25/21	*
2,4-Dinitrotoluene	ND U	13	3.2	1	11/15/21 21:39	10/25/21	
2-Methylphenol	ND U	13	5.2	1	11/15/21 21:39	10/25/21	*
4-Methylphenol	ND U	25	5.7	1	11/15/21 21:39	10/25/21	*
Nitrobenzene	ND U	13	4.3	1	11/15/21 21:39	10/25/21	
Pentachlorophenol (PCP)	ND U	130	6.7	1	11/15/21 21:39	10/25/21	*
Phenol	ND U	38	4.0	1	11/15/21 21:39	10/25/21	*
Pyridine	ND U	250	64	1	11/15/21 21:39	10/25/21	*
2,4,5-Trichlorophenol	ND U	13	3.8	1	11/15/21 21:39	10/25/21	
2,4,6-Trichlorophenol	ND U	13	3.8	1	11/15/21 21:39	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	74	35 - 105	11/15/21 21:39	
2-Fluorophenol	64	22 - 85	11/15/21 21:39	
Nitrobenzene-d5	73	10 - 84	11/15/21 21:39	
Phenol-d6	74	39 - 109	11/15/21 21:39	
p-Terphenyl-d14	88	30 - 102	11/15/21 21:39	
2,4,6-Tribromophenol	53	10 - 124	11/15/21 21:39	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	480	120	1	11/17/21 21:52	10/25/21	
Bis(2-ethylhexyl) Phthalate	ND U	120	11	1	11/17/21 21:52	10/25/21	*
Carbazole	ND U	12	4.6	1	11/17/21 21:52	10/25/21	
Di-n-butyl Phthalate	5.9 J	24	5.8	1	11/17/21 21:52	10/25/21	
Di-n-octyl Phthalate	ND U	12	3.9	1	11/17/21 21:52	10/25/21	
Dibenzofuran	ND U	12	4.1	1	11/17/21 21:52	10/25/21	*
2,4-Dinitrotoluene	ND U	12	3.0	1	11/17/21 21:52	10/25/21	
2-Methylphenol	ND U	12	4.9	1	11/17/21 21:52	10/25/21	*
4-Methylphenol	ND U	12	5.4	1	11/17/21 21:52	10/25/21	*
Nitrobenzene	ND U	12	4.1	1	11/17/21 21:52	10/25/21	
Pentachlorophenol (PCP)	ND U	120	6.4	1	11/17/21 21:52	10/25/21	
Phenol	ND U	36	3.7	1	11/17/21 21:52	10/25/21	*
Pyridine	ND U	240	60	1	11/17/21 21:52	10/25/21	*
2,4,5-Trichlorophenol	ND U	12	3.6	1	11/17/21 21:52	10/25/21	
2,4,6-Trichlorophenol	ND U	12	3.6	1	11/17/21 21:52	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	73	35 - 105	11/17/21 21:52	
2-Fluorophenol	72	22 - 85	11/17/21 21:52	
Nitrobenzene-d5	76	10 - 84	11/17/21 21:52	
Phenol-d6	76	39 - 109	11/17/21 21:52	
p-Terphenyl-d14	73	30 - 102	11/17/21 21:52	
2,4,6-Tribromophenol	62	10 - 124	11/17/21 21:52	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Sample Name: B31
Lab Code: K2112198-006

Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	1.5 J	4.7	1.1	1	11/08/21 21:42	10/20/21	*
Bis(2-ethylhexyl) Phthalate	0.56 J	0.94	0.13	1	11/08/21 21:42	10/20/21	
Carbazole	ND U	0.19	0.018	1	11/08/21 21:42	10/20/21	
Di-n-butyl Phthalate	ND U	0.38	0.023	1	11/08/21 21:42	10/20/21	*
Di-n-octyl Phthalate	ND U	0.38	0.033	1	11/08/21 21:42	10/20/21	
Dibenzofuran	ND U	0.19	0.018	1	11/08/21 21:42	10/20/21	
2,4-Dinitrotoluene	ND U	0.19	0.018	1	11/08/21 21:42	10/20/21	
2-Methylphenol	ND U	0.47	0.11	1	11/08/21 21:42	10/20/21	
4-Methylphenol	ND U	0.47	0.12	1	11/08/21 21:42	10/20/21	
Nitrobenzene	ND U	0.19	0.028	1	11/08/21 21:42	10/20/21	
Pentachlorophenol (PCP)	ND U	0.94	0.34	1	11/08/21 21:42	10/20/21	*
Phenol	ND U	0.47	0.063	1	11/08/21 21:42	10/20/21	
Pyridine	ND U	4.7	1.4	1	11/08/21 21:42	10/20/21	
2,4,5-Trichlorophenol	ND U	0.47	0.031	1	11/08/21 21:42	10/20/21	
2,4,6-Trichlorophenol	ND U	0.47	0.058	1	11/08/21 21:42	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	78	35 - 105	11/08/21 21:42	
2-Fluorophenol	71	34 - 118	11/08/21 21:42	
Nitrobenzene-d5	71	40 - 117	11/08/21 21:42	
Phenol-d6	77	39 - 109	11/08/21 21:42	
p-Terphenyl-d14	91	48 - 109	11/08/21 21:42	
2,4,6-Tribromophenol	90	35 - 132	11/08/21 21:42	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	22-85	10-84
B 0-10 C	K2112198-003	74	64	73
B-31 20-25 C	K2112198-005	73	72	76
Method Blank	KQ2120868-04	67	63	62
Lab Control Sample	KQ2120868-03	72	64	74

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	30-102	10-124
B 0-10 C	K2112198-003	74	88	53
B-31 20-25 C	K2112198-005	76	73	62
Method Blank	KQ2120868-04	65	64	53
Lab Control Sample	KQ2120868-03	75	64	72

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	34-118	40-117
B31	K2112198-006	78	71	71
Method Blank	KQ2120705-03	82	76	76
Lab Control Sample	KQ2120705-01	79	72	75
Duplicate Lab Control Sample	KQ2120705-02	92	88	91

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	48-109	35-132
B31	K2112198-006	77	91	90
Method Blank	KQ2120705-03	78	94	83
Lab Control Sample	KQ2120705-01	75	72	85
Duplicate Lab Control Sample	KQ2120705-02	91	91	101

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120705-03

Service Request: K2112198
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	4.7	1.1	1	11/08/21 20:18	10/20/21	
Bis(2-ethylhexyl) Phthalate	ND U	0.94	0.13	1	11/08/21 20:18	10/20/21	
Carbazole	ND U	0.19	0.018	1	11/08/21 20:18	10/20/21	
Di-n-butyl Phthalate	ND U	0.38	0.023	1	11/08/21 20:18	10/20/21	
Di-n-octyl Phthalate	ND U	0.38	0.033	1	11/08/21 20:18	10/20/21	
Dibenzofuran	ND U	0.19	0.018	1	11/08/21 20:18	10/20/21	
2,4-Dinitrotoluene	ND U	0.19	0.018	1	11/08/21 20:18	10/20/21	
2-Methylphenol	ND U	0.47	0.11	1	11/08/21 20:18	10/20/21	
4-Methylphenol	ND U	0.47	0.12	1	11/08/21 20:18	10/20/21	
Nitrobenzene	ND U	0.19	0.028	1	11/08/21 20:18	10/20/21	
Pentachlorophenol (PCP)	ND U	0.94	0.34	1	11/08/21 20:18	10/20/21	
Phenol	ND U	0.47	0.063	1	11/08/21 20:18	10/20/21	
Pyridine	ND U	4.7	1.4	1	11/08/21 20:18	10/20/21	
2,4,5-Trichlorophenol	ND U	0.47	0.031	1	11/08/21 20:18	10/20/21	
2,4,6-Trichlorophenol	ND U	0.47	0.058	1	11/08/21 20:18	10/20/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	82	35 - 105	11/08/21 20:18	
2-Fluorophenol	76	34 - 118	11/08/21 20:18	
Nitrobenzene-d5	76	40 - 117	11/08/21 20:18	
Phenol-d6	78	39 - 109	11/08/21 20:18	
p-Terphenyl-d14	94	48 - 109	11/08/21 20:18	
2,4,6-Tribromophenol	83	35 - 132	11/08/21 20:18	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120868-04

Service Request: K2112198
Date Collected: NA
Date Received: NA

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	380	96	1	11/15/21 10:44	10/25/21	
Bis(2-ethylhexyl) Phthalate	ND U	96	8.9	1	11/15/21 10:44	10/25/21	
Carbazole	ND U	9.6	3.8	1	11/15/21 10:44	10/25/21	
Di-n-butyl Phthalate	ND U	19	4.8	1	11/15/21 10:44	10/25/21	
Di-n-octyl Phthalate	ND U	19	3.2	1	11/15/21 10:44	10/25/21	
Dibenzofuran	ND U	9.6	3.4	1	11/15/21 10:44	10/25/21	
2,4-Dinitrotoluene	ND U	9.6	2.5	1	11/15/21 10:44	10/25/21	
2-Methylphenol	ND U	9.6	4.1	1	11/15/21 10:44	10/25/21	
4-Methylphenol	ND U	19	4.5	1	11/15/21 10:44	10/25/21	
Nitrobenzene	ND U	9.6	3.4	1	11/15/21 10:44	10/25/21	
Pentachlorophenol (PCP)	ND U	96	5.3	1	11/15/21 10:44	10/25/21	
Phenol	ND U	29	3.1	1	11/15/21 10:44	10/25/21	
Pyridine	ND U	190	50	1	11/15/21 10:44	10/25/21	
2,4,5-Trichlorophenol	ND U	9.6	3.0	1	11/15/21 10:44	10/25/21	
2,4,6-Trichlorophenol	ND U	9.6	3.0	1	11/15/21 10:44	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	67	35 - 105	11/15/21 10:44	
2-Fluorophenol	63	22 - 85	11/15/21 10:44	
Nitrobenzene-d5	62	10 - 84	11/15/21 10:44	
Phenol-d6	65	39 - 109	11/15/21 10:44	
p-Terphenyl-d14	64	30 - 102	11/15/21 10:44	
2,4,6-Tribromophenol	53	10 - 124	11/15/21 10:44	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 11/15/21
Date Extracted: 10/25/21

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry
Analysis Lot: 746263

Lab Control Sample
KQ2120868-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol	181	250	72	32-81
2,4,6-Trichlorophenol	182	250	73	33-79
2,4-Dinitrotoluene	142	250	57	35-93
2-Methylphenol	198	250	79 *	27-74
4-Methylphenol	230	250	92 *	26-79
Benzoic Acid	99.2 J	750	13	10-34
Bis(2-ethylhexyl) Phthalate	145	250	58	39-113
Carbazole	192	250	77	37-95
Dibenzofuran	197	250	79 *	30-78
Di-n-butyl Phthalate	129	250	52	30-120
Di-n-octyl Phthalate	188	250	75	41-105
Nitrobenzene	151	250	61	28-78
Pentachlorophenol (PCP)	127	250	51	19-103
Phenol	195	250	78 *	27-75
Pyridine	298	500	60 *	10-54

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 11/08/21
Date Extracted: 10/20/21

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 745493

Lab Control Sample
KQ2120705-01

Duplicate Lab Control Sample
KQ2120705-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	4.15	5.00	83	4.68	5.00	94	51-116	12	30
2,4,6-Trichlorophenol	4.25	5.00	85	4.63	5.00	93	51-114	9	30
2,4-Dinitrotoluene	3.34	5.00	67	3.65	5.00	73	56-120	9	30
2-Methylphenol	4.00	5.00	80	4.55	5.00	91	45-114	13	30
4-Methylphenol	4.67	5.00	93	5.21	5.00	104	44-120	11	30
Benzoic Acid	6.35	15.0	42	3.21 J	15.0	21	10-86	66 *	30
Bis(2-ethylhexyl) Phthalate	2.90	5.00	58	3.31	5.00	66	42-147	13	30
Carbazole	3.62	5.00	72	4.02	5.00	80	57-112	10	30
Dibenzofuran	4.33	5.00	87	4.71	5.00	94	51-102	8	30
Di-n-butyl Phthalate	2.85	5.00	57 *	3.10	5.00	62	61-121	8	30
Di-n-octyl Phthalate	4.08	5.00	82	4.39	5.00	88	50-125	7	30
Nitrobenzene	3.05	5.00	61	3.44	5.00	69	43-120	12	30
Pentachlorophenol (PCP)	3.14	5.00	63	3.54	5.00	71	27-112	12	30
Phenol	3.87	5.00	77	4.38	5.00	88	45-112	12	30
Pyridine	7.49	10.0	75	8.91	10.0	89	10-121	17	30



Subcontract Lab Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



November 29, 2021

Service Request No:K2112198

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

Laboratory Results for: EQRB

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 18, 2021
For your reference, these analyses have been assigned our service request number **K2112198**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental



Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Environmental

Client: Coles & Betts ENV
Project: EQRB
Sample Matrix: S/W

Service Request No.: K2112198
Date Received: 10/28/21

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three samples were received for analysis at ALS Environmental in Houston on 10/28/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100629: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. 1,2,3,4,7,8,9-HpCDF & 1,2,3,7,8-PeCDF LCS/DLCS recoveries were below QC limits; associated compounds for the samples in the batch should be considered potentially bias low.

EQ2100630: A Laboratory Control Spike (LCS) sample was analyzed and reported in addition to a MS/MSD for this extraction batch. 1,2,3,4,7,8,9-HpCDF LCS recovery was below QC limits; associated compound for the samples in the batch should be considered potentially bias low. The MS/MSD was performed on an unrelated sample.

B flags – Method Blanks

The Method Blank EQ2100630-01 contained low levels of 1,2,3,4,6,7,8-HpCDD, OCDD, and OCDF below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

Y flags – Cleanup Standard

Select sample recoveries for the cleanup standard, 37Cl-2,3,7,8-TCDD are below control limits. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected, and is not used in quantitation of target analytes.

Y flags – Labeled Standards

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with 'Y' flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- Non-detected compounds are not included in the 'Total'

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319

Service Request:K2112198

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2112198-003	B 0-10 C	10/15/2021	1030
K2112198-005	B-31 20-25 C	10/15/2021	1100
K2112198-006	B31	10/15/2021	1120
K2112198-007	Trip Blank	10/15/2021	1120

Service Request Summary

Folder #: K2112198
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA
Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: NPEDERSEN
Date Received: 10/18/21
Internal Due Date: 11/5/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

14 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 8 1000 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 4 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 4 40 mL-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
 3 40 mL-Glass Vial GRO CLEAR Tef/Silicone Septa HCL
 2 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 2 oz-Glass Jar Glass WM CLEAR None
 2 -N/A N/A
 2 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
 1 32 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 250 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 1 125 mL-Plastic Bottle WM CLEAR HNO3 (Diss)
 1 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-DELILAH, K-Disposed, K-SVEXT, EHRMS
 -WIC 10B, K-Misty-2, SMO, K-PETUNIA-09,
 In Lab
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	KELSO					KELSO					HOUSTON	KELSO			KELSO
				Hg D/7470A	Hg T/7470A	Hg/7471B	Metals D/6020A	Metals T/6020A	BUTYLINS/ALS SOP	HERB/8151A	NW_TPH/NWTPH-DX	PCB/8082A	Pest OC LL/8081B	Pest OC ULL/8081B	PCDD PCDF/8290A	PAH SIM ULL/8270D	PAH SIM/8270D	SVO LL/8270D
K2112198-003	B 0-10 C	Soil	10/15/21 1030															
K2112198-005	B-31 20-25 C	Soil	10/15/21 1100															
K2112198-006	B31	Water	10/15/21 1120															
K2112198-007	Trip Blank	Water	10/15/21 1120															

Folder Comments:

Composite 001 and 002 to make 003.

Reserve some from each discrete for future analysis.

KELSO			
NW_GAS/NWTPH-Gx			
VOC FP/8260C			
VOC Unp/8260C			
VOC_UNP/8260B			

Service Request Summary

Folder #: K2112198
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA

Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: NPEDERSEN
Date Received: 10/18/21
Internal Due Date: 11/5/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

14 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 8 1000 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 4 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 4 40 mL-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
 3 40 mL-Glass Vial GRO CLEAR Tef/Silicone Septa HCL
 2 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 2 oz-Glass Jar Glass WM CLEAR None
 2 -N/A N/A
 2 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
 1 32 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 250 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 1 125 mL-Plastic Bottle WM CLEAR HNO3 (Diss)
 1 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-DELILAH, K-Disposed, K-SVEXT, EHRMS
 -WIC 10B, K-Misty-2, SMO, K-PETUNIA-09,
 In Lab
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Metals	Metals D/6020A	1	As Ba Cd Cr Pb Se Ag
Metals	Hg/7471B	2	Dioxins for Houston
Metals	Metals T/6020A	7	As,Ba,Cd,Cr,Pb,Se,Ag
Semivoa GC	HERB/8151A	3	Report list: 18726
Semivoa GC	BUTYLINS/ALS SOP	4	Report list: 17560
Semivoa GC	Pest OC LL/8081B	2	Report list: 20324
Semivoa GC	NW_TPH/NWTPH-Dx	3	Report list: 22364
Semivoa GC	Pest OC ULL/8081B	1	Report list: 20324
Semivoa GC	PCB/8082A	3	Report list: 20420
Semivoa GCMS	PAH SIM/8270D	2	Report list: 18998
Semivoa GCMS	PAH SIM ULL/8270D	2	Report list: 18998
Semivoa GCMS	SVO LL/8270D	3	See attached Form V for target list
VOA GCMS	NW_GAS/NWTPH-Gx	3	Report list: 19509
VOA GCMS	VOC FP/8260C	1	Report list: 20915
VOA GCMS	VOC_UNP/8260B	2	Report list: 20915
VOA GCMS	VOC Unp/8260C	2	Report list: 20915

Data Qualifiers

Lab Standard

- + Possible Tedlar bag artifact.
- A TIC is a suspected aldol-condensation product
- B Analyte found in the associated method blank as well as in the sample.
- BC Reported results are not blank corrected.
- BH The back section of the tube yielded higher results than the front.
- BT Results indicated possible breakthrough; back section $\geq 10\%$ front section.
- C Result identification confirmed.
- D Compound identified in an analysis at a secondary dilution factor
- D Spike was diluted out
- DE Reported results are corrected for desorption efficiency.
- E Estimated value. Concentration above calibration range
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- H1 Sample analysis performed past holding time. See case narrative.
- H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
- H3 Sample was received and analyzed past holding time.
- H4 Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
- I Internal standard not within the specified limits. See case narrative.
- J Estimated Value. Concentration found below MRL.
- K A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
- K Analyte was detected above the method reporting limit prior to normalization.
- K The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- L1 Laboratory control sample recovery outside the specified limits; results may be biased high.
- L2 Laboratory control sample recovery outside the specified limits; results may be biased low.
- L3 Laboratory control sample recovery outside the specified limits.
- M Matrix interference; results may be biased high.
- M The duplicate injection precision not met.
- M1 Matrix interference due to coelution with a non-target compound; results may be biased high.
- N Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- P Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
- P Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
- Q Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
- R Duplicate Precision not met.
- R1 Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
- S Surrogate recovery not within specified limits.
- S The reported value was determined by the Method of Standard Additions (MSA).
- T Analyte is a tentatively identified compound, result is estimated.
- U Compound was analyzed for, but was not detected (ND).
- V1 The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
- V2 The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
- W Result quantified, but the corresponding peak was detected outside the generated retention time window.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- X See case narrative.
- Y Recovery outside limits
- Y The chromatogram resembles a petroleum product but does not match the calibration standard.
- Z The chromatogram does not resemble a petroleum product.
 - i The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCEntration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Conservation and Natural Resources	TX026932022-1	7/31/2022
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Conservation	04016-2021	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-27	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-28	5/1/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112198

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date: 11/16/21 Analyst: Jc Samples: 003

Second Level - Data Review – to be filled by person doing peer review

Date: 11/16/21 Analyst: VW Samples: 003

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID

K2112198

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:

11/19/21

Analyst:

Jc

Samples:

005

Second Level - Data Review – to be filled by person doing peer review

Date:

11/19/21

Analyst:

VW

Samples:

005

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112198

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date: 11/22/21	Analyst: <i>[Signature]</i>	Samples: 006

Second Level - Data Review – to be filled by person doing peer review

Date: 11/23/21	Analyst: <i>[Signature]</i>	Samples: 006



Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Intra-Network Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • I-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

Project Name: EQRB
Project Number: 319
Project Manager: Jill Betts
Company: Coles and Betts Environmental Consulting, LLC
QAP: LAB QAP

PCDD PCDF
8290A

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
K2112198-003	B 0-10 C	1	Soil	10/15/21	1030	10/18/21	HOUSTON	II
K2112198-005	B-31 20-25 C	1	Soil	10/15/21	1100	10/18/21	HOUSTON	II
K2112198-006	B31	2	Water	10/15/21	1120	10/18/21	HOUSTON	II

Special Instructions/Comments Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com. pH Checked _____	Turnaround Requirements <input type="checkbox"/> RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 <input checked="" type="checkbox"/> STANDARD Requested FAX Date: _____ Requested Report Date: <u>11/05/21</u>	Report Requirements <input type="checkbox"/> I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data PQL/MDL/J <u>Y</u> EDD <u>N</u>	Invoice Information PO# 51K2112198 Bill to
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------

Relinquished By: 10/25/21 1100
 Received By: J. Munn 10/28/21 10:50
 Airbill Number: _____
 Coles and Betts Temp 1.5°C 17031 CFO



10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 390509
 Team: Semivoa GCMS/TWOODS

Prep Workflow: OrgExtDioxS(30)
 Prep Method: Method

Status: Prepped
 Prep Date/Time: 11/2/21 10:46

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	EQ2100629-01	MB		8290A/PCDD PCDF			Solid	10.002g	
2	EQ2100629-02	LCS		8290A/PCDD PCDF			Solid	10.031g	
3	EQ2100629-03	DLCS		8290A/PCDD PCDF			Solid	10.162g	
4	K2112045-006	B-37 0-10 C	.02	8290A/PCDD PCDF			Soil	9.380g	
5	K2112045-014	B-34 0-10 C	.02	8290A/PCDD PCDF			Soil	10.202g	Fuel odor in sample
6	K2112045-022	B-37 10-23 C	.02	8290A/PCDD PCDF			Soil	9.200g	
7	K2112045-023	B-34 10-23 C	.02	8290A/PCDD PCDF			Soil	10.236g	
8	K2112045-024	B-29 0-12 C	.02	8290A/PCDD PCDF			Soil	8.358g	
9	K2112198-003	B 0-10 C	.04	8290A/PCDD PCDF			Soil	10.097g	
10	K2112198-005	B-31 20-25 C	.01	8290A/PCDD PCDF			Soil	10.294g	
11	K2112279-004	B-28 (0-10 C)	.08	8290A/PCDD PCDF			Soil	10.074g	
12	K2112279-007	B-28 (10-25 C)	.01	8290A/PCDD PCDF			Soil	10.057g	

Spiking Solutions

Name:	8290/1613B Cleanup Working Standard	Inventory ID	219817	Logbook Ref:	tw 10/15/21 219817	Expires On:	02/18/2022
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EQ2100629-01	100.00µL	EQ2100629-02	100.00µL	EQ2100629-03	100.00µL	K2112045-006	100.00µL	K2112045-014	100.00µL	K2112045-022	100.00µL
K2112045-023	100.00µL	K2112045-024	100.00µL	K2112198-003	100.00µL	K2112198-005	100.00µL	K2112279-004	100.00µL	K2112279-007	100.00µL

Name:	1613B Matrix Working Standard	Inventory ID	219968	Logbook Ref:	TW 10/22/21 SN	Expires On:	04/20/2022
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EQ2100629-01	100.00µL	EQ2100629-02	100.00µL	EQ2100629-03	100.00µL	K2112045-006	100.00µL	K2112045-014	100.00µL	K2112045-022	100.00µL
K2112045-023	100.00µL	K2112045-024	100.00µL	K2112198-003	100.00µL	K2112198-005	100.00µL	K2112279-004	100.00µL	K2112279-007	100.00µL

Name:	1613B Labeled Working Standard	Inventory ID	220141	Logbook Ref:	SN 11/2/21 220141 2-4 ng/ml	Expires On:	02/18/2022
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EQ2100629-01	1,000.00µL	EQ2100629-02	1,000.00µL	EQ2100629-03	1,000.00µL	K2112045-006	1,000.00µL	K2112045-014	1,000.00µL	K2112045-022	1,000.00µL
K2112045-023	1,000.00µL	K2112045-024	1,000.00µL	K2112198-003	1,000.00µL	K2112198-005	1,000.00µL	K2112279-004	1,000.00µL	K2112279-007	1,000.00µL

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	11/2/21 10:46	Started:	11/4/21 10:00	Started:	11/4/21 12:00	Started:	11/5/21 11:00
Finished:	11/3/21 09:00	Finished:	11/4/21 11:00	Finished:	11/4/21 15:00	Finished:	11/5/21 14:00
By:	TWOODS	By:	TWOODS	By:	TWOODS	By:	TWOODS
Comments		Comments		Comments		Comments	

Preparation Information Benchsheet

Prep Run#: 390509
Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtDioxS(30)
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/2/21 10:46

Comments: _____

Reviewed By: kn 11/22/21 Date: _____

Chain of Custody

Relinquished By: _____	Date: _____	<u>Extracts Examined</u>
Received By: _____	Date: _____	Yes No

Preparation Information Benchsheet

Prep Run#: 390511
Team: Semivoa GCMS/SHIVANI NAIDU

Prep Workflow: OrgExtDioxAq-30
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/2/21 10:00

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2101124-001	GW-7A-013-01-307	.01	8290A/PCDD PCDF			Water	982mL	clear
2	E2101124-002	GW-7A-013-02-307	.01	8290A/PCDD PCDF			Water	1010mL	clear
3	E2101124-003	GW-07-FB-01-307	.01	8290A/PCDD PCDF			Water	1025mL	clear
4	E2101124-004	GW-07-EB-01-307	.02	8290A/PCDD PCDF			Water	1001mL	clear
5	E2101135-016	MFS-EB-102121-1	.10	8290A/PCDD PCDF			Water	956mL	clear
6	EQ2100630-01	MB		8290A/PCDD PCDF			Liquid	1000mL	
7	EQ2100630-02	LCS		8290A/PCDD PCDF			Liquid	1000mL	
8	EQ2100630-03	GW-7A-013-01-307 MS	.03	8290A/PCDD PCDF			Liquid	1033mL	
9	EQ2100630-04	GW-7A-013-01-307 DMS	.05	8290A/PCDD PCDF			Liquid	987mL	
10	K2112045-007	B37	.10	8290A/PCDD PCDF			Water	980mL	murky
11	K2112045-015	B34	.10	8290A/PCDD PCDF			Water	1057mL	yellow cloudy
12	K2112045-020	B29	.11	8290A/PCDD PCDF			Water	1029mL	brown cloudy
13	K2112198-006	B31	.14	8290A/PCDD PCDF			Water	1058mL	yellow cloudy
14	K2112279-008	B-28	.13	8290A/PCDD PCDF			Water	878mL	yellow cloudy

Spiking Solutions

Name: 8290/1613B Cleanup Working Standard	Inventory ID: 219817	Logbook Ref: tw 10/15/21 219817	Expires On: 02/18/2022
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E2101124-001 100.00µL	E2101124-002 100.00µL	E2101124-003 100.00µL	E2101124-004 100.00µL	E2101135-016 100.00µL	EQ2100630-01 100.00µL
EQ2100630-02 100.00µL	EQ2100630-03 100.00µL	EQ2100630-04 100.00µL	K2112045-007 100.00µL	K2112045-015 100.00µL	K2112045-020 100.00µL
K2112198-006 100.00µL	K2112279-008 100.00µL				

Name: 1613B Matrix Working Standard	Inventory ID: 219968	Logbook Ref: TW 10/22/21 SN	Expires On: 04/20/2022
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EQ2100630-02 100.00µL	EQ2100630-03 100.00µL	EQ2100630-04 100.00µL
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Name: 1613B Labeled Working Standard	Inventory ID: 220141	Logbook Ref: SN 11/2/21 220141 2-4 ng/ml	Expires On: 02/18/2022
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E2101124-001 1,000.00µL	E2101124-002 1,000.00µL	E2101124-003 1,000.00µL	E2101124-004 1,000.00µL	E2101135-016 1,000.00µL	EQ2100630-01 1,000.00µL
EQ2100630-02 1,000.00µL	EQ2100630-03 1,000.00µL	EQ2100630-04 1,000.00µL	K2112045-007 1,000.00µL	K2112045-015 1,000.00µL	K2112045-020 1,000.00µL
K2112198-006 1,000.00µL	K2112279-008 1,000.00µL				

Preparation Information Benchsheet

Prep Run#: 390511
Team: Semivoa GCMS/SHIVANI NAIDU

Prep Workflow: OrgExtDioxAq-30
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/2/21 10:00

Preparation Materials

Carbon, High Purity	tw 08/09/21 carbon (218695)	Ethyl Acetate 99.9% Minimum EtOAc	TW 12/15/20 (214517)	Glass Wool	tw 7/8/21 glass wool (218851)
Hexanes 95%	tw 09/07/21 hexanes (219108)	Chlorine Test Strips	Chlorine test Strips (210298)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	tw 10/6/21 dcm (219683)
Sodium Hydroxide 1N NaOH	tw 08/10/21 (218694)	Sodium Sulfate Anhydrous Reagent Grade Na2SO4	tw 04/12/21 (217292)	Tridecane (n-Tridecane)	tw 04/ tridecane (216874)
ColorpHast pH-Indicator Strips	pH strips tw 21020 (206953)	Silica Gel	tw 06/01/21 silics g (217554)	sulfuric acid	8/12/21 tw (218912)
Toluene 99.9% Minimum	tw 09/09/21 toluene (219187)				

Preparation Steps

Step: Extraction	Step: Acid Clean	Step: Silica Gel Clean	Step: Final Volume
Started: 11/2/21 10:00	Started: 11/5/21 10:00	Started: 11/5/21 12:00	Started: 11/5/21 15:00
Finished: 11/2/21 16:00	Finished: 11/5/21 11:00	Finished: 11/5/21 15:00	Finished: 11/5/21 18:00
By: SHIVANI NAIDU	By: SHIVANI NAIDU	By: SHIVANI NAIDU	By: SHIVANI NAIDU
Comments	Comments	Comments	Comments

Comments: _____

Reviewed By: SN Date: 11/5/21

Chain of Custody

Relinquished By: _____	Date: _____	<u>Extracts Examined</u>
Received By: _____	Date: _____	Yes No



Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B 0-10 C
Lab Code: K2112198-003

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.097g
Data File Name: P535240
ICAL Date: 07/10/21

Date Analyzed: 11/12/21 05:31
Date Extracted: 11/2/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P535234

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.338	0.626			1
1,2,3,7,8-PeCDD	0.188JK		0.0816	3.13	2.11	1.000	1
1,2,3,6,7,8-HxCDD	ND	U	0.0903	3.13			1
1,2,3,4,7,8-HxCDD	ND	U	0.106	3.13			1
1,2,3,7,8,9-HxCDD	0.228J		0.0930	3.13	1.05	1.007	1
1,2,3,4,6,7,8-HpCDD	1.81J		0.156	3.13	1.05	1.000	1
OCDD	13.1		0.285	6.26	0.82	1.000	1
2,3,7,8-TCDF	ND	U	0.305	0.626			1
1,2,3,7,8-PeCDF	ND	U	0.121	3.13			1
2,3,4,7,8-PeCDF	ND	U	0.148	3.13			1
1,2,3,6,7,8-HxCDF	0.210J		0.0812	3.13	1.12	1.000	1
1,2,3,7,8,9-HxCDF	0.149JK		0.0972	3.13	0.38	1.000	1
1,2,3,4,7,8-HxCDF	ND	U	0.0734	3.13			1
2,3,4,6,7,8-HxCDF	0.213JK		0.0791	3.13	1.45	1.001	1
1,2,3,4,6,7,8-HpCDF	0.559JK		0.0119	3.13	0.64	1.000	1
1,2,3,4,7,8,9-HpCDF	0.126JK		0.00839	3.13	0.49	1.000	1
OCDF	6.70		0.395	6.26	0.95	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2112198
Project:	EQRB/319	Date Collected:	10/15/21 10:30
Sample Matrix:	Soil	Date Received:	10/18/21 10:20
Sample Name:	B 0-10 C	Units:	ng/Kg
Lab Code:	K2112198-003	Basis:	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	11/12/21 05:31
Prep Method:	Method	Date Extracted:	11/2/21
Sample Amount:	10.097g	Instrument Name:	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P535240	Blank File Name:	P628214
ICAL Date:	07/10/21	Cal Ver. File Name:	P535234

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.338	0.626			1
Total Penta-Dioxins	ND	U	0.0816	3.13			1
Total Hexa-Dioxins	ND	U	0.0957	3.13			1
Total Hepta-Dioxins	4.30		0.156	3.13	1.06		1
Total Tetra-Furans	ND	U	0.305	0.626			1
Total Penta-Furans	ND	U	0.133	3.13			1
Total Hexa-Furans	0.210J		0.0823	3.13	1.12		1
Total Hepta-Furans	ND	U	0.00977	3.13			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Sample Name: B 0-10 C
Lab Code: K2112198-003

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.097g

Data File Name: P535240
ICAL Date: 07/10/21

Date Analyzed: 11/12/21 05:31
Date Extracted: 11/2/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P535234

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1003.022	50		40-135	0.79	1.019
13C-1,2,3,7,8-PeCDD	2000	1220.156	61		40-135	1.57	1.171
13C-1,2,3,4,7,8-HxCDD	2000	1185.374	59		40-135	1.27	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1196.905	60		40-135	1.24	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	941.960	47		40-135	1.07	1.066
13C-OCDD	4000	1516.757	38	Y	40-135	0.88	1.142
13C-2,3,7,8-TCDF	2000	840.745	42		40-135	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	1333.986	67		40-135	1.59	1.131
13C-2,3,4,7,8-PeCDF	2000	1064.495	53		40-135	1.56	1.162
13C-1,2,3,4,7,8-HxCDF	2000	1098.585	55		40-135	0.51	0.972
13C-1,2,3,6,7,8-HxCDF	2000	891.820	45		40-135	0.50	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1034.090	52		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1011.925	51		40-135	0.50	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	745.690	37	Y	40-135	0.43	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1411.055	71		40-135	0.43	1.079
37Cl-2,3,7,8-TCDD	800	416.765	52		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B 0-10 C
Lab Code: K2112198-003

Service Request: K2112198
Date Collected: 10/15/21 10:30
Date Received: 10/18/21 10:20
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.338	0.626	1	1	
1,2,3,7,8-PeCDD	0.188	0.0816	3.13	1	1	0.188
1,2,3,6,7,8-HxCDD	ND	0.0903	3.13	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.106	3.13	1	0.1	
1,2,3,7,8,9-HxCDD	0.228	0.0930	3.13	1	0.1	0.0228
1,2,3,4,6,7,8-HpCDD	1.81	0.156	3.13	1	0.01	0.0181
OCDD	13.1	0.285	6.26	1	0.0003	0.00393
2,3,7,8-TCDF	ND	0.305	0.626	1	0.1	
1,2,3,7,8-PeCDF	ND	0.121	3.13	1	0.03	
2,3,4,7,8-PeCDF	ND	0.148	3.13	1	0.3	
1,2,3,6,7,8-HxCDF	0.210	0.0812	3.13	1	0.1	0.0210
1,2,3,7,8,9-HxCDF	0.149	0.0972	3.13	1	0.1	0.0149
1,2,3,4,7,8-HxCDF	ND	0.0734	3.13	1	0.1	
2,3,4,6,7,8-HxCDF	0.213	0.0791	3.13	1	0.1	0.0213
1,2,3,4,6,7,8-HpCDF	0.559	0.0119	3.13	1	0.01	0.00559
1,2,3,4,7,8,9-HpCDF	0.126	0.00839	3.13	1	0.01	0.00126
OCDF	6.70	0.395	6.26	1	0.0003	0.00201
Total TEQ						0.299

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.294g
Data File Name: P535242
ICAL Date: 07/10/21

Date Analyzed: 11/12/21 07:08
Date Extracted: 11/2/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P535234

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.615	0.615			1
1,2,3,7,8-PeCDD	ND	U	0.160	2.96			1
1,2,3,6,7,8-HxCDD	ND	U	0.122	2.96			1
1,2,3,4,7,8-HxCDD	ND	U	0.141	2.96			1
1,2,3,7,8,9-HxCDD	ND	U	0.125	2.96			1
1,2,3,4,6,7,8-HpCDD	0.327JK		0.186	2.96	1.62	1.000	1
OCDD	3.69J		0.238	5.92	0.89	1.000	1
2,3,7,8-TCDF	ND	U	0.921	0.921			1
1,2,3,7,8-PeCDF	ND	U	0.207	2.96			1
2,3,4,7,8-PeCDF	ND	U	0.273	2.96			1
1,2,3,6,7,8-HxCDF	ND	U	0.0694	2.96			1
1,2,3,7,8,9-HxCDF	ND	U	0.0823	2.96			1
1,2,3,4,7,8-HxCDF	0.156JK		0.0638	2.96	0.80	1.001	1
2,3,4,6,7,8-HxCDF	ND	U	0.0677	2.96			1
1,2,3,4,6,7,8-HpCDF	0.140JK		0.0208	2.96	0.86	1.001	1
1,2,3,4,7,8,9-HpCDF	0.0648JK		0.0148	2.96	1.46	1.000	1
OCDF	ND	U	0.441	5.92			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2112198
Project:	EQRB/319	Date Collected:	10/15/21 11:00
Sample Matrix:	Soil	Date Received:	10/18/21 10:20
Sample Name:	B-31 20-25 C	Units:	ng/Kg
Lab Code:	K2112198-005	Basis:	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	11/12/21 07:08
Prep Method:	Method	Date Extracted:	11/2/21
Sample Amount:	10.294g	Instrument Name:	E-HRMS-07
		GC Column:	DB-5MSUI
Data File Name:	P535242	Blank File Name:	P628214
ICAL Date:	07/10/21	Cal Ver. File Name:	P535234

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.615	0.615			1
Total Penta-Dioxins	ND	U	0.160	2.96			1
Total Hexa-Dioxins	ND	U	0.129	2.96			1
Total Hepta-Dioxins	ND	U	0.186	2.96			1
Total Tetra-Furans	ND	U	0.921	0.921			1
Total Penta-Furans	ND	U	0.235	2.96			1
Total Hexa-Furans	ND	U	0.0705	2.96			1
Total Hepta-Furans	ND	U	0.0171	2.96			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.294g

Data File Name: P535242
ICAL Date: 07/10/21

Date Analyzed: 11/12/21 07:08
Date Extracted: 11/2/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P535234

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	590.586	30	Y	40-135	0.77	1.019
13C-1,2,3,7,8-PeCDD	2000	736.902	37	Y	40-135	1.62	1.171
13C-1,2,3,4,7,8-HxCDD	2000	739.811	37	Y	40-135	1.24	0.992
13C-1,2,3,6,7,8-HxCDD	2000	758.392	38	Y	40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	601.917	30	Y	40-135	1.06	1.066
13C-OCDD	4000	953.014	24	Y	40-135	0.89	1.143
13C-2,3,7,8-TCDF	2000	284.513	14	Y	40-135	0.80	0.994
13C-1,2,3,7,8-PeCDF	2000	775.031	39	Y	40-135	1.58	1.131
13C-2,3,4,7,8-PeCDF	2000	576.918	29	Y	40-135	1.58	1.162
13C-1,2,3,4,7,8-HxCDF	2000	655.899	33	Y	40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	529.100	26	Y	40-135	0.49	0.975
13C-1,2,3,7,8,9-HxCDF	2000	626.999	31	Y	40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	609.666	30	Y	40-135	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	464.972	23	Y	40-135	0.41	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	876.978	44		40-135	0.42	1.080
37Cl-2,3,7,8-TCDD	800	272.811	34	Y	40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-31 20-25 C
Lab Code: K2112198-005

Service Request: K2112198
Date Collected: 10/15/21 11:00
Date Received: 10/18/21 10:20

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.615	0.615	1	1	
1,2,3,7,8-PeCDD	ND	0.160	2.96	1	1	
1,2,3,6,7,8-HxCDD	ND	0.122	2.96	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.141	2.96	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.125	2.96	1	0.1	
1,2,3,4,6,7,8-HpCDD	0.327	0.186	2.96	1	0.01	0.00327
OCDD	3.69	0.238	5.92	1	0.0003	0.00111
2,3,7,8-TCDF	ND	0.921	0.921	1	0.1	
1,2,3,7,8-PeCDF	ND	0.207	2.96	1	0.03	
2,3,4,7,8-PeCDF	ND	0.273	2.96	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.0694	2.96	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0823	2.96	1	0.1	
1,2,3,4,7,8-HxCDF	0.156	0.0638	2.96	1	0.1	0.0156
2,3,4,6,7,8-HxCDF	ND	0.0677	2.96	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.140	0.0208	2.96	1	0.01	0.00140
1,2,3,4,7,8,9-HpCDF	0.0648	0.0148	2.96	1	0.01	0.000648
OCDF	ND	0.441	5.92	1	0.0003	
Total TEQ						0.0220

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B31
Lab Code: K2112198-006

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1058mL
Data File Name: P628438
ICAL Date: 10/14/21

Date Analyzed: 11/20/21 22:32
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628433

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	3.30	4.73			1
1,2,3,7,8-PeCDD	ND	U	1.36	23.6			1
1,2,3,6,7,8-HxCDD	ND	U	0.728	23.6			1
1,2,3,4,7,8-HxCDD	ND	U	0.878	23.6			1
1,2,3,7,8,9-HxCDD	ND	U	0.734	23.6			1
1,2,3,4,6,7,8-HpCDD	1.49	BJK	0.825	23.6	1.42	1.000	1
OCDD	11.8	BJ	1.64	47.3	0.96	1.000	1
2,3,7,8-TCDF	ND	U	2.49	4.73			1
1,2,3,7,8-PeCDF	ND	U	0.863	23.6			1
2,3,4,7,8-PeCDF	ND	U	1.01	23.6			1
1,2,3,6,7,8-HxCDF	ND	U	0.863	23.6			1
1,2,3,7,8,9-HxCDF	ND	U	1.23	23.6			1
1,2,3,4,7,8-HxCDF	ND	U	0.814	23.6			1
2,3,4,6,7,8-HxCDF	ND	U	0.839	23.6			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.761	23.6			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.603	23.6			1
OCDF	5.87	BJ	2.04	47.3	0.85	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B31
Lab Code: K2112198-006

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1058mL
Data File Name: P628438
ICAL Date: 10/14/21

Date Analyzed: 11/20/21 22:32
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628433

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	3.30	4.73			1
Total Penta-Dioxins	ND	U	1.36	23.6			1
Total Hexa-Dioxins	ND	U	0.773	23.6			1
Total Hepta-Dioxins	ND	U	0.825	23.6			1
Total Tetra-Furans	ND	U	2.49	4.73			1
Total Penta-Furans	ND	U	0.925	23.6			1
Total Hexa-Furans	ND	U	0.918	23.6			1
Total Hepta-Furans	ND	U	0.667	23.6			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Sample Name: B31
Lab Code: K2112198-006

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1058mL

Data File Name: P628438
ICAL Date: 10/14/21

Date Analyzed: 11/20/21 22:32
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628433

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	535.730	27	Y	40-135	0.77	1.020
13C-1,2,3,7,8-PeCDD	2000	712.612	36	Y	40-135	1.59	1.174
13C-1,2,3,4,7,8-HxCDD	2000	845.328	42		40-135	1.27	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1075.102	54		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	859.003	43		40-135	1.07	1.066
13C-OCDD	4000	1282.142	32	Y	40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	483.029	24	Y	40-135	0.81	0.994
13C-1,2,3,7,8-PeCDF	2000	841.279	42		40-135	1.57	1.134
13C-2,3,4,7,8-PeCDF	2000	698.346	35	Y	40-135	1.56	1.165
13C-1,2,3,4,7,8-HxCDF	2000	925.939	46		40-135	0.51	0.972
13C-1,2,3,6,7,8-HxCDF	2000	864.723	43		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	758.879	38	Y	40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	918.601	46		40-135	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	761.341	38	Y	40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1158.820	58		40-135	0.44	1.079
37Cl-2,3,7,8-TCDD	800	294.120	37	Y	40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water
Sample Name: B31
Lab Code: K2112198-006

Service Request: K2112198
Date Collected: 10/15/21 11:20
Date Received: 10/18/21 10:20

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	3.30	4.73	1	1	
1,2,3,7,8-PeCDD	ND	1.36	23.6	1	1	
1,2,3,6,7,8-HxCDD	ND	0.728	23.6	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.878	23.6	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.734	23.6	1	0.1	
1,2,3,4,6,7,8-HpCDD	1.49	0.825	23.6	1	0.01	0.0149
OCDD	11.8	1.64	47.3	1	0.0003	0.00354
2,3,7,8-TCDF	ND	2.49	4.73	1	0.1	
1,2,3,7,8-PeCDF	ND	0.863	23.6	1	0.03	
2,3,4,7,8-PeCDF	ND	1.01	23.6	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.863	23.6	1	0.1	
1,2,3,7,8,9-HxCDF	ND	1.23	23.6	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.814	23.6	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.839	23.6	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.761	23.6	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.603	23.6	1	0.01	
OCDF	5.87	2.04	47.3	1	0.0003	0.00176
Total TEQ						0.0202

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: EQ2100629-01

Service Request: K2112198
Date Collected: NA
Date Received: NA

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.002g

Data File Name: P628214
ICAL Date: 10/14/21

Date Analyzed: 11/10/21 23:38
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.503	0.503			1
1,2,3,7,8-PeCDD	ND	U	0.223	2.50			1
1,2,3,6,7,8-HxCDD	ND	U	0.112	2.50			1
1,2,3,4,7,8-HxCDD	ND	U	0.133	2.50			1
1,2,3,7,8,9-HxCDD	ND	U	0.112	2.50			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.189	2.50			1
OCDD	ND	U	0.181	5.00			1
2,3,7,8-TCDF	ND	U	0.326	0.500			1
1,2,3,7,8-PeCDF	ND	U	0.181	2.50			1
2,3,4,7,8-PeCDF	ND	U	0.199	2.50			1
1,2,3,6,7,8-HxCDF	ND	U	0.103	2.50			1
1,2,3,7,8,9-HxCDF	ND	U	0.118	2.50			1
1,2,3,4,7,8-HxCDF	ND	U	0.0952	2.50			1
2,3,4,6,7,8-HxCDF	ND	U	0.0930	2.50			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.129	2.50			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.105	2.50			1
OCDF	ND	U	0.187	5.00			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100629-01

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.002g

Date Analyzed: 11/10/21 23:38
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Data File Name: P628214
ICAL Date: 10/14/21

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.503	0.503			1
Total Penta-Dioxins	ND	U	0.223	2.50			1
Total Hexa-Dioxins	ND	U	0.118	2.50			1
Total Hepta-Dioxins	ND	U	0.189	2.50			1
Total Tetra-Furans	ND	U	0.326	0.500			1
Total Penta-Furans	ND	U	0.190	2.50			1
Total Hexa-Furans	ND	U	0.102	2.50			1
Total Hepta-Furans	ND	U	0.115	2.50			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100629-01

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.002g

Date Analyzed: 11/10/21 23:38
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Data File Name: P628214
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	720.752	36	Y	40-135	0.75	1.019
13C-1,2,3,7,8-PeCDD	2000	1080.330	54		40-135	1.55	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1181.010	59		40-135	1.24	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1522.485	76		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1301.443	65		40-135	1.05	1.066
13C-OCDD	4000	2611.054	65		40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	575.810	29	Y	40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1142.551	57		40-135	1.58	1.132
13C-2,3,4,7,8-PeCDF	2000	1005.855	50		40-135	1.60	1.162
13C-1,2,3,4,7,8-HxCDF	2000	1165.741	58		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1116.773	56		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1112.766	56		40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1245.699	62		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1084.630	54		40-135	0.44	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1614.283	81		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	266.670	33	Y	40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: EQ2100630-01

Service Request: K2112198
Date Collected: NA
Date Received: NA

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628240
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 22:24
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	5.40	5.40			1
1,2,3,7,8-PeCDD	ND	U	1.36	25.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.977	25.0			1
1,2,3,4,7,8-HxCDD	ND	U	1.21	25.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.995	25.0			1
1,2,3,4,6,7,8-HpCDD	2.51J		1.62	25.0	0.91	1.000	1
OCDD	21.4J		3.17	50.0	1.00	1.000	1
2,3,7,8-TCDF	ND	U	3.60	5.00			1
1,2,3,7,8-PeCDF	ND	U	1.05	25.0			1
2,3,4,7,8-PeCDF	ND	U	1.15	25.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.862	25.0			1
1,2,3,7,8,9-HxCDF	ND	U	1.08	25.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.829	25.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.821	25.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	1.03	25.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.862	25.0			1
OCDF	6.81JK		3.12	50.0	1.07	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100630-01

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628240
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 22:24
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	5.40	5.40			1
Total Penta-Dioxins	ND	U	1.36	25.0			1
Total Hexa-Dioxins	ND	U	1.05	25.0			1
Total Hepta-Dioxins	2.51J		1.62	25.0	0.91		1
Total Tetra-Furans	ND	U	3.60	5.00			1
Total Penta-Furans	ND	U	1.10	25.0			1
Total Hexa-Furans	ND	U	0.889	25.0			1
Total Hepta-Furans	ND	U	0.931	25.0			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: EQ2100630-01

Service Request: K2112198
Date Collected: NA
Date Received: NA

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628240
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 22:24
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	747.549	37	Y	40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1005.432	50		40-135	1.55	1.170
13C-1,2,3,4,7,8-HxCDD	2000	964.293	48		40-135	1.30	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1278.756	64		40-135	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	951.175	48		40-135	1.05	1.066
13C-OCDD	4000	1436.380	36	Y	40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	682.049	34	Y	40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1123.970	56		40-135	1.57	1.130
13C-2,3,4,7,8-PeCDF	2000	990.302	50		40-135	1.59	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1017.861	51		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	998.196	50		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	944.104	47		40-135	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1088.195	54		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	874.764	44		40-135	0.45	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1268.511	63		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	319.341	40		40-135	NA	1.019



Accuracy & Precision

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Analyzed: 11/11/21
Date Extracted: 11/02/21

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: ng/Kg
Basis: Dry
Analysis Lot: 745940

Lab Control Sample
EQ2100629-02

Duplicate Lab Control Sample
EQ2100629-03

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,3,4,6,7,8-HpCDD	82.3	99.7	83	80.9	98.4	82	70-130	2	25
1,2,3,4,7,8-HxCDD	91.5	99.7	92	89.2	98.4	91	70-130	3	25
1,2,3,6,7,8-HxCDD	75.7	99.7	76	76.9	98.4	78	70-130	2	25
1,2,3,7,8,9-HxCDD	82.7	99.7	83	82.9	98.4	84	70-130	<1	25
1,2,3,7,8-PeCDD	86.8	99.7	87	84.5	98.4	86	70-130	3	25
2,3,7,8-TCDD	15.6	19.9	78	15.1	19.7	77	70-130	3	25
OCDD	168	199	84	169	197	86	70-130	<1	25
1,2,3,4,6,7,8-HpCDF	85.6	99.7	86	85.1	98.4	86	70-130	<1	25
1,2,3,4,7,8,9-HpCDF	55.8	99.7	56 *	54.5	98.4	55 *	70-130	2	25
1,2,3,4,7,8-HxCDF	78.3	99.7	79	77.5	98.4	79	70-130	1	25
1,2,3,6,7,8-HxCDF	85.4	99.7	86	83.8	98.4	85	70-130	2	25
1,2,3,7,8,9-HxCDF	80.9	99.7	81	80.4	98.4	82	70-130	<1	25
1,2,3,7,8-PeCDF	60.6	99.7	61 *	61.6	98.4	63 *	70-130	2	25
2,3,4,6,7,8-HxCDF	77.9	99.7	78	79.5	98.4	81	70-130	2	25
2,3,4,7,8-PeCDF	80.1	99.7	80	78.8	98.4	80	70-130	2	25
2,3,7,8-TCDF	14.3	19.9	72	14.6	19.7	74	70-130	2	25
OCDF	151	199	76	148	197	75	70-130	2	25

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100629-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.031g

Data File Name: P628221
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 05:27
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	15.6		0.313	0.498	0.76	1.001	1
1,2,3,7,8-PeCDD	86.8		0.0886	2.49	1.58	1.000	1
1,2,3,6,7,8-HxCDD	75.7		0.0516	2.49	1.21	1.000	1
1,2,3,4,7,8-HxCDD	91.5		0.0599	2.49	1.23	1.000	1
1,2,3,7,8,9-HxCDD	82.7		0.0512	2.49	1.23	1.007	1
1,2,3,4,6,7,8-HpCDD	82.3		0.0807	2.49	1.05	1.000	1
OCDD	168		0.0763	4.98	0.89	1.000	1
2,3,7,8-TCDF	14.3		0.229	0.498	0.81	1.001	1
1,2,3,7,8-PeCDF	60.6		0.0773	2.49	1.55	1.001	1
2,3,4,7,8-PeCDF	80.1		0.0900	2.49	1.55	1.000	1
1,2,3,6,7,8-HxCDF	85.4		0.0569	2.49	1.27	1.000	1
1,2,3,7,8,9-HxCDF	80.9		0.0619	2.49	1.25	1.000	1
1,2,3,4,7,8-HxCDF	78.3		0.0537	2.49	1.22	1.000	1
2,3,4,6,7,8-HxCDF	77.9		0.0499	2.49	1.23	1.000	1
1,2,3,4,6,7,8-HpCDF	85.6		0.183	2.49	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	55.8		0.152	2.49	1.01	1.000	1
OCDF	151		0.130	4.98	0.89	1.006	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100629-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.031g

Data File Name: P628221
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 05:27
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	15.6		0.313	0.498	0.76		1
Total Penta-Dioxins	86.8		0.0886	2.49	1.58		1
Total Hexa-Dioxins	250		0.0538	2.49	1.23		1
Total Hepta-Dioxins	82.3		0.0807	2.49	1.05		1
Total Tetra-Furans	14.3		0.229	0.498	0.81		1
Total Penta-Furans	141		0.0830	2.49	1.55		1
Total Hexa-Furans	323		0.0554	2.49	1.22		1
Total Hepta-Furans	142		0.164	2.49	1.03		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100629-02

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.031g

Date Analyzed: 11/11/21 05:27
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Data File Name: P628221
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	991.533	50		40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1351.150	68		40-135	1.54	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1404.392	70		40-135	1.33	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1746.323	87		40-135	1.20	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1522.604	76		40-135	1.05	1.066
13C-OCDD	4000	3108.380	78		40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	812.630	41		40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1483.930	74		40-135	1.57	1.131
13C-2,3,4,7,8-PeCDF	2000	1253.249	63		40-135	1.56	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1355.109	68		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1240.718	62		40-135	0.53	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1326.938	66		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1444.448	72		40-135	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1295.326	65		40-135	0.44	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1930.021	97		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	366.707	46		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100629-03

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.162g

Data File Name: P628222
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 06:16
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	15.1		0.195	0.492	0.76	1.001	1
1,2,3,7,8-PeCDD	84.5		0.0568	2.46	1.55	1.000	1
1,2,3,6,7,8-HxCDD	76.9		0.0679	2.46	1.27	1.000	1
1,2,3,4,7,8-HxCDD	89.2		0.0803	2.46	1.26	1.000	1
1,2,3,7,8,9-HxCDD	82.9		0.0678	2.46	1.20	1.007	1
1,2,3,4,6,7,8-HpCDD	80.9		0.0596	2.46	1.02	1.000	1
OCDD	169		0.108	4.92	0.91	1.000	1
2,3,7,8-TCDF	14.6		0.164	0.492	0.78	1.001	1
1,2,3,7,8-PeCDF	61.6		0.0815	2.46	1.53	1.001	1
2,3,4,7,8-PeCDF	78.8		0.0922	2.46	1.53	1.000	1
1,2,3,6,7,8-HxCDF	83.8		0.0318	2.46	1.24	1.000	1
1,2,3,7,8,9-HxCDF	80.4		0.0363	2.46	1.26	1.000	1
1,2,3,4,7,8-HxCDF	77.5		0.0295	2.46	1.21	1.000	1
2,3,4,6,7,8-HxCDF	79.5		0.0291	2.46	1.24	1.000	1
1,2,3,4,6,7,8-HpCDF	85.1		0.191	2.46	1.04	1.000	1
1,2,3,4,7,8,9-HpCDF	54.5		0.158	2.46	1.03	1.000	1
OCDF	148		0.122	4.92	0.90	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100629-03

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.162g

Data File Name: P628222
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 06:16
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	15.1		0.195	0.492	0.76		1
Total Penta-Dioxins	84.7		0.0568	2.46	1.55		1
Total Hexa-Dioxins	249		0.0713	2.46	1.26		1
Total Hepta-Dioxins	80.9		0.0596	2.46	1.02		1
Total Tetra-Furans	14.6		0.164	0.492	0.78		1
Total Penta-Furans	140		0.0864	2.46	1.53		1
Total Hexa-Furans	321		0.0315	2.46	1.21		1
Total Hepta-Furans	140		0.171	2.46	1.04		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100629-03

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.162g

Date Analyzed: 11/11/21 06:16
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Data File Name: P628222
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	895.712	45		40-135	0.75	1.019
13C-1,2,3,7,8-PeCDD	2000	1274.039	64		40-135	1.57	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1331.412	67		40-135	1.25	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1697.395	85		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1419.069	71		40-135	1.06	1.066
13C-OCDD	4000	2840.097	71		40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	755.323	38	Y	40-135	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	1389.756	69		40-135	1.55	1.131
13C-2,3,4,7,8-PeCDF	2000	1176.047	59		40-135	1.58	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1317.934	66		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1260.949	63		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1279.825	64		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1398.740	70		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1211.836	61		40-135	0.43	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1804.539	90		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	338.993	42		40-135	NA	1.019

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Analyzed: 11/12/21
Date Extracted: 11/02/21

Lab Control Sample Summary

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: pg/L
Basis: NA
Analysis Lot: 746633

Lab Control Sample

EQ2100630-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,2,3,4,6,7,8-HpCDD	906	1000	91	70-130
1,2,3,4,7,8-HxCDD	1040	1000	104	70-130
1,2,3,6,7,8-HxCDD	854	1000	85	70-130
1,2,3,7,8,9-HxCDD	938	1000	94	70-130
1,2,3,7,8-PeCDD	988	1000	99	70-130
2,3,7,8-TCDD	179	200	90	70-130
OCDD	1940	2000	97	70-130
1,2,3,4,6,7,8-HpCDF	957	1000	96	70-130
1,2,3,4,7,8,9-HpCDF	601	1000	60 *	70-130
1,2,3,4,7,8-HxCDF	885	1000	89	70-130
1,2,3,6,7,8-HxCDF	942	1000	94	70-130
1,2,3,7,8,9-HxCDF	907	1000	91	70-130
1,2,3,7,8-PeCDF	699	1000	70	70-130
2,3,4,6,7,8-HxCDF	889	1000	89	70-130
2,3,4,7,8-PeCDF	902	1000	90	70-130
2,3,7,8-TCDF	172	200	86	70-130
OCDF	1890	2000	94	70-130

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100630-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628246
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 03:23
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	179		3.31	5.00	0.77	1.000	1
1,2,3,7,8-PeCDD	988		1.14	25.0	1.54	1.000	1
1,2,3,6,7,8-HxCDD	854		0.753	25.0	1.28	1.000	1
1,2,3,4,7,8-HxCDD	1040		0.882	25.0	1.29	1.000	1
1,2,3,7,8,9-HxCDD	938		0.749	25.0	1.25	1.007	1
1,2,3,4,6,7,8-HpCDD	906		1.31	25.0	0.96	1.000	1
OCDD	1940		2.18	50.0	0.88	1.000	1
2,3,7,8-TCDF	172		2.32	5.00	0.79	1.001	1
1,2,3,7,8-PeCDF	699		0.946	25.0	1.59	1.001	1
2,3,4,7,8-PeCDF	902		1.12	25.0	1.52	1.000	1
1,2,3,6,7,8-HxCDF	942		0.714	25.0	1.22	1.000	1
1,2,3,7,8,9-HxCDF	907		0.868	25.0	1.22	1.000	1
1,2,3,4,7,8-HxCDF	885		0.687	25.0	1.27	1.000	1
2,3,4,6,7,8-HxCDF	889		0.669	25.0	1.17	1.000	1
1,2,3,4,6,7,8-HpCDF	957		2.36	25.0	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	601		1.90	25.0	1.03	1.000	1
OCDF	1890		2.94	50.0	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100630-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628246
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 03:23
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	179		3.31	5.00	0.77		1
Total Penta-Dioxins	991		1.14	25.0	1.54		1
Total Hexa-Dioxins	2840		0.788	25.0	1.29		1
Total Hepta-Dioxins	906		1.31	25.0	0.96		1
Total Tetra-Furans	172		2.32	5.00	0.79		1
Total Penta-Furans	1620		1.03	25.0	1.59		1
Total Hexa-Furans	3620		0.730	25.0	1.27		1
Total Hepta-Furans	1560		2.08	25.0	1.05		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112198
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100630-02

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628246
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 03:23
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	973.024	49		40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1155.173	58		40-135	1.51	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1098.127	55		40-135	1.34	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1420.748	71		40-135	1.22	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1008.494	50		40-135	1.06	1.066
13C-OCDD	4000	1361.621	34	Y	40-135	0.88	1.142
13C-2,3,7,8-TCDF	2000	872.268	44		40-135	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	1401.776	70		40-135	1.57	1.130
13C-2,3,4,7,8-PeCDF	2000	1139.700	57		40-135	1.60	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1157.541	58		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1147.160	57		40-135	0.50	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1099.896	55		40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1217.710	61		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	911.152	46		40-135	0.43	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1403.935	70		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	404.417	51		40-135	NA	1.019



December 30, 2021

Service Request No:K2112279

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

Laboratory Results for: EQRB

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 20, 2021
For your reference, these analyses have been assigned our service request number **K2112279**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager

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PHONE +1 360 577 7222 | FAX +1 360 636 1068
ALS Group USA, Corp.
dba ALS Environmental



Narrative Documents

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com



Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB
Sample Matrix: Soil, Water

Service Request: K2112279
Date Received: 10/20/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Three soil, water samples were received for analysis at ALS Environmental on 10/20/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 11/09/2021:Pentachlorophenol (PCP) was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 11/09/2021:The upper control criterion was exceeded for multiple analytes in Laboratory Control Sample (LCS). The analytes in question were not detected in the associated field samples above the MRL. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method 8270D, 11/09/2021:The upper control criterion was exceeded for p-Terphenyl-d14 in B-28 (0-10 C). No target analytes were detected in the sample above the MRL. Since the apparent problem equates to a high bias, the data quality was not significantly affected. No further corrective action was appropriate.

The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS14 \1109F002.D: Indeno(1,2,3-cd)pyrene. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 11/18/2021:Bis(2-ethylhexyl) Phthalate was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Method 8270D, 11/18/2021:The spike recovery of Di-n-butyl Phthalate for replicate Laboratory Control Sample (LCS/DLCS) was outside the lower control criterion. The analyte in question was not detected in the associated field samples above the MRL. The error associated with reduced recovery indicated a potential slight low bias. The data was flagged to indicate the problem.

Method 8270D, 11/18/2021:The Relative Percent Difference (RPD) for Benzoic Acid in the replicate Laboratory Control Sample (LCS/DLCS) was outside control criteria. The spike recoveries in the replicate Laboratory Control Sample (LCS/DLCS) were within acceptance limits, indicating the analytical batch was in control. No further corrective action was appropriate.

The extraction of the field sample was initially performed on 10/26/21. The extraction batch Method Blank (MB) KQ2121086-03 contained background contaminated of the compounds of interest. Efforts were made to re-extract the samples as soon as possible after the contamination was discovered. However, the re-extraction of the samples was performed past the recommended holding time. The results from the re-extraction were reported. The data was flagged to indicate the holding time violation.

Approved by Noel D. O'Quinn

Date 12/30/2021

Semivoa GC:

Method 8081B, 11/26/2021: The lower control criterion was exceeded for Tetrachloro-m-xylene in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence were reanalyzed in a passing CCV to prove the recovery of the analyte. The Laboratory Control Samples (LCS) and Method Blank (MB) were within range with the potential low bias and were not reanalyzed. Values were confirmed and reported from the original run, no further corrective action was required.

Method 8081B, 12/09/2021: The analysis of several samples were initially performed on 11/26/21. Due to a low failing CCV for Tetrachloro-m-xylene (TCMX), the samples required reanalysis. Efforts were made to reanalyze the samples as soon as possible after the analytical system was back in control. The results from the reanalysis were reported for TCMX. The data was flagged to indicate the holding time violation.

Method 8081B, 11/26/2021: The lower control criterion was exceeded for Tetrachloro-m-xylene in Continuing Calibration Verification (CCV). The field sample analyzed in this sequence were reanalyzed in a passing CCV to prove the recovery of the analyte. The Laboratory Control Samples (LCS) and Method Blank (MB) were within range with the potential low bias and were not reanalyzed. No further corrective action was required.

Method 8081B, 11/26/2021: The lower control criterion was exceeded for 4,4'-DDT in Continuing Calibration Verification (CCV). The field sample analyzed in this sequence were reanalyzed in a passing CCV to prove the recovery of the analyte, the data was reported from the rerun. No further corrective action was required.

Method 8081B, 11/26/2021: The upper control criterion was exceeded for multiple analytes in Laboratory Control Sample (LCS) KQ2120971-01. The analytes in question were not detected in the associated field samples. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method 8081B, 11/26/2021: The Relative Percent Difference (RPD) for Toxaphene in the replicate Laboratory Control Sample (LCS/DLCS) was outside control criteria. The spike recoveries were within acceptance limits, indicating the analytical batch was in control. No further corrective action was appropriate.

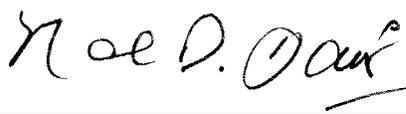
Method 8082A: The analysis of 8082A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for Aroclor 1260. The data quality was not affected. No further corrective action was necessary.

Method 8082A: The upper control criterion was exceeded for Aroclor 1016 in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte(s) in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8082A: The analysis of 8082A requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Decachlorobiphenyl. The results were reported from the column with an acceptable CCV or from the high bias column with samples non-detect. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 11/30/2021: The analysis of 8151A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for 2,4-D and Dichlorprop. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 11/30/2021: The upper control criterion was exceeded for MCPA and MCPP in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Approved by 

Date 12/30/2021

Method 8151A, 11/23/2021: The analysis of 8151A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for 2,4-D and Dichlorprop. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 11/23/2021: The analysis of 8151A requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for 2,4,5-T, 2,4-DB and Dinoseb. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method ALS SOP Butyltins, 11/01/2021: The analysis of ALS SOP Butyltins requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Tri-n-propyltin. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method ALS SOP, 10/28/2021: The upper control criterion was exceeded for Tri-n-butyltin and Tetra-n-butyltin in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method ALS SOP Butyltins, 10/28/2021: The analysis of ALS SOP Butyltins requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Tri-n-propyltin. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method NWTPH-Dx, 11/01/2021: The Relative Percent Difference (RPD) criterion for the replicate analysis of diesel and residual range organics in sample B-28 (0-10 C) was not applicable because the analyte concentration was below the Method Reporting Limit (MRL). Analytical values derived from measurements close to the detection limit are not subject to the same accuracy and precision criteria as results derived from measurements higher on the calibration range for the method.

Method NWTPH-Dx, 11/01/2021: The upper control criterion was exceeded for Diesel Range Organics and surrogates in various Continuing Calibration Verifications (CCVs). The field samples analyzed in this sequence did not contain the analyte in question above the MRL. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

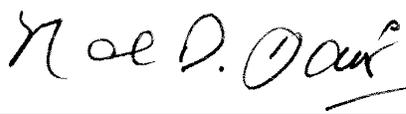
Metals:

Method 6020A, 10/27/2021: The Relative Percent Difference (RPD) for the replicate analysis of Arsenic and Lead in sample B-28 (0-10 C) was outside the normal ALS control limits. The variability in the results was attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

Method 6020A, 10/27/2021: The Relative Percent Difference (RPD) for the replicate analysis of Arsenic, Barium, and Chromium in sample B-28 was outside the normal ALS control limits. The associated QA/QC results (e.g. control sample, method blank, calibration standards, etc.) indicate the analysis was in control. No further corrective action was appropriate.

Method 6020A, 10/27/2021: The matrix spike recovery of Barium and Chromium for sample B-28 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential high bias in this matrix. No further corrective action was appropriate.

Subcontracted Analytical Parameters:

Approved by 

Date 12/30/2021



SAMPLE DETECTION SUMMARY

CLIENT ID: B-28 (0-10 C)		Lab ID: K2112279-004				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	2.31		0.07	0.60	mg/Kg	6020A
Barium	103		0.024	0.060	mg/Kg	6020A
Cadmium	0.054		0.008	0.024	mg/Kg	6020A
Chromium	13.2		0.07	0.24	mg/Kg	6020A
Lead	2.93		0.024	0.060	mg/Kg	6020A
Mercury	0.026		0.006	0.023	mg/Kg	7471B
Silver	0.029		0.005	0.024	mg/Kg	6020A
Acetone	17	J	3.4	23	ug/Kg	8260C
Methylene Chloride	2.1	J	0.19	12	ug/Kg	8260C
2-Methylnaphthalene	0.81	J	0.46	6.1	ug/Kg	8270D
Acenaphthene	0.90	J	0.37	6.1	ug/Kg	8270D
Acenaphthylene	0.93	J	0.35	6.1	ug/Kg	8270D
Anthracene	1.1	J	0.36	6.1	ug/Kg	8270D
Benz(a)anthracene	2.4	J	0.29	6.1	ug/Kg	8270D
Benzo(a)pyrene	2.5	J	0.47	6.1	ug/Kg	8270D
Benzo(b)fluoranthene	2.1	J	0.47	6.1	ug/Kg	8270D
Benzo(g,h,i)perylene	1.6	J	0.50	6.1	ug/Kg	8270D
Benzo(k)fluoranthene	1.0	J	0.30	6.1	ug/Kg	8270D
Chrysene	1.9	J	0.39	6.1	ug/Kg	8270D
Dibenzofuran	0.94	J	0.74	6.1	ug/Kg	8270D
Bis(2-ethylhexyl) Phthalate	17	J	11	120	ug/Kg	8270D
Fluoranthene	2.2	J	0.78	6.1	ug/Kg	8270D
Fluorene	3.4	J	0.70	6.1	ug/Kg	8270D
Indeno(1,2,3-cd)pyrene	1.8	J	0.45	6.1	ug/Kg	8270D
Naphthalene	1.6	J	0.58	6.1	ug/Kg	8270D
Phenanthrene	6.9		0.73	6.1	ug/Kg	8270D
Pyrene	3.0	J	0.40	6.1	ug/Kg	8270D
Di-n-octyl Phthalate	15	J	4.0	24	ug/Kg	8270D
Diesel Range Organics (C12 - C25 DRO)	7.3	J	2.3	31	mg/Kg	NWTPH-Dx
Residual Range Organics (C25 - C36 RRO)	20	J	4.8	120	mg/Kg	NWTPH-Dx
Solids, Total	81.3				Percent	160.3 Modified

CLIENT ID: B-28 (10-25 C)		Lab ID: K2112279-007				
Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic	1.80		0.06	0.48	mg/Kg	6020A
Barium	79.0		0.019	0.048	mg/Kg	6020A
Cadmium	0.052		0.007	0.019	mg/Kg	6020A
Chromium	13.6		0.06	0.19	mg/Kg	6020A
Lead	2.49		0.019	0.048	mg/Kg	6020A
Mercury	0.017	J	0.005	0.021	mg/Kg	7471B
Selenium	0.13	J	0.09	0.96	mg/Kg	6020A
Silver	0.024		0.004	0.019	mg/Kg	6020A



SAMPLE DETECTION SUMMARY

CLIENT ID: B-28 (10-25 C) Lab ID: K2112279-007

Analyte	Results	Flag	MDL	MRL	Units	Method
Acetone	13	J	3.4	23	ug/Kg	8260C
Methylene Chloride	1.6	J	0.19	12	ug/Kg	8260C
2-Methylnaphthalene	0.58	J	0.44	5.9	ug/Kg	8270D
Benz(a)anthracene	0.55	J	0.28	5.9	ug/Kg	8270D
Bis(2-ethylhexyl) Phthalate	13	J	11	120	ug/Kg	8270D
Naphthalene	1.2	J	0.56	5.9	ug/Kg	8270D
Phenanthrene	1.3	J	0.70	5.9	ug/Kg	8270D
Pyrene	0.42	J	0.38	5.9	ug/Kg	8270D
Diesel Range Organics (C12 - C25 DRO)	3.2	J	2.2	29	mg/Kg	NWTPH-Dx
Residual Range Organics (C25 - C36 RRO)	6.7	J	4.6	120	mg/Kg	NWTPH-Dx
Solids, Total	83.2				Percent	160.3 Modified

CLIENT ID: B-28 Lab ID: K2112279-008

Analyte	Results	Flag	MDL	MRL	Units	Method
Arsenic, Dissolved	0.51		0.09	0.50	ug/L	6020A
Barium, Dissolved	9.28		0.020	0.050	ug/L	6020A
Cadmium, Dissolved	0.016	J	0.008	0.020	ug/L	6020A
Chromium, Dissolved	0.20	J	0.03	0.20	ug/L	6020A
Lead, Dissolved	0.326		0.006	0.020	ug/L	6020A
Arsenic	4.49		0.09	0.50	ug/L	6020A
Barium	98.0		0.020	0.050	ug/L	6020A
Cadmium	0.111		0.008	0.020	ug/L	6020A
Chromium	8.10		0.03	0.20	ug/L	6020A
Lead	49.2		0.006	0.020	ug/L	6020A
Mercury	0.07	J	0.02	0.20	ug/L	7470A
Silver	0.015	J	0.009	0.020	ug/L	6020A
Acetone	7.8	J	3.3	20	ug/L	8260C
Gasoline Range Organics (Toluene-Naphthalene GRO)	28.7	J	12.0	250	ug/L	NWTPH-Gx
Carbon Disulfide	0.53		0.069	0.50	ug/L	8260C
Chloromethane	0.11	J	0.068	0.50	ug/L	8260C
1,1-Dichloroethene	0.16	J	0.080	0.50	ug/L	8260C
Toluene	0.12	J	0.054	0.50	ug/L	8260C
2-Methylnaphthalene	1.7	J	0.40	3.3	ng/L	8270D
Acenaphthylene	3.0	J	0.37	3.3	ng/L	8270D
Anthracene	4.3		0.29	3.3	ng/L	8270D
Benz(a)anthracene	17		0.34	3.3	ng/L	8270D
Benzo(a)pyrene	20		0.41	3.3	ng/L	8270D
Benzo(b)fluoranthene	30		0.25	3.3	ng/L	8270D
Benzo(g,h,i)perylene	16		0.36	3.3	ng/L	8270D
Benzo(k)fluoranthene	41		0.41	3.3	ng/L	8270D
Chrysene	21		0.65	3.3	ng/L	8270D



SAMPLE DETECTION SUMMARY

CLIENT ID: B-28 **Lab ID: K2112279-008**

Analyte	Results	Flag	MDL	MRL	Units	Method
Dibenz(a,h)anthracene	3.7		0.45	3.3	ng/L	8270D
Fluoranthene	40		0.46	3.3	ng/L	8270D
Fluorene	2.9	J	0.42	3.3	ng/L	8270D
Indeno(1,2,3-cd)pyrene	17		0.44	3.3	ng/L	8270D
Naphthalene	6.4		0.71	3.3	ng/L	8270D
Phenanthrene	17		0.72	3.3	ng/L	8270D
Pyrene	40		0.78	3.3	ng/L	8270D
Bis(2-ethylhexyl) Phthalate	0.80	J	0.15	1.1	ug/L	8270D
Di-n-butyl Phthalate	0.15	J	0.025	0.22	ug/L	8270D
alpha-BHC	1.2	JP	0.50	2.0	ng/L	8081B
Di-n-butyltin Cation	0.017	J	0.0077	0.052	ug/L	ALS SOP
MCPP	24	J	18	120	ug/L	8151A
Diesel Range Organics (C12 - C25 DRO)	220	J	11	250	ug/L	NWTPH-Dx
Residual Range Organics (C25 - C36 RRO)	340	J	19	500	ug/L	NWTPH-Dx



Sample Receipt Information

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00

Service Request:K2112279

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2112279-004	B-28 (0-10 C)	10/19/2021	1320
K2112279-007	B-28 (10-25 C)	10/19/2021	1335
K2112279-008	B-28	10/19/2021	1445



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SR# 14112279
COC Set 1 of 1
COC# _____

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
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Project Name QARB		Project Number 2080-00		NUMBER OF CONTAINERS	7D		14D		28D		30D		180D		365D		Remarks		
Project Manager Jill Betts					B015C / DRO RRO	B081B / Pest OC LL	B151A / HERB	B270D / PAH SIM	B270D / SVO LL	ALS SOP / BUTYLINS	B015C / VOC GRO	B260C / VOC FP	7470A / Hg D	7470A / Hg T	B290A / PCDD PCDF	B010C / Metals D		B010C / Metals T	B082A / PCB
Company Coles + Betts																			
Address																			
Phone #																			
Sampler Signature Paula Parrott		Sampler Printed Name Paula Parrott		email															
CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix															
1. B-28(0-5)		10/19/21	1:20p	S	4														
2. B-28(5-10)		10/19/21	1:25p	S	4														
3. B-28(10-15)		10/19/21	1:30p	S	4														
4. B-28(15-20)		10/19/21	1:35p	S	4														
5. B-28(20-25)		10/19/21	1:40p	S	4														
6.																			
7. B-28		10/19/21	2:25p	W	24	X	X	X	X	X	X	X	X	X	X	X	X		
8.																			
9.																			
10.																			

Report Requirements <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	Invoice Information P.O.# _____ Bill To: _____ _____	Circle which metals are to be analyzed Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg			
	Turnaround Requirements <input type="checkbox"/> 24 hr. _____ 48 hr. <input type="checkbox"/> 5 Day <input type="checkbox"/> Standard Requested Report Date _____	Special Instructions/Comments: _____ *Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other _____ (Circle One)			
Relinquished By: Signature: <i>Paula Parrott</i> Printed Name: Paula Parrott Firm: Apex Cos. Date/Time: 10/19/21 4:00p	Received By: Signature: <i>Paula Parrott</i> Printed Name: Paula Parrott Firm: ALS Date/Time: 10/20/21 10:10	Relinquished By: Signature: <i>Monica</i> Printed Name: Monica Firm: ALS Date/Time: 10/20/21 11:20	Received By: Signature: <i>Wendy Frellesen</i> Printed Name: Wendy Frellesen Firm: ALS Date/Time: 10/20/21 1:20	Relinquished By: Signature: _____ Printed Name: _____ Firm: _____ Date/Time: _____	Received By: Signature: _____ Printed Name: _____ Firm: _____ Date/Time: _____

PM Mark

Cooler Receipt and Preservation Form

Client Coles + Betts Service Request K21 12279
 Received: 10/20/12 Opened: 10/20/12 By: AP Unloaded: 10/20/12 By: AP

- Samples were received via? **USPS** **Fed Ex** **UPS** **DHL** **PDX** **Courier** **Hand Delivered**
 - Samples were received in: (circle) **Cooler** **Box** **Envelope** **Other** **NA**
 - Were custody seals on coolers? **NA** **Y** **N** If yes, how many and where? _____
 If present, were custody seals intact? **Y** **N** If present, were they signed and dated? **Y** **N**
 - Was a Temperature Blank present in cooler? **NA** **Y** **N** If yes, notate the temperature in the appropriate column below:
 If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - Were samples received within the method specified temperature ranges? **NA** **Y** **N**
 If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. **NA** **Y** **N**
- If applicable, tissue samples were received: **Frozen** **Partially Thawed** **Thawed**

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number	NA	Filed
4.1	3.9 4.2	1202	120065				NA	

- Packing material: **Inserts** **Baggies** **Bubble Wrap** **Gel Packs** **Wet Ice** **Dry Ice** **Sleeves** _____
- Were custody papers properly filled out (ink, signed, etc.)? **NA** **Y** **N**
- Were samples received in good condition (unbroken) **NA** **Y** **N**
- Were all sample labels complete (ie, analysis, preservation, etc.)? **NA** **Y** **N**
- Did all sample labels and tags agree with custody papers? **NA** **Y** **N**
- Were appropriate bottles/containers and volumes received for the tests indicated? **NA** **Y** **N**
- Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below **NA** **Y** **N**
- Were VOA vials received without headspace? Indicate in the table below. **NA** **Y** **N**
- Was C12/Res negative? **NA** **Y** **N**

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: Dissolved Metals bottles received empty. Lab created container made for Metals D filter @ LAB



Miscellaneous Forms

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00

Service Request: K2112279

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004
Sample Matrix: Soil

Date Collected: 10/19/21
Date Received: 10/20/21

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		JGRIMES
6020A	JHINSON	JCHAN
7471B	JHINSON	JHINSON
8081B	HKEIMIG	CFARMAN
8082A	HKEIMIG	SANDREWS
8151A	GTRIGG	BBRIGHT
8260C		TGLENN
8270D	ZSHARPE	LMCKOWN
8270D	HKEIMIG	CWILLIAMS
8290A	TWOODS	GCRUZ
ALS SOP	GTRIGG	SANDREWS
NWTPH-Dx	JMAGARE	TPOTTSCHMIDT
NWTPH-Gx		TGLENN

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004.R01
Sample Matrix: Soil

Date Collected: 10/19/21
Date Received: 10/20/21

Analysis Method	Extracted/Digested By	Analyzed By
6020A	JHINSON	EMCALLISTER
8081B	HKEIMIG	CFARMAN
NWTPH-Dx	JMAGARE	TPOTTSCHMIDT

Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007
Sample Matrix: Soil

Date Collected: 10/19/21
Date Received: 10/20/21

Analysis Method	Extracted/Digested By	Analyzed By
160.3 Modified		JGRIMES
6020A	JHINSON	JCHAN
7471B	JHINSON	JHINSON
8081B	HKEIMIG	CFARMAN

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00

Service Request: K2112279

Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007
Sample Matrix: Soil

Date Collected: 10/19/21
Date Received: 10/20/21

Analysis Method	Extracted/Digested By	Analyzed By
8082A	HKEIMIG	SANDREWS
8151A	GTRIGG	BBRIGHT
8260C		TGLENN
8270D	ZSHARPE	LMCKOWN
8270D	HKEIMIG	CWILLIAMS
8290A	TWOODS	GCRUZ
ALS SOP	GTRIGG	SANDREWS
NWTPH-Dx	JMAGARE	TPOTTSCHMIDT
NWTPH-Gx		TGLENN

Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007.R01
Sample Matrix: Soil

Date Collected: 10/19/21
Date Received: 10/20/21

Analysis Method	Extracted/Digested By	Analyzed By
6020A	JHINSON	EMCALLISTER
8081B	HKEIMIG	CFARMAN
NWTPH-Dx	JMAGARE	TPOTTSCHMIDT

Sample Name: B-28
Lab Code: K2112279-008
Sample Matrix: Water

Date Collected: 10/19/21
Date Received: 10/20/21

Analysis Method	Extracted/Digested By	Analyzed By
6020A	SSOLADEY	EMCALLISTER
7470A	JHINSON	JHINSON
8081B	WSTRUBLE	CFARMAN
8082A	RBERISHEV	SANDREWS
8151A	ZSHARPE	BBRIGHT
8260C		GROETTGER
8270D	HKEIMIG	LMCKOWN
8270D	ZSHARPE	CDEGNER

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00

Service Request: K2112279

Sample Name: B-28
Lab Code: K2112279-008
Sample Matrix: Water

Date Collected: 10/19/21
Date Received: 10/20/21

Analysis Method	Extracted/Digested By	Analyzed By
8290A	SHIVANI NAIDU	LLUONG
ALS SOP	GTRIGG	SANDREWS
NWTPH-Dx	JMAGARE	TPOTTSCHMIDT
NWTPH-Gx		TGLENN

Sample Name: B-28
Lab Code: K2112279-008.R01
Sample Matrix: Water

Date Collected: 10/19/21
Date Received: 10/20/21

Analysis Method	Extracted/Digested By	Analyzed By
8081B	WSTRUBLE	CFARMAN
8270D	HKEIMIG	CDEGNER



Sample Results

ALS Environmental—Kelso Laboratory
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Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20

Sample Name: B-28
Lab Code: K2112279-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	7.8 J	20	3.3	1	10/28/21 15:20	
Benzene	ND U	0.50	0.062	1	10/28/21 15:20	
Bromobenzene	ND U	2.0	0.12	1	10/28/21 15:20	
Bromochloromethane	ND U	0.50	0.16	1	10/28/21 15:20	
Bromodichloromethane	ND U	0.50	0.091	1	10/28/21 15:20	*
Bromoform	ND U	0.50	0.16	1	10/28/21 15:20	*
Bromomethane	ND U	0.50	0.16	1	10/28/21 15:20	
2-Butanone (MEK)	ND U	20	1.9	1	10/28/21 15:20	
n-Butylbenzene	ND U	4.0	0.054	1	10/28/21 15:20	
sec-Butylbenzene	ND U	2.0	0.062	1	10/28/21 15:20	
tert-Butylbenzene	ND U	2.0	0.059	1	10/28/21 15:20	
Carbon Disulfide	0.53	0.50	0.069	1	10/28/21 15:20	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/28/21 15:20	
Chlorobenzene	ND U	0.50	0.11	1	10/28/21 15:20	
Chloroethane	ND U	0.50	0.16	1	10/28/21 15:20	
Chloroform	ND U	0.50	0.072	1	10/28/21 15:20	
Chloromethane	0.11 J	0.50	0.068	1	10/28/21 15:20	
2-Chlorotoluene	ND U	2.0	0.10	1	10/28/21 15:20	
4-Chlorotoluene	ND U	2.0	0.13	1	10/28/21 15:20	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/28/21 15:20	
Dibromochloromethane	ND U	0.50	0.14	1	10/28/21 15:20	*
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/28/21 15:20	
Dibromomethane	ND U	0.50	0.15	1	10/28/21 15:20	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/28/21 15:20	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/28/21 15:20	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/28/21 15:20	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/28/21 15:20	
1,1-Dichloroethane	ND U	0.50	0.077	1	10/28/21 15:20	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/28/21 15:20	
1,1-Dichloroethene	0.16 J	0.50	0.080	1	10/28/21 15:20	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/28/21 15:20	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/28/21 15:20	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/28/21 15:20	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/28/21 15:20	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/28/21 15:20	
1,1-Dichloropropene	ND U	0.50	0.089	1	10/28/21 15:20	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/28/21 15:20	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/28/21 15:20	
Ethylbenzene	ND U	0.50	0.050	1	10/28/21 15:20	
Hexachlorobutadiene	ND U	2.0	0.11	1	10/28/21 15:20	*
2-Hexanone	ND U	20	2.7	1	10/28/21 15:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20

Sample Name: B-28
Lab Code: K2112279-008

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/28/21 15:20	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/28/21 15:20	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/28/21 15:20	
Methylene Chloride	ND U	2.0	0.10	1	10/28/21 15:20	
Naphthalene	ND U	2.0	0.088	1	10/28/21 15:20	
n-Propylbenzene	ND U	2.0	0.054	1	10/28/21 15:20	
Styrene	ND U	0.50	0.089	1	10/28/21 15:20	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/28/21 15:20	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/28/21 15:20	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/28/21 15:20	
Toluene	0.12 J	0.50	0.054	1	10/28/21 15:20	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	10/28/21 15:20	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	10/28/21 15:20	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/28/21 15:20	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/28/21 15:20	
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/28/21 15:20	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/28/21 15:20	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/28/21 15:20	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/28/21 15:20	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/28/21 15:20	
Vinyl Chloride	ND U	0.50	0.075	1	10/28/21 15:20	
o-Xylene	ND U	0.50	0.074	1	10/28/21 15:20	
m,p-Xylenes	ND U	0.50	0.11	1	10/28/21 15:20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	79	68 - 117	10/28/21 15:20	
Dibromofluoromethane	102	73 - 122	10/28/21 15:20	
Toluene-d8	100	65 - 144	10/28/21 15:20	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.9	0.13	1	10/25/21 17:44	*
1,1,1-Trichloroethane (TCA)	ND U	5.9	0.13	1	10/25/21 17:44	*
1,1,2,2-Tetrachloroethane	ND U	5.9	0.16	1	10/25/21 17:44	*
1,1,2-Trichloroethane	ND U	5.9	0.18	1	10/25/21 17:44	*
1,1-Dichloroethane	ND U	5.9	0.15	1	10/25/21 17:44	*
1,1-Dichloroethene	ND U	5.9	0.30	1	10/25/21 17:44	*
1,1-Dichloropropene	ND U	5.9	0.16	1	10/25/21 17:44	*
1,2,3-Trichlorobenzene	ND U	23	0.23	1	10/25/21 17:44	*
1,2,3-Trichloropropane	ND U	5.9	0.53	1	10/25/21 17:44	*
1,2,4-Trichlorobenzene	ND U	23	0.16	1	10/25/21 17:44	*
1,2,4-Trimethylbenzene	ND U	23	0.064	1	10/25/21 17:44	*
1,2-Dibromo-3-chloropropane	ND U	23	0.47	1	10/25/21 17:44	*
1,2-Dibromoethane (EDB)	ND U	23	0.12	1	10/25/21 17:44	*
1,2-Dichlorobenzene	ND U	5.9	0.091	1	10/25/21 17:44	*
1,2-Dichloroethane (EDC)	ND U	5.9	0.083	1	10/25/21 17:44	*
1,2-Dichloropropane	ND U	5.9	0.16	1	10/25/21 17:44	*
1,3,5-Trimethylbenzene	ND U	23	0.11	1	10/25/21 17:44	*
1,3-Dichlorobenzene	ND U	5.9	0.12	1	10/25/21 17:44	*
1,3-Dichloropropane	ND U	5.9	0.15	1	10/25/21 17:44	*
1,4-Dichlorobenzene	ND U	5.9	0.11	1	10/25/21 17:44	*
2,2-Dichloropropane	ND U	5.9	0.12	1	10/25/21 17:44	*
2-Butanone (MEK)	ND U	23	1.1	1	10/25/21 17:44	*
2-Chlorotoluene	ND U	23	0.15	1	10/25/21 17:44	*
2-Hexanone	ND U	23	1.1	1	10/25/21 17:44	*
4-Chlorotoluene	ND U	23	0.11	1	10/25/21 17:44	*
4-Isopropyltoluene	ND U	23	0.075	1	10/25/21 17:44	*
4-Methyl-2-pentanone (MIBK)	ND U	23	2.2	1	10/25/21 17:44	*
Acetone	17 J	23	3.4	1	10/25/21 17:44	*
Benzene	ND U	5.9	0.064	1	10/25/21 17:44	*
Bromobenzene	ND U	5.9	0.11	1	10/25/21 17:44	*
Bromochloromethane	ND U	5.9	0.29	1	10/25/21 17:44	*
Bromodichloromethane	ND U	5.9	0.19	1	10/25/21 17:44	*
Bromoform	ND U	5.9	0.17	1	10/25/21 17:44	*
Bromomethane	ND U	5.9	0.24	1	10/25/21 17:44	*
Carbon Disulfide	ND U	5.9	0.11	1	10/25/21 17:44	*
Carbon Tetrachloride	ND U	5.9	0.12	1	10/25/21 17:44	*
Chlorobenzene	ND U	5.9	0.077	1	10/25/21 17:44	*
Chloroethane	ND U	5.9	0.87	1	10/25/21 17:44	*
Chloroform	ND U	5.9	0.13	1	10/25/21 17:44	*
Chloromethane	ND U	5.9	0.22	1	10/25/21 17:44	*
Dibromochloromethane	ND U	5.9	0.22	1	10/25/21 17:44	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.9	0.33	1	10/25/21 17:44	*
Dichlorodifluoromethane	ND U	5.9	0.15	1	10/25/21 17:44	*
Ethylbenzene	ND U	5.9	0.12	1	10/25/21 17:44	*
Hexachlorobutadiene	ND U	23	0.47	1	10/25/21 17:44	*
Isopropylbenzene	ND U	23	0.095	1	10/25/21 17:44	*
Methylene Chloride	2.1 J	12	0.19	1	10/25/21 17:44	*
Naphthalene	ND U	23	0.16	1	10/25/21 17:44	*
Styrene	ND U	5.9	0.17	1	10/25/21 17:44	*
Tetrachloroethene (PCE)	ND U	5.9	0.19	1	10/25/21 17:44	*
Toluene	ND U	5.9	0.18	1	10/25/21 17:44	*
Trichloroethene (TCE)	ND U	5.9	0.18	1	10/25/21 17:44	*
Trichlorofluoromethane	ND U	5.9	0.10	1	10/25/21 17:44	*
Vinyl Chloride	ND U	5.9	0.22	1	10/25/21 17:44	*
cis-1,2-Dichloroethene	ND U	5.9	0.15	1	10/25/21 17:44	*
cis-1,3-Dichloropropene	ND U	5.9	0.16	1	10/25/21 17:44	*
m,p-Xylenes	ND U	5.9	0.12	1	10/25/21 17:44	*
n-Butylbenzene	ND U	23	0.081	1	10/25/21 17:44	*
n-Propylbenzene	ND U	23	0.16	1	10/25/21 17:44	*
o-Xylene	ND U	5.9	0.095	1	10/25/21 17:44	*
sec-Butylbenzene	ND U	23	0.087	1	10/25/21 17:44	*
tert-Butylbenzene	ND U	23	0.17	1	10/25/21 17:44	*
trans-1,2-Dichloroethene	ND U	5.9	0.15	1	10/25/21 17:44	*
trans-1,3-Dichloropropene	ND U	5.9	0.13	1	10/25/21 17:44	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	61 - 133	10/25/21 17:44	
Dibromofluoromethane	98	59 - 134	10/25/21 17:44	
Toluene-d8	99	77 - 122	10/25/21 17:44	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.8	0.13	1	10/25/21 18:05	*
1,1,1-Trichloroethane (TCA)	ND U	5.8	0.13	1	10/25/21 18:05	*
1,1,2,2-Tetrachloroethane	ND U	5.8	0.16	1	10/25/21 18:05	*
1,1,2-Trichloroethane	ND U	5.8	0.18	1	10/25/21 18:05	*
1,1-Dichloroethane	ND U	5.8	0.14	1	10/25/21 18:05	*
1,1-Dichloroethene	ND U	5.8	0.30	1	10/25/21 18:05	*
1,1-Dichloropropene	ND U	5.8	0.16	1	10/25/21 18:05	*
1,2,3-Trichlorobenzene	ND U	23	0.23	1	10/25/21 18:05	*
1,2,3-Trichloropropane	ND U	5.8	0.53	1	10/25/21 18:05	*
1,2,4-Trichlorobenzene	ND U	23	0.16	1	10/25/21 18:05	*
1,2,4-Trimethylbenzene	ND U	23	0.063	1	10/25/21 18:05	*
1,2-Dibromo-3-chloropropane	ND U	23	0.47	1	10/25/21 18:05	*
1,2-Dibromoethane (EDB)	ND U	23	0.11	1	10/25/21 18:05	*
1,2-Dichlorobenzene	ND U	5.8	0.090	1	10/25/21 18:05	*
1,2-Dichloroethane (EDC)	ND U	5.8	0.082	1	10/25/21 18:05	*
1,2-Dichloropropane	ND U	5.8	0.16	1	10/25/21 18:05	*
1,3,5-Trimethylbenzene	ND U	23	0.11	1	10/25/21 18:05	*
1,3-Dichlorobenzene	ND U	5.8	0.11	1	10/25/21 18:05	*
1,3-Dichloropropane	ND U	5.8	0.14	1	10/25/21 18:05	*
1,4-Dichlorobenzene	ND U	5.8	0.11	1	10/25/21 18:05	*
2,2-Dichloropropane	ND U	5.8	0.12	1	10/25/21 18:05	*
2-Butanone (MEK)	ND U	23	1.1	1	10/25/21 18:05	*
2-Chlorotoluene	ND U	23	0.14	1	10/25/21 18:05	*
2-Hexanone	ND U	23	1.1	1	10/25/21 18:05	*
4-Chlorotoluene	ND U	23	0.11	1	10/25/21 18:05	*
4-Isopropyltoluene	ND U	23	0.075	1	10/25/21 18:05	*
4-Methyl-2-pentanone (MIBK)	ND U	23	2.1	1	10/25/21 18:05	*
Acetone	13 J	23	3.4	1	10/25/21 18:05	*
Benzene	ND U	5.8	0.063	1	10/25/21 18:05	*
Bromobenzene	ND U	5.8	0.11	1	10/25/21 18:05	*
Bromochloromethane	ND U	5.8	0.28	1	10/25/21 18:05	*
Bromodichloromethane	ND U	5.8	0.19	1	10/25/21 18:05	*
Bromoform	ND U	5.8	0.17	1	10/25/21 18:05	*
Bromomethane	ND U	5.8	0.24	1	10/25/21 18:05	*
Carbon Disulfide	ND U	5.8	0.11	1	10/25/21 18:05	*
Carbon Tetrachloride	ND U	5.8	0.11	1	10/25/21 18:05	*
Chlorobenzene	ND U	5.8	0.076	1	10/25/21 18:05	*
Chloroethane	ND U	5.8	0.87	1	10/25/21 18:05	*
Chloroform	ND U	5.8	0.13	1	10/25/21 18:05	*
Chloromethane	ND U	5.8	0.21	1	10/25/21 18:05	*
Dibromochloromethane	ND U	5.8	0.21	1	10/25/21 18:05	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.8	0.33	1	10/25/21 18:05	*
Dichlorodifluoromethane	ND U	5.8	0.14	1	10/25/21 18:05	*
Ethylbenzene	ND U	5.8	0.11	1	10/25/21 18:05	*
Hexachlorobutadiene	ND U	23	0.47	1	10/25/21 18:05	*
Isopropylbenzene	ND U	23	0.095	1	10/25/21 18:05	*
Methylene Chloride	1.6 J	12	0.19	1	10/25/21 18:05	*
Naphthalene	ND U	23	0.16	1	10/25/21 18:05	*
Styrene	ND U	5.8	0.17	1	10/25/21 18:05	*
Tetrachloroethene (PCE)	ND U	5.8	0.19	1	10/25/21 18:05	*
Toluene	ND U	5.8	0.18	1	10/25/21 18:05	*
Trichloroethene (TCE)	ND U	5.8	0.18	1	10/25/21 18:05	*
Trichlorofluoromethane	ND U	5.8	0.099	1	10/25/21 18:05	*
Vinyl Chloride	ND U	5.8	0.21	1	10/25/21 18:05	*
cis-1,2-Dichloroethene	ND U	5.8	0.14	1	10/25/21 18:05	*
cis-1,3-Dichloropropene	ND U	5.8	0.16	1	10/25/21 18:05	*
m,p-Xylenes	ND U	5.8	0.12	1	10/25/21 18:05	*
n-Butylbenzene	ND U	23	0.081	1	10/25/21 18:05	*
n-Propylbenzene	ND U	23	0.16	1	10/25/21 18:05	*
o-Xylene	ND U	5.8	0.095	1	10/25/21 18:05	*
sec-Butylbenzene	ND U	23	0.087	1	10/25/21 18:05	*
tert-Butylbenzene	ND U	23	0.17	1	10/25/21 18:05	*
trans-1,2-Dichloroethene	ND U	5.8	0.14	1	10/25/21 18:05	*
trans-1,3-Dichloropropene	ND U	5.8	0.13	1	10/25/21 18:05	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	61 - 133	10/25/21 18:05	
Dibromofluoromethane	99	59 - 134	10/25/21 18:05	
Toluene-d8	100	77 - 122	10/25/21 18:05	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	13	1.7	108.34	10/26/21 01:21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	78	50 - 150	10/26/21 01:21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	12	1.6	101.98	10/26/21 01:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	56	50 - 150	10/26/21 01:44	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20
Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	28.7 J	250	12.0	1	10/25/21 13:41	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	104	50 - 150	10/25/21 13:41	



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.81 J	6.1	0.46	1	11/09/21 17:32	10/29/21	
Acenaphthene	0.90 J	6.1	0.37	1	11/09/21 17:32	10/29/21	
Acenaphthylene	0.93 J	6.1	0.35	1	11/09/21 17:32	10/29/21	
Anthracene	1.1 J	6.1	0.36	1	11/09/21 17:32	10/29/21	
Benz(a)anthracene	2.4 J	6.1	0.29	1	11/09/21 17:32	10/29/21	
Benzo(a)pyrene	2.5 J	6.1	0.47	1	11/09/21 17:32	10/29/21	
Benzo(b)fluoranthene	2.1 J	6.1	0.47	1	11/09/21 17:32	10/29/21	
Benzo(g,h,i)perylene	1.6 J	6.1	0.50	1	11/09/21 17:32	10/29/21	
Benzo(k)fluoranthene	1.0 J	6.1	0.30	1	11/09/21 17:32	10/29/21	
Chrysene	1.9 J	6.1	0.39	1	11/09/21 17:32	10/29/21	
Dibenz(a,h)anthracene	ND U	6.1	0.29	1	11/09/21 17:32	10/29/21	
Dibenzofuran	0.94 J	6.1	0.74	1	11/09/21 17:32	10/29/21	
Fluoranthene	2.2 J	6.1	0.78	1	11/09/21 17:32	10/29/21	
Fluorene	3.4 J	6.1	0.70	1	11/09/21 17:32	10/29/21	
Indeno(1,2,3-cd)pyrene	1.8 J	6.1	0.45	1	11/09/21 17:32	10/29/21	*
Naphthalene	1.6 J	6.1	0.58	1	11/09/21 17:32	10/29/21	
Phenanthrene	6.9	6.1	0.73	1	11/09/21 17:32	10/29/21	
Pyrene	3.0 J	6.1	0.40	1	11/09/21 17:32	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	70	28 - 112	11/09/21 17:32	
Fluorene-d10	73	34 - 106	11/09/21 17:32	
Terphenyl-d14	75	32 - 122	11/09/21 17:32	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.58 J	5.9	0.44	1	11/09/21 17:58	10/29/21	
Acenaphthene	ND U	5.9	0.36	1	11/09/21 17:58	10/29/21	
Acenaphthylene	ND U	5.9	0.33	1	11/09/21 17:58	10/29/21	
Anthracene	ND U	5.9	0.35	1	11/09/21 17:58	10/29/21	
Benz(a)anthracene	0.55 J	5.9	0.28	1	11/09/21 17:58	10/29/21	
Benzo(a)pyrene	ND U	5.9	0.45	1	11/09/21 17:58	10/29/21	
Benzo(b)fluoranthene	ND U	5.9	0.45	1	11/09/21 17:58	10/29/21	
Benzo(g,h,i)perylene	ND U	5.9	0.48	1	11/09/21 17:58	10/29/21	
Benzo(k)fluoranthene	ND U	5.9	0.29	1	11/09/21 17:58	10/29/21	
Chrysene	ND U	5.9	0.37	1	11/09/21 17:58	10/29/21	
Dibenz(a,h)anthracene	ND U	5.9	0.28	1	11/09/21 17:58	10/29/21	
Dibenzofuran	ND U	5.9	0.71	1	11/09/21 17:58	10/29/21	
Fluoranthene	ND U	5.9	0.75	1	11/09/21 17:58	10/29/21	
Fluorene	ND U	5.9	0.68	1	11/09/21 17:58	10/29/21	
Indeno(1,2,3-cd)pyrene	ND U	5.9	0.43	1	11/09/21 17:58	10/29/21	*
Naphthalene	1.2 J	5.9	0.56	1	11/09/21 17:58	10/29/21	
Phenanthrene	1.3 J	5.9	0.70	1	11/09/21 17:58	10/29/21	
Pyrene	0.42 J	5.9	0.38	1	11/09/21 17:58	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	72	28 - 112	11/09/21 17:58	
Fluorene-d10	75	34 - 106	11/09/21 17:58	
Terphenyl-d14	76	32 - 122	11/09/21 17:58	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20

Sample Name: B-28
Lab Code: K2112279-008

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	1.7 J	3.3	0.40	1	11/17/21 18:58	11/9/21	*
Acenaphthene	ND U	3.3	0.36	1	11/17/21 18:58	11/9/21	*
Acenaphthylene	3.0 J	3.3	0.37	1	11/17/21 18:58	11/9/21	*
Anthracene	4.3	3.3	0.29	1	11/17/21 18:58	11/9/21	*
Benz(a)anthracene	17	3.3	0.34	1	11/17/21 18:58	11/9/21	*
Benzo(a)pyrene	20	3.3	0.41	1	11/17/21 18:58	11/9/21	*
Benzo(b)fluoranthene	30	3.3	0.25	1	11/17/21 18:58	11/9/21	*
Benzo(g,h,i)perylene	16	3.3	0.36	1	11/17/21 18:58	11/9/21	*
Benzo(k)fluoranthene	41	3.3	0.41	1	11/17/21 18:58	11/9/21	*
Chrysene	21	3.3	0.65	1	11/17/21 18:58	11/9/21	*
Dibenz(a,h)anthracene	3.7	3.3	0.45	1	11/17/21 18:58	11/9/21	*
Dibenzofuran	ND U	3.3	0.42	1	11/17/21 18:58	11/9/21	*
Fluoranthene	40	3.3	0.46	1	11/17/21 18:58	11/9/21	*
Fluorene	2.9 J	3.3	0.42	1	11/17/21 18:58	11/9/21	*
Indeno(1,2,3-cd)pyrene	17	3.3	0.44	1	11/17/21 18:58	11/9/21	*
Naphthalene	6.4	3.3	0.71	1	11/17/21 18:58	11/9/21	*
Phenanthrene	17	3.3	0.72	1	11/17/21 18:58	11/9/21	*
Pyrene	40	3.3	0.78	1	11/17/21 18:58	11/9/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	82	39 - 123	11/17/21 18:58	
Fluorene-d10	78	28 - 125	11/17/21 18:58	
Terphenyl-d14	74	22 - 127	11/17/21 18:58	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	490	120	1	11/09/21 06:10	11/2/21	
Bis(2-ethylhexyl) Phthalate	17 J	120	11	1	11/09/21 06:10	11/2/21	
Carbazole	ND U	12	4.7	1	11/09/21 06:10	11/2/21	
Di-n-butyl Phthalate	ND U	24	5.9	1	11/09/21 06:10	11/2/21	
Di-n-octyl Phthalate	15 J	24	4.0	1	11/09/21 06:10	11/2/21	
Dibenzofuran	ND U	12	4.2	1	11/09/21 06:10	11/2/21	*
2,4-Dinitrotoluene	ND U	12	3.1	1	11/09/21 06:10	11/2/21	
2-Methylphenol	ND U	12	5.1	1	11/09/21 06:10	11/2/21	*
4-Methylphenol	ND U	24	5.6	1	11/09/21 06:10	11/2/21	*
Nitrobenzene	ND U	12	4.2	1	11/09/21 06:10	11/2/21	
Pentachlorophenol (PCP)	ND U	120	6.5	1	11/09/21 06:10	11/2/21	*
Phenol	ND U	37	3.8	1	11/09/21 06:10	11/2/21	
Pyridine	ND U	240	62	1	11/09/21 06:10	11/2/21	
2,4,5-Trichlorophenol	ND U	12	3.7	1	11/09/21 06:10	11/2/21	
2,4,6-Trichlorophenol	ND U	12	3.7	1	11/09/21 06:10	11/2/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	74	35 - 105	11/09/21 06:10	
2-Fluorophenol	60	22 - 85	11/09/21 06:10	
Nitrobenzene-d5	70	10 - 84	11/09/21 06:10	
Phenol-d6	71	39 - 109	11/09/21 06:10	
p-Terphenyl-d14	136	30 - 102	11/09/21 06:10	*
2,4,6-Tribromophenol	72	10 - 124	11/09/21 06:10	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	480	120	1	11/09/21 06:38	11/2/21	
Bis(2-ethylhexyl) Phthalate	13 J	120	11	1	11/09/21 06:38	11/2/21	
Carbazole	ND U	12	4.6	1	11/09/21 06:38	11/2/21	
Di-n-butyl Phthalate	ND U	24	5.8	1	11/09/21 06:38	11/2/21	
Di-n-octyl Phthalate	ND U	24	3.9	1	11/09/21 06:38	11/2/21	
Dibenzofuran	ND U	12	4.1	1	11/09/21 06:38	11/2/21	*
2,4-Dinitrotoluene	ND U	12	3.1	1	11/09/21 06:38	11/2/21	
2-Methylphenol	ND U	12	5.0	1	11/09/21 06:38	11/2/21	*
4-Methylphenol	ND U	24	5.5	1	11/09/21 06:38	11/2/21	*
Nitrobenzene	ND U	12	4.1	1	11/09/21 06:38	11/2/21	
Pentachlorophenol (PCP)	ND U	120	6.4	1	11/09/21 06:38	11/2/21	*
Phenol	ND U	36	3.8	1	11/09/21 06:38	11/2/21	
Pyridine	ND U	240	61	1	11/09/21 06:38	11/2/21	
2,4,5-Trichlorophenol	ND U	12	3.7	1	11/09/21 06:38	11/2/21	
2,4,6-Trichlorophenol	ND U	12	3.7	1	11/09/21 06:38	11/2/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	76	35 - 105	11/09/21 06:38	
2-Fluorophenol	62	22 - 85	11/09/21 06:38	
Nitrobenzene-d5	71	10 - 84	11/09/21 06:38	
Phenol-d6	73	39 - 109	11/09/21 06:38	
p-Terphenyl-d14	79	30 - 102	11/09/21 06:38	
2,4,6-Tribromophenol	70	10 - 124	11/09/21 06:38	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20

Sample Name: B-28
Lab Code: K2112279-008

Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	5.4	1.2	1	11/18/21 00:12	10/26/21	
Bis(2-ethylhexyl) Phthalate	0.80 J	1.1	0.15	1	11/18/21 00:12	10/26/21	*
Carbazole	ND U	0.22	0.020	1	11/18/21 00:12	10/26/21	
Di-n-butyl Phthalate	0.15 J	0.22	0.025	1	11/18/21 00:12	10/26/21	*
Di-n-octyl Phthalate	ND U	0.22	0.036	1	11/18/21 00:12	10/26/21	
Dibenzofuran	ND U	0.22	0.020	1	11/18/21 00:12	10/26/21	
2,4-Dinitrotoluene	ND U	0.22	0.020	1	11/18/21 00:12	10/26/21	
2-Methylphenol	ND U	0.54	0.12	1	11/18/21 00:12	10/26/21	
4-Methylphenol	ND U	0.54	0.14	1	11/18/21 00:12	10/26/21	
Nitrobenzene	ND U	0.22	0.031	1	11/18/21 00:12	10/26/21	
Pentachlorophenol (PCP)	ND U	1.1	0.37	1	11/18/21 00:12	10/26/21	
Phenol	ND U	0.54	0.069	1	11/18/21 00:12	10/26/21	
Pyridine	ND U	5.4	1.6	1	11/18/21 00:12	10/26/21	
2,4,5-Trichlorophenol	ND U	0.54	0.034	1	11/18/21 00:12	10/26/21	
2,4,6-Trichlorophenol	ND U	0.54	0.064	1	11/18/21 00:12	10/26/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	58	35 - 105	11/18/21 00:12	
2-Fluorophenol	61	34 - 118	11/18/21 00:12	
Nitrobenzene-d5	65	40 - 117	11/18/21 00:12	
Phenol-d6	64	39 - 109	11/18/21 00:12	
p-Terphenyl-d14	48	48 - 109	11/18/21 00:12	
2,4,6-Tribromophenol	61	35 - 132	11/18/21 00:12	



Semivolatile Organic Compounds by GC

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.4	0.73	1	11/26/21 12:50	10/27/21	
alpha-BHC	ND U	1.2	0.36	1	11/26/21 12:50	10/27/21	
beta-BHC	ND Ui	1.2	1.2	1	11/26/21 12:50	10/27/21	
delta-BHC	ND U	1.2	0.35	1	11/26/21 12:50	10/27/21	
gamma-BHC (Lindane)	ND U	1.2	0.38	1	11/26/21 12:50	10/27/21	
cis-Chlordane	ND U	1.2	0.51	1	11/26/21 12:50	10/27/21	
trans-Chlordane	ND U	1.2	0.47	1	11/26/21 12:50	10/27/21	
4,4'-DDD	ND U	2.4	0.74	1	11/26/21 12:50	10/27/21	
4,4'-DDE	ND U	1.2	0.49	1	11/26/21 12:50	10/27/21	
4,4'-DDT	ND Ui	2.4	0.83	1	11/26/21 12:50	10/27/21	*
Dieldrin	ND U	1.2	0.27	1	11/26/21 12:50	10/27/21	
Endosulfan I	ND U	1.2	0.46	1	11/26/21 12:50	10/27/21	
Endosulfan II	ND U	2.4	0.85	1	11/26/21 12:50	10/27/21	
Endosulfan Sulfate	ND Ui	2.4	1.9	1	11/26/21 12:50	10/27/21	
Endrin	ND U	1.2	0.40	1	11/26/21 12:50	10/27/21	
Endrin Aldehyde	ND U	2.4	1.1	1	11/26/21 12:50	10/27/21	
Endrin Ketone	ND U	1.2	0.56	1	11/26/21 12:50	10/27/21	
Heptachlor	ND Ui	1.2	0.84	1	11/26/21 12:50	10/27/21	
Heptachlor Epoxide	ND U	2.4	0.81	1	11/26/21 12:50	10/27/21	
Methoxychlor	ND U	2.4	0.87	1	11/26/21 12:50	10/27/21	
Toxaphene	ND U	120	42	1	11/26/21 12:50	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	73	10 - 134	11/26/21 12:50	
Tetrachloro-m-xylene	54	10 - 121	12/09/21 21:08	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.3	0.70	1	11/26/21 17:26	10/27/21	
alpha-BHC	ND U	1.2	0.34	1	11/26/21 17:26	10/27/21	
beta-BHC	ND Ui	1.3	1.3	1	11/26/21 17:26	10/27/21	
delta-BHC	ND U	1.2	0.33	1	11/26/21 17:26	10/27/21	
gamma-BHC (Lindane)	ND U	1.2	0.37	1	11/26/21 17:26	10/27/21	
cis-Chlordane	ND U	1.2	0.48	1	11/26/21 17:26	10/27/21	
trans-Chlordane	ND U	1.2	0.45	1	11/26/21 17:26	10/27/21	
4,4'-DDD	ND U	2.3	0.71	1	11/26/21 17:26	10/27/21	
4,4'-DDE	ND U	1.2	0.47	1	11/26/21 17:26	10/27/21	
4,4'-DDT	ND Ui	2.3	1.0	1	11/26/21 17:26	10/27/21	*
Dieldrin	ND U	1.2	0.26	1	11/26/21 17:26	10/27/21	
Endosulfan I	ND U	1.2	0.44	1	11/26/21 17:26	10/27/21	
Endosulfan II	ND U	2.3	0.81	1	11/26/21 17:26	10/27/21	
Endosulfan Sulfate	ND Ui	8.3	8.3	1	11/26/21 17:26	10/27/21	
Endrin	ND U	1.2	0.38	1	11/26/21 17:26	10/27/21	
Endrin Aldehyde	ND U	2.3	1.1	1	11/26/21 17:26	10/27/21	
Endrin Ketone	ND U	1.2	0.53	1	11/26/21 17:26	10/27/21	
Heptachlor	ND Ui	1.2	0.54	1	11/26/21 17:26	10/27/21	
Heptachlor Epoxide	ND U	2.3	0.78	1	11/26/21 17:26	10/27/21	
Methoxychlor	ND U	2.3	0.84	1	11/26/21 17:26	10/27/21	
Toxaphene	ND U	120	40	1	11/26/21 17:26	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	62	10 - 134	11/26/21 17:26	
Tetrachloro-m-xylene	48	10 - 121	12/09/21 21:39	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20

Sample Name: B-28
Lab Code: K2112279-008

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	4.0	1.6	1	11/26/21 04:20	10/25/21	
alpha-BHC	1.2 JP	2.0	0.50	1	11/26/21 04:20	10/25/21	
beta-BHC	ND Ui	3.1	3.1	1	11/26/21 04:20	10/25/21	*
delta-BHC	ND U	2.0	0.54	1	11/26/21 04:20	10/25/21	*
gamma-BHC (Lindane)	ND U	4.0	1.2	1	11/26/21 04:20	10/25/21	
cis-Chlordane	ND U	2.0	0.72	1	11/26/21 04:20	10/25/21	*
trans-Chlordane	ND U	4.0	1.1	1	11/26/21 04:20	10/25/21	*
4,4'-DDD	ND U	4.0	1.2	1	11/26/21 04:20	10/25/21	*
4,4'-DDE	ND U	2.0	0.92	1	11/26/21 04:20	10/25/21	
4,4'-DDT	ND Ui	5.3	5.3	1	12/09/21 22:09	10/25/21	*
Dieldrin	ND U	2.0	0.88	1	11/26/21 04:20	10/25/21	*
Endosulfan I	ND U	2.0	0.72	1	11/26/21 04:20	10/25/21	
Endosulfan II	ND U	2.0	0.68	1	11/26/21 04:20	10/25/21	
Endosulfan Sulfate	ND Ui	7.0	7.0	1	11/26/21 04:20	10/25/21	*
Endrin	ND Ui	6.8	6.8	1	11/26/21 04:20	10/25/21	*
Endrin Aldehyde	ND U	2.0	0.94	1	11/26/21 04:20	10/25/21	*
Endrin Ketone	ND U	4.0	1.4	1	11/26/21 04:20	10/25/21	*
Heptachlor	ND Ui	4.0	3.3	1	11/26/21 04:20	10/25/21	
Heptachlor Epoxide	ND U	2.0	0.58	1	11/26/21 04:20	10/25/21	*
Methoxychlor	ND U	4.0	1.7	1	11/26/21 04:20	10/25/21	*
Toxaphene	ND Ui	650	650	1	11/26/21 04:20	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	28	10 - 139	11/26/21 04:20	
Tetrachloro-m-xylene	82	32 - 151	12/09/21 22:09	

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Analytical Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	13	3.6	1	12/28/21 21:44	10/27/21	
Aroclor 1221	ND U	25	3.6	1	12/28/21 21:44	10/27/21	
Aroclor 1232	ND U	13	3.6	1	12/28/21 21:44	10/27/21	
Aroclor 1242	ND U	13	3.6	1	12/28/21 21:44	10/27/21	
Aroclor 1248	ND U	13	3.6	1	12/28/21 21:44	10/27/21	
Aroclor 1254	ND U	13	3.6	1	12/28/21 21:44	10/27/21	
Aroclor 1260	ND U	13	3.6	1	12/28/21 21:44	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	115	20 - 155	12/28/21 21:44	

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Analytical Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	12	3.5	1	12/28/21 22:16	10/27/21	
Aroclor 1221	ND U	24	3.5	1	12/28/21 22:16	10/27/21	
Aroclor 1232	ND U	12	3.5	1	12/28/21 22:16	10/27/21	
Aroclor 1242	ND U	12	3.5	1	12/28/21 22:16	10/27/21	
Aroclor 1248	ND U	12	3.5	1	12/28/21 22:16	10/27/21	
Aroclor 1254	ND U	12	3.5	1	12/28/21 22:16	10/27/21	
Aroclor 1260	ND U	12	3.5	1	12/28/21 22:16	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	98	20 - 155	12/28/21 22:16	

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Analytical Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20

Sample Name: B-28
Lab Code: K2112279-008

Units: ug/L
Basis: NA

Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND Ui	0.20	0.042	1	12/09/21 18:54	10/25/21	
Aroclor 1221	ND Ui	0.40	0.16	1	12/09/21 18:54	10/25/21	
Aroclor 1232	ND Ui	0.20	0.11	1	12/09/21 18:54	10/25/21	
Aroclor 1242	ND Ui	0.20	0.048	1	12/09/21 18:54	10/25/21	
Aroclor 1248	ND Ui	0.20	0.051	1	12/09/21 18:54	10/25/21	
Aroclor 1254	ND Ui	0.20	0.047	1	12/09/21 18:54	10/25/21	
Aroclor 1260	ND U	0.20	0.028	1	12/09/21 18:54	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	29	10 - 140	12/09/21 18:54	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	61	5.0	1	11/30/21 06:39	10/25/21	
2,4,5-TP (Silvex)	ND U	61	3.0	1	11/30/21 06:39	10/25/21	
2,4-D	ND U	61	9.5	1	11/30/21 06:39	10/25/21	*
2,4-DB	ND U	61	6.7	1	11/30/21 06:39	10/25/21	
Dalapon	ND U	61	6.8	1	11/30/21 06:39	10/25/21	
Dicamba	ND U	61	5.3	1	11/30/21 06:39	10/25/21	
Dichlorprop	ND U	61	4.2	1	11/30/21 06:39	10/25/21	*
Dinoseb	ND U	61	3.4	1	11/30/21 06:39	10/25/21	
MCPA	ND U	6100	400	1	11/30/21 06:39	10/25/21	
MCPP	ND U	6100	570	1	11/30/21 06:39	10/25/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	67	26 - 127	11/30/21 06:39	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	60	4.8	1	11/30/21 07:05	10/25/21	
2,4,5-TP (Silvex)	ND U	60	2.9	1	11/30/21 07:05	10/25/21	
2,4-D	ND U	60	9.3	1	11/30/21 07:05	10/25/21	*
2,4-DB	ND U	60	6.5	1	11/30/21 07:05	10/25/21	
Dalapon	ND U	60	6.6	1	11/30/21 07:05	10/25/21	
Dicamba	ND U	60	5.2	1	11/30/21 07:05	10/25/21	
Dichlorprop	ND U	60	4.1	1	11/30/21 07:05	10/25/21	*
Dinoseb	ND U	60	3.3	1	11/30/21 07:05	10/25/21	
MCPA	ND U	6000	390	1	11/30/21 07:05	10/25/21	
MCPP	ND U	6000	560	1	11/30/21 07:05	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	70	26 - 127	11/30/21 07:05	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.24	0.041	1	11/23/21 00:05	10/26/21	
2,4,5-TP (Silvex)	ND U	0.24	0.055	1	11/23/21 00:05	10/26/21	
2,4-D	ND U	0.49	0.044	1	11/23/21 00:05	10/26/21	
2,4-DB	ND U	0.49	0.13	1	11/23/21 00:05	10/26/21	
Dalapon	ND U	0.49	0.35	1	11/23/21 00:05	10/26/21	
Dicamba	ND U	0.24	0.031	1	11/23/21 00:05	10/26/21	
Dichlorprop	ND U	0.49	0.037	1	11/23/21 00:05	10/26/21	*
Dinoseb	ND U	0.24	0.019	1	11/23/21 00:05	10/26/21	*
MCPA	ND U	120	11	1	11/23/21 00:05	10/26/21	
MCP	24 J	120	18	1	11/23/21 00:05	10/26/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	48	17 - 113	11/23/21 00:05	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.2	0.32	1	11/01/21 18:26	10/27/21	
Di-n-butyltin Cation	ND U	1.2	0.24	1	11/01/21 18:26	10/27/21	
Tri-n-butyltin Cation	ND U	1.2	0.53	1	11/01/21 18:26	10/27/21	
Tetra-n-butyltin	ND U	1.2	0.54	1	11/01/21 18:26	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	94	10 - 152	11/01/21 18:26	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.2	0.32	1	11/01/21 18:09	10/27/21	
Di-n-butyltin Cation	ND U	1.2	0.23	1	11/01/21 18:09	10/27/21	
Tri-n-butyltin Cation	ND U	1.2	0.52	1	11/01/21 18:09	10/27/21	
Tetra-n-butyltin	ND U	1.2	0.53	1	11/01/21 18:09	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	57	10 - 152	11/01/21 18:09	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20

Sample Name: B-28
Lab Code: K2112279-008

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.052	0.031	1	10/28/21 20:55	10/25/21	
Di-n-butyltin Cation	0.017 J	0.052	0.0077	1	10/28/21 20:55	10/25/21	
Tri-n-butyltin Cation	ND U	0.052	0.013	1	10/28/21 20:55	10/25/21	*
Tetra-n-butyltin	ND U	0.052	0.040	1	10/28/21 20:55	10/25/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	139	10 - 195	10/28/21 20:55	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	7.3 J	31	2.3	1	11/01/21 20:17	10/29/21	*
Residual Range Organics (C25 - C36 RRO)	20 J	120	4.8	1	11/01/21 20:17	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	99	50 - 150	11/01/21 20:17	
n-Triacontane	107	50 - 150	11/01/21 20:17	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	3.2 J	29	2.2	1	11/01/21 20:40	10/29/21	*
Residual Range Organics (C25 - C36 RRO)	6.7 J	120	4.6	1	11/01/21 20:40	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	114	50 - 150	11/01/21 20:40	
n-Triacontane	121	50 - 150	11/01/21 20:40	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20
Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	220 J	250	11	1	11/02/21 20:05	10/29/21	*
Residual Range Organics (C25 - C36 RRO)	340 J	500	19	1	11/02/21 20:05	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	87	50 - 150	11/02/21 20:05	
n-Triacontane	88	50 - 150	11/02/21 20:05	



Metals

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.31	mg/Kg	0.60	0.07	5	11/03/21 09:12	11/01/21	
Barium	6020A	103	mg/Kg	0.060	0.024	5	11/03/21 09:12	11/01/21	
Cadmium	6020A	0.054	mg/Kg	0.024	0.008	5	11/03/21 09:12	11/01/21	
Chromium	6020A	13.2	mg/Kg	0.24	0.07	5	11/03/21 09:12	11/01/21	
Lead	6020A	2.93	mg/Kg	0.060	0.024	5	11/03/21 09:12	11/01/21	
Mercury	7471B	0.026	mg/Kg	0.023	0.006	1	10/27/21 15:59	10/25/21	
Selenium	6020A	ND U	mg/Kg	1.2	0.1	5	11/03/21 09:12	11/01/21	
Silver	6020A	0.029	mg/Kg	0.024	0.005	5	11/03/21 09:12	11/01/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	1.80	mg/Kg	0.48	0.06	5	11/03/21 09:23	11/01/21	
Barium	6020A	79.0	mg/Kg	0.048	0.019	5	11/03/21 09:23	11/01/21	
Cadmium	6020A	0.052	mg/Kg	0.019	0.007	5	11/03/21 09:23	11/01/21	
Chromium	6020A	13.6	mg/Kg	0.19	0.06	5	11/03/21 09:23	11/01/21	
Lead	6020A	2.49	mg/Kg	0.048	0.019	5	11/03/21 09:23	11/01/21	
Mercury	7471B	0.017 J	mg/Kg	0.021	0.005	1	10/27/21 16:06	10/25/21	
Selenium	6020A	0.13 J	mg/Kg	0.96	0.09	5	11/03/21 09:23	11/01/21	
Silver	6020A	0.024	mg/Kg	0.019	0.004	5	11/03/21 09:23	11/01/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20

Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	0.51	ug/L	0.50	0.09	1	10/27/21 18:04	10/26/21	
Barium	6020A	9.28	ug/L	0.050	0.020	1	10/27/21 18:04	10/26/21	
Cadmium	6020A	0.016 J	ug/L	0.020	0.008	1	10/27/21 18:04	10/26/21	
Chromium	6020A	0.20 J	ug/L	0.20	0.03	1	10/27/21 18:04	10/26/21	
Lead	6020A	0.326	ug/L	0.020	0.006	1	10/27/21 18:04	10/26/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/27/21 13:36	10/26/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 18:04	10/26/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/27/21 18:04	10/26/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	4.49	ug/L	0.50	0.09	1	10/27/21 17:53	10/26/21	
Barium	6020A	98.0	ug/L	0.050	0.020	1	10/27/21 17:53	10/26/21	
Cadmium	6020A	0.111	ug/L	0.020	0.008	1	10/27/21 17:53	10/26/21	
Chromium	6020A	8.10	ug/L	0.20	0.03	1	10/27/21 17:53	10/26/21	
Lead	6020A	49.2	ug/L	0.020	0.006	1	10/27/21 17:53	10/26/21	
Mercury	7470A	0.07 J	ug/L	0.20	0.02	1	10/27/21 13:34	10/26/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 17:53	10/26/21	
Silver	6020A	0.015 J	ug/L	0.020	0.009	1	10/27/21 17:53	10/26/21	



General Chemistry

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20
Basis: As Received

Inorganic Parameters

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>Result</u>	<u>Units</u>	<u>MRL</u>	<u>MDL</u>	<u>Dil.</u>	<u>Date Analyzed</u>	<u>Q</u>
Solids, Total	160.3 Modified	81.3	Percent	-	-	1	10/25/21 11:23	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20
Basis: As Received

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Q
Solids, Total	160.3 Modified	83.2	Percent	-	-	1	10/25/21 11:23	



QC Summary Forms

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Volatile Organic Compounds by GC/MS

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Phone (360) 577-7222 Fax (360) 425-9096
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Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
B-28	K2112279-008	79	102	100
Method Blank	KQ2121531-05	81	101	99
Lab Control Sample	KQ2121531-03	87	96	101
Duplicate Lab Control Sample	KQ2121531-04	91	95	100

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121531-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	ND U	20	3.3	1	10/28/21 12:14	
Benzene	ND U	0.50	0.062	1	10/28/21 12:14	
Bromobenzene	ND U	2.0	0.12	1	10/28/21 12:14	
Bromochloromethane	ND U	0.50	0.16	1	10/28/21 12:14	
Bromodichloromethane	ND U	0.50	0.091	1	10/28/21 12:14	
Bromoform	ND U	0.50	0.16	1	10/28/21 12:14	
Bromomethane	ND U	0.50	0.16	1	10/28/21 12:14	
2-Butanone (MEK)	ND U	20	1.9	1	10/28/21 12:14	
n-Butylbenzene	ND U	4.0	0.054	1	10/28/21 12:14	
sec-Butylbenzene	ND U	2.0	0.062	1	10/28/21 12:14	
tert-Butylbenzene	ND U	2.0	0.059	1	10/28/21 12:14	
Carbon Disulfide	ND U	0.50	0.069	1	10/28/21 12:14	
Carbon Tetrachloride	ND U	0.50	0.096	1	10/28/21 12:14	
Chlorobenzene	ND U	0.50	0.11	1	10/28/21 12:14	
Chloroethane	ND U	0.50	0.16	1	10/28/21 12:14	
Chloroform	ND U	0.50	0.072	1	10/28/21 12:14	
Chloromethane	ND U	0.50	0.068	1	10/28/21 12:14	
2-Chlorotoluene	ND U	2.0	0.10	1	10/28/21 12:14	
4-Chlorotoluene	ND U	2.0	0.13	1	10/28/21 12:14	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	10/28/21 12:14	
Dibromochloromethane	ND U	0.50	0.14	1	10/28/21 12:14	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	10/28/21 12:14	
Dibromomethane	ND U	0.50	0.15	1	10/28/21 12:14	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	10/28/21 12:14	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	10/28/21 12:14	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	10/28/21 12:14	
Dichlorodifluoromethane	ND U	0.50	0.13	1	10/28/21 12:14	
1,1-Dichloroethane	ND U	0.50	0.077	1	10/28/21 12:14	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	10/28/21 12:14	
1,1-Dichloroethene	ND U	0.50	0.080	1	10/28/21 12:14	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	10/28/21 12:14	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	10/28/21 12:14	
1,2-Dichloropropane	ND U	0.50	0.095	1	10/28/21 12:14	
1,3-Dichloropropane	ND U	0.50	0.14	1	10/28/21 12:14	
2,2-Dichloropropane	ND U	0.50	0.065	1	10/28/21 12:14	
1,1-Dichloropropene	ND U	0.50	0.089	1	10/28/21 12:14	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	10/28/21 12:14	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	10/28/21 12:14	
Ethylbenzene	ND U	0.50	0.050	1	10/28/21 12:14	
Hexachlorobutadiene	ND U	2.0	0.11	1	10/28/21 12:14	
2-Hexanone	ND U	20	2.7	1	10/28/21 12:14	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121531-05

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	10/28/21 12:14	
4-Isopropyltoluene	ND U	2.0	0.060	1	10/28/21 12:14	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	10/28/21 12:14	
Methylene Chloride	ND U	2.0	0.10	1	10/28/21 12:14	
Naphthalene	0.26 J	2.0	0.088	1	10/28/21 12:14	
n-Propylbenzene	ND U	2.0	0.054	1	10/28/21 12:14	
Styrene	ND U	0.50	0.089	1	10/28/21 12:14	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	10/28/21 12:14	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	10/28/21 12:14	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	10/28/21 12:14	
Toluene	ND U	0.50	0.054	1	10/28/21 12:14	
1,2,3-Trichlorobenzene	0.45 J	2.0	0.11	1	10/28/21 12:14	
1,2,4-Trichlorobenzene	0.17 J	2.0	0.096	1	10/28/21 12:14	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	10/28/21 12:14	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	10/28/21 12:14	
Trichloroethene (TCE)	ND U	0.50	0.10	1	10/28/21 12:14	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	10/28/21 12:14	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	10/28/21 12:14	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	10/28/21 12:14	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	10/28/21 12:14	
Vinyl Chloride	ND U	0.50	0.075	1	10/28/21 12:14	
o-Xylene	ND U	0.50	0.074	1	10/28/21 12:14	
m,p-Xylenes	ND U	0.50	0.11	1	10/28/21 12:14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	81	68 - 117	10/28/21 12:14	
Dibromofluoromethane	101	73 - 122	10/28/21 12:14	
Toluene-d8	99	65 - 144	10/28/21 12:14	

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 10/28/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 744193

Analyte Name	Lab Control Sample KQ2121531-03			Duplicate Lab Control Sample KQ2121531-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	10.8	10.0	108	10.7	10.0	107	66-124	1	30
1,1,1-Trichloroethane (TCA)	10.4	10.0	104	9.71	10.0	97	59-136	7	30
1,1,2,2-Tetrachloroethane	9.93	10.0	99	9.89	10.0	99	70-127	<1	30
1,1,2-Trichloroethane	9.81	10.0	98	9.58	10.0	96	74-118	2	30
1,1-Dichloroethane	10.3	10.0	103	9.99	10.0	100	68-132	3	30
1,1-Dichloroethene	8.57	10.0	86	8.07	10.0	81	66-129	6	30
1,1-Dichloropropene	9.69	10.0	97	9.02	10.0	90	59-134	7	30
1,2,3-Trichlorobenzene	9.36	10.0	94	9.73	10.0	97	68-120	4	30
1,2,3-Trichloropropane	10.8	10.0	108	10.4	10.0	104	69-123	4	30
1,2,4-Trichlorobenzene	9.57	10.0	96	9.72	10.0	97	58-126	2	30
1,2,4-Trimethylbenzene	9.97	10.0	100	9.80	10.0	98	63-122	2	30
1,2-Dibromo-3-chloropropane	10.5	10.0	105	10.6	10.0	106	55-132	1	30
1,2-Dibromoethane (EDB)	9.18	10.0	92	9.51	10.0	95	74-118	4	30
1,2-Dichlorobenzene	10.1	10.0	101	10.2	10.0	102	72-115	<1	30
1,2-Dichloroethane (EDC)	10.6	10.0	106	9.94	10.0	99	56-142	7	30
1,2-Dichloropropane	10.1	10.0	101	9.59	10.0	96	67-126	6	30
1,3,5-Trimethylbenzene	9.78	10.0	98	9.51	10.0	95	62-126	3	30
1,3-Dichlorobenzene	10.3	10.0	103	10.0	10.0	100	70-116	3	30
1,3-Dichloropropane	9.90	10.0	99	10.1	10.0	101	75-116	2	30
1,4-Dichlorobenzene	10.4	10.0	104	10.0	10.0	100	73-115	4	30
2,2-Dichloropropane	10.0	10.0	100	9.59	10.0	96	37-145	4	30
2-Butanone (MEK)	53.6	50.0	107	48.1	50.0	96	71-149	11	30
2-Chlorotoluene	9.90	10.0	99	9.75	10.0	98	55-131	2	30
2-Hexanone	49.3	50.0	99	49.3	50.0	99	59-131	<1	30
4-Chlorotoluene	10.2	10.0	102	9.85	10.0	99	66-121	4	30
4-Isopropyltoluene	10.0	10.0	100	9.72	10.0	97	61-128	3	30
4-Methyl-2-pentanone (MIBK)	50.7	50.0	101	49.6	50.0	99	64-134	2	30
Acetone	53.9	50.0	108	52.3	50.0	105	68-135	3	30
Benzene	10.0	10.0	100	9.69	10.0	97	69-124	3	30
Bromobenzene	10.2	10.0	102	10.4	10.0	104	72-116	2	30
Bromochloromethane	10.2	10.0	102	10.1	10.0	101	75-131	2	30
Bromodichloromethane	11.2	10.0	112	10.7	10.0	107	63-129	4	30
Bromoform	11.0	10.0	110	11.4	10.0	114	52-144	3	30
Bromomethane	8.92	10.0	89	8.67	10.0	87	35-113	3	30
Carbon Disulfide	17.4	20.0	87	17.0	20.0	85	46-144	3	30
Carbon Tetrachloride	10.4	10.0	104	10.1	10.0	101	55-140	3	30
Chlorobenzene	9.63	10.0	96	9.72	10.0	97	72-116	<1	30
Chloroethane	10.4	10.0	104	9.77	10.0	98	58-134	6	30
Chloroform	10.3	10.0	103	9.79	10.0	98	70-129	5	30
Chloromethane	9.61	10.0	96	9.23	10.0	92	34-130	4	30
cis-1,2-Dichloroethene	10.2	10.0	102	9.43	10.0	94	71-118	8	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 10/28/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 744193

Analyte Name	Lab Control Sample KQ2121531-03			Duplicate Lab Control Sample KQ2121531-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	11.3	10.0	113	11.0	10.0	110	62-132	3	30
Dibromochloromethane	12.1	10.0	121	11.6	10.0	116	67-126	4	30
Dibromomethane	9.43	10.0	94	9.39	10.0	94	69-128	<1	30
Dichlorodifluoromethane	8.34	10.0	83	8.21	10.0	82	32-124	2	30
Ethylbenzene	8.91	10.0	89	8.73	10.0	87	67-121	2	30
Hexachlorobutadiene	12.1	10.0	121 *	11.7	10.0	117	57-119	3	30
Isopropylbenzene	8.98	10.0	90	9.02	10.0	90	67-129	<1	30
m,p-Xylenes	18.4	20.0	92	18.3	20.0	91	69-121	<1	30
Methylene Chloride	10.3	10.0	103	9.81	10.0	98	71-122	5	30
Naphthalene	8.72	10.0	87	8.96	10.0	90	64-126	3	30
n-Butylbenzene	9.36	10.0	94	9.15	10.0	92	55-130	2	30
n-Propylbenzene	9.79	10.0	98	9.45	10.0	95	61-124	4	30
o-Xylene	8.89	10.0	89	9.00	10.0	90	71-119	1	30
sec-Butylbenzene	9.61	10.0	96	9.06	10.0	91	59-128	6	30
Styrene	9.98	10.0	100	10.0	10.0	100	74-121	<1	30
tert-Butylbenzene	9.42	10.0	94	9.07	10.0	91	61-127	4	30
Tetrachloroethene (PCE)	9.31	10.0	93	9.47	10.0	95	62-126	2	30
Toluene	10.1	10.0	101	9.69	10.0	97	69-124	4	30
trans-1,2-Dichloroethene	9.96	10.0	100	9.37	10.0	94	67-125	6	30
trans-1,3-Dichloropropene	10.4	10.0	104	10.8	10.0	108	59-125	3	30
Trichloroethene (TCE)	9.38	10.0	94	9.07	10.0	91	67-128	3	30
Trichlorofluoromethane (CFC 11)	8.56	10.0	86	8.23	10.0	82	52-141	4	30
Vinyl Chloride	9.72	10.0	97	9.08	10.0	91	55-123	7	30

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C

Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		61-133	59-134	77-122
B-28 (0-10 C)	K2112279-004	97	98	99
B-28 (10-25 C)	K2112279-007	96	99	100
Method Blank	KQ2121180-05	95	99	99
Lab Control Sample	KQ2121180-03	98	115	101
Duplicate Lab Control Sample	KQ2121180-04	100	103	102

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121180-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.0	0.11	1	10/25/21 14:57	
1,1,1-Trichloroethane (TCA)	ND U	5.0	0.11	1	10/25/21 14:57	
1,1,2,2-Tetrachloroethane	ND U	5.0	0.13	1	10/25/21 14:57	
1,1,2-Trichloroethane	ND U	5.0	0.15	1	10/25/21 14:57	
1,1-Dichloroethane	ND U	5.0	0.12	1	10/25/21 14:57	
1,1-Dichloroethene	ND U	5.0	0.25	1	10/25/21 14:57	
1,1-Dichloropropene	ND U	5.0	0.13	1	10/25/21 14:57	
1,2,3-Trichlorobenzene	ND U	20	0.19	1	10/25/21 14:57	
1,2,3-Trichloropropane	ND U	5.0	0.45	1	10/25/21 14:57	
1,2,4-Trichlorobenzene	ND U	20	0.13	1	10/25/21 14:57	
1,2,4-Trimethylbenzene	ND U	20	0.054	1	10/25/21 14:57	
1,2-Dibromo-3-chloropropane	ND U	20	0.40	1	10/25/21 14:57	
1,2-Dibromoethane (EDB)	ND U	20	0.094	1	10/25/21 14:57	
1,2-Dichlorobenzene	ND U	5.0	0.077	1	10/25/21 14:57	
1,2-Dichloroethane (EDC)	ND U	5.0	0.070	1	10/25/21 14:57	
1,2-Dichloropropane	ND U	5.0	0.13	1	10/25/21 14:57	
1,3,5-Trimethylbenzene	ND U	20	0.092	1	10/25/21 14:57	
1,3-Dichlorobenzene	ND U	5.0	0.094	1	10/25/21 14:57	
1,3-Dichloropropane	ND U	5.0	0.12	1	10/25/21 14:57	
1,4-Dichlorobenzene	ND U	5.0	0.086	1	10/25/21 14:57	
2,2-Dichloropropane	ND U	5.0	0.098	1	10/25/21 14:57	
2-Butanone (MEK)	ND U	20	0.90	1	10/25/21 14:57	
2-Chlorotoluene	ND U	20	0.12	1	10/25/21 14:57	
2-Hexanone	ND U	20	0.93	1	10/25/21 14:57	
4-Chlorotoluene	ND U	20	0.088	1	10/25/21 14:57	
4-Isopropyltoluene	ND U	20	0.064	1	10/25/21 14:57	
4-Methyl-2-pentanone (MIBK)	ND U	20	1.8	1	10/25/21 14:57	
Acetone	6.7 J	20	2.9	1	10/25/21 14:57	
Benzene	ND U	5.0	0.054	1	10/25/21 14:57	
Bromobenzene	ND U	5.0	0.088	1	10/25/21 14:57	
Bromochloromethane	ND U	5.0	0.24	1	10/25/21 14:57	
Bromodichloromethane	ND U	5.0	0.16	1	10/25/21 14:57	
Bromoform	ND U	5.0	0.14	1	10/25/21 14:57	
Bromomethane	ND U	5.0	0.20	1	10/25/21 14:57	
Carbon Disulfide	ND U	5.0	0.092	1	10/25/21 14:57	
Carbon Tetrachloride	ND U	5.0	0.094	1	10/25/21 14:57	
Chlorobenzene	ND U	5.0	0.065	1	10/25/21 14:57	
Chloroethane	ND U	5.0	0.74	1	10/25/21 14:57	
Chloroform	ND U	5.0	0.11	1	10/25/21 14:57	
Chloromethane	ND U	5.0	0.18	1	10/25/21 14:57	
Dibromochloromethane	ND U	5.0	0.18	1	10/25/21 14:57	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121180-05

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.0	0.28	1	10/25/21 14:57	
Dichlorodifluoromethane	ND U	5.0	0.12	1	10/25/21 14:57	
Ethylbenzene	ND U	5.0	0.094	1	10/25/21 14:57	
Hexachlorobutadiene	ND U	20	0.40	1	10/25/21 14:57	
Isopropylbenzene	ND U	20	0.081	1	10/25/21 14:57	
Methylene Chloride	1.2 J	10	0.16	1	10/25/21 14:57	
Naphthalene	ND U	20	0.13	1	10/25/21 14:57	
Styrene	ND U	5.0	0.14	1	10/25/21 14:57	
Tetrachloroethene (PCE)	ND U	5.0	0.16	1	10/25/21 14:57	
Toluene	ND U	5.0	0.15	1	10/25/21 14:57	
Trichloroethene (TCE)	ND U	5.0	0.15	1	10/25/21 14:57	
Trichlorofluoromethane	ND U	5.0	0.085	1	10/25/21 14:57	
Vinyl Chloride	ND U	5.0	0.18	1	10/25/21 14:57	
cis-1,2-Dichloroethene	ND U	5.0	0.12	1	10/25/21 14:57	
cis-1,3-Dichloropropene	ND U	5.0	0.13	1	10/25/21 14:57	
m,p-Xylenes	ND U	5.0	0.10	1	10/25/21 14:57	
n-Butylbenzene	ND U	20	0.069	1	10/25/21 14:57	
n-Propylbenzene	ND U	20	0.13	1	10/25/21 14:57	
o-Xylene	ND U	5.0	0.081	1	10/25/21 14:57	
sec-Butylbenzene	ND U	20	0.074	1	10/25/21 14:57	
tert-Butylbenzene	ND U	20	0.14	1	10/25/21 14:57	
trans-1,2-Dichloroethene	ND U	5.0	0.12	1	10/25/21 14:57	
trans-1,3-Dichloropropene	ND U	5.0	0.11	1	10/25/21 14:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	61 - 133	10/25/21 14:57	
Dibromofluoromethane	99	59 - 134	10/25/21 14:57	
Toluene-d8	99	77 - 122	10/25/21 14:57	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 743676

Analyte Name	Lab Control Sample KQ2121180-03			Duplicate Lab Control Sample KQ2121180-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	48.1	50.0	96	47.8	50.0	96	71-119	<1	40
1,1,1-Trichloroethane (TCA)	54.6	50.0	109	49.5	50.0	99	59-146	10	40
1,1,2,2-Tetrachloroethane	38.2	50.0	76	40.1	50.0	80	60-128	5	40
1,1,2-Trichloroethane	44.2	50.0	88	44.3	50.0	89	72-118	<1	40
1,1-Dichloroethane	50.7	50.0	101	44.3	50.0	89	59-137	14	40
1,1-Dichloroethene	52.2	50.0	104	51.8	50.0	104	64-152	<1	40
1,1-Dichloropropene	53.8	50.0	108	46.3	50.0	93	52-142	15	40
1,2,3-Trichlorobenzene	42.9	50.0	86	40.9	50.0	82	52-138	5	40
1,2,3-Trichloropropane	39.6	50.0	79	41.5	50.0	83	53-134	5	40
1,2,4-Trichlorobenzene	44.2	50.0	88	42.0	50.0	84	57-136	5	40
1,2,4-Trimethylbenzene	43.7	50.0	87	42.9	50.0	86	65-132	2	40
1,2-Dibromo-3-chloropropane	44.2	50.0	88	44.3	50.0	89	55-127	<1	40
1,2-Dibromoethane (EDB)	49.1	50.0	98	49.0	50.0	98	71-116	<1	40
1,2-Dichlorobenzene	42.6	50.0	85	42.3	50.0	85	67-124	<1	40
1,2-Dichloroethane (EDC)	45.9	50.0	92	47.4	50.0	95	65-121	3	40
1,2-Dichloropropane	41.9	50.0	84	42.8	50.0	86	71-121	2	40
1,3,5-Trimethylbenzene	42.3	50.0	85	42.6	50.0	85	66-132	<1	40
1,3-Dichlorobenzene	42.1	50.0	84	41.2	50.0	82	69-128	2	40
1,3-Dichloropropane	45.2	50.0	90	46.2	50.0	92	72-118	2	40
1,4-Dichlorobenzene	42.0	50.0	84	41.3	50.0	83	69-125	2	40
2,2-Dichloropropane	55.3	50.0	111	49.4	50.0	99	50-138	11	40
2-Butanone (MEK)	98.4	100	98	83.7	100	84	54-116	16	40
2-Chlorotoluene	40.8	50.0	82	41.0	50.0	82	65-129	<1	40
2-Hexanone	84.6	100	85	92.7	100	93	67-121	9	40
4-Chlorotoluene	41.5	50.0	83	40.7	50.0	81	51-134	2	40
4-Isopropyltoluene	44.7	50.0	89	43.8	50.0	88	61-132	2	40
4-Methyl-2-pentanone (MIBK)	83.5	100	84	83.0	100	83	69-126	<1	40
Acetone	95.9	100	96	98.4	100	98	32-135	3	40
Benzene	42.9	50.0	86	43.6	50.0	87	68-122	2	40
Bromobenzene	44.4	50.0	89	43.8	50.0	88	71-124	1	40
Bromochloromethane	55.3	50.0	111	49.2	50.0	98	65-131	12	40
Bromodichloromethane	41.8	50.0	84	43.0	50.0	86	61-143	3	40
Bromoform	46.6	50.0	93	49.6	50.0	99	62-134	6	40
Bromomethane	48.5	50.0	97	51.1	50.0	102	22-180	5	40
Carbon Disulfide	49.4	50.0	99	50.3	50.0	101	55-141	2	40
Carbon Tetrachloride	57.1	50.0	114	51.7	50.0	103	51-135	10	40
Chlorobenzene	45.4	50.0	91	45.1	50.0	90	70-116	<1	40
Chloroethane	50.6	50.0	101	51.3	50.0	103	51-122	1	40
Chloroform	52.3	50.0	105	47.2	50.0	94	61-137	10	40
Chloromethane	47.8	50.0	96	47.8	50.0	96	37-146	<1	40
cis-1,2-Dichloroethene	52.4	50.0	105	45.7	50.0	91	62-138	14	40

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 743676

Analyte Name	Lab Control Sample KQ2121180-03			Duplicate Lab Control Sample KQ2121180-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	42.8	50.0	86	43.2	50.0	86	58-138	<1	40
Dibromochloromethane	49.7	50.0	99	50.7	50.0	101	69-120	2	40
Dibromomethane	46.0	50.0	92	46.7	50.0	93	68-125	1	40
Dichlorodifluoromethane	61.2	50.0	122	60.2	50.0	120	38-160	2	40
Ethylbenzene	48.6	50.0	97	47.4	50.0	95	70-118	2	40
Hexachlorobutadiene	48.9	50.0	98	47.3	50.0	95	54-140	3	40
Isopropylbenzene	46.3	50.0	93	46.5	50.0	93	67-133	<1	40
m,p-Xylenes	95.4	100	95	94.4	100	94	69-127	1	40
Methylene Chloride	45.2	50.0	90	46.6	50.0	93	65-122	3	40
Naphthalene	42.4	50.0	85	42.7	50.0	85	54-134	<1	40
n-Butylbenzene	44.1	50.0	88	42.9	50.0	86	53-139	3	40
n-Propylbenzene	44.1	50.0	88	43.3	50.0	87	57-143	2	40
o-Xylene	45.7	50.0	91	45.7	50.0	91	69-124	<1	40
sec-Butylbenzene	42.8	50.0	86	42.2	50.0	84	55-146	1	40
Styrene	47.8	50.0	96	47.3	50.0	95	62-135	<1	40
tert-Butylbenzene	43.0	50.0	86	42.9	50.0	86	67-131	<1	40
Tetrachloroethene (PCE)	49.3	50.0	99	48.5	50.0	97	66-126	2	40
Toluene	44.3	50.0	89	44.8	50.0	90	75-117	1	40
trans-1,2-Dichloroethene	51.4	50.0	103	51.2	50.0	102	63-127	<1	40
trans-1,3-Dichloropropene	45.3	50.0	91	46.9	50.0	94	63-121	3	40
Trichloroethene (TCE)	46.0	50.0	92	46.1	50.0	92	67-126	<1	40
Trichlorofluoromethane	56.9	50.0	114	55.8	50.0	112	51-140	2	40
Vinyl Chloride	50.8	50.0	102	52.3	50.0	105	54-127	3	40

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene
		50-150
B-28 (0-10 C)	K2112279-004	78
B-28 (10-25 C)	K2112279-007	56
Method Blank	KQ2121047-03	89
Method Blank	KQ2121047-09	89
Lab Control Sample	KQ2121047-04	94
Duplicate Lab Control Sample	KQ2121047-05	94

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	1,4-Difluorobenzene
		50-150
B-28	K2112279-008	104
B-28	KQ2120959-04	101
Method Blank	KQ2120959-06	103
Lab Control Sample	KQ2120959-07	102
Duplicate Lab Control Sample	KQ2120959-08	102

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 10/25/21

Replicate Sample Summary
Volatile Petroleum Products by GC/FID

Sample Name: B-28
Lab Code: K2112279-008

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2120959-04 Result			
Gasoline Range Organics (Toluene-Naphthalene GRO)	NWTPH-Gx	250	12.0	28.7 J	28.6 J	28.7	<1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120959-06

Service Request: K2112279
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	250	12.0	1	10/25/21 10:58	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	103	50 - 150	10/25/21 10:58	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121047-03

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	10/25/21 17:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	50 - 150	10/25/21 17:34	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121047-09

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	10/26/21 00:11	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	50 - 150	10/26/21 00:11	

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 743621

Lab Control Sample
KQ2120959-07

Duplicate Lab Control Sample
KQ2120959-08

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Gasoline Range Organics (Toluene-Naphthalene GRO)	484	500	97	477	500	95	80-119	2	30

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 10/25/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: mg/Kg
Basis: Dry
Analysis Lot: 743674

Lab Control Sample
KQ2121047-04

Duplicate Lab Control Sample
KQ2121047-05

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Gasoline Range Organics (Toluene-Naphthalene GRO)	19.5	25.0	78	19.5	25.0	78	76-114	<1	40



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360) 577-7222 Fax (360) 425-9096
www.alsglobal.com

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Extraction Method: EPA 3546

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		28-112	34-106	32-122
B-28 (0-10 C)	K2112279-004	70	73	75
B-28 (10-25 C)	K2112279-007	72	75	76
Method Blank	KQ2120975-04	76	75	78
Lab Control Sample	KQ2120975-03	78	76	77
B-28 (0-10 C)	KQ2120975-01	76	74	80
B-28 (0-10 C)	KQ2120975-02	83	81	89

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 11/9/21
Date Extracted: 10/29/21

Duplicate Matrix Spike Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004
Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2120975-01			Duplicate Matrix Spike KQ2120975-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2-Methylnaphthalene	0.81 J	498	615	81	487	614	79	28-98	2	40
Acenaphthene	0.90 J	508	615	83	505	614	82	30-101	<1	40
Acenaphthylene	0.93 J	510	615	83	512	614	83	32-97	<1	40
Anthracene	1.1 J	633	615	103	647	614	105	27-116	2	40
Benz(a)anthracene	2.4 J	604	615	98	612	614	99	27-127	1	40
Benzo(a)pyrene	2.5 J	610	615	99	604	614	98	25-129	<1	40
Benzo(b)fluoranthene	2.1 J	607	615	98	600	614	97	21-130	1	40
Benzo(g,h,i)perylene	1.6 J	622	615	101	619	614	101	17-130	<1	40
Benzo(k)fluoranthene	1.0 J	594	615	97	592	614	96	22-126	<1	40
Chrysene	1.9 J	608	615	99	613	614	99	25-132	<1	40
Dibenz(a,h)anthracene	ND U	674	615	110	671	614	109	32-116	<1	40
Dibenzofuran	0.94 J	522	615	85	522	614	85	28-105	<1	40
Fluoranthene	2.2 J	533	615	86	539	614	87	10-138	1	40
Fluorene	3.4 J	532	615	86	533	614	86	23-116	<1	40
Indeno(1,2,3-cd)pyrene	1.8 J	691	615	112	695	614	113	17-138	<1	40
Naphthalene	1.6 J	497	615	81	489	614	79	29-88	2	40
Phenanthrene	6.9	519	615	83	528	614	85	10-128	2	40
Pyrene	3.0 J	561	615	91	575	614	93	16-134	3	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120975-04

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	0.72 J	4.9	0.37	1	11/09/21 15:19	10/29/21	
Acenaphthene	ND U	4.9	0.30	1	11/09/21 15:19	10/29/21	
Acenaphthylene	ND U	4.9	0.28	1	11/09/21 15:19	10/29/21	
Anthracene	0.45 J	4.9	0.29	1	11/09/21 15:19	10/29/21	
Benz(a)anthracene	0.67 J	4.9	0.23	1	11/09/21 15:19	10/29/21	
Benzo(a)pyrene	ND U	4.9	0.38	1	11/09/21 15:19	10/29/21	
Benzo(b)fluoranthene	ND U	4.9	0.38	1	11/09/21 15:19	10/29/21	
Benzo(g,h,i)perylene	ND U	4.9	0.40	1	11/09/21 15:19	10/29/21	
Benzo(k)fluoranthene	ND U	4.9	0.24	1	11/09/21 15:19	10/29/21	
Chrysene	0.43 J	4.9	0.31	1	11/09/21 15:19	10/29/21	
Dibenz(a,h)anthracene	ND U	4.9	0.23	1	11/09/21 15:19	10/29/21	
Dibenzofuran	ND U	4.9	0.60	1	11/09/21 15:19	10/29/21	
Fluoranthene	ND U	4.9	0.63	1	11/09/21 15:19	10/29/21	
Fluorene	ND U	4.9	0.57	1	11/09/21 15:19	10/29/21	
Indeno(1,2,3-cd)pyrene	ND U	4.9	0.36	1	11/09/21 15:19	10/29/21	
Naphthalene	1.9 J	4.9	0.47	1	11/09/21 15:19	10/29/21	
Phenanthrene	1.4 J	4.9	0.59	1	11/09/21 15:19	10/29/21	
Pyrene	0.83 J	4.9	0.32	1	11/09/21 15:19	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	76	28 - 112	11/09/21 15:19	
Fluorene-d10	75	34 - 106	11/09/21 15:19	
Terphenyl-d14	78	32 - 122	11/09/21 15:19	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 11/09/21
Date Extracted: 10/29/21

Lab Control Sample Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 745144

Lab Control Sample
KQ2120975-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2-Methylnaphthalene	363	500	73	43-92
Acenaphthene	381	500	76	44-95
Acenaphthylene	381	500	76	44-93
Anthracene	484	500	97	46-100
Benz(a)anthracene	437	500	87	52-105
Benzo(a)pyrene	436	500	87	52-111
Benzo(b)fluoranthene	414	500	83	52-114
Benzo(g,h,i)perylene	406	500	81	45-107
Benzo(k)fluoranthene	426	500	85	52-112
Chrysene	450	500	90	51-110
Dibenz(a,h)anthracene	440	500	88	44-110
Dibenzofuran	364	500	73	44-96
Fluoranthene	411	500	82	49-102
Fluorene	403	500	81	45-98
Indeno(1,2,3-cd)pyrene	447	500	89	44-117
Naphthalene	361	500	72	42-88
Phenanthrene	395	500	79	41-99
Pyrene	399	500	80	48-104

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		39-123	28-125	22-127
B-28	K2112279-008	82	78	74
Method Blank	KQ2122015-03	90	80	89
Lab Control Sample	KQ2122015-01	85	73	82
Duplicate Lab Control Sample	KQ2122015-02	83	74	81

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2122015-03

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	3.2	0.40	1	11/17/21 16:31	11/9/21	
Acenaphthene	ND U	3.2	0.36	1	11/17/21 16:31	11/9/21	
Acenaphthylene	ND U	3.2	0.37	1	11/17/21 16:31	11/9/21	
Anthracene	ND U	3.2	0.29	1	11/17/21 16:31	11/9/21	
Benz(a)anthracene	ND U	3.2	0.34	1	11/17/21 16:31	11/9/21	
Benzo(a)pyrene	ND U	3.2	0.41	1	11/17/21 16:31	11/9/21	
Benzo(b)fluoranthene	ND U	3.2	0.25	1	11/17/21 16:31	11/9/21	
Benzo(g,h,i)perylene	ND U	3.2	0.36	1	11/17/21 16:31	11/9/21	
Benzo(k)fluoranthene	ND U	3.2	0.41	1	11/17/21 16:31	11/9/21	
Chrysene	ND U	3.2	0.65	1	11/17/21 16:31	11/9/21	
Dibenz(a,h)anthracene	ND U	3.2	0.45	1	11/17/21 16:31	11/9/21	
Dibenzofuran	ND U	3.2	0.42	1	11/17/21 16:31	11/9/21	
Fluoranthene	ND U	3.2	0.46	1	11/17/21 16:31	11/9/21	
Fluorene	ND U	3.2	0.42	1	11/17/21 16:31	11/9/21	
Indeno(1,2,3-cd)pyrene	ND U	3.2	0.44	1	11/17/21 16:31	11/9/21	
Naphthalene	ND U	3.2	0.71	1	11/17/21 16:31	11/9/21	
Phenanthrene	1.2 J	3.2	0.72	1	11/17/21 16:31	11/9/21	
Pyrene	ND U	3.2	0.78	1	11/17/21 16:31	11/9/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	90	39 - 123	11/17/21 16:31	
Fluorene-d10	80	28 - 125	11/17/21 16:31	
Terphenyl-d14	89	22 - 127	11/17/21 16:31	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 11/17/21
Date Extracted: 11/09/21

Duplicate Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ng/L
Basis: NA
Analysis Lot: 746531

Lab Control Sample
KQ2122015-01

Duplicate Lab Control Sample
KQ2122015-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2-Methylnaphthalene	387	500	77	399	500	80	42-108	3	30
Acenaphthene	390	500	78	400	500	80	58-98	3	30
Acenaphthylene	396	500	79	412	500	82	61-102	4	30
Anthracene	404	500	81	411	500	82	65-98	2	30
Benz(a)anthracene	417	500	83	413	500	83	67-96	<1	30
Benzo(a)pyrene	438	500	88	440	500	88	68-107	<1	30
Benzo(b)fluoranthene	462	500	92	463	500	93	69-104	<1	30
Benzo(g,h,i)perylene	436	500	87	436	500	87	61-110	<1	30
Benzo(k)fluoranthene	448	500	90	448	500	90	68-108	<1	30
Chrysene	391	500	78	387	500	77	67-105	<1	30
Dibenz(a,h)anthracene	446	500	89	445	500	89	54-118	<1	30
Dibenzofuran	378	500	76	392	500	78	52-103	4	30
Fluoranthene	437	500	87	445	500	89	63-106	2	30
Fluorene	378	500	76	394	500	79	59-97	4	30
Indeno(1,2,3-cd)pyrene	463	500	93	462	500	92	61-115	<1	30
Naphthalene	390	500	78	414	500	83	59-95	6	30
Phenanthrene	412	500	82	414	500	83	61-100	<1	30
Pyrene	404	500	81	403	500	81	64-104	<1	30

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	22-85	10-84
B-28 (0-10 C)	K2112279-004	74	60	70
B-28 (10-25 C)	K2112279-007	76	62	71
Method Blank	KQ2120760-04	68	52	60
Lab Control Sample	KQ2120760-03	70	53	68

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	30-102	10-124
B-28 (0-10 C)	K2112279-004	71	136*	72
B-28 (10-25 C)	K2112279-007	73	79	70
Method Blank	KQ2120760-04	64	101	75
Lab Control Sample	KQ2120760-03	64	104*	77

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	34-118	40-117
B-28	K2112279-008	58	61	65
Method Blank	KQ2121079-03	67	67	71
Lab Control Sample	KQ2121079-01	62	68	70
Duplicate Lab Control Sample	KQ2121079-02	67	69	73

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	48-109	35-132
B-28	K2112279-008	64	48	61
Method Blank	KQ2121079-03	70	72	57
Lab Control Sample	KQ2121079-01	72	75	66
Duplicate Lab Control Sample	KQ2121079-02	74	81	66

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120760-04

Service Request: K2112279
Date Collected: NA
Date Received: NA

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	390	96	1	11/09/21 04:17	11/2/21	
Bis(2-ethylhexyl) Phthalate	9.0 J	98	8.9	1	11/09/21 04:17	11/2/21	
Carbazole	ND U	9.8	3.8	1	11/09/21 04:17	11/2/21	
Di-n-butyl Phthalate	ND U	20	4.8	1	11/09/21 04:17	11/2/21	
Di-n-octyl Phthalate	ND U	20	3.2	1	11/09/21 04:17	11/2/21	
Dibenzofuran	ND U	9.8	3.4	1	11/09/21 04:17	11/2/21	
2,4-Dinitrotoluene	ND U	9.8	2.5	1	11/09/21 04:17	11/2/21	
2-Methylphenol	ND U	9.8	4.1	1	11/09/21 04:17	11/2/21	
4-Methylphenol	ND U	20	4.5	1	11/09/21 04:17	11/2/21	
Nitrobenzene	ND U	9.8	3.4	1	11/09/21 04:17	11/2/21	
Pentachlorophenol (PCP)	ND U	98	5.3	1	11/09/21 04:17	11/2/21	
Phenol	ND U	29	3.1	1	11/09/21 04:17	11/2/21	
Pyridine	ND U	200	50	1	11/09/21 04:17	11/2/21	
2,4,5-Trichlorophenol	ND U	9.8	3.0	1	11/09/21 04:17	11/2/21	
2,4,6-Trichlorophenol	ND U	9.8	3.0	1	11/09/21 04:17	11/2/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	68	35 - 105	11/09/21 04:17	
2-Fluorophenol	52	22 - 85	11/09/21 04:17	
Nitrobenzene-d5	60	10 - 84	11/09/21 04:17	
Phenol-d6	64	39 - 109	11/09/21 04:17	
p-Terphenyl-d14	101	30 - 102	11/09/21 04:17	
2,4,6-Tribromophenol	75	10 - 124	11/09/21 04:17	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2121079-03

Service Request: K2112279
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	5.0	1.1	1	11/17/21 22:20	10/26/21	
Bis(2-ethylhexyl) Phthalate	ND U	1.0	0.13	1	11/17/21 22:20	10/26/21	
Carbazole	ND U	0.20	0.018	1	11/17/21 22:20	10/26/21	
Di-n-butyl Phthalate	0.048 J	0.20	0.023	1	11/17/21 22:20	10/26/21	
Di-n-octyl Phthalate	ND U	0.20	0.033	1	11/17/21 22:20	10/26/21	
Dibenzofuran	ND U	0.20	0.018	1	11/17/21 22:20	10/26/21	
2,4-Dinitrotoluene	ND U	0.20	0.018	1	11/17/21 22:20	10/26/21	
2-Methylphenol	ND U	0.50	0.11	1	11/17/21 22:20	10/26/21	
4-Methylphenol	ND U	0.50	0.12	1	11/17/21 22:20	10/26/21	
Nitrobenzene	ND U	0.20	0.028	1	11/17/21 22:20	10/26/21	
Pentachlorophenol (PCP)	ND U	1.0	0.34	1	11/17/21 22:20	10/26/21	
Phenol	ND U	0.50	0.063	1	11/17/21 22:20	10/26/21	
Pyridine	ND U	5.0	1.4	1	11/17/21 22:20	10/26/21	
2,4,5-Trichlorophenol	ND U	0.50	0.031	1	11/17/21 22:20	10/26/21	
2,4,6-Trichlorophenol	ND U	0.50	0.058	1	11/17/21 22:20	10/26/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	67	35 - 105	11/17/21 22:20	
2-Fluorophenol	67	34 - 118	11/17/21 22:20	
Nitrobenzene-d5	71	40 - 117	11/17/21 22:20	
Phenol-d6	70	39 - 109	11/17/21 22:20	
p-Terphenyl-d14	72	48 - 109	11/17/21 22:20	
2,4,6-Tribromophenol	57	35 - 132	11/17/21 22:20	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 11/09/21
Date Extracted: 11/02/21

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry
Analysis Lot: 745501

Lab Control Sample
KQ2120760-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol	197	250	79	32-81
2,4,6-Trichlorophenol	199	250	80 *	33-79
2,4-Dinitrotoluene	163	250	65	35-93
2-Methylphenol	189	250	76 *	27-74
4-Methylphenol	220	250	88 *	26-79
Benzoic Acid	166 J	750	22	10-34
Bis(2-ethylhexyl) Phthalate	184	250	74	39-113
Carbazole	176	250	70	37-95
Dibenzofuran	207	250	83 *	30-78
Di-n-butyl Phthalate	157	250	63	30-120
Di-n-octyl Phthalate	213	250	85	41-105
Nitrobenzene	144	250	57	28-78
Pentachlorophenol (PCP)	154	250	62	19-103
Phenol	175	250	70	27-75
Pyridine	246	500	49	10-54

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 11/17/21
Date Extracted: 10/26/21

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 746675

Lab Control Sample
KQ2121079-01

Duplicate Lab Control Sample
KQ2121079-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-Trichlorophenol	3.34	5.00	67	3.46	5.00	69	51-116	3	30
2,4,6-Trichlorophenol	3.47	5.00	69	3.65	5.00	73	51-114	5	30
2,4-Dinitrotoluene	3.15	5.00	63	3.23	5.00	65	56-120	2	30
2-Methylphenol	3.64	5.00	73	3.81	5.00	76	45-114	4	30
4-Methylphenol	4.22	5.00	84	4.39	5.00	88	44-120	4	30
Benzoic Acid	7.50	15.0	50	4.47 J	15.0	30	10-86	51 *	30
Bis(2-ethylhexyl) Phthalate	3.71	5.00	74	3.82	5.00	76	42-147	3	30
Carbazole	3.77	5.00	75	3.98	5.00	80	57-112	5	30
Dibenzofuran	3.52	5.00	70	3.78	5.00	76	51-102	7	30
Di-n-butyl Phthalate	2.67	5.00	53 *	2.73	5.00	55 *	61-121	2	30
Di-n-octyl Phthalate	2.91	5.00	58	2.91	5.00	58	50-125	<1	30
Nitrobenzene	2.87	5.00	57	3.03	5.00	61	43-120	5	30
Pentachlorophenol (PCP)	3.92	5.00	78	3.83	5.00	77	27-112	2	30
Phenol	3.81	5.00	76	3.97	5.00	79	45-112	4	30
Pyridine	7.31	10.0	73	5.60	10.0	56	10-121	26	30



Semivolatile Organic Compounds by GC

ALS Environmental—Kelso Laboratory
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Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-134	10-121
B-28 (0-10 C)	K2112279-004	73	54
B-28 (10-25 C)	K2112279-007	62	48
Method Blank	KQ2120980-10	76	41
Lab Control Sample	KQ2120980-07	73	41
Lab Control Sample	KQ2120980-08	62	35
B-28 (0-10 C)	KQ2120980-01	84	45
B-28 (0-10 C)	KQ2120980-02	68	38
B-28 (0-10 C)	KQ2120980-03	63	36
B-28 (0-10 C)	KQ2120980-04	95	52

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 11/26/21
Date Extracted: 10/27/21

Duplicate Matrix Spike Summary
Low Level Organochlorine Pesticides by GC

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004
Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2120980-01			Duplicate Matrix Spike KQ2120980-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Aldrin	ND U	23.5	29.5	80	19.5	29.5	66	18-89	18	40
alpha-BHC	ND U	20.0	29.5	68	16.3	29.5	55	16-96	20	40
beta-BHC	ND Ui	29.6	29.5	100	23.8 P	29.5	81	16-106	22	40
delta-BHC	ND U	29.2	29.5	99 *	23.1	29.5	78	20-95	23	40
gamma-BHC (Lindane)	ND U	24.8	29.5	84	20.7	29.5	70	17-97	18	40
cis-Chlordane	ND U	24.0	29.5	81	19.0	29.5	64	20-93	23	40
trans-Chlordane	ND U	25.8	29.5	88	22.6	29.5	77	10-103	13	40
4,4'-DDD	ND U	27.2 P	29.5	92	21.3 P	29.5	72	10-180	24	40
4,4'-DDE	ND U	21.3	29.5	72	17.1	29.5	58	17-94	22	40
4,4'-DDT	ND Ui	28.9 P	29.5	98	22.8 P	29.5	77	17-104	24	40
Dieldrin	ND U	25.2	29.5	85	20.5	29.5	69	19-88	20	40
Endosulfan I	ND U	20.3 P	29.5	69	18.1 P	29.5	61	16-87	11	40
Endosulfan II	ND U	22.8	29.5	77	19.5	29.5	66	15-117	15	40
Endosulfan Sulfate	ND Ui	30.3	29.5	103 *	26.6	29.5	90	17-98	13	40
Endrin	ND U	25.9	29.5	88	25.5	29.5	87	10-107	2	40
Endrin Aldehyde	ND U	26.0 P	29.5	88	21.5 P	29.5	73	21-94	19	40
Endrin Ketone	ND U	28.5	29.5	97	24.0	29.5	81	19-97	17	40
Heptachlor	ND Ui	29.4 P	29.5	100	21.2 P	29.5	72	13-111	32	40
Heptachlor Epoxide	ND U	24.9	29.5	85	19.8	29.5	67	18-92	23	40
Methoxychlor	ND U	37.7	29.5	128 *	34.0 P	29.5	115	17-122	10	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 11/26/21
Date Extracted: 10/27/21

Duplicate Matrix Spike Summary
Low Level Organochlorine Pesticides by GC

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004
Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2120980-03			Duplicate Matrix Spike KQ2120980-04			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Toxaphene	ND U	982	1200	82	1490	1230	121 *	16-114	41*	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120980-10

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.59	1	11/26/21 04:59	10/27/21	
alpha-BHC	ND U	1.0	0.29	1	11/26/21 04:59	10/27/21	
beta-BHC	ND Ui	1.1	1.1	1	11/26/21 04:59	10/27/21	
delta-BHC	ND U	1.0	0.28	1	11/26/21 04:59	10/27/21	
gamma-BHC (Lindane)	0.32 JP	1.0	0.31	1	11/26/21 04:59	10/27/21	
cis-Chlordane	ND U	1.0	0.41	1	11/26/21 04:59	10/27/21	
trans-Chlordane	ND U	1.0	0.38	1	11/26/21 04:59	10/27/21	
4,4'-DDD	ND U	2.0	0.60	1	11/26/21 04:59	10/27/21	
4,4'-DDE	ND U	1.0	0.40	1	11/26/21 04:59	10/27/21	
4,4'-DDT	ND U	2.0	0.61	1	11/26/21 04:59	10/27/21	
Dieldrin	ND U	0.88	0.22	1	11/26/21 04:59	10/27/21	
Endosulfan I	ND U	1.0	0.37	1	11/26/21 04:59	10/27/21	
Endosulfan II	ND U	2.0	0.69	1	11/26/21 04:59	10/27/21	
Endosulfan Sulfate	ND Ui	2.0	1.1	1	11/26/21 04:59	10/27/21	
Endrin	ND U	1.0	0.32	1	11/26/21 04:59	10/27/21	
Endrin Aldehyde	ND U	2.0	0.89	1	11/26/21 04:59	10/27/21	
Endrin Ketone	ND U	1.0	0.45	1	11/26/21 04:59	10/27/21	
Heptachlor	ND Ui	1.1	1.1	1	11/26/21 04:59	10/27/21	
Heptachlor Epoxide	ND U	2.0	0.66	1	11/26/21 04:59	10/27/21	
Methoxychlor	ND U	2.0	0.71	1	11/26/21 04:59	10/27/21	
Toxaphene	ND U	100	34	1	11/26/21 04:59	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	76	10 - 134	11/26/21 04:59	
Tetrachloro-m-xylene	41	10 - 121	11/26/21 04:59	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 11/26/21
Date Extracted: 10/27/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 748259

Lab Control Sample
KQ2120980-07

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
4,4'-DDD	19.8	25.0	79	10-180
4,4'-DDE	15.5	25.0	62	17-94
4,4'-DDT	22.2 P	25.0	89	17-104
Aldrin	17.4	25.0	70	18-89
alpha-BHC	15.1	25.0	60	16-96
beta-BHC	22.3	25.0	89	16-106
cis-Chlordane	18.2	25.0	73	20-93
delta-BHC	22.0	25.0	88	20-95
Dieldrin	18.4	25.0	73	19-88
Endosulfan I	15.1 P	25.0	60	16-87
Endosulfan II	17.3	25.0	69	15-117
Endosulfan Sulfate	22.9	25.0	92	17-98
Endrin	21.4	25.0	85	10-107
Endrin Aldehyde	19.8 P	25.0	79	21-94
Endrin Ketone	23.1	25.0	92	19-97
gamma-BHC (Lindane)	19.1	25.0	76	17-97
Heptachlor	22.6 P	25.0	90	13-111
Heptachlor Epoxide	18.2	25.0	73	18-92
Methoxychlor	23.3	25.0	93	17-122
trans-Chlordane	19.1	25.0	76	10-103

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 11/26/21
Date Extracted: 10/27/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 748259

Lab Control Sample
KQ2120980-08

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Toxaphene	839	1000	84	16-114

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: KQ2120980-01

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 81.3

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.71	27.2	86.8	105	P	1	11/26/21 13:30
4,4'-DDE	0.48	21.3	27.3	25		1	11/26/21 13:30
4,4'-DDT	0.72	28.9	68.6	81	P	1	11/26/21 13:30
Aldrin	0.70	23.5	25.7	9		1	11/26/21 13:30
Dieldrin	0.26	25.2	25.7	2		1	11/26/21 13:30
Endosulfan I	0.44	20.3	47.1	80	P	1	11/26/21 13:30
Endosulfan II	0.82	22.8	24.7	8		1	11/26/21 13:30
Endosulfan Sulfate	1.2	30.3	30.7	1		1	11/26/21 13:30
Endrin	0.38	25.9	28.1	8		1	11/26/21 13:30
Endrin Aldehyde	1.1	26.0	70.8	93	P	1	11/26/21 13:30
Endrin Ketone	0.54	28.5	31.8	11		1	11/26/21 13:30
Heptachlor	0.46	29.4	101	110	P	1	11/26/21 13:30
Heptachlor Epoxide	0.78	24.9	27.8	11		1	11/26/21 13:30
Methoxychlor	0.84	37.7	52.0	32		1	11/26/21 13:30
alpha-BHC	0.35	20.0	21.3	6		1	11/26/21 13:30
beta-BHC	0.32	29.6	36.5	21		1	11/26/21 13:30
cis-Chlordane	0.49	24.0	25.8	7		1	11/26/21 13:30
delta-BHC	0.34	29.2	29.5	1		1	11/26/21 13:30
gamma-BHC (Lindane)	0.37	24.8	27.5	10		1	11/26/21 13:30
trans-Chlordane	0.45	25.8	26.5	3		1	11/26/21 13:30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: KQ2120980-02

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 81.3

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.71	21.3	76.3	113	P	1	11/26/21 14:09
4,4'-DDE	0.48	17.1	22.7	28		1	11/26/21 14:09
4,4'-DDT	0.72	22.8	116	134	P	1	11/26/21 14:09
Aldrin	0.70	19.5	21.5	10		1	11/26/21 14:09
Dieldrin	0.26	20.5	20.7	<1		1	11/26/21 14:09
Endosulfan I	0.44	18.1	35.3	64	P	1	11/26/21 14:09
Endosulfan II	0.82	19.5	20.2	4		1	11/26/21 14:09
Endosulfan Sulfate	1.2	26.6	27.2	2		1	11/26/21 14:09
Endrin	0.38	25.5	32.2	23		1	11/26/21 14:09
Endrin Aldehyde	1.1	21.5	132	144	P	1	11/26/21 14:09
Endrin Ketone	0.54	24.0	27.1	12		1	11/26/21 14:09
Heptachlor	0.47	21.2	103	132	P	1	11/26/21 14:09
Heptachlor Epoxide	0.78	19.8	22.9	15		1	11/26/21 14:09
Methoxychlor	0.84	34.0	55.8	49	P	1	11/26/21 14:09
alpha-BHC	0.35	16.3	18.6	13		1	11/26/21 14:09
beta-BHC	0.32	23.8	42.8	57	P	1	11/26/21 14:09
cis-Chlordane	0.49	19.0	21.8	14		1	11/26/21 14:09
delta-BHC	0.34	23.1	24.1	4		1	11/26/21 14:09
gamma-BHC (Lindane)	0.37	20.7	22.1	7		1	11/26/21 14:09
trans-Chlordane	0.45	22.6	22.8	<1		1	11/26/21 14:09

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dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: KQ2120980-03

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 81.3

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	41	982	1070	9		1	11/26/21 14:48

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: KQ2120980-04

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21

Units: ug/Kg
Basis: Dry
Percent Solids: 81.3

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	42	1490	1600	7		1	11/26/21 15:28

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2120980-07

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.60	19.8	22.6	13		1	11/26/21 05:38
4,4'-DDE	0.40	15.5	19.9	25		1	11/26/21 05:38
4,4'-DDT	0.61	22.2	56.6	87	P	1	11/26/21 05:38
Aldrin	0.59	17.4	17.7	2		1	11/26/21 05:38
Dieldrin	0.22	18.4	19.0	3		1	11/26/21 05:38
Endosulfan I	0.37	15.1	35.4	80	P	1	11/26/21 05:38
Endosulfan II	0.69	17.3	18.7	8		1	11/26/21 05:38
Endosulfan Sulfate	0.99	22.9	24.6	7		1	11/26/21 05:38
Endrin	0.32	21.4	23.2	8		1	11/26/21 05:38
Endrin Aldehyde	0.89	19.8	65.2	107	P	1	11/26/21 05:38
Endrin Ketone	0.45	23.1	23.9	3		1	11/26/21 05:38
Heptachlor	0.39	22.6	81.6	113	P	1	11/26/21 05:38
Heptachlor Epoxide	0.66	18.2	20.2	10		1	11/26/21 05:38
Methoxychlor	0.71	23.3	30.1	25		1	11/26/21 05:38
alpha-BHC	0.29	15.1	16.2	7		1	11/26/21 05:38
beta-BHC	0.27	22.3	32.6	38		1	11/26/21 05:38
cis-Chlordane	0.41	18.2	19.2	5		1	11/26/21 05:38
delta-BHC	0.28	22.0	22.6	3		1	11/26/21 05:38
gamma-BHC (Lindane)	0.31	19.1	20.0	5		1	11/26/21 05:38
trans-Chlordane	0.38	19.1	21.1	10		1	11/26/21 05:38

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120980-08

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	34	839	877	4		1	11/26/21 11:32

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120980-10

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	0.31	0.32	0.76	81	JP	1	11/26/21 04:59

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Extraction Method: EPA 3511

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-139	32-151
B-28	K2112279-008	28	82
Method Blank	KQ2120971-05	136	75
Lab Control Sample	KQ2120971-01	114	57
Duplicate Lab Control Sample	KQ2120971-02	102	50
Lab Control Sample	KQ2120971-03	78	34
Duplicate Lab Control Sample	KQ2120971-04	120	56

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120971-05

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.77	1	11/26/21 01:04	10/25/21	
alpha-BHC	ND U	1.0	0.25	1	11/26/21 01:04	10/25/21	
beta-BHC	ND Ui	1.4	1.4	1	11/26/21 01:04	10/25/21	
delta-BHC	ND U	1.0	0.27	1	11/26/21 01:04	10/25/21	
gamma-BHC (Lindane)	ND U	2.0	0.60	1	11/26/21 01:04	10/25/21	
cis-Chlordane	ND U	1.0	0.36	1	11/26/21 01:04	10/25/21	
trans-Chlordane	ND U	2.0	0.54	1	11/26/21 01:04	10/25/21	
4,4'-DDD	ND U	2.0	0.57	1	11/26/21 01:04	10/25/21	
4,4'-DDE	ND Ui	1.0	0.68	1	11/26/21 01:04	10/25/21	
4,4'-DDT	ND U	2.0	0.75	1	11/26/21 01:04	10/25/21	
Dieldrin	ND U	1.0	0.44	1	11/26/21 01:04	10/25/21	
Endosulfan I	ND U	1.0	0.36	1	11/26/21 01:04	10/25/21	
Endosulfan II	ND U	1.0	0.34	1	11/26/21 01:04	10/25/21	
Endosulfan Sulfate	ND Ui	1.0	0.89	1	11/26/21 01:04	10/25/21	
Endrin	ND U	1.0	0.42	1	11/26/21 01:04	10/25/21	
Endrin Aldehyde	ND U	1.0	0.47	1	11/26/21 01:04	10/25/21	
Endrin Ketone	ND Ui	2.0	0.90	1	11/26/21 01:04	10/25/21	
Heptachlor	ND Ui	2.0	0.88	1	11/26/21 01:04	10/25/21	
Heptachlor Epoxide	ND U	1.0	0.29	1	11/26/21 01:04	10/25/21	
Methoxychlor	ND Ui	6.1	6.1	1	11/26/21 01:04	10/25/21	
Toxaphene	ND Ui	130	130	1	11/26/21 01:04	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	136	10 - 139	11/26/21 01:04	
Tetrachloro-m-xylene	75	32 - 151	11/26/21 01:04	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 11/26/21
Date Extracted: 10/25/21

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 748479

Lab Control Sample
KQ2120971-01

Duplicate Lab Control Sample
KQ2120971-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
4,4'-DDD	38.3	25.0	153	39.9	25.0	160 *	35-158	4	30
4,4'-DDE	29.2	25.0	117	26.1	25.0	105	53-129	11	30
4,4'-DDT	36.1 P	25.0	145	31.9 P	25.0	128	43-164	12	30
Aldrin	29.6	25.0	118	24.9	25.0	100	37-135	17	30
alpha-BHC	27.9	25.0	112	24.3	25.0	97	48-148	14	30
beta-BHC	33.7	25.0	135 *	30.0	25.0	120	37-133	12	30
cis-Chlordane	33.6	25.0	134 *	30.4	25.0	121	54-127	10	30
delta-BHC	35.0	25.0	140 *	31.1	25.0	125	44-128	12	30
Dieldrin	33.0	25.0	132 *	29.6	25.0	118	51-122	11	30
Endosulfan I	27.7	25.0	111	25.1	25.0	100	44-135	10	30
Endosulfan II	33.1	25.0	133	30.1	25.0	120	37-180	10	30
Endosulfan Sulfate	38.4	25.0	154 *	34.4	25.0	138	42-144	11	30
Endrin	37.8	25.0	151 *	34.7	25.0	139 *	52-133	9	30
Endrin Aldehyde	35.1 P	25.0	140 *	30.3 P	25.0	121	49-126	15	30
Endrin Ketone	40.5	25.0	162 *	36.8	25.0	147 *	54-131	10	30
gamma-BHC (Lindane)	34.4	25.0	138	30.5	25.0	122	51-140	12	30
Heptachlor	36.2	25.0	145	32.1	25.0	128	33-161	12	30
Heptachlor Epoxide	34.9	25.0	140 *	30.9	25.0	123	51-125	12	30
Methoxychlor	49.7	25.0	199 *	46.8 P	25.0	187	38-194	6	30
trans-Chlordane	33.9	25.0	136 *	31.4	25.0	126	54-126	8	30

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 11/26/21
Date Extracted: 10/25/21

Duplicate Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 748479

Lab Control Sample
KQ2120971-03

Duplicate Lab Control Sample
KQ2120971-04

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>	<u>RPD</u>	<u>RPD Limit</u>
Toxaphene	934	1000	93	1580	1000	158	44-190	51 *	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
alpha-BHC	0.50	1.2	2.0	50	JP	1	11/26/21 04:20

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2120971-01

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	38.3	46.2	19		1	11/26/21 01:43
4,4'-DDE	0.46	29.2	31.0	6		1	11/26/21 01:43
4,4'-DDT	0.75	36.1	79.6	75	P	1	11/26/21 01:43
Aldrin	0.77	29.6	29.6	<1		1	11/26/21 01:43
Dieldrin	0.44	33.0	33.6	2		1	11/26/21 01:43
Endosulfan I	0.36	27.7	29.3	6		1	11/26/21 01:43
Endosulfan II	0.34	33.1	37.4	12		1	11/26/21 01:43
Endosulfan Sulfate	0.47	38.4	41.6	8		1	11/26/21 01:43
Endrin	0.42	37.8	38.2	1		1	11/26/21 01:43
Endrin Aldehyde	0.47	35.1	85.0	83	P	1	11/26/21 01:43
Endrin Ketone	0.70	40.5	41.3	2		1	11/26/21 01:43
Heptachlor	0.61	36.2	42.8	17		1	11/26/21 01:43
Heptachlor Epoxide	0.29	34.9	35.8	3		1	11/26/21 01:43
Methoxychlor	0.85	49.7	64.0	25		1	11/26/21 01:43
alpha-BHC	0.25	27.9	28.0	<1		1	11/26/21 01:43
beta-BHC	0.17	33.7	39.1	15		1	11/26/21 01:43
cis-Chlordane	0.36	33.6	34.3	2		1	11/26/21 01:43
delta-BHC	0.27	35.0	35.8	2		1	11/26/21 01:43
gamma-BHC (Lindane)	0.60	34.4	35.1	2		1	11/26/21 01:43
trans-Chlordane	0.54	33.9	36.4	7		1	11/26/21 01:43

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2120971-02

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	39.9	40.2	<1		1	11/26/21 02:22
4,4'-DDE	0.46	26.1	27.9	7		1	11/26/21 02:22
4,4'-DDT	0.75	31.9	122	117	P	1	11/26/21 02:22
Aldrin	0.77	24.9	25.2	1		1	11/26/21 02:22
Dieldrin	0.44	29.6	31.6	7		1	11/26/21 02:22
Endosulfan I	0.36	25.1	27.8	10		1	11/26/21 02:22
Endosulfan II	0.34	30.1	31.1	3		1	11/26/21 02:22
Endosulfan Sulfate	0.47	34.4	40.1	15		1	11/26/21 02:22
Endrin	0.42	34.7	36.1	4		1	11/26/21 02:22
Endrin Aldehyde	0.47	30.3	139	128	P	1	11/26/21 02:22
Endrin Ketone	0.70	36.8	37.2	1		1	11/26/21 02:22
Heptachlor	0.61	32.1	40.8	24		1	11/26/21 02:22
Heptachlor Epoxide	0.29	30.9	30.9	<1		1	11/26/21 02:22
Methoxychlor	0.85	46.8	75.9	47	P	1	11/26/21 02:22
alpha-BHC	0.25	24.3	24.5	<1		1	11/26/21 02:22
beta-BHC	0.17	30.0	41.1	31		1	11/26/21 02:22
cis-Chlordane	0.36	30.4	31.5	4		1	11/26/21 02:22
delta-BHC	0.27	31.1	32.0	3		1	11/26/21 02:22
gamma-BHC (Lindane)	0.60	30.5	31.1	2		1	11/26/21 02:22
trans-Chlordane	0.54	31.4	33.9	8		1	11/26/21 02:22

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2120971-03

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	934	1180	23		1	11/26/21 03:01

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2120971-04

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1580	1790	12		1	11/26/21 03:41

Client: Coles and Betts Environmental Consulting
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl
		20 - 155
B-28 (0-10 C)	K2112279-004	115
B-28 (10-25 C)	K2112279-007	98
B-28 (0-10 C) MS	KWG2102842-1	98
B-28 (0-10 C) DMS	KWG2102842-2	116
Lab Control Sample	KWG2102842-3	121
Method Blank	KWG2102842-4	97

Client: Coles and Betts Environmental Consulting
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A
Extraction Method: EPA 3511

Sample Name	Lab Code	Decachlorobiphenyl
		10 - 140
B-28	K2112279-008	29
Lab Control Sample	KWG2102829-1	80
Duplicate Lab Control Sample	KWG2102829-2	101
Method Blank	KWG2102829-3	88

Client: Coles and Betts Environmental Consulting
Project: EQRB/2680-00
Sample Matrix: Not Applicable

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A

Extraction Method:

Sample Name	Lab Code	Decachlorobiphenyl 20 - 155
Instrument Blank IB	KWG2103097-2	
Instrument Blank IB	KWG2103097-4	
Instrument Blank IB	KWG2103193-2	
Instrument Blank IB	KWG2103193-4	
Instrument Blank IB	KWG2103193-6	
Instrument Blank IB	KWG2103196-2	

Client: Coles and Betts Environmental Consulting
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 12/28/21
Date Extracted: 10/27/21

**Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)**

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004
Analysis Method: 8082A
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike KWG2102842-1		Result	Duplicate Matrix Spike KWG2102842-2		% Rec Limits	RPD	RPD Limit
			Spike Amount	% Rec		Spike Amount	% Rec			
Aroclor 1016	ND U	105	120	87	103	120	86	44-119	2	40
Aroclor 1260	ND U	110	120	92	111	120	92	56-130	<1	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KWG2102829-3

Units: ug/L
Basis: NA

Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	0.20	0.028	1	12/09/21 17:02	10/25/21	
Aroclor 1221	ND U	0.40	0.028	1	12/09/21 17:02	10/25/21	
Aroclor 1232	ND U	0.20	0.028	1	12/09/21 17:02	10/25/21	
Aroclor 1242	ND U	0.20	0.028	1	12/09/21 17:02	10/25/21	
Aroclor 1248	ND U	0.20	0.028	1	12/09/21 17:02	10/25/21	
Aroclor 1254	ND U	0.20	0.028	1	12/09/21 17:02	10/25/21	
Aroclor 1260	ND U	0.20	0.028	1	12/09/21 17:02	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	88	10 - 140	12/09/21 17:02	

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Analytical Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KWG2102842-4

Units: ug/Kg
Basis: Dry

Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	ND U	10	2.9	1	12/28/21 20:41	10/27/21	
Aroclor 1221	ND U	20	2.9	1	12/28/21 20:41	10/27/21	
Aroclor 1232	ND U	10	2.9	1	12/28/21 20:41	10/27/21	
Aroclor 1242	ND U	10	2.9	1	12/28/21 20:41	10/27/21	
Aroclor 1248	ND U	10	2.9	1	12/28/21 20:41	10/27/21	
Aroclor 1254	ND U	10	2.9	1	12/28/21 20:41	10/27/21	
Aroclor 1260	ND U	10	2.9	1	12/28/21 20:41	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	97	20 - 155	12/28/21 20:41	

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QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 12/28/21
Date Extracted: 10/27/21

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082A
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: KWG2103193

Lab Control Sample
KWG2102842-3

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Aroclor 1016	86.8	100	87	44-119
Aroclor 1260	94.6	100	95	56-130

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 26-127
B-28 (0-10 C)	K2112279-004	67
B-28 (10-25 C)	K2112279-007	70
Method Blank	KQ2120356-04	74
Lab Control Sample	KQ2120356-03	74

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 17-113
B-28	K2112279-008	48
Method Blank	KQ2121054-03	34
Lab Control Sample	KQ2121054-01	49
Duplicate Lab Control Sample	KQ2121054-02	56

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120356-04

Service Request: K2112279
Date Collected: NA
Date Received: NA
Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	50	4.0	1	11/30/21 21:47	10/25/21	
2,4,5-TP (Silvex)	ND U	50	2.4	1	11/30/21 21:47	10/25/21	
2,4-D	ND U	50	7.7	1	11/30/21 21:47	10/25/21	
2,4-DB	ND Ui	50	23	1	11/30/21 21:47	10/25/21	
Dalapon	ND U	50	5.5	1	11/30/21 21:47	10/25/21	
Dicamba	ND U	50	4.3	1	11/30/21 21:47	10/25/21	
Dichlorprop	ND U	50	3.4	1	11/30/21 21:47	10/25/21	
Dinoseb	ND U	50	2.7	1	11/30/21 21:47	10/25/21	
MCPA	ND U	5000	320	1	11/30/21 21:47	10/25/21	
MCP	ND U	5000	460	1	11/30/21 21:47	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	74	26 - 127	11/30/21 21:47	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2121054-03

Service Request: K2112279
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/22/21 22:23	10/26/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/22/21 22:23	10/26/21	
2,4-D	ND U	0.38	0.036	1	11/22/21 22:23	10/26/21	
2,4-DB	0.23 JP	0.38	0.10	1	11/22/21 22:23	10/26/21	
Dalapon	ND U	0.38	0.28	1	11/22/21 22:23	10/26/21	
Dicamba	ND U	0.19	0.025	1	11/22/21 22:23	10/26/21	
Dichlorprop	ND U	0.38	0.030	1	11/22/21 22:23	10/26/21	
Dinoseb	ND U	0.19	0.015	1	11/22/21 22:23	10/26/21	
MCPA	ND U	94	8.7	1	11/22/21 22:23	10/26/21	
MCPP	ND U	94	14	1	11/22/21 22:23	10/26/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	34	17 - 113	11/22/21 22:23	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 11/30/21
Date Extracted: 10/25/21

Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 747806

Lab Control Sample
KQ2120356-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-T	129	167	77	44-125
2,4,5-TP (Silvex)	133	167	80	46-125
2,4-D	129	167	77	46-120
2,4-DB	174	167	105	30-126
Dalapon	76.5	167	46	13-100
Dicamba	129	167	77	43-119
Dichlorprop	121	167	73	47-108
Dinoseb	107	167	64	25-110
MCPA	17700	16700	106	40-128
MCPD	17900	16700	108	49-134

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 11/22/21
Date Extracted: 10/26/21

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/L
Basis: NA
Analysis Lot: 747173

Lab Control Sample
KQ2121054-01

Duplicate Lab Control Sample
KQ2121054-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-T	2.21	2.50	89	2.24	2.50	90	30-120	1	30
2,4,5-TP (Silvex)	1.75	2.50	70	1.85	2.50	74	37-114	5	30
2,4-D	1.63	2.50	65	1.71	2.50	68	35-110	5	30
2,4-DB	1.56 P	2.50	63	1.74	2.50	70	10-134	11	30
Dalapon	1.44	2.50	57	1.46	2.50	59	14-110	2	30
Dicamba	1.72	2.50	69	1.80	2.50	72	30-108	4	30
Dichlorprop	1.54	2.50	61	1.60	2.50	64	29-104	4	30
Dinoseb	1.69	2.50	67	1.66	2.50	67	11-105	1	30
MCPA	196	250	78	206	250	82	21-117	5	30
MCPD	201	250	81	219	250	87	16-141	8	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
MCP	18	24	28	15	J	1	11/23/21 00:05

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120356-03

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	4.0	129	142	10		1	11/30/21 22:13
2,4,5-TP (Silvex)	2.4	133	148	11		1	11/30/21 22:13
2,4-D	7.7	129	145	12		1	11/30/21 22:13
2,4-DB	5.4	174	181	4		1	11/30/21 22:13
Dalapon	5.5	76.5	99.6	26		1	11/30/21 22:13
Dicamba	4.3	129	148	14		1	11/30/21 22:13
Dichlorprop	3.4	121	159	27		1	11/30/21 22:13
Dinoseb	2.7	107	124	15		1	11/30/21 22:13
MCPA	320	17700	16300	8		1	11/30/21 22:13
MCPP	460	17900	15200	16		1	11/30/21 22:13

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2121054-01

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	2.21	1.78	22		1	11/22/21 22:48
2,4,5-TP (Silvex)	0.045	1.75	1.97	12		1	11/22/21 22:48
2,4-D	0.036	1.63	1.85	13		1	11/22/21 22:48
2,4-DB	0.10	1.56	2.43	44	P	1	11/22/21 22:48
Dalapon	0.28	1.44	1.79	22		1	11/22/21 22:48
Dicamba	0.025	1.72	1.83	6		1	11/22/21 22:48
Dichlorprop	0.030	1.54	1.89	20		1	11/22/21 22:48
Dinoseb	0.015	1.69	1.43	17		1	11/22/21 22:48
MCPA	8.7	196	234	18		1	11/22/21 22:48
MCPP	14	201	215	7		1	11/22/21 22:48

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2121054-02

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	2.24	1.85	19		1	11/22/21 23:14
2,4,5-TP (Silvex)	0.045	1.85	2.06	11		1	11/22/21 23:14
2,4-D	0.036	1.71	1.93	12		1	11/22/21 23:14
2,4-DB	0.10	1.74	2.54	37		1	11/22/21 23:14
Dalapon	0.28	1.46	1.84	23		1	11/22/21 23:14
Dicamba	0.025	1.80	1.91	6		1	11/22/21 23:14
Dichlorprop	0.030	1.60	1.95	20		1	11/22/21 23:14
Dinoseb	0.015	1.66	1.41	16		1	11/22/21 23:14
MCPA	8.7	206	281	31		1	11/22/21 23:14
MCPP	14	219	226	3		1	11/22/21 23:14

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2121054-03

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4-DB	0.10	0.23	0.13	56	JP	1	11/22/21 22:23

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: Method

Sample Name	Lab Code	Tri-n-propyltin
		10-152
B-28 (0-10 C)	K2112279-004	94
B-28 (10-25 C)	K2112279-007	57
Method Blank	KQ2120754-04	104
Lab Control Sample	KQ2120754-03	109

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: EPA 3520C

Sample Name	Lab Code	Tri-n-propyltin
		10-195
B-28	K2112279-008	139
Method Blank	KQ2120978-03	144
Lab Control Sample	KQ2120978-01	142
Duplicate Lab Control Sample	KQ2120978-02	151

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120754-04

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.98	0.26	1	11/01/21 13:16	10/27/21	
Di-n-butyltin Cation	0.24 J	0.98	0.19	1	11/01/21 13:16	10/27/21	
Tri-n-butyltin Cation	0.61 J	0.98	0.43	1	11/01/21 13:16	10/27/21	
Tetra-n-butyltin	ND U	0.98	0.44	1	11/01/21 13:16	10/27/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	104	10 - 152	11/01/21 13:16	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2120978-03

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.050	0.029	1	10/28/21 19:49	10/25/21	
Di-n-butyltin Cation	0.038 J	0.050	0.0073	1	10/28/21 19:49	10/25/21	
Tri-n-butyltin Cation	ND U	0.050	0.012	1	10/28/21 19:49	10/25/21	
Tetra-n-butyltin	ND U	0.050	0.038	1	10/28/21 19:49	10/25/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	144	10 - 195	10/28/21 19:49	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 11/01/21
Date Extracted: 10/27/21

Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 744774

Lab Control Sample
KQ2120754-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Di-n-butyltin Cation	20.4	19.2	106	10-190
n-Butyltin Cation	15.4	15.6	99	10-200
Tetra-n-butyltin	23.3	25.0	93	10-194
Tri-n-butyltin Cation	22.9	22.3	103	10-186

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 10/28/21
Date Extracted: 10/25/21

Duplicate Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 744773

Lab Control Sample
KQ2120978-01

Duplicate Lab Control Sample
KQ2120978-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Di-n-butyltin Cation	0.470	0.383	123	0.495	0.383	129	10-200	5	30
n-Butyltin Cation	0.276 P	0.312	88	0.365	0.312	117	10-200	28	30
Tetra-n-butyltin	0.606	0.500	121	0.638	0.500	128	10-200	5	30
Tri-n-butyltin Cation	0.581	0.446	130	0.609	0.446	137	10-200	5	30

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0077	0.017	0.017	<1	J	1	10/28/21 20:55

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2120754-03

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	20.4	25.6	23		1	11/01/21 13:32
Tetra-n-butyltin	0.44	23.3	29.7	24		1	11/01/21 13:32
Tri-n-butyltin Cation	0.43	22.9	31.0	30		1	11/01/21 13:32
n-Butyltin Cation	0.26	15.4	21.8	34		1	11/01/21 13:32

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120754-04

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	0.24	0.29	19	J	1	11/01/21 13:16
Tri-n-butyltin Cation	0.43	0.61	0.76	22	J	1	11/01/21 13:16

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: Lab Control Sample
Lab Code: KQ2120978-01

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.470	0.680	37		1	10/28/21 20:06
Tetra-n-butyltin	0.038	0.606	0.715	17		1	10/28/21 20:06
Tri-n-butyltin Cation	0.012	0.581	0.798	31		1	10/28/21 20:06
n-Butyltin Cation	0.029	0.276	0.493	56	P	1	10/28/21 20:06

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2120978-02

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.495	0.733	39		1	10/28/21 20:22
Tetra-n-butyltin	0.038	0.638	0.770	19		1	10/28/21 20:22
Tri-n-butyltin Cation	0.012	0.609	0.830	31		1	10/28/21 20:22
n-Butyltin Cation	0.029	0.365	0.504	32		1	10/28/21 20:22

ALS Group USA, Corp.
dba ALS Environmental

Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
SRM Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120978-03

Service Request: K2112279
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.038	0.048	23	J	1	10/28/21 19:49

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-28 (0-10 C)	K2112279-004	99	107
B-28 (10-25 C)	K2112279-007	114	121
B-28 (0-10 C)	KQ2121369-01	97	100
Method Blank	KQ2121369-03	94	102
Lab Control Sample	KQ2121369-02	124	127

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3510C

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-28	K2112279-008	87	88
Method Blank	KQ2121357-03	93	92
Lab Control Sample	KQ2121357-01	94	92
Duplicate Lab Control Sample	KQ2121357-02	99	98

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 11/01/21

Replicate Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2121369-01 Result			
Diesel Range Organics (C12 - C25 DRO)	NWTPH-Dx	30	2.2	7.3 J	4.7 J	5.99	44 #	40
Residual Range Organics (C25 - C36 RRO)	NWTPH-Dx	120	4.7	20 J	12 J	16.1	51 #	40

Results flagged with an asterisk (*) indicate values outside control criteria.

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2121357-03

Service Request: K2112279
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	19 J	250	11	1	11/02/21 18:58	10/29/21	
Residual Range Organics (C25 - C36 RRO)	27 J	500	19	1	11/02/21 18:58	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	93	50 - 150	11/02/21 18:58	
n-Triacontane	92	50 - 150	11/02/21 18:58	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121369-03

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	2.4 J	24	1.8	1	11/01/21 19:55	10/29/21	
Residual Range Organics (C25 - C36 RRO)	7.1 J	97	3.9	1	11/01/21 19:55	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	94	50 - 150	11/01/21 19:55	
n-Triacontane	102	50 - 150	11/01/21 19:55	

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 11/01/21
Date Extracted: 10/29/21

Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Units: mg/Kg
Basis: Dry
Analysis Lot: 744525

Lab Control Sample
KQ2121369-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Diesel Range Organics (C12 - C25 DRO)	324	267	122	42-134
Residual Range Organics (C25 - C36 RRO)	143	133	107	48-141

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 11/02/21
Date Extracted: 10/29/21

Duplicate Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Units: ug/L
Basis: NA
Analysis Lot: 744632

Analyte Name	Lab Control Sample KQ2121357-01			Duplicate Lab Control Sample KQ2121357-02			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Diesel Range Organics (C12 - C25 DRO)	2880	3200	90	3110	3200	97	46-140	8	30
Residual Range Organics (C25 - C36 RRO)	1230	1600	77	1290	1600	81	45-159	4	30



Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120888-01

Service Request: K2112279
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	ug/L	0.50	0.09	1	10/27/21 17:47	10/26/21	
Barium	6020A	ND U	ug/L	0.050	0.020	1	10/27/21 17:47	10/26/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	10/27/21 17:47	10/26/21	
Chromium	6020A	ND U	ug/L	0.20	0.03	1	10/27/21 17:47	10/26/21	
Lead	6020A	ND U	ug/L	0.020	0.006	1	10/27/21 17:47	10/26/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	10/27/21 17:47	10/26/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	10/27/21 17:47	10/26/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: KQ2120892-01

Service Request: K2112279
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	ug/L	0.20	0.02	1	10/27/21 13:23	10/26/21	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2120984-03

Service Request: K2112279
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7471B	ND U	mg/Kg	0.02	0.005	1	10/27/21 15:56	10/25/21	

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2121370-03

Service Request: K2112279
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	mg/Kg	0.5	0.06	5	11/03/21 09:08	11/01/21	
Barium	6020A	ND U	mg/Kg	0.05	0.020	5	11/03/21 09:08	11/01/21	
Cadmium	6020A	ND U	mg/Kg	0.020	0.007	5	11/03/21 09:08	11/01/21	
Chromium	6020A	ND U	mg/Kg	0.20	0.06	5	11/03/21 09:08	11/01/21	
Lead	6020A	ND U	mg/Kg	0.05	0.020	5	11/03/21 09:08	11/01/21	
Selenium	6020A	ND U	mg/Kg	1.0	0.09	5	11/03/21 09:08	11/01/21	
Silver	6020A	0.009 J	mg/Kg	0.020	0.004	5	11/03/21 09:08	11/01/21	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 10/27/21
Date Extracted: 10/26/21

Matrix Spike Summary
Total Metals

Sample Name: B-28
Lab Code: K2112279-008
Analysis Method: 6020A
Prep Method: EPA CLP ILM04.0

Units: ug/L
Basis: NA

Matrix Spike
KQ2120888-04

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	4.49	46.2	50.0	83	75-125
Barium	98.0	226	100	128 N	75-125
Cadmium	0.111	24.7	25.0	98	75-125
Chromium	8.10	26.5	10.0	184 N	75-125
Lead	49.2	104	50.0	110	75-125
Selenium	ND U	43.0	50.0	86	75-125
Silver	0.015 J	12.0	12.5	96	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 10/27/21
Date Extracted: 10/25/21

Matrix Spike Summary
Total Metals

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004
Analysis Method: 7471B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2120984-02

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	0.026	0.590	0.583	97	80-120

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Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 11/3/21
Date Extracted: 11/1/21

Matrix Spike Summary
Total Metals

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004
Analysis Method: 6020A
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2121370-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	2.31	122	115	104	75-125
Barium	103	346	231	105	75-125
Cadmium	0.054	12.6	11.5	108	75-125
Chromium	13.2	64.2	46.2	110	75-125
Lead	2.93	134	115	113	75-125
Selenium	ND U	118	115	102	75-125
Silver	0.029	12.1	11.5	105	75-125

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 10/27/21

Replicate Sample Summary
Total Metals

Sample Name: B-28
Lab Code: K2112279-008

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2120888-03 Result			
Arsenic	6020A	0.50	0.09	4.49	6.16	5.33	31 *	20
Barium	6020A	0.050	0.020	98.0	124	111	23 *	20
Cadmium	6020A	0.020	0.008	0.111	0.132	0.122	17	20
Chromium	6020A	0.20	0.03	8.10	17.2	12.7	72 *	20
Lead	6020A	0.020	0.006	49.2	56.9	53.1	15	20
Selenium	6020A	1.0	0.2	ND U	ND U	ND	-	20
Silver	6020A	0.020	0.009	0.015 J	0.076	0.046	134 #	20

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 10/27/21

Replicate Sample Summary

Total Metals

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2120984-01 Result			
Mercury	7471B	0.024	0.006	0.026	0.028	0.027	9	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 11/03/21

Replicate Sample Summary
Total Metals

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2121370-01 Result			
Arsenic	6020A	0.58	0.07	2.31	2.98	2.65	26 *	20
Barium	6020A	0.058	0.023	103	100	102	3	20
Cadmium	6020A	0.023	0.008	0.054	0.061	0.058	13	20
Chromium	6020A	0.23	0.07	13.2	14.9	14.1	11	20
Lead	6020A	0.058	0.023	2.93	4.04	3.49	32 *	20
Selenium	6020A	1.2	0.1	ND U	ND U	ND	-	20
Silver	6020A	0.023	0.005	0.029	0.026	0.028	9	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 10/27/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2120888-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	47.7	50.0	95	80-120
Barium	6020A	100	100	100	80-120
Cadmium	6020A	24.9	25.0	100	80-120
Chromium	6020A	9.67	10.0	97	80-120
Lead	6020A	49.4	50.0	99	80-120
Selenium	6020A	51.0	50.0	102	80-120
Silver	6020A	12.2	12.5	98	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 10/27/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2120892-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	4.91	5.00	98	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 10/27/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2120984-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7471B	0.500	0.500	100	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 11/03/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2121370-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	99.1	100	99	80-120
Barium	6020A	210	200	105	80-120
Cadmium	6020A	10.5	10.0	105	80-120
Chromium	6020A	40.7	40.0	102	80-120
Lead	6020A	102	100	102	80-120
Selenium	6020A	100	100	100	80-120
Silver	6020A	10.3	10.0	103	80-120



General Chemistry

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ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: 10/19/21
Date Received: 10/20/21
Date Analyzed: 10/25/21

Replicate Sample Summary
Inorganic Parameters

Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Units: Percent
Basis: As Received

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2112279-004DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total	160.3 Modified	-	81.3	81.3	81.3	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Subcontracted Analytical Parameters

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November 29, 2021

Service Request No:K2112279

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

Laboratory Results for: EQRB

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 20, 2021
For your reference, these analyses have been assigned our service request number **K2112279**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental



Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
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ALS Environmental

Client: Coles & Betts ENV
Project: EQRB
Sample Matrix: S/W

Service Request No.: K2112279
Date Received: 10/29/21

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Three samples were received for analysis at ALS Environmental in Houston on 10/29/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100629: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in addition to a MS/MSD for this extraction batch. 1,2,3,4,7,8,9-HpCDF & 1,2,3,7,8-PeCDF LCS/DLCS recoveries were below QC limits; associated compounds for the samples in the batch should be considered potentially bias low.

EQ2100630: A Laboratory Control Spike (LCS) sample was analyzed and reported in addition to a MS/MSD for this extraction batch. 1,2,3,4,7,8,9-HpCDF LCS recovery was below QC limits; associated compound for the samples in the batch should be considered potentially bias low. The MS/MSD was performed on an unrelated sample.

B flags – Method Blanks

The Method Blank EQ2100630-01 contained low levels of 1,2,3,4,6,7,8-HpCDD, OCDD, and OCDF below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with 'B' flags where the sample result is less than ten times the level detected in the method blank.

Y flags – Cleanup Standard

The recoveries for the cleanup standard, 37Cl-2,3,7,8-TCDD are below control limits in K2112279-007 and MBLK EQ629. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected, and is not used in quantitation of target analytes.

Y flags – Labeled Standards

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with 'Y' flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEQ Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- Non-detected compounds are not included in the 'Total'

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00

Service Request:K2112279

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2112279-004	B-28 (0-10 C)	10/19/2021	1320
K2112279-007	B-28 (10-25 C)	10/19/2021	1335
K2112279-008	B-28	10/19/2021	1445

Service Request Summary

Folder #: K2112279
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 2680-00

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA
Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: FADAIR
Date Received: 10/20/21
Internal Due Date: 11/9/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: N, Y
P.O. Number:
EDD: No EDD Specified

28 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 6 40 ml-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
 4 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 4 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 8 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 3 250 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 2 2 oz-Glass Jar Glass WM CLEAR None
 2 16 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
 1 250 mL-Plastic Bottle Plastic WM CLEAR Unpreserved
 1 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-DELILAH, K-NOT CREATED, K-Misty-2, K-SVEXT, K-Disposed, EHRMS-WIC 10D, K-PETUNIA-09, SUBBED, In Lab, K-MET LTS
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	KELSO					KELSO					KELSO			HOUSTON	KELSO
				Hg D/7470A	Hg T/7470A	Hg/7471B	Metals D/6020A	Metals T/6020A	BUTYLINS/ALS SOP	HERB/8151A	NW_TPH/NWTPH-Dx	PCB/8082A	Pest OC LL/8081B	Pest OC ULL/8081B	PAH SIM ULL/8270D	PAH SIM/8270D	SVO LL/8270D	PCDD PCDF/8290A
K2112279-004	B-28 (0-10 C)	Soil	10/19/21 1320															
K2112279-007	B-28 (10-25 C)	Soil	10/19/21 1335															
K2112279-008	B-28	Water	10/19/21 1445															

Folder Comments:

Composite 001 and 002 to make 004.
 Composite 003,005 and 006 to make 007.
 Reserve some from each discrete for future analysis.

KELSO		
NW_GAS/NWTPH-Gx	VOC FP/8260C	VOC Unp/8260C

Service Request Summary

Folder #: K2112279
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 2680-00

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA
Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: FADAIR
Date Received: 10/20/21
Internal Due Date: 11/9/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: N, Y
P.O. Number:
EDD: No EDD Specified

28 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 6 40 ml-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
 4 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 4 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 8 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 3 250 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 2 2 oz-Glass Jar Glass WM CLEAR None
 2 16 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
 1 250 mL-Plastic Bottle Plastic WM CLEAR Unpreserved
 1 125 mL-Plastic Bottle NM CLEAR HNO3

Location: K-DELILAH, K-NOT CREATED, K-Misty-2, K-SVEXT, K-Disposed, EHRMS-WIC 10D, K-PETUNIA-09, SUBBED, In Lab, K-MET LTS

Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Metals	Metals D/6020A	1	As Ba Cd Cr Pb Se Ag
Metals	Filter Met/Filter Met	1	Filter and preserve for Diss. Metals
Metals	Metals T/6020A	5	As,Ba,Cd,Cr,Pb,Se,Ag
Semivoa GC	Pest OC LL/8081B	2	Report list: 20324
Semivoa GC	HERB/8151A	3	Report list: 18726
Semivoa GC	BUTYLTINS/ALS SOP	3	Report list: 17560
Semivoa GC	Pest OC ULL/8081B	1	Report list: 20324
Semivoa GC	NW_TPH/NWTPH-Dx	5	Report list: 22364
Semivoa GC	PCB/8082A	3	Report list: 20420
Semivoa GCMS	PAH SIM/8270D	2	Report list: 18998
Semivoa GCMS	PAH SIM ULL/8270D	2	Report list: 18998
Soils Prep	Sub Sample/Subsample	2	Aliquot sample for outside shipping Dioxins
VOA GCMS	VOC FP/8260C	1	Report list: 20915
VOA GCMS	NW_GAS/NWTPH-Gx	3	Report list: 19509
VOA GCMS	VOC Unp/8260C	2	Report list: 20915

Data Qualifiers

Lab Standard

- + Possible Tedlar bag artifact.
- A TIC is a suspected aldol-condensation product
- B Analyte found in the associated method blank as well as in the sample.
- BC Reported results are not blank corrected.
- BH The back section of the tube yielded higher results than the front.
- BT Results indicated possible breakthrough; back section $\geq 10\%$ front section.
- C Result identification confirmed.
- D Compound identified in an analysis at a secondary dilution factor
- D Spike was diluted out
- DE Reported results are corrected for desorption efficiency.
- E Estimated value. Concentration above calibration range
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- H1 Sample analysis performed past holding time. See case narrative.
- H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
- H3 Sample was received and analyzed past holding time.
- H4 Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
- I Internal standard not within the specified limits. See case narrative.
- J Estimated Value. Concentration found below MRL.
- K A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
- K Analyte was detected above the method reporting limit prior to normalization.
- K The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- L1 Laboratory control sample recovery outside the specified limits; results may be biased high.
- L2 Laboratory control sample recovery outside the specified limits; results may be biased low.
- L3 Laboratory control sample recovery outside the specified limits.
- M Matrix interference; results may be biased high.
- M The duplicate injection precision not met.
- M1 Matrix interference due to coelution with a non-target compound; results may be biased high.
- N Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- P Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
- P Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
- Q Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
- R Duplicate Precision not met.
- R1 Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
- S Surrogate recovery not within specified limits.
- S The reported value was determined by the Method of Standard Additions (MSA).
- T Analyte is a tentatively identified compound, result is estimated.
- U Compound was analyzed for, but was not detected (ND).
- V1 The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
- V2 The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
- W Result quantified, but the corresponding peak was detected outside the generated retention time window.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- X See case narrative.
- Y Recovery outside limits
- Y The chromatogram resembles a petroleum product but does not match the calibration standard.
- Z The chromatogram does not resemble a petroleum product.
 - i The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCEntration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Conservation and Natural Resources	TX026932022-1	7/31/2022
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Conservation	04016-2021	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-27	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-28	5/1/2022
United States Department of Agriculture	P330-19-00299	10/10/2022



Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Intra-Network Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

Project Name: EQRB
Project Number: 2680-00
Project Manager: Jill Betts
Company: Coles and Betts Environmental Consulting, LLC
QAP: LAB QAP

PCDD PCDF
8290A

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
K2112279-004	B-28 (0-10 C)	1	Soil	10/19/21	1320	10/20/21	HOUSTON	II
K2112279-007	B-28 (10-25 C)	1	Soil	10/19/21	1335	10/20/21	HOUSTON	II
K2112279-008	B-28	2	Water	10/19/21	1445	10/20/21	HOUSTON	II

Folder Comments:

Composite 001 and 002 to make 004.
 Composite 003,005 and 006 to make 007.
 Reserve some from each discrete for future analysis.

<p>Special Instructions/Comments Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.</p> <div style="text-align: right; margin-top: 20px;"> <p><i>Handwritten:</i> 2 → U.C.C. 1.4 2131 11:00</p> </div> <p>pH Checked _____</p>	<p>Turnaround Requirements</p> <p><input type="checkbox"/> RUSH (Surcharges Apply)</p> <p>PLEASE CIRCLE WORK DAYS</p> <p style="text-align: center;">1 2 3 4 5</p> <p><input checked="" type="checkbox"/> STANDARD</p> <p>Requested FAX Date: _____</p> <p>Requested Report Date: <u>11/09/21</u></p>	<p>Report Requirements</p> <p><input type="checkbox"/> I. Results Only</p> <p><input checked="" type="checkbox"/> II. Results + QC Summaries</p> <p><input type="checkbox"/> III. Results + QC and Calibration Summaries</p> <p><input type="checkbox"/> IV. Data Validation Report with Raw Data</p> <p>PQL/MDL/J <u>Y</u></p> <p>EDD <u>N</u></p>	<p>Invoice Information</p> <hr/> <p>PO# 51K2112279</p> <hr/> <p>Bill to</p>
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------

Relinquished By: M. Mullegan 10/27/21 Received By: [Signature] 10/29/2021 10:45 Airbill Number: _____



Environmental

Cooler Receipt Form

Project Chemist

LA

Client/Project

ALS-H

Thermometer ID

1021

Date/Time Received:

10-24-21

Initials:

ML

Date/Time Logged in:

10-25-21

Initials

LA

1. Method of delivery:

- US Mail
- Fed Ex
- UPS
- DHL
- Courier
- Client

2. Samples received in:

- Cooler
- Box
- Envelope
- Other

3. Were custody seals on coolers?

- Yes
- No

Were they intact?

- Yes
- No
- N/A

Were they signed and dated?

- Yes
- No
- N/A

If yes, how many and where?

1-F

4. Packing Material:

- Inserts
- Baggies
- Bubble Wrap
- Gel Packs
- Wet Ice
- Sleeves
- Other

5. Foreign or Regulated Soil?

- Yes
- No

Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
5325 9603 4164		10-24-21	1045	TA	14	<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

- 6. Were custody papers properly filled out (ink, signed, dated, etc)? Yes No
- 7. Did all bottles arrive in good condition (not broken, no signs of leakage)? Yes No
- 8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? Yes No
- 9. Were appropriate bottles/containers and volumes received for the requested tests? Yes No
- 10. Did sample labels and tags agree with custody documents? Yes No

Notes, Discrepancies, & Resolutions:

Service request Label:



10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 390511
 Team: Semivoa GCMS/SHIVANI NAIDU

Prep WorkFlow: OrgExtDiox.Aq-30
 Prep Method: Method

Status: Prepped
 Prep Date/Time: 11/2/21 10:00

#	Lab Code	Client ID	B#	Method /Test	pH	CI	Matrix	Amt. Ext.	Sample Description
1	E2101124-001	GW-7A-013-01-307	.01	8290A/PCDD PCDF			Water	982mL	clear
2	E2101124-002	GW-7A-013-02-307	.01	8290A/PCDD PCDF			Water	1010mL	clear
3	E2101124-003	GW-07-FB-01-307	.01	8290A/PCDD PCDF			Water	1025mL	clear
4	E2101124-004	GW-07-EB-01-307	.02	8290A/PCDD PCDF			Water	1001mL	clear
5	E2101135-016	MFS-EB-102121-1	.10	8290A/PCDD PCDF			Water	956mL	clear
6	EQ2100630-01	MB		8290A/PCDD PCDF			Liquid	1000mL	
7	EQ2100630-02	LCS		8290A/PCDD PCDF			Liquid	1000mL	
8	EQ2100630-03	GW-7A-013-01-307 MS	.03	8290A/PCDD PCDF			Liquid	1033mL	
9	EQ2100630-04	GW-7A-013-01-307 DMS	.05	8290A/PCDD PCDF			Liquid	987mL	
10	K2112045-007	B37	.10	8290A/PCDD PCDF			Water	980mL	murky
11	K2112045-015	B34	.10	8290A/PCDD PCDF			Water	1057mL	yellow cloudy
12	K2112045-020	B29	.11	8290A/PCDD PCDF			Water	1029mL	brown cloudy
13	K2112198-006	B31	.14	8290A/PCDD PCDF			Water	1058mL	yellow cloudy
14	K2112279-008	B-28	.13	8290A/PCDD PCDF			Water	878mL	yellow cloudy

Spiking Solutions

Name:	8290/1613B Cleanup Working Standard	Inventory ID	219817	Logbook Ref:	tw 10/15/21 219817	Expires On:	02/18/2022
E2101124-001	100.00µL	E2101124-002	100.00µL	E2101124-004	100.00µL	EQ2100630-01	100.00µL
EQ2100630-02	100.00µL	EQ2100630-03	100.00µL	K2112045-007	100.00µL	K2112045-020	100.00µL
K2112198-006	100.00µL	K2112279-008	100.00µL				

Name:	1613B Matrix Working Standard	Inventory ID	219968	Logbook Ref:	TW 10/22/21 SN	Expires On:	04/20/2022
EQ2100630-02	100.00µL	EQ2100630-03	100.00µL				

Name:	1613B Labeled Working Standard	Inventory ID	220141	Logbook Ref:	SN 11/2/21 220141 2-4 ng/ml	Expires On:	02/18/2022
E2101124-001	1,000.00µL	E2101124-002	1,000.00µL	E2101124-004	1,000.00µL	EQ2100630-01	1,000.00µL
EQ2100630-02	1,000.00µL	EQ2100630-03	1,000.00µL	K2112045-007	1,000.00µL	K2112045-020	1,000.00µL
K2112198-006	1,000.00µL	K2112279-008	1,000.00µL				

Preparation Information Benchsheet

Prep Run#: 390511 **Prep WorkFlow:** OrgExtDioxAq-30 **Status:** Prepped
Team: Semivoa GCMS/SHIVANI NAIDU **Prep Method:** Method **Prep Date/Time:** 11/2/21 10:00

Preparation Materials

Carbon, High Purity	tw 08/09/21 carbon (218695)	Ethyl Acetate 99.9% Minimum EtOAc	TW 12/15/20 (214517)	Glass Wool	tw 7/8/21 glass wool (218851)
Hexanes 95%	tw 09/07/21 hexanes (219108)	Chlorine Test Strips	Chlorine test Strips (210298)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	tw 10/6/21 dcm (219683)
Sodium Hydroxide 1N NaOH	tw 08/10/21 (218694)	Sodium Sulfate Anhydrous Reagent Grade Na2SO4	tw 04/12/21 (217292)	Tridecane (n-Tridecane)	tw 04/ tridecane (216874)
ColorpHast pH-Indicator Strips	pH strips tw 21020 (206953)	Silica Gel	tw 06/01/21 silics g (217554)	sulfuric acid	8/12/21 tw (218912)
Toluene 99.9% Minimum	tw 09/09/21 toluene (219187)				

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	11/2/21 10:00	Started:	11/5/21 10:00	Started:	11/5/21 12:00	Started:	11/5/21 15:00
Finished:	11/2/21 16:00	Finished:	11/5/21 11:00	Finished:	11/5/21 15:00	Finished:	11/5/21 18:00
By:	SHIVANI NAIDU	By:	SHIVANI NAIDU	By:	SHIVANI NAIDU	By:	SHIVANI NAIDU
Comments	Comments	Comments	Comments	Comments	Comments	Comments	Comments

Comments: _____

Reviewed By: _____ SN _____ Date: 11/5/21

Chain of Custody

Relinquished By: _____	Date: _____	Extracts Examined
Received By: _____	Date: _____	Yes No

Preparation Information Benchsheet

Prep Run#: 390509
 Team: Semivoa GCMS/TWOODS

Prep Workflow: OrgExtDioxS(30)
 Prep Method: Method

Status: Prepped
 Prep Date/Time: 11/2/21 10:46

#	Lab Code	Client ID	B#	Method /Test	pH	CI	Matrix	Amt. Ext.	Sample Description
1	EQ2100629-01	MB		8290A/PCDD PCDF			Solid	10.002g	
2	EQ2100629-02	LCS		8290A/PCDD PCDF			Solid	10.031g	
3	EQ2100629-03	D LCS		8290A/PCDD PCDF			Solid	10.162g	
4	K2112045-006	B-37 0-10 C	.02	8290A/PCDD PCDF			Soil	9.380g	
5	K2112045-014	B-34 0-10 C	.02	8290A/PCDD PCDF			Soil	10.202g	Fuel odor in sample
6	K2112045-022	B-37 10-23 C	.02	8290A/PCDD PCDF			Soil	9.200g	
7	K2112045-023	B-34 10-23 C	.02	8290A/PCDD PCDF			Soil	10.236g	
8	K2112045-024	B-29 0-12 C	.02	8290A/PCDD PCDF			Soil	8.358g	
9	K2112198-003	B 0-10 C	.04	8290A/PCDD PCDF			Soil	10.097g	
10	K2112198-005	B-31 20-25 C	.01	8290A/PCDD PCDF			Soil	10.294g	
11	K2112279-004	B-28 (0-10 C)	.08	8290A/PCDD PCDF			Soil	10.074g	
12	K2112279-007	B-28 (10-25 C)	.01	8290A/PCDD PCDF			Soil	10.057g	

Spiking Solutions

Name: 8290/1613B Cleanup Working Standard	Inventory ID	219817	Logbook Ref:	tw 10/15/21 219817	Expires On:	02/18/2022
EQ2100629-01 100.00µL	EQ2100629-03	100.00µL	K2112045-006	100.00µL	K2112045-014	100.00µL
K2112045-023 100.00µL	K2112198-003	100.00µL	K2112198-005	100.00µL	K2112279-004	100.00µL

Name: 1613B Matrix Working Standard	Inventory ID	219968	Logbook Ref:	TW 10/22/21 SN	Expires On:	04/20/2022
EQ2100629-01 100.00µL	EQ2100629-03	100.00µL	K2112045-006	100.00µL	K2112045-014	100.00µL
K2112045-023 100.00µL	K2112198-003	100.00µL	K2112198-005	100.00µL	K2112279-004	100.00µL

Name: 1613B Labeled Working Standard	Inventory ID	220141	Logbook Ref:	SN 11/2/21 220141 2-4 ng/ml	Expires On:	02/18/2022
EQ2100629-01 1,000.00µL	EQ2100629-03	1,000.00µL	K2112045-006	1,000.00µL	K2112045-014	1,000.00µL
K2112045-023 1,000.00µL	K2112198-003	1,000.00µL	K2112198-005	1,000.00µL	K2112279-004	1,000.00µL

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	11/2/21 10:46	Started:	11/4/21 10:00	Started:	11/4/21 12:00	Started:	11/5/21 11:00
Finished:	11/3/21 09:00	Finished:	11/4/21 11:00	Finished:	11/4/21 15:00	Finished:	11/5/21 14:00
By:	TWOODS	By:	TWOODS	By:	TWOODS	By:	TWOODS
Comments	Comments	Comments	Comments	Comments	Comments	Comments	Comments

Preparation Information Benchsheet

Prep Run#: 390509
Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtDioxS(30)
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/2/21 10:46

Comments: _____

Reviewed By: _____ kn 11/22/21 Date: _____

Chain of Custody

Relinquished By: _____	Date: _____	Extracts Examined
Received By: _____	Date: _____	Yes No

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112279

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date: 11/16/21 Analyst: *[Signature]* Samples: 004

Second Level - Data Review – to be filled by person doing peer review

Date: 11/16/21 Analyst: *[Signature]* Samples: 004

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112279

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
11/17/21	LKL	008

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
11/18/21	WJ	008

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID

K2112279

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:

11/19/21

Analyst:

Uc

Samples:

007

Second Level - Data Review – to be filled by person doing peer review

Date:

11/19/21

Analyst:

Uc

Samples:

007



Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.074g
Data File Name: P535243
ICAL Date: 07/10/21

Date Analyzed: 11/12/21 07:56
Date Extracted: 11/2/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P535234

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.453	0.610			1
1,2,3,7,8-PeCDD	ND	U	0.116	3.05			1
1,2,3,6,7,8-HxCDD	ND	U	0.0974	3.05			1
1,2,3,4,7,8-HxCDD	ND	U	0.109	3.05			1
1,2,3,7,8,9-HxCDD	ND	U	0.0979	3.05			1
1,2,3,4,6,7,8-HpCDD	0.801JK		0.135	3.05	0.76	1.000	1
OCDD	7.88		0.250	6.10	1.01	1.000	1
2,3,7,8-TCDF	ND	U	0.349	0.610			1
1,2,3,7,8-PeCDF	ND	U	0.150	3.05			1
2,3,4,7,8-PeCDF	ND	U	0.186	3.05			1
1,2,3,6,7,8-HxCDF	ND	U	0.0869	3.05			1
1,2,3,7,8,9-HxCDF	ND	U	0.121	3.05			1
1,2,3,4,7,8-HxCDF	ND	U	0.0811	3.05			1
2,3,4,6,7,8-HxCDF	ND	U	0.0889	3.05			1
1,2,3,4,6,7,8-HpCDF	0.265JK		0.0190	3.05	0.80	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0168	3.05			1
OCDF	1.34J		0.321	6.10	0.79	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.074g
Data File Name: P535243
ICAL Date: 07/10/21

Date Analyzed: 11/12/21 07:56
Date Extracted: 11/2/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P535234

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.453	0.610			1
Total Penta-Dioxins	ND	U	0.116	3.05			1
Total Hexa-Dioxins	ND	U	0.101	3.05			1
Total Hepta-Dioxins	0.985J		0.135	3.05	0.93		1
Total Tetra-Furans	ND	U	0.349	0.610			1
Total Penta-Furans	ND	U	0.166	3.05			1
Total Hexa-Furans	ND	U	0.0927	3.05			1
Total Hepta-Furans	ND	U	0.0178	3.05			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20
Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.074g
Data File Name: P535243
ICAL Date: 07/10/21

Date Analyzed: 11/12/21 07:56
Date Extracted: 11/2/21
Instrument Name: E-HRMS-07
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P535234

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	859.380	43		40-135	0.77	1.019
13C-1,2,3,7,8-PeCDD	2000	995.256	50		40-135	1.56	1.171
13C-1,2,3,4,7,8-HxCDD	2000	1067.875	53		40-135	1.31	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1071.736	54		40-135	1.19	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	922.071	46		40-135	1.10	1.066
13C-OCDD	4000	1658.358	41		40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	740.390	37	Y	40-135	0.80	0.994
13C-1,2,3,7,8-PeCDF	2000	1110.449	56		40-135	1.57	1.131
13C-2,3,4,7,8-PeCDF	2000	870.804	44		40-135	1.58	1.162
13C-1,2,3,4,7,8-HxCDF	2000	996.765	50		40-135	0.50	0.972
13C-1,2,3,6,7,8-HxCDF	2000	803.981	40		40-135	0.51	0.975
13C-1,2,3,7,8,9-HxCDF	2000	816.291	41		40-135	0.48	1.008
13C-2,3,4,6,7,8-HxCDF	2000	887.107	44		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	738.253	37	Y	40-135	0.42	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1143.362	57		40-135	0.42	1.079
37Cl-2,3,7,8-TCDD	800	468.596	59		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (0-10 C)
Lab Code: K2112279-004

Service Request: K2112279
Date Collected: 10/19/21 13:20
Date Received: 10/20/21 11:20
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.453	0.610	1	1	
1,2,3,7,8-PeCDD	ND	0.116	3.05	1	1	
1,2,3,6,7,8-HxCDD	ND	0.0974	3.05	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.109	3.05	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.0979	3.05	1	0.1	
1,2,3,4,6,7,8-HpCDD	0.801	0.135	3.05	1	0.01	0.00801
OCDD	7.88	0.250	6.10	1	0.0003	0.00236
2,3,7,8-TCDF	ND	0.349	0.610	1	0.1	
1,2,3,7,8-PeCDF	ND	0.150	3.05	1	0.03	
2,3,4,7,8-PeCDF	ND	0.186	3.05	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.0869	3.05	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.121	3.05	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.0811	3.05	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0889	3.05	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.265	0.0190	3.05	1	0.01	0.00265
1,2,3,4,7,8,9-HpCDF	ND	0.0168	3.05	1	0.01	
OCDF	1.34	0.321	6.10	1	0.0003	0.000402
Total TEQ						0.0134

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.057g
Data File Name: P628346
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 10:57
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.649	0.649			1
1,2,3,7,8-PeCDD	ND	U	0.266	2.99			1
1,2,3,6,7,8-HxCDD	ND	U	0.158	2.99			1
1,2,3,4,7,8-HxCDD	ND	U	0.178	2.99			1
1,2,3,7,8,9-HxCDD	ND	U	0.155	2.99			1
1,2,3,4,6,7,8-HpCDD	0.239JK		0.209	2.99	0.83	1.000	1
OCDD	1.93J		0.287	5.98	0.89	1.000	1
2,3,7,8-TCDF	ND	U	0.497	0.598			1
1,2,3,7,8-PeCDF	ND	U	0.168	2.99			1
2,3,4,7,8-PeCDF	ND	U	0.198	2.99			1
1,2,3,6,7,8-HxCDF	ND	U	0.171	2.99			1
1,2,3,7,8,9-HxCDF	ND	U	0.212	2.99			1
1,2,3,4,7,8-HxCDF	ND	U	0.162	2.99			1
2,3,4,6,7,8-HxCDF	ND	U	0.162	2.99			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.157	2.99			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.116	2.99			1
OCDF	ND	U	0.458	5.98			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2112279
Project:	EQRB/2680-00	Date Collected:	10/19/21 13:35
Sample Matrix:	Soil	Date Received:	10/20/21 11:20
Sample Name:	B-28 (10-25 C)	Units:	ng/Kg
Lab Code:	K2112279-007	Basis:	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	11/17/21 10:57
Prep Method:	Method	Date Extracted:	11/2/21
Sample Amount:	10.057g	Instrument Name:	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P628346	Blank File Name:	P628214
ICAL Date:	10/14/21	Cal Ver. File Name:	P628336

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.649	0.649			1
Total Penta-Dioxins	ND	U	0.266	2.99			1
Total Hexa-Dioxins	ND	U	0.163	2.99			1
Total Hepta-Dioxins	0.492J		0.209	2.99	1.03		1
Total Tetra-Furans	ND	U	0.497	0.598			1
Total Penta-Furans	ND	U	0.181	2.99			1
Total Hexa-Furans	ND	U	0.175	2.99			1
Total Hepta-Furans	ND	U	0.132	2.99			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.057g
Data File Name: P628346
ICAL Date: 10/14/21

Date Analyzed: 11/17/21 10:57
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628336

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	590.083	30	Y	40-135	0.77	1.020
13C-1,2,3,7,8-PeCDD	2000	669.844	33	Y	40-135	1.55	1.173
13C-1,2,3,4,7,8-HxCDD	2000	841.619	42		40-135	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1015.959	51		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	811.449	41		40-135	1.07	1.066
13C-OCDD	4000	1355.800	34	Y	40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	561.716	28	Y	40-135	0.80	0.994
13C-1,2,3,7,8-PeCDF	2000	840.271	42		40-135	1.56	1.134
13C-2,3,4,7,8-PeCDF	2000	673.078	34	Y	40-135	1.58	1.164
13C-1,2,3,4,7,8-HxCDF	2000	898.293	45		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	828.417	41		40-135	0.53	0.975
13C-1,2,3,7,8,9-HxCDF	2000	772.831	39	Y	40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	898.237	45		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	680.090	34	Y	40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1119.389	56		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	297.942	37	Y	40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: B-28 (10-25 C)
Lab Code: K2112279-007

Service Request: K2112279
Date Collected: 10/19/21 13:35
Date Received: 10/20/21 11:20
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.649	0.649	1	1	
1,2,3,7,8-PeCDD	ND	0.266	2.99	1	1	
1,2,3,6,7,8-HxCDD	ND	0.158	2.99	1	0.1	
1,2,3,4,7,8-HxCDD	ND	0.178	2.99	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.155	2.99	1	0.1	
1,2,3,4,6,7,8-HpCDD	0.239	0.209	2.99	1	0.01	0.00239
OCDD	1.93	0.287	5.98	1	0.0003	0.000579
2,3,7,8-TCDF	ND	0.497	0.598	1	0.1	
1,2,3,7,8-PeCDF	ND	0.168	2.99	1	0.03	
2,3,4,7,8-PeCDF	ND	0.198	2.99	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.171	2.99	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.212	2.99	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.162	2.99	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.162	2.99	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	0.157	2.99	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	0.116	2.99	1	0.01	
OCDF	ND	0.458	5.98	1	0.0003	
Total TEQ						0.00297

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 878mL
Data File Name: P628245
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 02:34
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	4.05	5.69			1
1,2,3,7,8-PeCDD	ND	U	1.82	28.5			1
1,2,3,6,7,8-HxCDD	ND	U	1.44	28.5			1
1,2,3,4,7,8-HxCDD	ND	U	1.68	28.5			1
1,2,3,7,8,9-HxCDD	ND	U	1.43	28.5			1
1,2,3,4,6,7,8-HpCDD	1.80	BJK	1.60	28.5	0.62	1.000	1
OCDD	12.9	BJ	3.53	56.9	1.00	1.000	1
2,3,7,8-TCDF	ND	U	3.42	5.69			1
1,2,3,7,8-PeCDF	ND	U	1.17	28.5			1
2,3,4,7,8-PeCDF	ND	U	1.38	28.5			1
1,2,3,6,7,8-HxCDF	ND	U	1.54	28.5			1
1,2,3,7,8,9-HxCDF	ND	U	1.94	28.5			1
1,2,3,4,7,8-HxCDF	ND	U	1.42	28.5			1
2,3,4,6,7,8-HxCDF	ND	U	1.44	28.5			1
1,2,3,4,6,7,8-HpCDF	ND	U	1.19	28.5			1
1,2,3,4,7,8,9-HpCDF	ND	U	1.02	28.5			1
OCDF	ND	U	3.99	56.9			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 878mL
Data File Name: P628245
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 02:34
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	4.05	5.69			1
Total Penta-Dioxins	ND	U	1.82	28.5			1
Total Hexa-Dioxins	ND	U	1.50	28.5			1
Total Hepta-Dioxins	ND	U	1.60	28.5			1
Total Tetra-Furans	ND	U	3.42	5.69			1
Total Penta-Furans	ND	U	1.27	28.5			1
Total Hexa-Furans	ND	U	1.57	28.5			1
Total Hepta-Furans	ND	U	1.09	28.5			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20
Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 878mL
Data File Name: P628245
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 02:34
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	932.196	47		40-135	0.74	1.019
13C-1,2,3,7,8-PeCDD	2000	1109.694	55		40-135	1.53	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1019.389	51		40-135	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1297.443	65		40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	962.415	48		40-135	1.08	1.066
13C-OCDD	4000	1389.726	35	Y	40-135	0.90	1.142
13C-2,3,7,8-TCDF	2000	838.599	42		40-135	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	1338.907	67		40-135	1.56	1.131
13C-2,3,4,7,8-PeCDF	2000	1100.346	55		40-135	1.59	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1076.002	54		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1036.419	52		40-135	0.53	0.975
13C-1,2,3,7,8,9-HxCDF	2000	966.593	48		40-135	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1104.425	55		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	875.939	44		40-135	0.45	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1280.659	64		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	430.265	54		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: B-28
Lab Code: K2112279-008

Service Request: K2112279
Date Collected: 10/19/21 14:45
Date Received: 10/20/21 11:20

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	4.05	5.69	1	1	
1,2,3,7,8-PeCDD	ND	1.82	28.5	1	1	
1,2,3,6,7,8-HxCDD	ND	1.44	28.5	1	0.1	
1,2,3,4,7,8-HxCDD	ND	1.68	28.5	1	0.1	
1,2,3,7,8,9-HxCDD	ND	1.43	28.5	1	0.1	
1,2,3,4,6,7,8-HpCDD	1.80	1.60	28.5	1	0.01	0.0180
OCDD	12.9	3.53	56.9	1	0.0003	0.00387
2,3,7,8-TCDF	ND	3.42	5.69	1	0.1	
1,2,3,7,8-PeCDF	ND	1.17	28.5	1	0.03	
2,3,4,7,8-PeCDF	ND	1.38	28.5	1	0.3	
1,2,3,6,7,8-HxCDF	ND	1.54	28.5	1	0.1	
1,2,3,7,8,9-HxCDF	ND	1.94	28.5	1	0.1	
1,2,3,4,7,8-HxCDF	ND	1.42	28.5	1	0.1	
2,3,4,6,7,8-HxCDF	ND	1.44	28.5	1	0.1	
1,2,3,4,6,7,8-HpCDF	ND	1.19	28.5	1	0.01	
1,2,3,4,7,8,9-HpCDF	ND	1.02	28.5	1	0.01	
OCDF	ND	3.99	56.9	1	0.0003	
Total TEQ						0.0219

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: EQ2100629-01

Service Request: K2112279
Date Collected: NA
Date Received: NA

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.002g

Data File Name: P628214
ICAL Date: 10/14/21

Date Analyzed: 11/10/21 23:38
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.503	0.503			1
1,2,3,7,8-PeCDD	ND	U	0.223	2.50			1
1,2,3,6,7,8-HxCDD	ND	U	0.112	2.50			1
1,2,3,4,7,8-HxCDD	ND	U	0.133	2.50			1
1,2,3,7,8,9-HxCDD	ND	U	0.112	2.50			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.189	2.50			1
OCDD	ND	U	0.181	5.00			1
2,3,7,8-TCDF	ND	U	0.326	0.500			1
1,2,3,7,8-PeCDF	ND	U	0.181	2.50			1
2,3,4,7,8-PeCDF	ND	U	0.199	2.50			1
1,2,3,6,7,8-HxCDF	ND	U	0.103	2.50			1
1,2,3,7,8,9-HxCDF	ND	U	0.118	2.50			1
1,2,3,4,7,8-HxCDF	ND	U	0.0952	2.50			1
2,3,4,6,7,8-HxCDF	ND	U	0.0930	2.50			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.129	2.50			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.105	2.50			1
OCDF	ND	U	0.187	5.00			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: EQ2100629-01

Service Request: K2112279
Date Collected: NA
Date Received: NA
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.002g
Data File Name: P628214
ICAL Date: 10/14/21

Date Analyzed: 11/10/21 23:38
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.503	0.503			1
Total Penta-Dioxins	ND	U	0.223	2.50			1
Total Hexa-Dioxins	ND	U	0.118	2.50			1
Total Hepta-Dioxins	ND	U	0.189	2.50			1
Total Tetra-Furans	ND	U	0.326	0.500			1
Total Penta-Furans	ND	U	0.190	2.50			1
Total Hexa-Furans	ND	U	0.102	2.50			1
Total Hepta-Furans	ND	U	0.115	2.50			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Sample Name: Method Blank
Lab Code: EQ2100629-01

Service Request: K2112279
Date Collected: NA
Date Received: NA

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.002g

Data File Name: P628214
ICAL Date: 10/14/21

Date Analyzed: 11/10/21 23:38
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	720.752	36	Y	40-135	0.75	1.019
13C-1,2,3,7,8-PeCDD	2000	1080.330	54		40-135	1.55	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1181.010	59		40-135	1.24	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1522.485	76		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1301.443	65		40-135	1.05	1.066
13C-OCDD	4000	2611.054	65		40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	575.810	29	Y	40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1142.551	57		40-135	1.58	1.132
13C-2,3,4,7,8-PeCDF	2000	1005.855	50		40-135	1.60	1.162
13C-1,2,3,4,7,8-HxCDF	2000	1165.741	58		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1116.773	56		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1112.766	56		40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1245.699	62		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1084.630	54		40-135	0.44	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1614.283	81		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	266.670	33	Y	40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: EQ2100630-01

Service Request: K2112279
Date Collected: NA
Date Received: NA
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL
Data File Name: P628240
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 22:24
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	5.40	5.40			1
1,2,3,7,8-PeCDD	ND	U	1.36	25.0			1
1,2,3,6,7,8-HxCDD	ND	U	0.977	25.0			1
1,2,3,4,7,8-HxCDD	ND	U	1.21	25.0			1
1,2,3,7,8,9-HxCDD	ND	U	0.995	25.0			1
1,2,3,4,6,7,8-HpCDD	2.51J		1.62	25.0	0.91	1.000	1
OCDD	21.4J		3.17	50.0	1.00	1.000	1
2,3,7,8-TCDF	ND	U	3.60	5.00			1
1,2,3,7,8-PeCDF	ND	U	1.05	25.0			1
2,3,4,7,8-PeCDF	ND	U	1.15	25.0			1
1,2,3,6,7,8-HxCDF	ND	U	0.862	25.0			1
1,2,3,7,8,9-HxCDF	ND	U	1.08	25.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.829	25.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.821	25.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	1.03	25.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.862	25.0			1
OCDF	6.81JK		3.12	50.0	1.07	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: EQ2100630-01

Service Request: K2112279
Date Collected: NA
Date Received: NA
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL
Data File Name: P628240
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 22:24
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	5.40	5.40			1
Total Penta-Dioxins	ND	U	1.36	25.0			1
Total Hexa-Dioxins	ND	U	1.05	25.0			1
Total Hepta-Dioxins	2.51J		1.62	25.0	0.91		1
Total Tetra-Furans	ND	U	3.60	5.00			1
Total Penta-Furans	ND	U	1.10	25.0			1
Total Hexa-Furans	ND	U	0.889	25.0			1
Total Hepta-Furans	ND	U	0.931	25.0			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: EQ2100630-01

Service Request: K2112279
Date Collected: NA
Date Received: NA

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628240
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 22:24
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	747.549	37	Y	40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1005.432	50		40-135	1.55	1.170
13C-1,2,3,4,7,8-HxCDD	2000	964.293	48		40-135	1.30	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1278.756	64		40-135	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	951.175	48		40-135	1.05	1.066
13C-OCDD	4000	1436.380	36	Y	40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	682.049	34	Y	40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1123.970	56		40-135	1.57	1.130
13C-2,3,4,7,8-PeCDF	2000	990.302	50		40-135	1.59	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1017.861	51		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	998.196	50		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	944.104	47		40-135	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1088.195	54		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	874.764	44		40-135	0.45	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1268.511	63		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	319.341	40		40-135	NA	1.019



Accuracy & Precision

ALS Environmental - Houston HRMS
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Phone (713)266-1599 Fax (713)266-0130
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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Analyzed: 11/11/21
Date Extracted: 11/02/21

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: ng/Kg
Basis: Dry
Analysis Lot: 745940

Lab Control Sample
EQ2100629-02

Duplicate Lab Control Sample
EQ2100629-03

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,3,4,6,7,8-HpCDD	82.3	99.7	83	80.9	98.4	82	70-130	2	25
1,2,3,4,7,8-HxCDD	91.5	99.7	92	89.2	98.4	91	70-130	3	25
1,2,3,6,7,8-HxCDD	75.7	99.7	76	76.9	98.4	78	70-130	2	25
1,2,3,7,8,9-HxCDD	82.7	99.7	83	82.9	98.4	84	70-130	<1	25
1,2,3,7,8-PeCDD	86.8	99.7	87	84.5	98.4	86	70-130	3	25
2,3,7,8-TCDD	15.6	19.9	78	15.1	19.7	77	70-130	3	25
OCDD	168	199	84	169	197	86	70-130	<1	25
1,2,3,4,6,7,8-HpCDF	85.6	99.7	86	85.1	98.4	86	70-130	<1	25
1,2,3,4,7,8,9-HpCDF	55.8	99.7	56 *	54.5	98.4	55 *	70-130	2	25
1,2,3,4,7,8-HxCDF	78.3	99.7	79	77.5	98.4	79	70-130	1	25
1,2,3,6,7,8-HxCDF	85.4	99.7	86	83.8	98.4	85	70-130	2	25
1,2,3,7,8,9-HxCDF	80.9	99.7	81	80.4	98.4	82	70-130	<1	25
1,2,3,7,8-PeCDF	60.6	99.7	61 *	61.6	98.4	63 *	70-130	2	25
2,3,4,6,7,8-HxCDF	77.9	99.7	78	79.5	98.4	81	70-130	2	25
2,3,4,7,8-PeCDF	80.1	99.7	80	78.8	98.4	80	70-130	2	25
2,3,7,8-TCDF	14.3	19.9	72	14.6	19.7	74	70-130	2	25
OCDF	151	199	76	148	197	75	70-130	2	25

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100629-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.031g

Data File Name: P628221
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 05:27
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	15.6		0.313	0.498	0.76	1.001	1
1,2,3,7,8-PeCDD	86.8		0.0886	2.49	1.58	1.000	1
1,2,3,6,7,8-HxCDD	75.7		0.0516	2.49	1.21	1.000	1
1,2,3,4,7,8-HxCDD	91.5		0.0599	2.49	1.23	1.000	1
1,2,3,7,8,9-HxCDD	82.7		0.0512	2.49	1.23	1.007	1
1,2,3,4,6,7,8-HpCDD	82.3		0.0807	2.49	1.05	1.000	1
OCDD	168		0.0763	4.98	0.89	1.000	1
2,3,7,8-TCDF	14.3		0.229	0.498	0.81	1.001	1
1,2,3,7,8-PeCDF	60.6		0.0773	2.49	1.55	1.001	1
2,3,4,7,8-PeCDF	80.1		0.0900	2.49	1.55	1.000	1
1,2,3,6,7,8-HxCDF	85.4		0.0569	2.49	1.27	1.000	1
1,2,3,7,8,9-HxCDF	80.9		0.0619	2.49	1.25	1.000	1
1,2,3,4,7,8-HxCDF	78.3		0.0537	2.49	1.22	1.000	1
2,3,4,6,7,8-HxCDF	77.9		0.0499	2.49	1.23	1.000	1
1,2,3,4,6,7,8-HpCDF	85.6		0.183	2.49	1.03	1.000	1
1,2,3,4,7,8,9-HpCDF	55.8		0.152	2.49	1.01	1.000	1
OCDF	151		0.130	4.98	0.89	1.006	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100629-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.031g

Data File Name: P628221
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 05:27
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	15.6		0.313	0.498	0.76		1
Total Penta-Dioxins	86.8		0.0886	2.49	1.58		1
Total Hexa-Dioxins	250		0.0538	2.49	1.23		1
Total Hepta-Dioxins	82.3		0.0807	2.49	1.05		1
Total Tetra-Furans	14.3		0.229	0.498	0.81		1
Total Penta-Furans	141		0.0830	2.49	1.55		1
Total Hexa-Furans	323		0.0554	2.49	1.22		1
Total Hepta-Furans	142		0.164	2.49	1.03		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100629-02

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.031g

Data File Name: P628221
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 05:27
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	991.533	50		40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1351.150	68		40-135	1.54	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1404.392	70		40-135	1.33	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1746.323	87		40-135	1.20	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1522.604	76		40-135	1.05	1.066
13C-OCDD	4000	3108.380	78		40-135	0.91	1.142
13C-2,3,7,8-TCDF	2000	812.630	41		40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1483.930	74		40-135	1.57	1.131
13C-2,3,4,7,8-PeCDF	2000	1253.249	63		40-135	1.56	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1355.109	68		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1240.718	62		40-135	0.53	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1326.938	66		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1444.448	72		40-135	0.51	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1295.326	65		40-135	0.44	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1930.021	97		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	366.707	46		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100629-03

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.162g

Data File Name: P628222
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 06:16
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	15.1		0.195	0.492	0.76	1.001	1
1,2,3,7,8-PeCDD	84.5		0.0568	2.46	1.55	1.000	1
1,2,3,6,7,8-HxCDD	76.9		0.0679	2.46	1.27	1.000	1
1,2,3,4,7,8-HxCDD	89.2		0.0803	2.46	1.26	1.000	1
1,2,3,7,8,9-HxCDD	82.9		0.0678	2.46	1.20	1.007	1
1,2,3,4,6,7,8-HpCDD	80.9		0.0596	2.46	1.02	1.000	1
OCDD	169		0.108	4.92	0.91	1.000	1
2,3,7,8-TCDF	14.6		0.164	0.492	0.78	1.001	1
1,2,3,7,8-PeCDF	61.6		0.0815	2.46	1.53	1.001	1
2,3,4,7,8-PeCDF	78.8		0.0922	2.46	1.53	1.000	1
1,2,3,6,7,8-HxCDF	83.8		0.0318	2.46	1.24	1.000	1
1,2,3,7,8,9-HxCDF	80.4		0.0363	2.46	1.26	1.000	1
1,2,3,4,7,8-HxCDF	77.5		0.0295	2.46	1.21	1.000	1
2,3,4,6,7,8-HxCDF	79.5		0.0291	2.46	1.24	1.000	1
1,2,3,4,6,7,8-HpCDF	85.1		0.191	2.46	1.04	1.000	1
1,2,3,4,7,8,9-HpCDF	54.5		0.158	2.46	1.03	1.000	1
OCDF	148		0.122	4.92	0.90	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100629-03

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.162g

Data File Name: P628222
ICAL Date: 10/14/21

Date Analyzed: 11/11/21 06:16
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	15.1		0.195	0.492	0.76		1
Total Penta-Dioxins	84.7		0.0568	2.46	1.55		1
Total Hexa-Dioxins	249		0.0713	2.46	1.26		1
Total Hepta-Dioxins	80.9		0.0596	2.46	1.02		1
Total Tetra-Furans	14.6		0.164	0.492	0.78		1
Total Penta-Furans	140		0.0864	2.46	1.53		1
Total Hexa-Furans	321		0.0315	2.46	1.21		1
Total Hepta-Furans	140		0.171	2.46	1.04		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Soil

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100629-03

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.162g

Date Analyzed: 11/11/21 06:16
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628214
Cal Ver. File Name: P628211

Data File Name: P628222
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	895.712	45		40-135	0.75	1.019
13C-1,2,3,7,8-PeCDD	2000	1274.039	64		40-135	1.57	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1331.412	67		40-135	1.25	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1697.395	85		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1419.069	71		40-135	1.06	1.066
13C-OCDD	4000	2840.097	71		40-135	0.90	1.143
13C-2,3,7,8-TCDF	2000	755.323	38	Y	40-135	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	1389.756	69		40-135	1.55	1.131
13C-2,3,4,7,8-PeCDF	2000	1176.047	59		40-135	1.58	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1317.934	66		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1260.949	63		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1279.825	64		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1398.740	70		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1211.836	61		40-135	0.43	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1804.539	90		40-135	0.43	1.080
37Cl-2,3,7,8-TCDD	800	338.993	42		40-135	NA	1.019

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Analyzed: 11/12/21
Date Extracted: 11/02/21

Lab Control Sample Summary

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: pg/L
Basis: NA
Analysis Lot: 746633

Lab Control Sample
EQ2100630-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,2,3,4,6,7,8-HpCDD	906	1000	91	70-130
1,2,3,4,7,8-HxCDD	1040	1000	104	70-130
1,2,3,6,7,8-HxCDD	854	1000	85	70-130
1,2,3,7,8,9-HxCDD	938	1000	94	70-130
1,2,3,7,8-PeCDD	988	1000	99	70-130
2,3,7,8-TCDD	179	200	90	70-130
OCDD	1940	2000	97	70-130
1,2,3,4,6,7,8-HpCDF	957	1000	96	70-130
1,2,3,4,7,8,9-HpCDF	601	1000	60 *	70-130
1,2,3,4,7,8-HxCDF	885	1000	89	70-130
1,2,3,6,7,8-HxCDF	942	1000	94	70-130
1,2,3,7,8,9-HxCDF	907	1000	91	70-130
1,2,3,7,8-PeCDF	699	1000	70	70-130
2,3,4,6,7,8-HxCDF	889	1000	89	70-130
2,3,4,7,8-PeCDF	902	1000	90	70-130
2,3,7,8-TCDF	172	200	86	70-130
OCDF	1890	2000	94	70-130

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100630-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628246
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 03:23
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	179		3.31	5.00	0.77	1.000	1
1,2,3,7,8-PeCDD	988		1.14	25.0	1.54	1.000	1
1,2,3,6,7,8-HxCDD	854		0.753	25.0	1.28	1.000	1
1,2,3,4,7,8-HxCDD	1040		0.882	25.0	1.29	1.000	1
1,2,3,7,8,9-HxCDD	938		0.749	25.0	1.25	1.007	1
1,2,3,4,6,7,8-HpCDD	906		1.31	25.0	0.96	1.000	1
OCDD	1940		2.18	50.0	0.88	1.000	1
2,3,7,8-TCDF	172		2.32	5.00	0.79	1.001	1
1,2,3,7,8-PeCDF	699		0.946	25.0	1.59	1.001	1
2,3,4,7,8-PeCDF	902		1.12	25.0	1.52	1.000	1
1,2,3,6,7,8-HxCDF	942		0.714	25.0	1.22	1.000	1
1,2,3,7,8,9-HxCDF	907		0.868	25.0	1.22	1.000	1
1,2,3,4,7,8-HxCDF	885		0.687	25.0	1.27	1.000	1
2,3,4,6,7,8-HxCDF	889		0.669	25.0	1.17	1.000	1
1,2,3,4,6,7,8-HpCDF	957		2.36	25.0	1.05	1.000	1
1,2,3,4,7,8,9-HpCDF	601		1.90	25.0	1.03	1.000	1
OCDF	1890		2.94	50.0	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100630-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628246
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 03:23
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	179		3.31	5.00	0.77		1
Total Penta-Dioxins	991		1.14	25.0	1.54		1
Total Hexa-Dioxins	2840		0.788	25.0	1.29		1
Total Hepta-Dioxins	906		1.31	25.0	0.96		1
Total Tetra-Furans	172		2.32	5.00	0.79		1
Total Penta-Furans	1620		1.03	25.0	1.59		1
Total Hexa-Furans	3620		0.730	25.0	1.27		1
Total Hepta-Furans	1560		2.08	25.0	1.05		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/2680-00
Sample Matrix: Water

Service Request: K2112279
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100630-02

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628246
ICAL Date: 10/14/21

Date Analyzed: 11/12/21 03:23
Date Extracted: 11/2/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628240
Cal Ver. File Name: P628237

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	973.024	49		40-135	0.76	1.019
13C-1,2,3,7,8-PeCDD	2000	1155.173	58		40-135	1.51	1.170
13C-1,2,3,4,7,8-HxCDD	2000	1098.127	55		40-135	1.34	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1420.748	71		40-135	1.22	0.993
13C-1,2,3,4,6,7,8-HpCDD	2000	1008.494	50		40-135	1.06	1.066
13C-OCDD	4000	1361.621	34	Y	40-135	0.88	1.142
13C-2,3,7,8-TCDF	2000	872.268	44		40-135	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	1401.776	70		40-135	1.57	1.130
13C-2,3,4,7,8-PeCDF	2000	1139.700	57		40-135	1.60	1.161
13C-1,2,3,4,7,8-HxCDF	2000	1157.541	58		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1147.160	57		40-135	0.50	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1099.896	55		40-135	0.50	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1217.710	61		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	911.152	46		40-135	0.43	1.040
13C-1,2,3,4,7,8,9-HpCDF	2000	1403.935	70		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	404.417	51		40-135	NA	1.019



ALS Environmental
ALS Group USA, Corp
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January 05, 2022

Analytical Report for Service Request No: K2112570

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

RE: EQRB / 319

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 27, 2021
For your reference, these analyses have been assigned our service request number **K2112570**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



ALS Environmental
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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Metals
Butyltins
Semi-Volatile Petroleum Products by GCFID
Volatile Petroleum Products by GCFID
Ultra Low Level Organochlorine Pesticides by GCECD
Polychlorinated Biphenyls (PCBs)
Chlorinated Herbicides by GC
Volatile Organic Compounds
Low Level Semivolatile Organic Compounds by GCMS
Polynuclear Aromatic Hydrocarbon by GCMS SIM Ultra Low Level
Subcontract Lab Results

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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www.alsglobal.com

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB
Sample Matrix: Water, Ground Water

Service Request: K2112570
Date Received: 10/27/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Two water, ground water samples were received for analysis at ALS Environmental on 10/27/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 11/24/2021: Pentachlorophenol (PCP) was flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Semivolatile GC:

Method 8081B, 12/03/2021: The lower control criterion was exceeded for surrogate tetrachloro-m-xylene (TCMX) in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence show a low bias for this analyte, however results are still within ALS criteria. The secondary surrogate, decachlorobiphenyl, was within control criteria. No further corrective action was taken.

Method 8081B, 12/03/2021: The upper control criterion was exceeded for 4,4'-DDD in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8081B, 12/03/2021: The control criteria were exceeded for Tetrachloro-m-xylene in MB KQ2121205-07. Surrogate Decachlorobiphenyl and the associated spike recoveries of target compounds were in control, indicating the analysis was in control. The surrogate outlier was flagged accordingly. No further corrective action was appropriate.

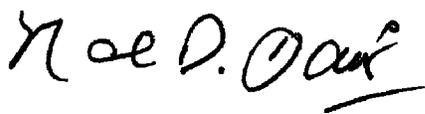
Method 8082A: The upper control criterion was exceeded for Aroclor 1260 in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8082A: The analysis of 8082A requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Decachlorobiphenyl. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 11/30/2021: The analysis of 8151A requires the use of dual column confirmation. For the Initial Calibration Verification (ICV) at least one of the analytical systems in a dual column or dual detector system must meet the criteria. This criteria was met on one column for 2,4-D and Dichlorprop. The data quality was not affected. No further corrective action was necessary.

Method 8151A, 11/30/2021: The upper control criterion was exceeded for MCPA and MCPP in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method ALS SOP, 12/07/2021: The lower control criterion was exceeded for di-n-butyltin and n-butyltin in the closing Continuing

Approved by 

Date 01/05/2022



Chain of Custody

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K212570

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC Laboratory ALS Labs **CHAIN OF CUSTODY**
 5741 NE Flanders St., Portland, OR 97213
 office: 503-477-6150 Lab Project No. _____ Chain of Custody No. 1201
 mobile: 503-819-2835

Project Manager Jill Betts Liquid with Sediment Sample Samples Received at 4C (Y or N) _____
 Project No. 319 Test Filtrate _____ Test Sediment _____ Test Both _____ Appropriate Containers Used (Y or N) _____
 Project Name EQRB Multi-Phase Sample Provide Verbal Results (Y or N) No
 Collected by MSL Test One (which) _____ Test Separately _____ Shake _____ Provide Preliminary Results Yes

Comments
 Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail.

Matrix	Analyses to be Performed												RUSH	Remarks
	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A		

Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NWTPH-Gx	NWTPH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	RCRA 8 Metals by EPA Method 200/6020A/7471B	RUSH	Remarks	
	13-30	10/25/21	1:20	GIW	X			24	X	X	X	X	X	X	X	X	X	X	X	X	Metals Fetal Screen

Relinquished by <u>[Signature]</u>	Company <u>ALS</u>	Date <u>10/27/21</u>	Time <u>1:50</u>	Received by <u>[Signature]</u>	Company <u>ALS</u>	Date <u>10/27/21</u>	Time <u>10:00</u>
Relinquished by <u>[Signature]</u>	Company <u>ALS</u>	Date <u>10/27/21</u>	Time <u>12:45</u>	Received by <u>[Signature]</u>	Company <u>ALS</u>	Date <u>10/27/21</u>	Time <u>12:45</u>
Relinquished by _____	Company _____	Date _____	Time _____	Received by _____	Company _____	Date _____	Time _____

PM MH

Cooler Receipt and Preservation Form

Client Coles & Betts Env. Consulting Service Request K21 12570

Received: 10/27/21 Opened: 10/27/21 By: [Signature] Unloaded: 10/27/21 By: [Signature]

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
- 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
- 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N

If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified if out of temp	Tracking Number NA	Filed
<u>9.9</u>	<u>8.7</u>	<u>IRD</u>		<u>X</u>	<u>Yes</u>		

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves Melted ice
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____



Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: B-30
Lab Code: K2112570-001

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45
Basis: NA

Dissolved Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	0.61	ug/L	0.50	0.09	1	11/02/21 11:36	10/29/21	
Barium	6020A	15.5	ug/L	0.050	0.020	1	11/02/21 11:36	10/29/21	
Cadmium	6020A	0.013 J	ug/L	0.020	0.008	1	11/02/21 11:36	10/29/21	
Chromium	6020A	2.72	ug/L	0.20	0.03	1	11/02/21 11:36	10/29/21	
Lead	6020A	0.445	ug/L	0.020	0.006	1	11/02/21 11:36	10/29/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	11/03/21 13:16	11/01/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	11/02/21 11:36	10/29/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	11/02/21 11:36	10/29/21	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: B-30
Lab Code: K2112570-001

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	0.77	ug/L	0.50	0.09	1	11/02/21 11:33	10/29/21	
Barium	6020A	26.6	ug/L	0.050	0.020	1	11/02/21 11:33	10/29/21	
Cadmium	6020A	0.009 J	ug/L	0.020	0.008	1	11/02/21 11:33	10/29/21	
Chromium	6020A	5.77	ug/L	0.20	0.03	1	11/02/21 11:33	10/29/21	
Lead	6020A	0.921	ug/L	0.020	0.006	1	11/02/21 11:33	10/29/21	
Mercury	7470A	ND U	ug/L	0.20	0.02	1	11/03/21 13:06	11/01/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	11/02/21 11:33	10/29/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	11/02/21 11:33	10/29/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2121289-03

Service Request: K2112570
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	ug/L	0.50	0.09	1	11/02/21 11:03	10/29/21	
Barium	6020A	ND U	ug/L	0.050	0.020	1	11/02/21 11:03	10/29/21	
Cadmium	6020A	ND U	ug/L	0.020	0.008	1	11/02/21 11:03	10/29/21	
Chromium	6020A	ND U	ug/L	0.20	0.03	1	11/02/21 11:03	10/29/21	
Lead	6020A	ND U	ug/L	0.020	0.006	1	11/02/21 11:03	10/29/21	
Selenium	6020A	ND U	ug/L	1.0	0.2	1	11/02/21 11:03	10/29/21	
Silver	6020A	ND U	ug/L	0.020	0.009	1	11/02/21 11:03	10/29/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2121476-01

Service Request: K2112570
Date Collected: NA
Date Received: NA
Basis: NA

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7470A	ND U	ug/L	0.20	0.02	1	11/03/21 12:56	11/01/21	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 11/03/21

Replicate Sample Summary

Total Metals

Sample Name: B-30
Lab Code: K2112570-001

Units: ug/L
Basis: NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2121476-03 Result			
Mercury	7470A	0.20	0.02	ND U	ND U	ND	-	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 11/3/21
Date Extracted: 11/1/21

Matrix Spike Summary
Total Metals

Sample Name: B-30
Lab Code: K2112570-001
Analysis Method: 7470A
Prep Method: Method

Units: ug/L
Basis: NA

Matrix Spike
KQ2121476-04

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	ND U	4.84	5.00	97	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 11/02/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2121289-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	50.7	50.0	101	80-120
Barium	6020A	103	100	103	80-120
Cadmium	6020A	26.1	25.0	104	80-120
Chromium	6020A	10.3	10.0	103	80-120
Lead	6020A	53.3	50.0	107	80-120
Selenium	6020A	53.0	50.0	106	80-120
Silver	6020A	12.7	12.5	102	80-120

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 11/03/21

Lab Control Sample Summary
Total Metals

Units:ug/L
Basis:NA

Lab Control Sample
KQ2121476-02

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7470A	4.80	5.00	96	80-120



Butyltins

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dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45

Sample Name: B-30
Lab Code: K2112570-001

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.051	0.030	1	12/07/21 12:53	10/28/21	*
Di-n-butyltin Cation	0.021 J	0.051	0.0075	1	12/07/21 12:53	10/28/21	
Tri-n-butyltin Cation	ND U	0.051	0.013	1	12/07/21 12:53	10/28/21	
Tetra-n-butyltin	ND U	0.051	0.039	1	12/07/21 12:53	10/28/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	135	10 - 195	12/07/21 12:53	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: EPA 3520C

Sample Name	Lab Code	Tri-n-propyltin
		10-195
B-30	K2112570-001	135
Method Blank	KQ2121222-03	102
Lab Control Sample	KQ2121222-01	130
Duplicate Lab Control Sample	KQ2121222-02	124

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121222-03

Units: ug/L
Basis: NA

Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.050	0.029	1	12/07/21 12:04	10/28/21	
Di-n-butyltin Cation	0.048 J	0.050	0.0073	1	12/07/21 12:04	10/28/21	
Tri-n-butyltin Cation	ND U	0.050	0.012	1	12/07/21 12:04	10/28/21	
Tetra-n-butyltin	ND U	0.050	0.038	1	12/07/21 12:04	10/28/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	102	10 - 195	12/07/21 12:04	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 12/07/21
Date Extracted: 10/28/21

Duplicate Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 748377

Lab Control Sample
KQ2121222-01

Duplicate Lab Control Sample
KQ2121222-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Di-n-butyltin Cation	0.546	0.383	143	0.552	0.383	144	10-200	1	30
n-Butyltin Cation	0.466 P	0.312	150	0.413 P	0.312	132	10-200	12	30
Tetra-n-butyltin	0.414	0.500	83	0.433 P	0.500	87	10-200	4	30
Tri-n-butyltin Cation	0.535	0.446	120	0.523	0.446	117	10-200	2	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Ground Water
Sample Name: B-30
Lab Code: K2112570-001

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0075	0.021	0.015	33	J	1	12/07/21 12:53

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Ground Water
Sample Name: Lab Control Sample
Lab Code: KQ2121222-01

Service Request: K2112570
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.546	0.411	28		1	12/07/21 12:20
Tetra-n-butyltin	0.038	0.414	0.580	33		1	12/07/21 12:20
Tri-n-butyltin Cation	0.012	0.535	0.688	25		1	12/07/21 12:20
n-Butyltin Cation	0.029	0.466	0.262	56	P	1	12/07/21 12:20

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Ground Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2121222-02

Service Request: K2112570
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.552	0.409	30		1	12/07/21 12:37
Tetra-n-butyltin	0.038	0.433	0.651	40	P	1	12/07/21 12:37
Tri-n-butyltin Cation	0.012	0.523	0.654	22		1	12/07/21 12:37
n-Butyltin Cation	0.029	0.413	0.227	58	P	1	12/07/21 12:37

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2121222-03

Service Request: K2112570
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Butyltins

Analytical Method: ALS SOP
Prep Method: EPA 3520C

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.0073	0.048	0.051	6	J	1	12/07/21 12:04



Semi-Volatile Petroleum Products by GC/FID

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: B-30
Lab Code: K2112570-001

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45
Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	120 J	250	11	1	11/02/21 23:48	10/29/21	*
Residual Range Organics (C25 - C36 RRO)	200 J	500	19	1	11/02/21 23:48	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	110	50 - 150	11/02/21 23:48	
n-Triacontane	114	50 - 150	11/02/21 23:48	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3510C

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-30	K2112570-001	110	114
Method Blank	KQ2121357-03	93	92
Lab Control Sample	KQ2121357-01	94	92
Duplicate Lab Control Sample	KQ2121357-02	99	98

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2121357-03

Service Request: K2112570
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	19 J	250	11	1	11/02/21 18:58	10/29/21	
Residual Range Organics (C25 - C36 RRO)	27 J	500	19	1	11/02/21 18:58	10/29/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	93	50 - 150	11/02/21 18:58	
n-Triacontane	92	50 - 150	11/02/21 18:58	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 11/02/21
Date Extracted: 10/29/21

Duplicate Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3510C

Units: ug/L
Basis: NA
Analysis Lot: 744632

Analyte Name	Lab Control Sample KQ2121357-01			Duplicate Lab Control Sample KQ2121357-02			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Diesel Range Organics (C12 - C25 DRO)	2880	3200	90	3110	3200	97	46-140	8	30
Residual Range Organics (C25 - C36 RRO)	1230	1600	77	1290	1600	81	45-159	4	30



Volatile Petroleum Products by GC/FID

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45

Sample Name: B-30
Lab Code: K2112570-001

Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	15.3 J	250	12.0	1	11/02/21 15:50	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	102	50 - 150	11/02/21 15:50	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	1,4-Difluorobenzene
		50-150
B-30	K2112570-001	102
B-30	KQ2121597-01	104
Method Blank	KQ2121597-04	103
Lab Control Sample	KQ2121597-05	102
Duplicate Lab Control Sample	KQ2121597-06	103

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 11/02/21

Replicate Sample Summary
Volatile Petroleum Products by GC/FID

Sample Name: B-30
Lab Code: K2112570-001

Units: ug/L
Basis: NA

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>MDL</u>	<u>Sample Result</u>	<u>Duplicate Sample KQ2121597-01 Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Gasoline Range Organics (Toluene-Naphthalene GRO)	NWTPH-Gx	250	12.0	15.3 J	15.8 J	15.5	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2121597-04

Service Request: K2112570
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	250	12.0	1	11/02/21 14:17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Difluorobenzene	103	50 - 150	11/02/21 14:17	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 11/02/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 744664

Lab Control Sample
KQ2121597-05

Duplicate Lab Control Sample
KQ2121597-06

Analyte Name	Lab Control Sample KQ2121597-05			Duplicate Lab Control Sample KQ2121597-06			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Gasoline Range Organics (Toluene-Naphthalene GRO)	514	500	103	469	500	94	80-119	9	30



Ultra Low Level Organochlorine Pesticides by GC/ECD

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45

Sample Name: B-30
Lab Code: K2112570-001

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.77	1	12/04/21 20:12	10/28/21	
alpha-BHC	0.28 JP	1.0	0.25	1	12/04/21 20:12	10/28/21	
beta-BHC	ND Ui	1.0	0.91	1	12/04/21 20:12	10/28/21	
delta-BHC	ND U	1.0	0.27	1	12/04/21 20:12	10/28/21	
gamma-BHC (Lindane)	ND U	2.0	0.60	1	12/04/21 20:12	10/28/21	
cis-Chlordane	ND U	1.0	0.36	1	12/04/21 20:12	10/28/21	
trans-Chlordane	ND U	2.0	0.54	1	12/04/21 20:12	10/28/21	
4,4'-DDD	ND U	2.0	0.57	1	12/04/21 20:12	10/28/21	*
4,4'-DDE	ND U	1.0	0.46	1	12/04/21 20:12	10/28/21	
4,4'-DDT	ND Ui	2.0	1.5	1	12/04/21 20:12	10/28/21	
Dieldrin	ND U	1.0	0.44	1	12/04/21 20:12	10/28/21	
Endosulfan I	ND U	1.0	0.36	1	12/04/21 20:12	10/28/21	
Endosulfan II	ND U	1.0	0.34	1	12/04/21 20:12	10/28/21	
Endosulfan Sulfate	ND Ui	1.0	0.92	1	12/04/21 20:12	10/28/21	
Endrin	ND Ui	1.0	0.78	1	12/04/21 20:12	10/28/21	
Endrin Aldehyde	ND Ui	1.0	0.75	1	12/04/21 20:12	10/28/21	
Endrin Ketone	ND U	2.0	0.70	1	12/04/21 20:12	10/28/21	
Heptachlor	ND Ui	2.0	0.89	1	12/04/21 20:12	10/28/21	
Heptachlor Epoxide	ND U	1.0	0.29	1	12/04/21 20:12	10/28/21	
Methoxychlor	ND U	2.0	0.85	1	12/04/21 20:12	10/28/21	
Toxaphene	ND U	100	49	1	12/04/21 20:12	10/28/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	52	10 - 139	12/04/21 20:12	
Tetrachloro-m-xylene	39	32 - 151	12/04/21 20:12	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570

SURROGATE RECOVERY SUMMARY
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Extraction Method: EPA 3511

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-139	32-151
B-30	K2112570-001	52	39
Method Blank	KQ2121205-07	50	26*
Lab Control Sample	KQ2121205-05	71	33
Lab Control Sample	KQ2121205-06	72	33

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2121205-07

Service Request: K2112570
Date Collected: NA
Date Received: NA
Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.77	1	12/04/21 11:45	10/28/21	
alpha-BHC	ND U	1.0	0.25	1	12/04/21 11:45	10/28/21	
beta-BHC	ND Ui	1.3	1.3	1	12/04/21 11:45	10/28/21	
delta-BHC	ND U	1.0	0.27	1	12/04/21 11:45	10/28/21	
gamma-BHC (Lindane)	ND U	2.0	0.60	1	12/04/21 11:45	10/28/21	
cis-Chlordane	ND U	1.0	0.36	1	12/04/21 11:45	10/28/21	
trans-Chlordane	ND U	2.0	0.54	1	12/04/21 11:45	10/28/21	
4,4'-DDD	ND U	2.0	0.57	1	12/04/21 11:45	10/28/21	
4,4'-DDE	ND U	1.0	0.46	1	12/04/21 11:45	10/28/21	
4,4'-DDT	ND U	2.0	0.75	1	12/04/21 11:45	10/28/21	
Dieldrin	ND U	1.0	0.44	1	12/04/21 11:45	10/28/21	
Endosulfan I	ND U	1.0	0.36	1	12/04/21 11:45	10/28/21	
Endosulfan II	ND U	1.0	0.34	1	12/04/21 11:45	10/28/21	
Endosulfan Sulfate	ND U	1.0	0.47	1	12/04/21 11:45	10/28/21	
Endrin	ND U	1.0	0.42	1	12/04/21 11:45	10/28/21	
Endrin Aldehyde	ND U	1.0	0.47	1	12/04/21 11:45	10/28/21	
Endrin Ketone	ND U	2.0	0.70	1	12/04/21 11:45	10/28/21	
Heptachlor	ND U	2.0	0.61	1	12/04/21 11:45	10/28/21	
Heptachlor Epoxide	ND U	1.0	0.29	1	12/04/21 11:45	10/28/21	
Methoxychlor	4.4 P	2.0	0.85	1	12/04/21 11:45	10/28/21	
Toxaphene	ND U	100	49	1	12/04/21 11:45	10/28/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	50	10 - 139	12/04/21 11:45	
Tetrachloro-m-xylene	26	32 - 151	12/04/21 11:45	*

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 12/04/21
Date Extracted: 10/28/21

Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 748079

Lab Control Sample
KQ2121205-05

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
4,4'-DDD	24.2	25.0	97	35-158
4,4'-DDE	20.7	25.0	83	53-129
4,4'-DDT	26.6 P	25.0	106	43-164
Aldrin	19.3	25.0	77	37-135
alpha-BHC	17.4	25.0	69	48-148
beta-BHC	21.2	25.0	85	37-133
cis-Chlordane	23.5	25.0	94	54-127
delta-BHC	23.6	25.0	94	44-128
Dieldrin	23.9	25.0	96	51-122
Endosulfan I	23.2	25.0	93	44-135
Endosulfan II	24.2	25.0	97	37-180
Endosulfan Sulfate	28.6	25.0	114	42-144
Endrin	24.5	25.0	98	52-133
Endrin Aldehyde	23.2 P	25.0	93	49-126
Endrin Ketone	23.8	25.0	95	54-131
gamma-BHC (Lindane)	22.7	25.0	91	51-140
Heptachlor	24.2 P	25.0	97	33-161
Heptachlor Epoxide	23.9	25.0	96	51-125
Methoxychlor	15.2 P	25.0	61	38-194
trans-Chlordane	24.6	25.0	98	54-126

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 12/04/21
Date Extracted: 10/28/21

Lab Control Sample Summary
Ultra Low Level Organochlorine Pesticides by GC/ECD

Analysis Method: 8081B
Prep Method: EPA 3511

Units: ng/L
Basis: NA
Analysis Lot: 748079

Lab Control Sample
KQ2121205-06

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Toxaphene	1320	1000	132	44-190

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Ground Water
Sample Name: B-30
Lab Code: K2112570-001

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
alpha-BHC	0.25	0.28	0.68	83	JP	1	12/04/21 20:12

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Ground Water

Service Request: K2112570
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2121205-05

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.57	24.2	30.3	22		1	12/04/21 12:24
4,4'-DDE	0.46	20.7	20.9	<1		1	12/04/21 12:24
4,4'-DDT	0.75	26.6	69.9	90	P	1	12/04/21 12:24
Aldrin	0.77	19.3	19.3	<1		1	12/04/21 12:24
Dieldrin	0.44	23.9	24.0	<1		1	12/04/21 12:24
Endosulfan I	0.36	23.2	25.6	10		1	12/04/21 12:24
Endosulfan II	0.34	24.2	27.4	12		1	12/04/21 12:24
Endosulfan Sulfate	0.47	28.6	28.8	<1		1	12/04/21 12:24
Endrin	0.42	24.5	27.1	10		1	12/04/21 12:24
Endrin Aldehyde	0.47	23.2	69.0	99	P	1	12/04/21 12:24
Endrin Ketone	0.70	23.8	29.6	22		1	12/04/21 12:24
Heptachlor	0.61	24.2	38.8	46	P	1	12/04/21 12:24
Heptachlor Epoxide	0.29	23.9	26.9	12		1	12/04/21 12:24
Methoxychlor	0.85	15.2	48.4	104	P	1	12/04/21 12:24
alpha-BHC	0.25	17.4	19.2	10		1	12/04/21 12:24
beta-BHC	0.17	21.2	25.8	20		1	12/04/21 12:24
cis-Chlordane	0.36	23.5	24.6	5		1	12/04/21 12:24
delta-BHC	0.27	23.6	24.7	5		1	12/04/21 12:24
gamma-BHC (Lindane)	0.60	22.7	22.8	<1		1	12/04/21 12:24
trans-Chlordane	0.54	24.6	28.0	13		1	12/04/21 12:24

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Ground Water
Sample Name: Lab Control Sample
Lab Code: KQ2121205-06

Service Request: K2112570
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	49	1320	1370	4		1	12/04/21 13:03

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2121205-07

Service Request: K2112570
Date Collected: NA
Date Received:

Units: ng/L
Basis: NA

Ultra Low Level Organochlorine Pesticides by GC/ECD

Analytical Method: 8081B
Prep Method: EPA 3511

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Methoxychlor	0.85	4.4	9.8	76	P	1	12/04/21 11:45



Polychlorinated Biphenyls (PCBs)

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Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Ground water

Service Request: K2112570
Date Collected: 10/25/2021
Date Received: 10/27/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-30
Lab Code: K2112570-001
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1221	ND	U	0.40	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1232	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1242	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1248	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1254	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1260	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	46	10-140	12/21/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Ground water

Service Request: K2112570
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG2102896-3
Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1221	ND	U	0.40	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1232	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1242	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1248	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1254	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	
Aroclor 1260	ND	U	0.20	0.028	1	11/01/21	12/21/21	KWG2102896	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	73	10-140	12/21/21	Acceptable

Comments: _____

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Ground water

Service Request: K2112570

**Surrogate Recovery Summary
 Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3511
Analysis Method: 8082A

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
B-30	K2112570-001	46
Method Blank	KWG2102896-3	73
Lab Control Sample	KWG2102896-1	86
Duplicate Lab Control Sample	KWG2102896-2	66

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 10-140

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Ground water

Service Request: K2112570
Date Extracted: 11/01/2021
Date Analyzed: 12/21/2021

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3511
Analysis Method: 8082A

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG2102896

Analyte Name	Lab Control Sample KWG2102896-1 Lab Control Spike			Duplicate Lab Control Sample KWG2102896-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Aroclor 1016	2.20	2.50	88	1.80	2.50	72	31-164	20	30
Aroclor 1260	2.62	2.50	105	2.15	2.50	86	34-182	20	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Chlorinated Herbicides by GC

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45

Sample Name: B-30
Lab Code: K2112570-001

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/30/21 19:40	11/1/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/30/21 19:40	11/1/21	
2,4-D	ND U	0.38	0.036	1	11/30/21 19:40	11/1/21	*
2,4-DB	ND U	0.38	0.10	1	11/30/21 19:40	11/1/21	
Dalapon	ND U	0.38	0.28	1	11/30/21 19:40	11/1/21	
Dicamba	ND U	0.19	0.025	1	11/30/21 19:40	11/1/21	
Dichlorprop	ND U	0.38	0.030	1	11/30/21 19:40	11/1/21	*
Dinoseb	ND U	0.19	0.015	1	11/30/21 19:40	11/1/21	
MCPA	ND U	94	8.7	1	11/30/21 19:40	11/1/21	*
MCPP	ND U	94	14	1	11/30/21 19:40	11/1/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	44	17 - 113	11/30/21 19:40	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 17-113
B-30	K2112570-001	44
Method Blank	KQ2121496-03	48
Lab Control Sample	KQ2121496-01	68
Duplicate Lab Control Sample	KQ2121496-02	60

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2121496-03

Service Request: K2112570
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	0.19	0.033	1	11/30/21 18:24	11/1/21	
2,4,5-TP (Silvex)	ND U	0.19	0.045	1	11/30/21 18:24	11/1/21	
2,4-D	ND U	0.38	0.036	1	11/30/21 18:24	11/1/21	
2,4-DB	ND U	0.38	0.10	1	11/30/21 18:24	11/1/21	
Dalapon	ND U	0.38	0.28	1	11/30/21 18:24	11/1/21	
Dicamba	ND U	0.19	0.025	1	11/30/21 18:24	11/1/21	
Dichlorprop	ND U	0.38	0.030	1	11/30/21 18:24	11/1/21	
Dinoseb	ND U	0.19	0.015	1	11/30/21 18:24	11/1/21	
MCPA	ND U	94	8.7	1	11/30/21 18:24	11/1/21	
MCP	ND U	94	14	1	11/30/21 18:24	11/1/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	48	17 - 113	11/30/21 18:24	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 11/30/21
Date Extracted: 11/01/21

Duplicate Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/L
Basis: NA
Analysis Lot: 748832

Lab Control Sample
KQ2121496-01

Duplicate Lab Control Sample
KQ2121496-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-T	1.68	2.50	67	1.59	2.50	64	30-120	6	30
2,4,5-TP (Silvex)	1.83	2.50	73	1.68	2.50	67	37-114	8	30
2,4-D	1.69	2.50	68	1.55	2.50	62	35-110	8	30
2,4-DB	2.37	2.50	95	1.83	2.50	73	10-134	26	30
Dalapon	1.59	2.50	64	1.51	2.50	61	14-110	5	30
Dicamba	1.87	2.50	75	1.70	2.50	68	30-108	9	30
Dichlorprop	1.66	2.50	66	1.50	2.50	60	29-104	10	30
Dinoseb	1.55	2.50	62	1.52	2.50	61	11-105	2	30
MCPA	219	250	88	200	250	80	21-117	9	30
MCPD	229	250	92	206	250	82	16-141	10	30

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Ground Water
Sample Name: Lab Control Sample
Lab Code: KQ2121496-01

Service Request: K2112570
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.68	1.99	17		1	11/30/21 18:49
2,4,5-TP (Silvex)	0.045	1.83	2.03	10		1	11/30/21 18:49
2,4-D	0.036	1.69	1.92	13		1	11/30/21 18:49
2,4-DB	0.10	2.37	2.41	2		1	11/30/21 18:49
Dalapon	0.28	1.59	1.82	13		1	11/30/21 18:49
Dicamba	0.025	1.87	2.07	10		1	11/30/21 18:49
Dichlorprop	0.030	1.66	2.07	22		1	11/30/21 18:49
Dinoseb	0.015	1.55	1.76	13		1	11/30/21 18:49
MCPA	8.7	219	219	<1		1	11/30/21 18:49
MCPP	14	229	247	8		1	11/30/21 18:49

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Ground Water
Sample Name: Duplicate Lab Control Sample
Lab Code: KQ2121496-02

Service Request: K2112570
Date Collected: NA
Date Received:

Units: ug/L
Basis: NA

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4,5-T	0.033	1.59	1.96	21		1	11/30/21 19:15
2,4,5-TP (Silvex)	0.045	1.68	1.86	10		1	11/30/21 19:15
2,4-D	0.036	1.55	1.76	13		1	11/30/21 19:15
2,4-DB	0.10	1.83	2.58	34		1	11/30/21 19:15
Dalapon	0.28	1.51	1.78	16		1	11/30/21 19:15
Dicamba	0.025	1.70	1.92	12		1	11/30/21 19:15
Dichlorprop	0.030	1.50	1.90	24		1	11/30/21 19:15
Dinoseb	0.015	1.52	1.73	13		1	11/30/21 19:15
MCPA	8.7	200	202	<1		1	11/30/21 19:15
MCPP	14	206	225	9		1	11/30/21 19:15



Volatile Organic Compounds

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45

Sample Name: B-30
Lab Code: K2112570-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	13 J	20	3.3	1	11/04/21 17:29	
Benzene	ND U	0.50	0.062	1	11/04/21 17:29	
Bromobenzene	ND U	2.0	0.12	1	11/04/21 17:29	
Bromochloromethane	ND U	0.50	0.16	1	11/04/21 17:29	
Bromodichloromethane	ND U	0.50	0.091	1	11/04/21 17:29	*
Bromoform	ND U	0.50	0.16	1	11/04/21 17:29	*
Bromomethane	ND U	0.50	0.16	1	11/04/21 17:29	
2-Butanone (MEK)	ND U	20	1.9	1	11/04/21 17:29	
n-Butylbenzene	ND U	4.0	0.054	1	11/04/21 17:29	
sec-Butylbenzene	ND U	2.0	0.062	1	11/04/21 17:29	
tert-Butylbenzene	ND U	2.0	0.059	1	11/04/21 17:29	
Carbon Disulfide	ND U	0.50	0.069	1	11/04/21 17:29	
Carbon Tetrachloride	ND U	0.50	0.096	1	11/04/21 17:29	
Chlorobenzene	ND U	0.50	0.11	1	11/04/21 17:29	
Chloroethane	ND U	0.50	0.16	1	11/04/21 17:29	
Chloroform	ND U	0.50	0.072	1	11/04/21 17:29	
Chloromethane	0.14 J	0.50	0.068	1	11/04/21 17:29	
2-Chlorotoluene	ND U	2.0	0.10	1	11/04/21 17:29	
4-Chlorotoluene	ND U	2.0	0.13	1	11/04/21 17:29	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	11/04/21 17:29	
Dibromochloromethane	ND U	0.50	0.14	1	11/04/21 17:29	*
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	11/04/21 17:29	
Dibromomethane	ND U	0.50	0.15	1	11/04/21 17:29	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	11/04/21 17:29	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	11/04/21 17:29	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	11/04/21 17:29	
Dichlorodifluoromethane	ND U	0.50	0.13	1	11/04/21 17:29	
1,1-Dichloroethane	ND U	0.50	0.077	1	11/04/21 17:29	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	11/04/21 17:29	
1,1-Dichloroethene	ND U	0.50	0.080	1	11/04/21 17:29	
cis-1,2-Dichloroethene	0.11 J	0.50	0.067	1	11/04/21 17:29	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	11/04/21 17:29	
1,2-Dichloropropane	ND U	0.50	0.095	1	11/04/21 17:29	
1,3-Dichloropropane	ND U	0.50	0.14	1	11/04/21 17:29	
2,2-Dichloropropane	ND U	0.50	0.065	1	11/04/21 17:29	
1,1-Dichloropropene	ND U	0.50	0.089	1	11/04/21 17:29	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	11/04/21 17:29	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	11/04/21 17:29	
Ethylbenzene	ND U	0.50	0.050	1	11/04/21 17:29	
Hexachlorobutadiene	ND U	2.0	0.11	1	11/04/21 17:29	*
2-Hexanone	ND U	20	2.7	1	11/04/21 17:29	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45

Sample Name: B-30
Lab Code: K2112570-001

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	11/04/21 17:29	
4-Isopropyltoluene	ND U	2.0	0.060	1	11/04/21 17:29	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	11/04/21 17:29	
Methylene Chloride	ND U	2.0	0.10	1	11/04/21 17:29	
Naphthalene	ND U	2.0	0.088	1	11/04/21 17:29	
n-Propylbenzene	ND U	2.0	0.054	1	11/04/21 17:29	
Styrene	ND U	0.50	0.089	1	11/04/21 17:29	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	11/04/21 17:29	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	11/04/21 17:29	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	11/04/21 17:29	
Toluene	0.21 J	0.50	0.054	1	11/04/21 17:29	
1,2,3-Trichlorobenzene	ND U	2.0	0.11	1	11/04/21 17:29	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	11/04/21 17:29	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	11/04/21 17:29	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	11/04/21 17:29	
Trichloroethene (TCE)	ND U	0.50	0.10	1	11/04/21 17:29	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	11/04/21 17:29	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	11/04/21 17:29	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	11/04/21 17:29	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	11/04/21 17:29	
Vinyl Chloride	ND U	0.50	0.075	1	11/04/21 17:29	
o-Xylene	ND U	0.50	0.074	1	11/04/21 17:29	
m,p-Xylenes	ND U	0.50	0.11	1	11/04/21 17:29	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	79	68 - 117	11/04/21 17:29	
Dibromofluoromethane	103	73 - 122	11/04/21 17:29	
Toluene-d8	98	65 - 144	11/04/21 17:29	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112570
Date Collected: NA
Date Received: 10/27/21 12:45

Sample Name: Trip Blank
Lab Code: K2112570-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	7.4 J	20	3.3	1	11/04/21 13:57	
Benzene	ND U	0.50	0.062	1	11/04/21 13:57	
Bromobenzene	ND U	2.0	0.12	1	11/04/21 13:57	
Bromochloromethane	ND U	0.50	0.16	1	11/04/21 13:57	
Bromodichloromethane	ND U	0.50	0.091	1	11/04/21 13:57	*
Bromoform	ND U	0.50	0.16	1	11/04/21 13:57	*
Bromomethane	ND U	0.50	0.16	1	11/04/21 13:57	
2-Butanone (MEK)	ND U	20	1.9	1	11/04/21 13:57	
n-Butylbenzene	ND U	4.0	0.054	1	11/04/21 13:57	
sec-Butylbenzene	ND U	2.0	0.062	1	11/04/21 13:57	
tert-Butylbenzene	ND U	2.0	0.059	1	11/04/21 13:57	
Carbon Disulfide	ND U	0.50	0.069	1	11/04/21 13:57	
Carbon Tetrachloride	ND U	0.50	0.096	1	11/04/21 13:57	
Chlorobenzene	ND U	0.50	0.11	1	11/04/21 13:57	
Chloroethane	ND U	0.50	0.16	1	11/04/21 13:57	
Chloroform	ND U	0.50	0.072	1	11/04/21 13:57	
Chloromethane	ND U	0.50	0.068	1	11/04/21 13:57	
2-Chlorotoluene	ND U	2.0	0.10	1	11/04/21 13:57	
4-Chlorotoluene	ND U	2.0	0.13	1	11/04/21 13:57	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	11/04/21 13:57	
Dibromochloromethane	ND U	0.50	0.14	1	11/04/21 13:57	*
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	11/04/21 13:57	
Dibromomethane	ND U	0.50	0.15	1	11/04/21 13:57	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	11/04/21 13:57	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	11/04/21 13:57	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	11/04/21 13:57	
Dichlorodifluoromethane	ND U	0.50	0.13	1	11/04/21 13:57	
1,1-Dichloroethane	ND U	0.50	0.077	1	11/04/21 13:57	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	11/04/21 13:57	
1,1-Dichloroethene	ND U	0.50	0.080	1	11/04/21 13:57	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	11/04/21 13:57	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	11/04/21 13:57	
1,2-Dichloropropane	ND U	0.50	0.095	1	11/04/21 13:57	
1,3-Dichloropropane	ND U	0.50	0.14	1	11/04/21 13:57	
2,2-Dichloropropane	ND U	0.50	0.065	1	11/04/21 13:57	
1,1-Dichloropropene	ND U	0.50	0.089	1	11/04/21 13:57	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	11/04/21 13:57	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	11/04/21 13:57	
Ethylbenzene	ND U	0.50	0.050	1	11/04/21 13:57	
Hexachlorobutadiene	ND U	2.0	0.11	1	11/04/21 13:57	*
2-Hexanone	ND U	20	2.7	1	11/04/21 13:57	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112570
Date Collected: NA
Date Received: 10/27/21 12:45

Sample Name: Trip Blank
Lab Code: K2112570-002

Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	11/04/21 13:57	
4-Isopropyltoluene	ND U	2.0	0.060	1	11/04/21 13:57	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	11/04/21 13:57	
Methylene Chloride	0.13 J	2.0	0.10	1	11/04/21 13:57	
Naphthalene	ND U	2.0	0.088	1	11/04/21 13:57	
n-Propylbenzene	ND U	2.0	0.054	1	11/04/21 13:57	
Styrene	ND U	0.50	0.089	1	11/04/21 13:57	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	11/04/21 13:57	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	11/04/21 13:57	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	11/04/21 13:57	
Toluene	0.54	0.50	0.054	1	11/04/21 13:57	
1,2,3-Trichlorobenzene	0.13 J	2.0	0.11	1	11/04/21 13:57	
1,2,4-Trichlorobenzene	ND U	2.0	0.096	1	11/04/21 13:57	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	11/04/21 13:57	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	11/04/21 13:57	
Trichloroethene (TCE)	ND U	0.50	0.10	1	11/04/21 13:57	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	11/04/21 13:57	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	11/04/21 13:57	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	11/04/21 13:57	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	11/04/21 13:57	
Vinyl Chloride	ND U	0.50	0.075	1	11/04/21 13:57	
o-Xylene	ND U	0.50	0.074	1	11/04/21 13:57	
m,p-Xylenes	ND U	0.50	0.11	1	11/04/21 13:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	82	68 - 117	11/04/21 13:57	
Dibromofluoromethane	100	73 - 122	11/04/21 13:57	
Toluene-d8	102	65 - 144	11/04/21 13:57	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C

Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		68-117	73-122	65-144
B-30	K2112570-001	79	103	98
Method Blank	KQ2122453-05	84	103	99
Lab Control Sample	KQ2122453-03	91	94	103
Duplicate Lab Control Sample	KQ2122453-04	88	98	104

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Water

Service Request: K2112570

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene 68-117	Dibromofluoromethane 73-122	Toluene-d8 65-144
Trip Blank	K2112570-002	82	100	102

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2122453-05

Service Request: K2112570
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Acetone	ND U	20	3.3	1	11/04/21 13:04	
Benzene	ND U	0.50	0.062	1	11/04/21 13:04	
Bromobenzene	ND U	2.0	0.12	1	11/04/21 13:04	
Bromochloromethane	ND U	0.50	0.16	1	11/04/21 13:04	
Bromodichloromethane	ND U	0.50	0.091	1	11/04/21 13:04	
Bromoform	ND U	0.50	0.16	1	11/04/21 13:04	
Bromomethane	ND U	0.50	0.16	1	11/04/21 13:04	
2-Butanone (MEK)	ND U	20	1.9	1	11/04/21 13:04	
n-Butylbenzene	ND U	4.0	0.054	1	11/04/21 13:04	
sec-Butylbenzene	ND U	2.0	0.062	1	11/04/21 13:04	
tert-Butylbenzene	ND U	2.0	0.059	1	11/04/21 13:04	
Carbon Disulfide	0.10 J	0.50	0.069	1	11/04/21 13:04	
Carbon Tetrachloride	ND U	0.50	0.096	1	11/04/21 13:04	
Chlorobenzene	ND U	0.50	0.11	1	11/04/21 13:04	
Chloroethane	ND U	0.50	0.16	1	11/04/21 13:04	
Chloroform	ND U	0.50	0.072	1	11/04/21 13:04	
Chloromethane	ND U	0.50	0.068	1	11/04/21 13:04	
2-Chlorotoluene	ND U	2.0	0.10	1	11/04/21 13:04	
4-Chlorotoluene	ND U	2.0	0.13	1	11/04/21 13:04	
1,2-Dibromo-3-chloropropane	ND U	2.0	0.22	1	11/04/21 13:04	
Dibromochloromethane	ND U	0.50	0.14	1	11/04/21 13:04	
1,2-Dibromoethane (EDB)	ND U	2.0	0.10	1	11/04/21 13:04	
Dibromomethane	ND U	0.50	0.15	1	11/04/21 13:04	
1,2-Dichlorobenzene	ND U	0.50	0.12	1	11/04/21 13:04	
1,3-Dichlorobenzene	ND U	0.50	0.10	1	11/04/21 13:04	
1,4-Dichlorobenzene	ND U	0.50	0.12	1	11/04/21 13:04	
Dichlorodifluoromethane	ND U	0.50	0.13	1	11/04/21 13:04	
1,1-Dichloroethane	ND U	0.50	0.077	1	11/04/21 13:04	
1,2-Dichloroethane (EDC)	ND U	0.50	0.080	1	11/04/21 13:04	
1,1-Dichloroethene	ND U	0.50	0.080	1	11/04/21 13:04	
cis-1,2-Dichloroethene	ND U	0.50	0.067	1	11/04/21 13:04	
trans-1,2-Dichloroethene	ND U	0.50	0.072	1	11/04/21 13:04	
1,2-Dichloropropane	ND U	0.50	0.095	1	11/04/21 13:04	
1,3-Dichloropropane	ND U	0.50	0.14	1	11/04/21 13:04	
2,2-Dichloropropane	ND U	0.50	0.065	1	11/04/21 13:04	
1,1-Dichloropropene	ND U	0.50	0.089	1	11/04/21 13:04	
cis-1,3-Dichloropropene	ND U	0.50	0.18	1	11/04/21 13:04	
trans-1,3-Dichloropropene	ND U	0.50	0.068	1	11/04/21 13:04	
Ethylbenzene	ND U	0.50	0.050	1	11/04/21 13:04	
Hexachlorobutadiene	0.20 J	2.0	0.11	1	11/04/21 13:04	
2-Hexanone	ND U	20	2.7	1	11/04/21 13:04	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2122453-05

Service Request: K2112570
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Isopropylbenzene	ND U	2.0	0.051	1	11/04/21 13:04	
4-Isopropyltoluene	ND U	2.0	0.060	1	11/04/21 13:04	
4-Methyl-2-pentanone (MIBK)	ND U	20	2.6	1	11/04/21 13:04	
Methylene Chloride	0.16 J	2.0	0.10	1	11/04/21 13:04	
Naphthalene	0.28 J	2.0	0.088	1	11/04/21 13:04	
n-Propylbenzene	ND U	2.0	0.054	1	11/04/21 13:04	
Styrene	ND U	0.50	0.089	1	11/04/21 13:04	
1,1,1,2-Tetrachloroethane	ND U	0.50	0.11	1	11/04/21 13:04	
1,1,2,2-Tetrachloroethane	ND U	0.50	0.16	1	11/04/21 13:04	
Tetrachloroethene (PCE)	ND U	0.50	0.099	1	11/04/21 13:04	
Toluene	ND U	0.50	0.054	1	11/04/21 13:04	
1,2,3-Trichlorobenzene	0.54 J	2.0	0.11	1	11/04/21 13:04	
1,2,4-Trichlorobenzene	0.17 J	2.0	0.096	1	11/04/21 13:04	
1,1,2-Trichloroethane	ND U	0.50	0.14	1	11/04/21 13:04	
1,1,1-Trichloroethane (TCA)	ND U	0.50	0.075	1	11/04/21 13:04	
Trichloroethene (TCE)	ND U	0.50	0.10	1	11/04/21 13:04	
Trichlorofluoromethane (CFC 11)	ND U	0.50	0.12	1	11/04/21 13:04	
1,2,3-Trichloropropane	ND U	0.50	0.20	1	11/04/21 13:04	
1,2,4-Trimethylbenzene	ND U	2.0	0.069	1	11/04/21 13:04	
1,3,5-Trimethylbenzene	ND U	2.0	0.089	1	11/04/21 13:04	
Vinyl Chloride	ND U	0.50	0.075	1	11/04/21 13:04	
o-Xylene	ND U	0.50	0.074	1	11/04/21 13:04	
m,p-Xylenes	ND U	0.50	0.11	1	11/04/21 13:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	84	68 - 117	11/04/21 13:04	
Dibromofluoromethane	103	73 - 122	11/04/21 13:04	
Toluene-d8	99	65 - 144	11/04/21 13:04	

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 11/04/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 744919

Analyte Name	Lab Control Sample KQ2122453-03			Duplicate Lab Control Sample KQ2122453-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	11.3	10.0	113	11.2	10.0	112	66-124	<1	30
1,1,1-Trichloroethane (TCA)	11.8	10.0	118	11.5	10.0	115	59-136	3	30
1,1,2,2-Tetrachloroethane	9.63	10.0	96	9.38	10.0	94	70-127	3	30
1,1,2-Trichloroethane	10.2	10.0	102	10.0	10.0	100	74-118	2	30
1,1-Dichloroethane	11.0	10.0	110	11.3	10.0	113	68-132	2	30
1,1-Dichloroethene	9.55	10.0	96	9.42	10.0	94	66-129	1	30
1,1-Dichloropropene	10.7	10.0	107	10.5	10.0	105	59-134	2	30
1,2,3-Trichlorobenzene	8.60	10.0	86	9.15	10.0	92	68-120	6	30
1,2,3-Trichloropropane	9.81	10.0	98	10.1	10.0	101	69-123	3	30
1,2,4-Trichlorobenzene	9.15	10.0	92	9.10	10.0	91	58-126	<1	30
1,2,4-Trimethylbenzene	9.76	10.0	98	9.51	10.0	95	63-122	3	30
1,2-Dibromo-3-chloropropane	8.91	10.0	89	9.30	10.0	93	55-132	4	30
1,2-Dibromoethane (EDB)	9.74	10.0	97	9.35	10.0	94	74-118	4	30
1,2-Dichlorobenzene	9.60	10.0	96	9.59	10.0	96	72-115	<1	30
1,2-Dichloroethane (EDC)	10.8	10.0	108	10.4	10.0	104	56-142	4	30
1,2-Dichloropropane	10.7	10.0	107	10.4	10.0	104	67-126	3	30
1,3,5-Trimethylbenzene	9.66	10.0	97	9.37	10.0	94	62-126	3	30
1,3-Dichlorobenzene	9.67	10.0	97	9.52	10.0	95	70-116	2	30
1,3-Dichloropropane	10.1	10.0	101	10.3	10.0	103	75-116	3	30
1,4-Dichlorobenzene	9.62	10.0	96	9.57	10.0	96	73-115	<1	30
2,2-Dichloropropane	11.4	10.0	114	11.2	10.0	112	37-145	2	30
2-Butanone (MEK)	56.9	50.0	114	55.5	50.0	111	71-149	3	30
2-Chlorotoluene	10.0	10.0	100	9.52	10.0	95	55-131	5	30
2-Hexanone	49.2	50.0	98	46.4	50.0	93	59-131	6	30
4-Chlorotoluene	9.85	10.0	99	9.70	10.0	97	66-121	2	30
4-Isopropyltoluene	10.1	10.0	101	9.97	10.0	100	61-128	1	30
4-Methyl-2-pentanone (MIBK)	50.7	50.0	101	50.3	50.0	101	64-134	<1	30
Acetone	54.1	50.0	108	56.1	50.0	112	68-135	4	30
Benzene	10.9	10.0	109	10.9	10.0	109	69-124	<1	30
Bromobenzene	9.70	10.0	97	9.48	10.0	95	72-116	2	30
Bromochloromethane	10.6	10.0	106	10.6	10.0	106	75-131	<1	30
Bromodichloromethane	11.7	10.0	117	11.7	10.0	117	63-129	<1	30
Bromoform	11.0	10.0	110	11.3	10.0	113	52-144	3	30
Bromomethane	8.72	10.0	87	8.69	10.0	87	35-113	<1	30
Carbon Disulfide	18.1	20.0	90	17.9	20.0	89	46-144	1	30
Carbon Tetrachloride	12.3	10.0	123	12.1	10.0	121	55-140	2	30
Chlorobenzene	10.4	10.0	104	10.2	10.0	102	72-116	2	30
Chloroethane	11.8	10.0	118	11.8	10.0	118	58-134	<1	30
Chloroform	11.1	10.0	111	11.0	10.0	110	70-129	<1	30
Chloromethane	10.2	10.0	102	9.92	10.0	99	34-130	3	30
cis-1,2-Dichloroethene	10.4	10.0	104	10.5	10.0	105	71-118	<1	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 11/04/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260C
Prep Method: None

Units: ug/L
Basis: NA
Analysis Lot: 744919

Analyte Name	Lab Control Sample KQ2122453-03			Duplicate Lab Control Sample KQ2122453-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	11.6	10.0	116	11.8	10.0	118	62-132	1	30
Dibromochloromethane	12.0	10.0	120	11.6	10.0	116	67-126	3	30
Dibromomethane	9.94	10.0	99	9.76	10.0	98	69-128	2	30
Dichlorodifluoromethane	9.79	10.0	98	9.66	10.0	97	32-124	1	30
Ethylbenzene	9.99	10.0	100	9.56	10.0	96	67-121	4	30
Hexachlorobutadiene	12.0	10.0	120 *	11.7	10.0	117	57-119	3	30
Isopropylbenzene	10.2	10.0	102	9.87	10.0	99	67-129	3	30
m,p-Xylenes	20.2	20.0	101	19.8	20.0	99	69-121	2	30
Methylene Chloride	10.9	10.0	109	10.4	10.0	104	71-122	5	30
Naphthalene	7.86	10.0	79	8.03	10.0	80	64-126	2	30
n-Butylbenzene	9.34	10.0	93	9.35	10.0	94	55-130	<1	30
n-Propylbenzene	9.72	10.0	97	9.68	10.0	97	61-124	<1	30
o-Xylene	9.90	10.0	99	9.54	10.0	95	71-119	4	30
sec-Butylbenzene	9.69	10.0	97	9.54	10.0	95	59-128	2	30
Styrene	10.2	10.0	102	9.86	10.0	99	74-121	3	30
tert-Butylbenzene	9.23	10.0	92	9.25	10.0	93	61-127	<1	30
Tetrachloroethene (PCE)	10.9	10.0	109	10.4	10.0	104	62-126	5	30
Toluene	11.1	10.0	111	10.8	10.0	108	69-124	2	30
trans-1,2-Dichloroethene	10.4	10.0	104	11.1	10.0	111	67-125	7	30
trans-1,3-Dichloropropene	11.0	10.0	110	10.6	10.0	106	59-125	3	30
Trichloroethene (TCE)	10.5	10.0	105	10.4	10.0	104	67-128	1	30
Trichlorofluoromethane (CFC 11)	10.0	10.0	100	9.89	10.0	99	52-141	2	30
Vinyl Chloride	10.8	10.0	108	10.8	10.0	108	55-123	<1	30



Low Level Semivolatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45

Sample Name: B-30
Lab Code: K2112570-001

Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	4.7	1.1	1	11/24/21 15:40	11/1/21	
Bis(2-ethylhexyl) Phthalate	0.55 J	0.94	0.13	1	11/24/21 15:40	11/1/21	
Carbazole	ND U	0.19	0.018	1	11/24/21 15:40	11/1/21	
Di-n-butyl Phthalate	0.11 J	0.19	0.023	1	11/24/21 15:40	11/1/21	
Di-n-octyl Phthalate	ND U	0.19	0.033	1	11/24/21 15:40	11/1/21	
Dibenzofuran	ND U	0.19	0.018	1	11/24/21 15:40	11/1/21	
2,4-Dinitrotoluene	ND U	0.19	0.018	1	11/24/21 15:40	11/1/21	
2-Methylphenol	ND U	0.47	0.11	1	11/24/21 15:40	11/1/21	
4-Methylphenol	ND U	0.47	0.12	1	11/24/21 15:40	11/1/21	
Nitrobenzene	ND U	0.19	0.028	1	11/24/21 15:40	11/1/21	
Pentachlorophenol (PCP)	ND U	0.94	0.34	1	11/24/21 15:40	11/1/21	*
Phenol	ND U	0.47	0.063	1	11/24/21 15:40	11/1/21	
Pyridine	ND U	4.7	1.4	1	11/24/21 15:40	11/1/21	
2,4,5-Trichlorophenol	ND U	0.47	0.031	1	11/24/21 15:40	11/1/21	
2,4,6-Trichlorophenol	ND U	0.47	0.058	1	11/24/21 15:40	11/1/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	74	35 - 105	11/24/21 15:40	
2-Fluorophenol	78	34 - 118	11/24/21 15:40	
Nitrobenzene-d5	84	40 - 117	11/24/21 15:40	
Phenol-d6	83	39 - 109	11/24/21 15:40	
p-Terphenyl-d14	89	48 - 109	11/24/21 15:40	
2,4,6-Tribromophenol	80	35 - 132	11/24/21 15:40	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	34-118	40-117
B-30	K2112570-001	74	78	84
Method Blank	KQ2121478-03	83	86	92
Lab Control Sample	KQ2121478-01	80	83	88
Duplicate Lab Control Sample	KQ2121478-02	80	83	90

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	48-109	35-132
B-30	K2112570-001	83	89	80
Method Blank	KQ2121478-03	91	88	74
Lab Control Sample	KQ2121478-01	88	86	79
Duplicate Lab Control Sample	KQ2121478-02	89	82	80

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2121478-03

Service Request: K2112570
Date Collected: NA
Date Received: NA
Units: ug/L
Basis: NA

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	4.7	1.1	1	11/23/21 21:55	11/1/21	
Bis(2-ethylhexyl) Phthalate	ND U	0.94	0.13	1	11/23/21 21:55	11/1/21	
Carbazole	ND U	0.19	0.018	1	11/19/21 02:35	11/1/21	
Di-n-butyl Phthalate	0.043 J	0.19	0.023	1	11/23/21 21:55	11/1/21	
Di-n-octyl Phthalate	ND U	0.19	0.033	1	11/23/21 21:55	11/1/21	
Dibenzofuran	ND U	0.19	0.018	1	11/23/21 21:55	11/1/21	
2,4-Dinitrotoluene	ND U	0.19	0.018	1	11/23/21 21:55	11/1/21	
2-Methylphenol	ND U	0.47	0.11	1	11/23/21 21:55	11/1/21	
4-Methylphenol	ND U	0.47	0.12	1	11/23/21 21:55	11/1/21	
Nitrobenzene	ND U	0.19	0.028	1	11/23/21 21:55	11/1/21	
Pentachlorophenol (PCP)	ND U	0.94	0.34	1	11/23/21 21:55	11/1/21	
Phenol	ND U	0.47	0.063	1	11/23/21 21:55	11/1/21	
Pyridine	ND U	4.7	1.4	1	11/19/21 02:35	11/1/21	
2,4,5-Trichlorophenol	ND U	0.47	0.031	1	11/23/21 21:55	11/1/21	
2,4,6-Trichlorophenol	ND U	0.47	0.058	1	11/23/21 21:55	11/1/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	83	35 - 105	11/23/21 21:55	
2-Fluorophenol	86	34 - 118	11/23/21 21:55	
Nitrobenzene-d5	92	40 - 117	11/23/21 21:55	
Phenol-d6	91	39 - 109	11/23/21 21:55	
p-Terphenyl-d14	88	48 - 109	11/23/21 21:55	
2,4,6-Tribromophenol	74	35 - 132	11/23/21 21:55	

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 11/23/21
Date Extracted: 11/01/21

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 747350

Lab Control Sample
KQ2121478-01

Duplicate Lab Control Sample
KQ2121478-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-Trichlorophenol	4.52	5.00	90	4.55	5.00	91	51-116	<1	30
2,4,6-Trichlorophenol	4.58	5.00	92	4.62	5.00	92	51-114	<1	30
2,4-Dinitrotoluene	4.27	5.00	85	4.29	5.00	86	56-120	<1	30
2-Methylphenol	4.62	5.00	92	4.97	5.00	99	45-114	7	30
4-Methylphenol	5.34	5.00	107	5.69	5.00	114	44-120	6	30
Benzoic Acid	10.2	15.0	68	9.10	15.0	61	10-86	11	30
Bis(2-ethylhexyl) Phthalate	4.57	5.00	91	4.68	5.00	94	42-147	2	30
Dibenzofuran	4.90	5.00	98	4.97	5.00	99	51-102	1	30
Di-n-butyl Phthalate	3.93	5.00	79	4.03	5.00	81	61-121	2	30
Di-n-octyl Phthalate	4.71	5.00	94	4.83	5.00	97	50-125	3	30
Nitrobenzene	3.78	5.00	76	3.92	5.00	78	43-120	4	30
Pentachlorophenol (PCP)	4.64	5.00	93	4.78	5.00	96	27-112	3	30
Phenol	4.83	5.00	97	4.94	5.00	99	45-112	2	30

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 11/19/21
Date Extracted: 11/01/21

Duplicate Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ug/L
Basis: NA
Analysis Lot: 747028

Lab Control Sample
KQ2121478-01

Duplicate Lab Control Sample
KQ2121478-02

Analyte Name	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Carbazole	4.07	5.00	81	4.24	5.00	85	57-112	4	30
Pyridine	8.27	10.0	83	8.56	10.0	86	10-121	3	30



Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45

Sample Name: B-30
Lab Code: K2112570-001

Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	3.2	0.40	1	11/09/21 13:32	11/1/21	
Acenaphthene	ND U	3.2	0.36	1	11/09/21 13:32	11/1/21	
Acenaphthylene	ND U	3.2	0.37	1	11/09/21 13:32	11/1/21	
Anthracene	ND U	3.2	0.29	1	11/09/21 13:32	11/1/21	
Benz(a)anthracene	0.75 J	3.2	0.34	1	11/09/21 13:32	11/1/21	
Benzo(a)pyrene	ND U	3.2	0.41	1	11/09/21 13:32	11/1/21	
Benzo(b)fluoranthene	ND U	3.2	0.25	1	11/09/21 13:32	11/1/21	
Benzo(g,h,i)perylene	0.84 J	3.2	0.36	1	11/09/21 13:32	11/1/21	
Benzo(k)fluoranthene	ND U	3.2	0.41	1	11/09/21 13:32	11/1/21	
Chrysene	0.98 J	3.2	0.65	1	11/09/21 13:32	11/1/21	
Dibenz(a,h)anthracene	ND U	3.2	0.45	1	11/09/21 13:32	11/1/21	
Dibenzofuran	1.2 J	3.2	0.42	1	11/09/21 13:32	11/1/21	
Fluoranthene	5.3	3.2	0.46	1	11/09/21 13:32	11/1/21	
Fluorene	1.8 J	3.2	0.42	1	11/09/21 13:32	11/1/21	
Indeno(1,2,3-cd)pyrene	ND U	3.2	0.44	1	11/09/21 13:32	11/1/21	
Naphthalene	ND U	3.2	0.71	1	11/09/21 13:32	11/1/21	
Phenanthrene	5.9	3.2	0.72	1	11/09/21 13:32	11/1/21	
Pyrene	7.0	3.2	0.78	1	11/09/21 13:32	11/1/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	76	39 - 123	11/09/21 13:32	
Fluorene-d10	69	28 - 125	11/09/21 13:32	
Terphenyl-d14	70	22 - 127	11/09/21 13:32	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570

SURROGATE RECOVERY SUMMARY

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Extraction Method: EPA 3520C

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		39-123	28-125	22-127
B-30	K2112570-001	76	69	70
Method Blank	KQ2121524-03	87	73	90
Lab Control Sample	KQ2121524-01	89	76	87
Duplicate Lab Control Sample	KQ2121524-02	88	75	86

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: KQ2121524-03

Service Request: K2112570
Date Collected: NA
Date Received: NA
Units: ng/L
Basis: NA

Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	3.2	0.40	1	11/09/21 11:38	11/1/21	
Acenaphthene	ND U	3.2	0.36	1	11/09/21 11:38	11/1/21	
Acenaphthylene	ND U	3.2	0.37	1	11/09/21 11:38	11/1/21	
Anthracene	ND U	3.2	0.29	1	11/09/21 11:38	11/1/21	
Benz(a)anthracene	0.50 J	3.2	0.34	1	11/09/21 11:38	11/1/21	
Benzo(a)pyrene	ND U	3.2	0.41	1	11/09/21 11:38	11/1/21	
Benzo(b)fluoranthene	ND U	3.2	0.25	1	11/09/21 11:38	11/1/21	
Benzo(g,h,i)perylene	ND U	3.2	0.36	1	11/09/21 11:38	11/1/21	
Benzo(k)fluoranthene	ND U	3.2	0.41	1	11/09/21 11:38	11/1/21	
Chrysene	ND U	3.2	0.65	1	11/09/21 11:38	11/1/21	
Dibenz(a,h)anthracene	ND U	3.2	0.45	1	11/09/21 11:38	11/1/21	
Dibenzofuran	ND U	3.2	0.42	1	11/09/21 11:38	11/1/21	
Fluoranthene	0.58 J	3.2	0.46	1	11/09/21 11:38	11/1/21	
Fluorene	ND U	3.2	0.42	1	11/09/21 11:38	11/1/21	
Indeno(1,2,3-cd)pyrene	ND U	3.2	0.44	1	11/09/21 11:38	11/1/21	
Naphthalene	ND U	3.2	0.71	1	11/09/21 11:38	11/1/21	
Phenanthrene	1.2 J	3.2	0.72	1	11/09/21 11:38	11/1/21	
Pyrene	ND U	3.2	0.78	1	11/09/21 11:38	11/1/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	87	39 - 123	11/09/21 11:38	
Fluorene-d10	73	28 - 125	11/09/21 11:38	
Terphenyl-d14	90	22 - 127	11/09/21 11:38	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 11/09/21
Date Extracted: 11/01/21

Duplicate Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons by GC/MS SIM Ultra Low Level

Analysis Method: 8270D
Prep Method: EPA 3520C

Units: ng/L
Basis: NA
Analysis Lot: 745457

Lab Control Sample
KQ2121524-01

Duplicate Lab Control Sample
KQ2121524-02

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2-Methylnaphthalene	425	500	85	401	500	80	42-108	6	30
Acenaphthene	418	500	84	404	500	81	58-98	3	30
Acenaphthylene	419	500	84	407	500	81	61-102	3	30
Anthracene	427	500	85	417	500	83	65-98	2	30
Benz(a)anthracene	428	500	86	421	500	84	67-96	2	30
Benzo(a)pyrene	448	500	90	441	500	88	68-107	2	30
Benzo(b)fluoranthene	493	500	99	474	500	95	69-104	4	30
Benzo(g,h,i)perylene	381	500	76	385	500	77	61-110	<1	30
Benzo(k)fluoranthene	467	500	93	466	500	93	68-108	<1	30
Chrysene	419	500	84	432	500	86	67-105	3	30
Dibenz(a,h)anthracene	329	500	66	342	500	68	54-118	4	30
Dibenzofuran	406	500	81	396	500	79	52-103	3	30
Fluoranthene	465	500	93	460	500	92	63-106	<1	30
Fluorene	400	500	80	391	500	78	59-97	2	30
Indeno(1,2,3-cd)pyrene	373	500	75	384	500	77	61-115	3	30
Naphthalene	415	500	83	394	500	79	59-95	5	30
Phenanthrene	442	500	88	428	500	86	61-100	3	30
Pyrene	437	500	87	423	500	85	64-104	3	30



Subcontract Lab Results

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



November 29, 2021

Service Request No:K2112570

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

Laboratory Results for: EQRB

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 27, 2021
For your reference, these analyses have been assigned our service request number **K2112570**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental



Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
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ALS Environmental

Client: Coles & Betts ENV
Project: EQRB
Sample Matrix: W

Service Request No.: K2112570
Date Received: 11/03/21

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

One sample was received for analysis at ALS Environmental in Houston on 11/03/21.

The sample was received in good condition and is consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100654: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of a MS/MSD for this extraction batch. The 2,3,7,8-TCDD/TCDF LCS recoveries failed marginally low; DLCS recoveries passed.

B flags – Method Blanks

The Method Blank EQ2100654-01 contained low levels of 1,2,3,4,6,7,8-HpCDD, OCDD, and OCDF below the Method Reporting Limit (MRL). The associated compounds in the samples are flagged with ‘B’ flags where the sample result is less than ten times the level detected in the method blank.

Y flags – Cleanup Standard

The recoveries for the cleanup standard, 37Cl-2,3,7,8-TCDD are below control limits in the LCS & DLCS. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected, and is not used in quantitation of target analytes.

Y flags – Labeled Standards

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with ‘Y’ flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a ‘K’ flag. A ‘K’ flag indicates an estimated maximum possible concentration for the associated compound.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEO Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- Non-detected compounds are not included in the 'Total'

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319

Service Request:K2112570

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2112570-001	B-30	10/25/2021	1320
K2112570-002	Trip Blank		

Service Request Summary

Folder #: K2112570
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA

Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: BRICKMAN
Date Received: 10/27/21
Internal Due Date: 11/16/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

8 40 ml-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
 9 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 4 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 1 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
 2 250 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 1 125 mL-Plastic Bottle WM CLEAR HNO3 (Diss)
 1 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-Misty-3, K-Disposed, K-DELILAH, In Lab,
 SUBBED, EHRMS-WIC 10A, K-MET LTS
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	KELSO				KELSO				HOUSTON	KELSO		KELSO	
				Hg D/7470A	Hg T/7470A	Metals D/6020A	Metals T/6020A	BUTYLINS/ALS SOP	HERB/8151A	NW_TPH/NWTPH-Dx	PCB/8082A	Pest OC ULL/8081B	PCDD PCDF/8290A	PAH SIM ULL/8270D	SVO LL/8270D	NW_GAS/NWTPH-Gx
K2112570-001	B-30	Ground Water	10/25/21 1320													
K2112570-002	Trip Blank	Water														

Service Request Summary

Folder #: K2112570
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA

Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: BRICKMAN
Date Received: 10/27/21
Internal Due Date: 11/16/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

8 40 ml-Glass Vial VOA CLEAR Tef/Silicone Septa HCL
 9 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 4 500 mL-Glass Bottle NM AMBER Teflon Liner Unpreserved
 1 500 mL-Glass Bottle NM AMBER Teflon Liner HCL
 2 250 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
 1 125 mL-Plastic Bottle WM CLEAR HNO3 (Diss)
 1 125 mL-Plastic Bottle NM CLEAR HNO3
Location: K-Misty-3, K-Disposed, K-DELILAH, In Lab,
 SUBBED, EHRMS-WIC 10A, K-MET LTS
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Metals	Metals D/6020A	1	As Ba Cd Cr Pb Se Ag
Metals	Metals T/6020A	1	As,Ba,Cd,Cr,Pb,Se,Ag
Semivoa GC	BUTYLTINS/ALS SOP	2	Report list: 17560
Semivoa GC	NW_TPH/NWTPH-Dx	1	Report list: 22364
Semivoa GC	Pest OC ULL/8081B	1	Report list: 20324
Semivoa GC	HERB/8151A	1	Report list: 18726
Semivoa GC	PCB/8082A	1	Report list: 20420
Semivoa GCMS	PAH SIM ULL/8270D	1	Report list: 18998
VOA GCMS	VOC FP/8260C	2	Report list: 20915
VOA GCMS	NW_GAS/NWTPH-Gx	1	Report list: 19509

Data Qualifiers

Lab Standard

- + Possible Tedlar bag artifact.
- A TIC is a suspected aldol-condensation product
- B Analyte found in the associated method blank as well as in the sample.
- BC Reported results are not blank corrected.
- BH The back section of the tube yielded higher results than the front.
- BT Results indicated possible breakthrough; back section $\geq 10\%$ front section.
- C Result identification confirmed.
- D Compound identified in an analysis at a secondary dilution factor
- D Spike was diluted out
- DE Reported results are corrected for desorption efficiency.
- E Estimated value. Concentration above calibration range
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- H1 Sample analysis performed past holding time. See case narrative.
- H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
- H3 Sample was received and analyzed past holding time.
- H4 Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
- I Internal standard not within the specified limits. See case narrative.
- J Estimated Value. Concentration found below MRL.
- K A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
- K Analyte was detected above the method reporting limit prior to normalization.
- K The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- L1 Laboratory control sample recovery outside the specified limits; results may be biased high.
- L2 Laboratory control sample recovery outside the specified limits; results may be biased low.
- L3 Laboratory control sample recovery outside the specified limits.
- M Matrix interference; results may be biased high.
- M The duplicate injection precision not met.
- M1 Matrix interference due to coelution with a non-target compound; results may be biased high.
- N Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- P Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
- P Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
- Q Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
- R Duplicate Precision not met.
- R1 Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
- S Surrogate recovery not within specified limits.
- S The reported value was determined by the Method of Standard Additions (MSA).
- T Analyte is a tentatively identified compound, result is estimated.
- U Compound was analyzed for, but was not detected (ND).
- V1 The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
- V2 The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
- W Result quantified, but the corresponding peak was detected outside the generated retention time window.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- X See case narrative.
- Y Recovery outside limits
- Y The chromatogram resembles a petroleum product but does not match the calibration standard.
- Z The chromatogram does not resemble a petroleum product.
- i The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCetration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Conservation and Natural Resources	TX026932022-1	7/31/2022
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Conservation	04016-2021	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-27	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-28	5/1/2022
United States Department of Agriculture	P330-19-00299	10/10/2022

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112570

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
11/29/21	LKL	001

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
11/29/21	kw	001



Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Intra-Network Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Mark Harris

Project Name: EQRB
Project Number: 319
Project Manager: Jill Betts
Company: Coles and Betts Environmental Consulting, LLC
QAP: LAB QAP

PCDD PCDF
8290A

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
K2112570-001	13-30	2	Water	10/25/21	1320	10/27/21	HOUSTON	II

Special Instructions/Comments Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com. <div style="text-align: center; color: blue; font-size: 1.2em;"> OK. Joe 0-90 #31 01/00. </div> <p>pH Checked _____</p>	Turnaround Requirements _____ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 ✓ STANDARD Requested FAX Date: _____ Requested Report Date: <u>11/16/21</u>	Report Requirements _____ I. Results Only ✓ II. Results + QC Summaries _____ III. Results + QC and Calibration Summaries _____ IV. Data Validation Report with Raw Data PQL/MDL/J <u>Y</u> EDD <u>N</u>	Invoice Information PO# 51K2112570 Bill to
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------

Relinquished By: *[Signature]* 11/1/21
 Received By: *[Signature]* 11/3/21 10:30
 Airbill Number: _____



Cooler Receipt Form

Project Chemist CG

Client/Project AL4-h

Thermometer ID 1221

Date/Time Received: 11-3-21

Initials: PG

Date/Time Logged in: 11-3-21

Initials CG

1. Method of delivery: US Mail Fed Ex UPS DHL Courier Client

2. Samples received in: Cooler Box Envelope Other

3. Were custody seals on coolers? Yes No
Were they intact? Yes No N/A
Were they signed and dated? Yes No N/A

If yes, how many and where?

1-F

4. Packing Material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Sleeves Other

5. Foreign or Regulated Soil? Yes No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
5325 9809 6430		11-3-21	1030	PG	0.4	<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

- 6. Were custody papers properly filled out (ink, signed, dated, etc)? Yes No
- 7. Did all bottles arrive in good condition (not broken, no signs of leakage)? Yes No
- 8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? Yes No
- 9. Were appropriate bottles/containers and volumes received for the requested tests? Yes No
- 10. Did sample labels and tags agree with custody documents? Yes No

Notes, Discrepancies, & Resolutions:

Empty box for notes, discrepancies, and resolutions.

Service request Label:

Empty box for service request label.



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SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
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Preparation Information Benchsheet

Prep Run#: 391497
Team: Semivoa GCMS/SHIVANI NAIDU

Prep Workflow: OrgExtDioxAq-30
Prep Method: Method Sep Funnel/Jar

Status: Prepped
Prep Date/Time: 11/17/21 09:19

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2101164-001	001 Outfall	.01	8290/PCDD PCDF			Water	1060mL	yellow cloudy
2	E2101182-001	001 Outfall	.01	8290/PCDD PCDF			Water	1057mL	yellow cloudy
3	E2101187-005	Field Blank		8290/PCDD PCDF			Water	1048mL	clear
4	EQ2100654-01	MB		8290A/PCDD PCDF			Liquid	1000mL	
5	EQ2100654-02	LCS		8290A/PCDD PCDF			Liquid	1000mL	
6	EQ2100654-03	DLCS		8290A/PCDD PCDF			Liquid	1000mL	
7	K2112570-001	B-30	.20	8290A/PCDD PCDF			Ground Water	1053mL	cloudy

Spiking Solutions

Name: 8290/1613B Cleanup Working Standard	Inventory ID: 219817	Logbook Ref: tw 10/15/21 219817	Expires On: 02/18/2022
--------------------------------------------------	-----------------------------	----------------------------------------	-------------------------------

E2101164-001 100.00µL E2101182-001 100.00µL E2101187-005 100.00µL EQ2100654-01 100.00µL EQ2100654-02 100.00µL EQ2100654-03 100.00µL
 K2112570-001 100.00µL

Name: 1613B Matrix Working Standard	Inventory ID: 220213	Logbook Ref: tw 11/4/21 220213	Expires On: 02/18/2022
--------------------------------------------	-----------------------------	---------------------------------------	-------------------------------

EQ2100654-02 100.00µL EQ2100654-03 100.00µL

Name: 1613B Labeled Working Standard	Inventory ID: 220480	Logbook Ref: SN 11/17/21 220480 2-4 ng/ml	Expires On: 02/18/2022
---------------------------------------------	-----------------------------	--------------------------------------------------	-------------------------------

E2101164-001 1,000.00µL E2101182-001 1,000.00µL E2101187-005 1,000.00µL EQ2100654-01 1,000.00µL EQ2100654-02 1,000.00µL EQ2100654-03 1,000.00µL
 K2112570-001 1,000.00µL

Preparation Materials

Carbon, High Purity	tw 08/09/21 carbon (218695)	Ethyl Acetate 99.9% Minimum EtOAc	TW 12/15/20 (214517)	Glass Wool	tw 7/8/21 glass wool (218851)
Hexanes 95%	tw 09/07/21 hexanes (219108)	Dichloromethane (Methylene Chloride) 99.9% MeCl ₂	tw 11/2/21 (220191)	Sodium Hydroxide 1N NaOH	tw 08/10/21 (218694)
Silica Gel	tw 9/7/21 (220322)	sulfuric acid	8/12/21 tw (218912)	Toluene 99.9% Minimum	tw 09/09/21 toluene (219187)
ColorpHast pH-Indicator Strips	pH-Indicator strips (217936)	Chlorine Test Strips	chlorine test strips (206954)	Sodium Sulfate Anhydrous Reagent Grade Na ₂ SO ₄	tw 04/12/21 (217292)
Tridecane (n-Tridecane)	tw 04/ tridecane (216874)				

Preparation Steps

Step: Extraction	Step: Acid Clean	Step: Silica Gel Clean	Step: Final Volume
Started: 11/17/21 09:19	Started: 11/22/21 10:00	Started: 11/22/21 12:00	Started: 11/22/21 15:00
Finished: 11/17/21 16:16	Finished: 11/22/21 11:00	Finished: 11/22/21 15:00	Finished: 11/22/21 18:00
By: SHIVANI NAIDU	By: SHIVANI NAIDU	By: SHIVANI NAIDU	By: SHIVANI NAIDU
Comments	Comments	Comments	Comments

Preparation Information Benchsheet

Prep Run#: 391497
Team: Semivoa GCMS/SHIVANI NAIDU

Prep WorkFlow: OrgExtDioxAq-30
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/17/21 09:19

Comments: _____

Reviewed By: SW Date: 11/24/21

Chain of Custody

Relinquished By: _____	Date: _____	<u>Extracts Examined</u>
Received By: _____	Date: _____	Yes No



Analytical Results

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10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Sample Name: B-30
Lab Code: K2112570-001

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1053mL

Data File Name: P628532
ICAL Date: 10/14/21

Date Analyzed: 11/24/21 14:38
Date Extracted: 11/17/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628503
Cal Ver. File Name: P628526

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	4.67	4.75			1
1,2,3,7,8-PeCDD	ND	U	2.20	23.7			1
1,2,3,6,7,8-HxCDD	2.13JK		1.98	23.7	0.57	1.000	1
1,2,3,4,7,8-HxCDD	ND	U	2.26	23.7			1
1,2,3,7,8,9-HxCDD	ND	U	1.95	23.7			1
1,2,3,4,6,7,8-HpCDD	41.2		2.09	23.7	1.01	1.000	1
OCDD	320		5.47	47.5	0.99	1.000	1
2,3,7,8-TCDF	ND	U	4.49	4.75			1
1,2,3,7,8-PeCDF	ND	U	2.21	23.7			1
2,3,4,7,8-PeCDF	ND	U	1.99	23.7			1
1,2,3,6,7,8-HxCDF	ND	U	1.90	23.7			1
1,2,3,7,8,9-HxCDF	ND	U	2.22	23.7			1
1,2,3,4,7,8-HxCDF	ND	U	1.80	23.7			1
2,3,4,6,7,8-HxCDF	ND	U	1.80	23.7			1
1,2,3,4,6,7,8-HpCDF	17.5J		2.23	23.7	1.00	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	2.58	23.7			1
OCDF	211		4.34	47.5	0.90	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2112570
Project:	EQRB/319	Date Collected:	10/25/21 13:20
Sample Matrix:	Ground Water	Date Received:	10/27/21 12:45
Sample Name:	B-30	Units:	pg/L
Lab Code:	K2112570-001	Basis:	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	11/24/21 14:38
Prep Method:	Method	Date Extracted:	11/17/21
Sample Amount:	1053mL	Instrument Name:	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P628532	Blank File Name:	P628503
ICAL Date:	10/14/21	Cal Ver. File Name:	P628526

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	4.67	4.75			1
Total Penta-Dioxins	ND	U	2.20	23.7			1
Total Hexa-Dioxins	ND	U	2.05	23.7			1
Total Hepta-Dioxins	75.7		2.09	23.7	1.06		1
Total Tetra-Furans	ND	U	4.49	4.75			1
Total Penta-Furans	ND	U	2.10	23.7			1
Total Hexa-Furans	7.98J		1.92	23.7	1.42		1
Total Hepta-Furans	58.7		2.40	23.7	1.00		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Sample Name: B-30
Lab Code: K2112570-001

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1053mL

Data File Name: P628532
ICAL Date: 10/14/21

Date Analyzed: 11/24/21 14:38
Date Extracted: 11/17/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628503
Cal Ver. File Name: P628526

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	889.945	44		40-135	0.77	1.020
13C-1,2,3,7,8-PeCDD	2000	1089.561	54		40-135	1.54	1.173
13C-1,2,3,4,7,8-HxCDD	2000	1136.213	57		40-135	1.29	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1367.090	68		40-135	1.29	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1112.704	56		40-135	1.11	1.066
13C-OCDD	4000	1643.943	41		40-135	0.90	1.142
13C-2,3,7,8-TCDF	2000	890.479	45		40-135	0.77	0.994
13C-1,2,3,7,8-PeCDF	2000	1024.726	51		40-135	1.57	1.134
13C-2,3,4,7,8-PeCDF	2000	1099.548	55		40-135	1.56	1.165
13C-1,2,3,4,7,8-HxCDF	2000	1246.413	62		40-135	0.50	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1162.892	58		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1132.224	57		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1254.770	63		40-135	0.50	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	954.676	48		40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	999.484	50		40-135	0.43	1.079
37Cl-2,3,7,8-TCDD	800	379.953	47		40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: B-30
Lab Code: K2112570-001

Service Request: K2112570
Date Collected: 10/25/21 13:20
Date Received: 10/27/21 12:45

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	4.67	4.75	1	1	
1,2,3,7,8-PeCDD	ND	2.20	23.7	1	1	
1,2,3,6,7,8-HxCDD	2.13	1.98	23.7	1	0.1	0.213
1,2,3,4,7,8-HxCDD	ND	2.26	23.7	1	0.1	
1,2,3,7,8,9-HxCDD	ND	1.95	23.7	1	0.1	
1,2,3,4,6,7,8-HpCDD	41.2	2.09	23.7	1	0.01	0.412
OCDD	320	5.47	47.5	1	0.0003	0.0960
2,3,7,8-TCDF	ND	4.49	4.75	1	0.1	
1,2,3,7,8-PeCDF	ND	2.21	23.7	1	0.03	
2,3,4,7,8-PeCDF	ND	1.99	23.7	1	0.3	
1,2,3,6,7,8-HxCDF	ND	1.90	23.7	1	0.1	
1,2,3,7,8,9-HxCDF	ND	2.22	23.7	1	0.1	
1,2,3,4,7,8-HxCDF	ND	1.80	23.7	1	0.1	
2,3,4,6,7,8-HxCDF	ND	1.80	23.7	1	0.1	
1,2,3,4,6,7,8-HpCDF	17.5	2.23	23.7	1	0.01	0.175
1,2,3,4,7,8,9-HpCDF	ND	2.58	23.7	1	0.01	
OCDF	211	4.34	47.5	1	0.0003	0.0633
Total TEQ						0.959

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: EQ2100654-01

Service Request: K2112570
Date Collected: NA
Date Received: NA
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL
Data File Name: P628503
ICAL Date: 10/14/21

Date Analyzed: 11/23/21 13:17
Date Extracted: 11/17/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628503
Cal Ver. File Name: P628500

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	2.41	5.00			1
1,2,3,7,8-PeCDD	ND	U	1.38	25.0			1
1,2,3,6,7,8-HxCDD	ND	U	1.34	25.0			1
1,2,3,4,7,8-HxCDD	ND	U	1.56	25.0			1
1,2,3,7,8,9-HxCDD	ND	U	1.33	25.0			1
1,2,3,4,6,7,8-HpCDD	2.73JK		1.51	25.0	1.28	1.000	1
OCDD	14.6JK		2.02	50.0	1.05	1.000	1
2,3,7,8-TCDF	ND	U	1.62	5.00			1
1,2,3,7,8-PeCDF	ND	U	1.22	25.0			1
2,3,4,7,8-PeCDF	ND	U	1.10	25.0			1
1,2,3,6,7,8-HxCDF	ND	U	1.05	25.0			1
1,2,3,7,8,9-HxCDF	ND	U	1.13	25.0			1
1,2,3,4,7,8-HxCDF	ND	U	0.980	25.0			1
2,3,4,6,7,8-HxCDF	ND	U	0.957	25.0			1
1,2,3,4,6,7,8-HpCDF	ND	U	1.40	25.0			1
1,2,3,4,7,8,9-HpCDF	ND	U	1.75	25.0			1
OCDF	3.32JK		2.30	50.0	0.52	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water
Sample Name: Method Blank
Lab Code: EQ2100654-01

Service Request: K2112570
Date Collected: NA
Date Received: NA
Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL
Data File Name: P628503
ICAL Date: 10/14/21

Date Analyzed: 11/23/21 13:17
Date Extracted: 11/17/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628503
Cal Ver. File Name: P628500

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	2.41	5.00			1
Total Penta-Dioxins	ND	U	1.38	25.0			1
Total Hexa-Dioxins	ND	U	1.40	25.0			1
Total Hepta-Dioxins	ND	U	1.51	25.0			1
Total Tetra-Furans	ND	U	1.62	5.00			1
Total Penta-Furans	ND	U	1.16	25.0			1
Total Hexa-Furans	ND	U	1.03	25.0			1
Total Hepta-Furans	ND	U	1.56	25.0			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Sample Name: Method Blank
Lab Code: EQ2100654-01

Service Request: K2112570
Date Collected: NA
Date Received: NA

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628503
ICAL Date: 10/14/21

Date Analyzed: 11/23/21 13:17
Date Extracted: 11/17/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628503
Cal Ver. File Name: P628500

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1097.988	55		40-135	0.77	1.020
13C-1,2,3,7,8-PeCDD	2000	1192.482	60		40-135	1.54	1.174
13C-1,2,3,4,7,8-HxCDD	2000	1244.345	62		40-135	1.26	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1518.486	76		40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1388.016	69		40-135	1.05	1.066
13C-OCDD	4000	2523.549	63		40-135	0.89	1.142
13C-2,3,7,8-TCDF	2000	1098.589	55		40-135	0.80	0.994
13C-1,2,3,7,8-PeCDF	2000	1127.412	56		40-135	1.59	1.134
13C-2,3,4,7,8-PeCDF	2000	1202.063	60		40-135	1.59	1.165
13C-1,2,3,4,7,8-HxCDF	2000	1351.794	68		40-135	0.51	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1246.119	62		40-135	0.51	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1264.850	63		40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1396.245	70		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1254.975	63		40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1176.495	59		40-135	0.45	1.079
37Cl-2,3,7,8-TCDD	800	393.216	49		40-135	NA	1.020



Accuracy & Precision

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Analyzed: 11/23/21
Date Extracted: 11/17/21

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: pg/L
Basis: NA
Analysis Lot: 747351

Lab Control Sample
EQ2100654-02

Duplicate Lab Control Sample
EQ2100654-03

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,3,4,6,7,8-HpCDD	738	1000	74	759	1000	76	70-130	3	25
1,2,3,4,7,8-HxCDD	815	1000	82	843	1000	84	70-130	3	25
1,2,3,6,7,8-HxCDD	754	1000	75	736	1000	74	70-130	2	25
1,2,3,7,8,9-HxCDD	795	1000	79	811	1000	81	70-130	2	25
1,2,3,7,8-PeCDD	806	1000	81	791	1000	79	70-130	2	25
2,3,7,8-TCDD	136	200	68 *	151	200	76	70-130	11	25
OCDD	1650	2000	82	1670	2000	84	70-130	1	25
1,2,3,4,6,7,8-HpCDF	782	1000	78	809	1000	81	70-130	3	25
1,2,3,4,7,8,9-HpCDF	761	1000	76	786	1000	79	70-130	3	25
1,2,3,4,7,8-HxCDF	720	1000	72	723	1000	72	70-130	<1	25
1,2,3,6,7,8-HxCDF	755	1000	76	779	1000	78	70-130	3	25
1,2,3,7,8,9-HxCDF	715	1000	72	757	1000	76	70-130	6	25
1,2,3,7,8-PeCDF	756	1000	76	767	1000	77	70-130	1	25
2,3,4,6,7,8-HxCDF	718	1000	72	759	1000	76	70-130	5	25
2,3,4,7,8-PeCDF	738	1000	74	766	1000	77	70-130	4	25
2,3,7,8-TCDF	139	200	69 *	140	200	70	70-130	<1	25
OCDF	1640	2000	82	1680	2000	84	70-130	2	25

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100654-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628510
ICAL Date: 10/14/21

Date Analyzed: 11/23/21 19:06
Date Extracted: 11/17/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628503
Cal Ver. File Name: P628500

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	136		8.12	8.12	0.79	1.001	1
1,2,3,7,8-PeCDD	806		2.85	25.0	1.63	1.000	1
1,2,3,6,7,8-HxCDD	754		1.82	25.0	1.21	1.000	1
1,2,3,4,7,8-HxCDD	815		2.01	25.0	1.22	1.000	1
1,2,3,7,8,9-HxCDD	795		1.77	25.0	1.28	1.007	1
1,2,3,4,6,7,8-HpCDD	738		1.98	25.0	1.02	1.000	1
OCDD	1650		1.92	50.0	0.88	1.000	1
2,3,7,8-TCDF	139		6.05	6.05	0.77	1.001	1
1,2,3,7,8-PeCDF	756		2.50	25.0	1.53	1.001	1
2,3,4,7,8-PeCDF	738		1.83	25.0	1.54	1.000	1
1,2,3,6,7,8-HxCDF	755		1.77	25.0	1.24	1.000	1
1,2,3,7,8,9-HxCDF	715		1.87	25.0	1.21	1.000	1
1,2,3,4,7,8-HxCDF	720		1.76	25.0	1.28	1.000	1
2,3,4,6,7,8-HxCDF	718		1.49	25.0	1.25	1.000	1
1,2,3,4,6,7,8-HpCDF	782		3.89	25.0	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	761		4.90	25.0	0.99	1.000	1
OCDF	1640		2.20	50.0	0.89	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100654-02

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628510
ICAL Date: 10/14/21

Date Analyzed: 11/23/21 19:06
Date Extracted: 11/17/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628503
Cal Ver. File Name: P628500

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	138		8.12	8.12	0.79		1
Total Penta-Dioxins	806		2.85	25.0	1.63		1
Total Hexa-Dioxins	2360		1.86	25.0	1.22		1
Total Hepta-Dioxins	738		1.98	25.0	1.02		1
Total Tetra-Furans	139		6.05	6.05	0.77		1
Total Penta-Furans	1500		2.12	25.0	1.59		1
Total Hexa-Furans	2910		1.71	25.0	1.28		1
Total Hepta-Furans	1540		4.37	25.0	1.01		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100654-02

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628510
ICAL Date: 10/14/21

Date Analyzed: 11/23/21 19:06
Date Extracted: 11/17/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628503
Cal Ver. File Name: P628500

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	497.565	25	Y	40-135	0.78	1.019
13C-1,2,3,7,8-PeCDD	2000	1067.105	53		40-135	1.57	1.173
13C-1,2,3,4,7,8-HxCDD	2000	1371.071	69		40-135	1.24	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1623.775	81		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1534.723	77		40-135	1.09	1.066
13C-OCDD	4000	2824.610	71		40-135	0.89	1.142
13C-2,3,7,8-TCDF	2000	499.391	25	Y	40-135	0.79	0.994
13C-1,2,3,7,8-PeCDF	2000	808.096	40		40-135	1.60	1.133
13C-2,3,4,7,8-PeCDF	2000	1085.027	54		40-135	1.56	1.164
13C-1,2,3,4,7,8-HxCDF	2000	1337.566	67		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1306.809	65		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1398.529	70		40-135	0.52	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1557.426	78		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1441.922	72		40-135	0.45	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1375.683	69		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	172.947	22	Y	40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100654-03

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Date Analyzed: 11/23/21 19:57
Date Extracted: 11/17/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628503
Cal Ver. File Name: P628500

Data File Name: P628511
ICAL Date: 10/14/21

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	151		13.5	13.5	0.65	1.000	1
1,2,3,7,8-PeCDD	791		2.73	25.0	1.60	1.000	1
1,2,3,6,7,8-HxCDD	736		1.56	25.0	1.30	1.000	1
1,2,3,4,7,8-HxCDD	843		1.79	25.0	1.27	1.000	1
1,2,3,7,8,9-HxCDD	811		1.54	25.0	1.28	1.006	1
1,2,3,4,6,7,8-HpCDD	759		2.28	25.0	1.05	1.001	1
OCDD	1670		2.83	50.0	0.92	1.000	1
2,3,7,8-TCDF	140		12.2	12.2	0.68	1.000	1
1,2,3,7,8-PeCDF	767		3.86	25.0	1.63	1.000	1
2,3,4,7,8-PeCDF	766		2.49	25.0	1.50	1.000	1
1,2,3,6,7,8-HxCDF	779		1.52	25.0	1.25	1.000	1
1,2,3,7,8,9-HxCDF	757		1.57	25.0	1.22	1.000	1
1,2,3,4,7,8-HxCDF	723		1.53	25.0	1.21	1.000	1
2,3,4,6,7,8-HxCDF	759		1.30	25.0	1.22	1.000	1
1,2,3,4,6,7,8-HpCDF	809		2.33	25.0	1.01	1.000	1
1,2,3,4,7,8,9-HpCDF	786		2.83	25.0	1.02	1.000	1
OCDF	1680		2.04	50.0	0.90	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100654-03

Units: pg/L
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Data File Name: P628511
ICAL Date: 10/14/21

Date Analyzed: 11/23/21 19:57
Date Extracted: 11/17/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628503
Cal Ver. File Name: P628500

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	151		13.5	13.5	0.65		1
Total Penta-Dioxins	791		2.73	25.0	1.60		1
Total Hexa-Dioxins	2390		1.62	25.0	1.27		1
Total Hepta-Dioxins	759		2.28	25.0	1.05		1
Total Tetra-Furans	143		12.2	12.2	0.68		1
Total Penta-Furans	1530		3.04	25.0	1.63		1
Total Hexa-Furans	3030		1.47	25.0	1.21		1
Total Hepta-Furans	1590		2.57	25.0	1.01		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Ground Water

Service Request: K2112570
Date Collected: NA
Date Received: NA

Sample Name: Duplicate Lab Control Sample
Lab Code: EQ2100654-03

Units: Percent
Basis: NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 1000mL

Date Analyzed: 11/23/21 19:57
Date Extracted: 11/17/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628503
Cal Ver. File Name: P628500

Data File Name: P628511
ICAL Date: 10/14/21

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	294.634	15	Y	40-135	0.75	1.020
13C-1,2,3,7,8-PeCDD	2000	1006.911	50		40-135	1.53	1.173
13C-1,2,3,4,7,8-HxCDD	2000	1397.538	70		40-135	1.26	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1683.520	84		40-135	1.28	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1566.689	78		40-135	1.08	1.066
13C-OCDD	4000	2813.314	70		40-135	0.92	1.142
13C-2,3,7,8-TCDF	2000	289.514	14	Y	40-135	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	664.412	33	Y	40-135	1.59	1.134
13C-2,3,4,7,8-PeCDF	2000	1014.039	51		40-135	1.58	1.165
13C-1,2,3,4,7,8-HxCDF	2000	1325.637	66		40-135	0.51	0.971
13C-1,2,3,6,7,8-HxCDF	2000	1293.185	65		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1423.606	71		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1543.367	77		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1426.310	71		40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1433.499	72		40-135	0.43	1.079
37Cl-2,3,7,8-TCDD	800	106.817	13	Y	40-135	NA	1.020



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January 11, 2022

Analytical Report for Service Request No: K2112572

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

RE: EQRB / 319

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 27, 2021
For your reference, these analyses have been assigned our service request number **K2112572**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at Mark.Harris@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Mark Harris
Project Manager



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Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Metals
Butyltins
Semi-Volatile Petroleum Products by GCFID
Volatile Petroleum Products by GCFID
Low Level Organochlorine Pesticides by GC
Polychlorinated Biphenyls (PCBs)
Chlorinated Herbicides
Volatile Organic Compounds by GC MS, Unpreserved
Polycyclic Aromatic Hydrocarbons
Low Level Semivolatile Organic Compounds by GCMS
Subcontract Lab Results

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
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Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB
Sample Matrix: Soil

Service Request: K2112572
Date Received: 10/27/2021

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Two soil samples were received for analysis at ALS Environmental on 10/27/2021. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

Method 8270D, 11/23/2021: The upper control criterion was exceeded for Bis(2-ethylhexyl) Phthalate in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8270D, 11/23/2021: The upper control criterion was exceeded for multiple analytes in Laboratory Control Sample (LCS). The analytes in question were not detected in the associated field samples. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Method 8270D, 11/23/2021: The upper control criterion was exceeded for Nitrobenzene-d5 in Method Blank. No target analytes were detected in the Method Blank. Since the apparent problem equates to a high bias, the data quality was not significantly affected. No further corrective action was appropriate.

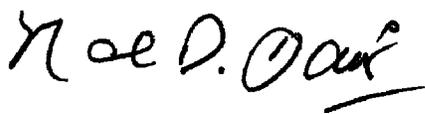
Semivolatile GC:

Method 8081B, 12/03/2021: The lower control criterion was exceeded for surrogate tetrachloro-m-xylene (TCMX) in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence show a low bias for this analyte, however results are still within ALS criteria. The secondary surrogate, decachlorobiphenyl, was within control criteria. No further corrective action was taken.

Method 8081B, 12/03/2021: The analysis of 8081B requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Decachlorobiphenyl. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method 8081B, 12/05/2021: The upper control criterion was exceeded for 4,4'-DDD, Endosulfan Sulfate and Endrin Ketone in Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Method 8081B, 12/05/2021: The upper control criterion was exceeded for Methoxychlor in Laboratory Control Sample (LCS). The analyte in question were not detected in the associated field samples. The confirmation column contained a interference peak and was not quantitated. The error associated with elevated recovery indicated a high bias. The sample data was not significantly

Approved by 

Date 01/11/2022

affected. No further corrective action was appropriate.

Method 8151A, 01/04/2022: The analysis of Herbicides by 8151A requires the use of dual column confirmation. When the Continuing Calibration Verification (CCV) criterion is met for both columns, the lower of the two sample results is generally reported. The primary evaluation criteria were not met on the confirmation column for 2,4-dichlorophenylacetic acid. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method ALS SOP Butyltins, 11/11/2021: The analysis of ALS SOP Butyltins requires the use of dual column confirmation. The primary evaluation criteria were not met on the confirmation column for Tri-n-propyltin. The results were reported from the column with an acceptable CCV. The data quality was not affected. No further corrective action was necessary.

Method NWTPH-Dx, 11/04/2021: The upper control criterion was exceeded for n-Triacontane, o-Terphenyl and Diesel Range Organics in the closing Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the target analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Metals:

Method 6020A, 11/03/2021: The Relative Percent Difference (RPD) for the replicate analysis of Barium in sample B-30 (0-10) Comp was outside the normal ALS control limits. The variability in the results was attributed to the heterogeneous character of the sample. Standard mixing techniques were used, but were not sufficient for complete homogenization of this sample.

Subcontracted Analytical Parameters:

Dioxins and Furans by EPA Method 8290

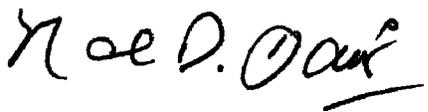
The analysis for Dioxins and Furans was performed at ALS Houston, Texas Laboratory. The data for this analysis is included in the corresponding section of this report.

Volatiles by GC/MS:

Method 8260C, 11/04/2021: Samples were received with insufficient holding time. The analysis was performed as soon as possible after receipt by the laboratory. The data was flagged to indicate the holding time violation.

Method 8260C, 11/04/2021: Several analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV). In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Approved by



Date

01/11/2022



Chain of Custody

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
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KJ117573
CHAIN OF CUSTODY

COLES + BETTS ENVIRONMENTAL CONSULTING, LLC
5741 NE Flanders St., Portland, OR 97213
office: 503-477-6150
mobile: 503-819-2835

Laboratory: ALS Labs
Lab Project No. _____

Chain of Custody No. 1 of 1

Project Manager: Jill Betts
Project No.: 319
Project Name: EQRB
Collected by: *MSK*

Liquid with Sediment Sample
Test Filtrate _____ Test Sediment _____ Test Both _____

Multi-Phase Sample
Test One (which) _____ Test Separately _____ Shake _____

Samples Received at 4C (Y or N) _____
Appropriate Containers Used (Y or N) _____
Provide Verbal Results (Y or N) No
Provide Preliminary Results Yes

Comments: Discreet samples will be composited per instructions provided by Jill Betts with Coles & Betts Environmental via e-mail.
→ please composite:
B-30(0-10) = B-30 0-5 + B-30 5-10
B-30(10-25) = B-30 10-15 + B-30 15-20 + B-30 20-25

Matrix: Soil, Water, Other

Analyses to be Performed:
Number of Containers
NWTFH-Gx
NWTFH-Dx
VOCs by EPA Method 8260B
PAHs by EPA Method 8270SIM
Low Level SVOCs by EPA Method 8270D
Low Level Organochlorine Pesticides by EPA Method 8081B
PCBs by EPA Method 8082A
PCDD and PCDFs by EPA Method 8290A
Butyltins
RCRA 8 Metals by EPA Method 200.6020A/7471B
RUSH

Lab ID	Sample #	Date	Time	Sample Description	Soil	Water	Other	Number of Containers	NWTFH-Gx	NWTFH-Dx	VOCs by EPA Method 8260B	PAHs by EPA Method 8270SIM	Low Level SVOCs by EPA Method 8270D	Low Level Organochlorine Pesticides by EPA Method 8081B	PCBs by EPA Method 8082A	PCDD and PCDFs by EPA Method 8290A	Butyltins	RCRA 8 Metals by EPA Method 200.6020A/7471B	RUSH	Remarks	
	B-30 0-5	10/25/21	12:50	0-5'	X			4													
	B-30 5-10		12:55	5-10'	X			4													
	B-30 10-15		1:55	10-15'	X			4													
	B-30 15-20		2:05	15-20'	X			4													
	B-30 20-25		2:15	20-25'	X			4													
	B-30(0-10)								X	X	X	X	X	X	X	X	X	X	X		
	B-30(10-25)								X	X	X	X	X	X	X	X	X	X	X		

Relinquished by: *[Signature]* Company: *For Coles + Betts* Date: 10/27/21 Time: 10:30
Received by: *[Signature]* Company: *ALS*

Relinquished by: *[Signature]* Company: *ALS* Date: 10/27/21 Time: 12:45
Received by: _____ Company: _____

Relinquished by: _____ Company: _____ Date: _____ Time: _____
Received by: _____ Company: _____

PM Mark

Cooler Receipt and Preservation Form

Client Colust Betts Env. Consulting Service Request K21 12572
Received: 10/27/21 Opened: 10/27/21 By: [Signature] Unloaded: 10/27/21 By: [Signature]

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 - 2. Samples were received in: (circle) Cooler Box Envelope Other NA
 - 3. Were custody seals on coolers? NA Y N If yes, how many and where? _____
If present, were custody seals intact? Y N If present, were they signed and dated? Y N
 - 4. Was a Temperature Blank present in cooler? NA Y N If yes, notate the temperature in the appropriate column below:
If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
 - 5. Were samples received within the method specified temperature ranges? NA Y N
If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. NA Y N
- If applicable, tissue samples were received: Frozen Partially Thawed Thawed

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp indicate with "X"	PM Notified If out of temp	Tracking Number / NA	Filed
7.6	10.4	IR01	---	X	Yes		

- 6. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves melted ice
- 7. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 8. Were samples received in good condition (unbroken) NA Y N
- 9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA Y N
- 10. Did all sample labels and tags agree with custody papers? NA Y N
- 11. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 12. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 13. Were VOA vials received without headspace? Indicate in the table below NA Y N
- 14. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: All notified of Temp.



Total Solids

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Analysis Method: 160.3 Modified
Prep Method: None

Service Request: K2112572
Date Collected: 10/25/21
Date Received: 10/27/21
Units: Percent
Basis: As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
B-30 (0-10) Comp	K2112572-003	86.3	-	-	1	10/29/21 15:36	
B-30 (10-25) Comp	K2112572-007	86.7	-	-	1	10/29/21 15:36	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 10/29/21

Replicate Sample Summary

Inorganic Parameters

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Units: Percent
Basis: As Received

<u>Analyte Name</u>	<u>Analysis Method</u>	<u>MRL</u>	<u>Sample Result</u>	<u>Duplicate Sample K2112572-003DUP Result</u>	<u>Average</u>	<u>RPD</u>	<u>RPD Limit</u>
Solids, Total	160.3 Modified	-	86.3	85.9	86.1	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.38	mg/Kg	0.52	0.06	5	11/03/21 08:50	11/01/21	
Barium	6020A	79.8	mg/Kg	0.052	0.021	5	11/03/21 08:50	11/01/21	
Cadmium	6020A	0.051	mg/Kg	0.021	0.007	5	11/03/21 08:50	11/01/21	
Chromium	6020A	13.0	mg/Kg	0.21	0.06	5	11/03/21 08:50	11/01/21	
Lead	6020A	3.70	mg/Kg	0.052	0.021	5	11/03/21 08:50	11/01/21	
Mercury	7471B	0.032	mg/Kg	0.021	0.005	1	11/03/21 13:14	11/02/21	
Selenium	6020A	0.10 J	mg/Kg	1.0	0.09	5	11/03/21 08:50	11/01/21	
Silver	6020A	0.025	mg/Kg	0.021	0.004	5	11/03/21 08:50	11/01/21	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45

Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	2.25	mg/Kg	0.56	0.07	5	11/03/21 09:01	11/01/21	
Barium	6020A	69.3	mg/Kg	0.056	0.022	5	11/03/21 09:01	11/01/21	
Cadmium	6020A	0.051	mg/Kg	0.022	0.008	5	11/03/21 09:01	11/01/21	
Chromium	6020A	12.1	mg/Kg	0.22	0.07	5	11/03/21 09:01	11/01/21	
Lead	6020A	3.54	mg/Kg	0.056	0.022	5	11/03/21 09:01	11/01/21	
Mercury	7471B	0.023	mg/Kg	0.022	0.006	1	11/03/21 13:21	11/02/21	
Selenium	6020A	0.1 J	mg/Kg	1.1	0.1	5	11/03/21 09:01	11/01/21	
Silver	6020A	0.029	mg/Kg	0.022	0.004	5	11/03/21 09:01	11/01/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2121424-03

Service Request: K2112572
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic	6020A	ND U	mg/Kg	0.5	0.06	5	11/03/21 08:46	11/01/21	
Barium	6020A	ND U	mg/Kg	0.05	0.020	5	11/03/21 08:46	11/01/21	
Cadmium	6020A	ND U	mg/Kg	0.020	0.007	5	11/03/21 08:46	11/01/21	
Chromium	6020A	ND U	mg/Kg	0.20	0.06	5	11/03/21 08:46	11/01/21	
Lead	6020A	ND U	mg/Kg	0.05	0.020	5	11/03/21 08:46	11/01/21	
Selenium	6020A	ND U	mg/Kg	1.0	0.09	5	11/03/21 08:46	11/01/21	
Silver	6020A	0.008 J	mg/Kg	0.020	0.004	5	11/03/21 08:46	11/01/21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2121423-03

Service Request: K2112572
Date Collected: NA
Date Received: NA
Basis: Dry

Total Metals

Analyte Name	Analysis Method	Result	Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Mercury	7471B	ND U	mg/Kg	0.02	0.005	1	11/03/21 13:11	11/02/21	

ALS Group USA, Corp.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 11/03/21

Replicate Sample Summary
Total Metals

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate	Average	RPD	RPD Limit
					Sample KQ2121424-01 Result			
Arsenic	6020A	0.46	0.06	2.38	2.28	2.33	4	20
Barium	6020A	0.046	0.018	79.8	118	98.9	39 *	20
Cadmium	6020A	0.018	0.006	0.051	0.057	0.054	13	20
Chromium	6020A	0.18	0.06	13.0	12.9	13.0	<1	20
Lead	6020A	0.046	0.018	3.70	4.02	3.86	8	20
Selenium	6020A	0.92	0.08	0.10 J	0.09 J	0.10	13	20
Silver	6020A	0.018	0.004	0.025	0.023	0.024	5	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 11/03/21

Replicate Sample Summary

Total Metals

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2121423-01			
Mercury	7471B	0.021	0.005	0.032	0.013 J	0.023	87 #	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 11/3/21
Date Extracted: 11/1/21

Matrix Spike Summary
Total Metals

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003
Analysis Method: 6020A
Prep Method: EPA 3050B

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2121424-02

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	2.38	110	107	100	75-125
Barium	79.8	304	214	105	75-125
Cadmium	0.051	11.1	10.7	103	75-125
Chromium	13.0	55.8	43.0	100	75-125
Lead	3.70	120	107	108	75-125
Selenium	0.10 J	111	107	103	75-125
Silver	0.025	10.7	10.7	99	75-125

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Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 11/3/21
Date Extracted: 11/2/21

Matrix Spike Summary
Total Metals

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003
Analysis Method: 7471B
Prep Method: Method

Units: mg/Kg
Basis: Dry

Matrix Spike
KQ2121423-02

<u>Analyte Name</u>	<u>Sample Result</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Mercury	0.032	0.530	0.525	95	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 11/03/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2121424-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Arsenic	6020A	96.5	100	97	80-120
Barium	6020A	206	200	103	80-120
Cadmium	6020A	10.0	10.0	100	80-120
Chromium	6020A	40.2	40.0	101	80-120
Lead	6020A	100	100	100	80-120
Selenium	6020A	102	100	102	80-120
Silver	6020A	10.0	10.0	100	80-120

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 11/03/21

Lab Control Sample Summary
Total Metals

Units:mg/Kg
Basis:Dry

Lab Control Sample
KQ2121423-04

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Mercury	7471B	0.496	0.500	99	80-120



Butyltins

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.2	0.30	1	11/11/21 22:15	11/4/21	
Di-n-butyltin Cation	ND U	1.2	0.22	1	11/11/21 22:15	11/4/21	
Tri-n-butyltin Cation	ND U	1.2	0.50	1	11/11/21 22:15	11/4/21	
Tetra-n-butyltin	ND U	1.2	0.51	1	11/11/21 22:15	11/4/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	67	10 - 152	11/11/21 22:15	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45

Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	1.1	0.30	1	11/11/21 23:07	11/4/21	
Di-n-butyltin Cation	0.26 JP	1.1	0.22	1	11/11/21 23:07	11/4/21	
Tri-n-butyltin Cation	0.69 J	1.1	0.50	1	11/11/21 23:07	11/4/21	
Tetra-n-butyltin	ND U	1.1	0.51	1	11/11/21 23:07	11/4/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	98	10 - 152	11/11/21 23:07	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572

SURROGATE RECOVERY SUMMARY

Butyltins

Analysis Method: ALS SOP
Extraction Method: Method

Sample Name	Lab Code	Tri-n-propyltin
		10-152
B-30 (0-10) Comp	K2112572-003	67
B-30 (10-25) Comp	K2112572-007	98
Method Blank	KQ2121420-04	81
Lab Control Sample	KQ2121420-03	83
B-30 (0-10) Comp	KQ2121420-01	81
B-30 (0-10) Comp	KQ2121420-02	117

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 11/11/21
Date Extracted: 11/4/21

Duplicate Matrix Spike Summary
Butyltins

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003
Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Result	Matrix Spike KQ2121420-01		Duplicate Matrix Spike KQ2121420-02		% Rec Limits	RPD	RPD Limit	
			Spike Amount	% Rec	Result	Spike Amount				% Rec
n-Butyltin Cation	ND U	ND U	17.7	0 *	4.72 P	17.9	26	10-200	NC	40
Di-n-butyltin Cation	ND U	15.6	21.8	72	19.4	22.0	88	10-190	22	40
Tri-n-butyltin Cation	ND U	22.4	25.4	88	26.9	25.5	106	10-186	18	40
Tetra-n-butyltin	ND U	16.3	28.5	57	26.8	28.7	94	10-194	49*	40

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Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121420-04

Units: ug/Kg
Basis: Dry

Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
n-Butyltin Cation	ND U	0.98	0.26	1	11/11/21 21:40	11/4/21	
Di-n-butyltin Cation	ND U	0.98	0.19	1	11/11/21 21:40	11/4/21	
Tri-n-butyltin Cation	ND U	0.98	0.43	1	11/11/21 21:40	11/4/21	
Tetra-n-butyltin	ND U	0.98	0.44	1	11/11/21 21:40	11/4/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Tri-n-propyltin	81	10 - 152	11/11/21 21:40	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 11/11/21
Date Extracted: 11/04/21

Lab Control Sample Summary
Butyltins

Analysis Method: ALS SOP
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 746363

Lab Control Sample
KQ2121420-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Di-n-butyltin Cation	10.3 P	19.2	54	10-190
n-Butyltin Cation	11.6	15.6	75	10-200
Tetra-n-butyltin	20.9	25.0	84	10-194
Tri-n-butyltin Cation	16.8	22.3	75	10-186

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.7

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.22	0.26	0.42	47	JP	1	11/11/21 23:07
Tri-n-butyltin Cation	0.50	0.69	0.99	36	J	1	11/11/21 23:07

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: KQ2121420-01

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.22	15.6	21.6	32		1	11/11/21 22:32
Tetra-n-butyltin	0.51	16.3	21.7	28		1	11/11/21 22:32
Tri-n-butyltin Cation	0.49	22.4	31.2	33		1	11/11/21 22:32

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: KQ2121420-02

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.3

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.22	19.4	25.9	29		1	11/11/21 22:49
Tetra-n-butyltin	0.51	26.8	32.6	20		1	11/11/21 22:49
Tri-n-butyltin Cation	0.50	26.9	37.6	33		1	11/11/21 22:49
n-Butyltin Cation	0.30	4.72	7.97	51	P	1	11/11/21 22:49

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2121420-03

Service Request: K2112572
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Butyltins

Analytical Method: ALS SOP
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Di-n-butyltin Cation	0.19	10.3	15.6	41	P	1	11/11/21 21:58
Tetra-n-butyltin	0.44	20.9	21.7	4		1	11/11/21 21:58
Tri-n-butyltin Cation	0.43	16.8	21.2	23		1	11/11/21 21:58
n-Butyltin Cation	0.26	11.6	14.9	25		1	11/11/21 21:58



Semi-Volatile Petroleum Products by GC/FID

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1317 South 13th Avenue, Kelso, WA 98626
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	4.3 J	28	2.1	1	11/04/21 21:11	11/3/21	*
Residual Range Organics (C25 - C36 RRO)	11 J	110	4.4	1	11/04/21 21:11	11/3/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	101	50 - 150	11/04/21 21:11	
n-Triacontane	103	50 - 150	11/04/21 21:11	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	20 J	28	2.1	1	11/04/21 21:55	11/3/21	*
Residual Range Organics (C25 - C36 RRO)	16 J	110	4.5	1	11/04/21 21:55	11/3/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	127	50 - 150	11/04/21 21:55	
n-Triacontane	128	50 - 150	11/04/21 21:55	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572

SURROGATE RECOVERY SUMMARY
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Extraction Method: EPA 3550B

Sample Name	Lab Code	o-Terphenyl	n-Triacontane
		50-150	50-150
B-30 (0-10) Comp	K2112572-003	101	103
B-30 (10-25) Comp	K2112572-007	127	128
B-30 (0-10) Comp	KQ2121657-01	98	100
Method Blank	KQ2121657-04	123	119
Lab Control Sample	KQ2121657-03	106	106

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 11/04/21

Replicate Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2121657-01 Result			
Diesel Range Organics (C12 - C25 DRO)	NWTPH-Dx	29	2.1	4.3 J	3.0 J	3.64	36	40
Residual Range Organics (C25 - C36 RRO)	NWTPH-Dx	110	4.5	11 J	7.8 J	9.59	38	40

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121657-04

Units: mg/Kg
Basis: Dry

Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Diesel Range Organics (C12 - C25 DRO)	ND U	24	1.8	1	11/04/21 20:49	11/3/21	
Residual Range Organics (C25 - C36 RRO)	6.6 J	97	3.9	1	11/04/21 20:49	11/3/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
o-Terphenyl	123	50 - 150	11/04/21 20:49	
n-Triacontane	119	50 - 150	11/04/21 20:49	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 11/04/21
Date Extracted: 11/03/21

Lab Control Sample Summary
Semi-Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Dx
Prep Method: EPA 3550B

Units: mg/Kg
Basis: Dry
Analysis Lot: 745018

Lab Control Sample
KQ2121657-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Diesel Range Organics (C12 - C25 DRO)	276	267	104	42-134
Residual Range Organics (C25 - C36 RRO)	121	133	91	48-141



Volatile Petroleum Products by GC/FID

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	12	1.5	99.94	11/02/21 19:21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	50 - 150	11/02/21 19:21	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	13	1.6	108.92	11/02/21 19:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	50 - 150	11/02/21 19:44	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572

SURROGATE RECOVERY SUMMARY
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene
		50-150
B-30 (0-10) Comp	K2112572-003	89
B-30 (10-25) Comp	K2112572-007	99
B-30 (10-25) Comp	KQ2121602-01	98
Method Blank	KQ2121602-04	98
Lab Control Sample	KQ2121602-05	94
Duplicate Lab Control Sample	KQ2121602-06	96

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 11/02/21

Replicate Sample Summary
Volatile Petroleum Products by GC/FID

Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Units: mg/Kg
Basis: Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
					KQ2121602-01 Result			
Gasoline Range Organics (Toluene-Naphthalene GRO)	NWTPH-Gx	13	1.6	ND U	ND U	NC	NC	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121602-04

Units: mg/Kg
Basis: Dry

Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Gasoline Range Organics (Toluene-Naphthalene GRO)	ND U	5.0	0.62	50	11/02/21 17:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	50 - 150	11/02/21 17:24	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 11/02/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Petroleum Products by GC/FID

Analysis Method: NWTPH-Gx
Prep Method: None

Units: mg/Kg
Basis: Dry
Analysis Lot: 744670

Lab Control Sample
KQ2121602-05

Duplicate Lab Control Sample
KQ2121602-06

Analyte Name	Lab Control Sample			Duplicate Lab Control Sample			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Gasoline Range Organics (Toluene-Naphthalene GRO)	20.4	25.0	82	20.9	25.0	84	76-114	2	40



Low Level Organochlorine Pesticides by GC

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Phone (360)577-7222 Fax (360)636-1068
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.59	1	12/05/21 21:27	11/3/21	
alpha-BHC	ND U	1.0	0.29	1	12/05/21 21:27	11/3/21	
beta-BHC	ND Ui	2.1	2.1	1	12/05/21 21:27	11/3/21	
delta-BHC	ND U	1.0	0.28	1	12/05/21 21:27	11/3/21	
gamma-BHC (Lindane)	0.43 J	1.0	0.31	1	12/05/21 21:27	11/3/21	
cis-Chlordane	ND U	1.0	0.41	1	12/05/21 21:27	11/3/21	
trans-Chlordane	ND U	1.0	0.38	1	12/05/21 21:27	11/3/21	
4,4'-DDD	ND U	2.0	0.60	1	12/05/21 21:27	11/3/21	*
4,4'-DDE	ND U	1.0	0.40	1	12/05/21 21:27	11/3/21	
4,4'-DDT	ND Ui	2.7	2.7	1	12/05/21 21:27	11/3/21	
Dieldrin	ND Ui	1.2	1.2	1	12/05/21 21:27	11/3/21	
Endosulfan I	ND U	1.0	0.37	1	12/05/21 21:27	11/3/21	
Endosulfan II	ND Ui	2.0	1.2	1	12/05/21 21:27	11/3/21	
Endosulfan Sulfate	ND Ui	2.0	1.8	1	12/05/21 21:27	11/3/21	*
Endrin	ND U	1.0	0.32	1	12/05/21 21:27	11/3/21	
Endrin Aldehyde	ND Ui	2.0	0.96	1	12/05/21 21:27	11/3/21	
Endrin Ketone	ND U	1.0	0.45	1	12/05/21 21:27	11/3/21	
Heptachlor	ND Ui	1.3	1.3	1	12/05/21 21:27	11/3/21	
Heptachlor Epoxide	ND U	2.0	0.66	1	12/05/21 21:27	11/3/21	
Methoxychlor	ND U	2.0	0.71	1	12/05/21 21:27	11/3/21	*
Toxaphene	ND U	100	34	1	12/05/21 21:27	11/3/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	72	10 - 134	12/05/21 21:27	
Tetrachloro-m-xylene	43	10 - 121	12/05/21 21:27	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45

Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.3	0.68	1	12/05/21 22:06	11/3/21	
alpha-BHC	ND Ui	1.1	0.38	1	12/05/21 22:06	11/3/21	
beta-BHC	ND Ui	1.5	1.5	1	12/05/21 22:06	11/3/21	
delta-BHC	ND U	1.1	0.33	1	12/05/21 22:06	11/3/21	
gamma-BHC (Lindane)	ND Ui	1.1	0.64	1	12/05/21 22:06	11/3/21	
cis-Chlordane	ND U	1.1	0.48	1	12/05/21 22:06	11/3/21	
trans-Chlordane	ND U	1.1	0.44	1	12/05/21 22:06	11/3/21	
4,4'-DDD	ND U	2.3	0.69	1	12/05/21 22:06	11/3/21	*
4,4'-DDE	ND U	1.1	0.46	1	12/05/21 22:06	11/3/21	
4,4'-DDT	ND Ui	2.3	1.4	1	12/05/21 22:06	11/3/21	
Dieldrin	ND U	1.1	0.26	1	12/05/21 22:06	11/3/21	
Endosulfan I	ND U	1.1	0.43	1	12/05/21 22:06	11/3/21	
Endosulfan II	ND Ui	2.5	2.5	1	12/05/21 22:06	11/3/21	
Endosulfan Sulfate	ND Ui	2.3	1.7	1	12/05/21 22:06	11/3/21	*
Endrin	ND Ui	1.1	0.81	1	12/05/21 22:06	11/3/21	
Endrin Aldehyde	ND U	2.3	1.1	1	12/05/21 22:06	11/3/21	
Endrin Ketone	ND U	1.1	0.52	1	12/05/21 22:06	11/3/21	
Heptachlor	ND U	1.1	0.45	1	12/05/21 22:06	11/3/21	
Heptachlor Epoxide	ND U	2.3	0.76	1	12/05/21 22:06	11/3/21	
Methoxychlor	ND U	2.3	0.82	1	12/05/21 22:06	11/3/21	*
Toxaphene	ND U	110	40	1	12/05/21 22:06	11/3/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	76	10 - 134	12/05/21 22:06	
Tetrachloro-m-xylene	41	10 - 121	12/05/21 22:06	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572

SURROGATE RECOVERY SUMMARY
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Extraction Method: EPA 3546

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10-134	10-121
B-30 (0-10) Comp	K2112572-003	72	43
B-30 (10-25) Comp	K2112572-007	76	41
Method Blank	KQ2121494-09	75	44
Lab Control Sample	KQ2121494-07	74	41
Lab Control Sample	KQ2121494-08	59	31

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121494-09

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Aldrin	ND U	2.0	0.59	1	12/05/21 19:31	11/3/21	
alpha-BHC	1.2 P	1.0	0.29	1	12/05/21 19:31	11/3/21	
beta-BHC	ND Ui	7.5	7.5	1	12/05/21 19:31	11/3/21	
delta-BHC	0.66 JP	1.0	0.28	1	12/05/21 19:31	11/3/21	
gamma-BHC (Lindane)	ND U	1.0	0.31	1	12/05/21 19:31	11/3/21	
cis-Chlordane	ND U	1.0	0.41	1	12/05/21 19:31	11/3/21	
trans-Chlordane	ND U	1.0	0.38	1	12/05/21 19:31	11/3/21	
4,4'-DDD	ND Ui	2.0	1.5	1	12/05/21 19:31	11/3/21	
4,4'-DDE	0.62 J	1.0	0.40	1	12/05/21 19:31	11/3/21	
4,4'-DDT	ND Ui	2.0	1.3	1	12/05/21 19:31	11/3/21	
Dieldrin	ND Ui	2.0	2.0	1	12/05/21 19:31	11/3/21	
Endosulfan I	ND U	1.0	0.37	1	12/05/21 19:31	11/3/21	
Endosulfan II	ND U	2.0	0.69	1	12/05/21 19:31	11/3/21	
Endosulfan Sulfate	ND Ui	2.1	2.1	1	12/05/21 19:31	11/3/21	
Endrin	ND U	1.0	0.32	1	12/05/21 19:31	11/3/21	
Endrin Aldehyde	ND U	2.0	0.89	1	12/05/21 19:31	11/3/21	
Endrin Ketone	ND Ui	2.1	2.1	1	12/05/21 19:31	11/3/21	
Heptachlor	ND Ui	1.0	0.51	1	12/05/21 19:31	11/3/21	
Heptachlor Epoxide	ND U	2.0	0.66	1	12/05/21 19:31	11/3/21	
Methoxychlor	13 P	2.0	0.71	1	12/05/21 19:31	11/3/21	
Toxaphene	ND U	100	34	1	12/05/21 19:31	11/3/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	75	10 - 134	12/05/21 19:31	
Tetrachloro-m-xylene	44	10 - 121	12/05/21 19:31	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 12/05/21
Date Extracted: 11/03/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 748081

Lab Control Sample
KQ2121494-07

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
4,4'-DDD	16.1	25.0	65	10-180
4,4'-DDE	14.5	25.0	58	17-94
4,4'-DDT	21.7 P	25.0	87	17-104
Aldrin	16.1	25.0	64	18-89
alpha-BHC	13.6	25.0	54	16-96
beta-BHC	19.3	25.0	77	16-106
cis-Chlordane	18.4	25.0	74	20-93
delta-BHC	20.2	25.0	81	20-95
Dieldrin	18.2	25.0	73	19-88
Endosulfan I	18.0	25.0	72	16-87
Endosulfan II	18.6	25.0	74	15-117
Endosulfan Sulfate	22.2	25.0	89	17-98
Endrin	20.3	25.0	81	10-107
Endrin Aldehyde	18.4	25.0	74	21-94
Endrin Ketone	20.2	25.0	81	19-97
gamma-BHC (Lindane)	17.8	25.0	71	17-97
Heptachlor	20.9 P	25.0	84	13-111
Heptachlor Epoxide	17.9	25.0	72	18-92
Methoxychlor	35.1 P	25.0	140 *	17-122
trans-Chlordane	20.6	25.0	82	10-103

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 12/05/21
Date Extracted: 11/03/21

Lab Control Sample Summary
Low Level Organochlorine Pesticides by GC

Analysis Method: 8081B
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 748081

Lab Control Sample
KQ2121494-08

<u>Analyte Name</u>	<u>Result</u>	<u>Spike Amount</u>	<u>% Rec</u>	<u>% Rec Limits</u>
Toxaphene	629	1000	63	16-114

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.3

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
gamma-BHC (Lindane)	0.31	0.43	0.60	33	J	1	12/05/21 21:27

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received:

Sample Name: Lab Control Sample
Lab Code: KQ2121494-07

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDD	0.60	16.1	21.8	30		1	12/05/21 20:10
4,4'-DDE	0.40	14.5	16.6	14		1	12/05/21 20:10
4,4'-DDT	0.61	21.7	34.0	44	P	1	12/05/21 20:10
Aldrin	0.59	16.1	16.3	1		1	12/05/21 20:10
Dieldrin	0.22	18.2	19.0	4		1	12/05/21 20:10
Endosulfan I	0.37	18.0	18.6	3		1	12/05/21 20:10
Endosulfan II	0.69	18.6	19.9	7		1	12/05/21 20:10
Endosulfan Sulfate	0.99	22.2	21.7	2		1	12/05/21 20:10
Endrin	0.32	20.3	21.0	3		1	12/05/21 20:10
Endrin Aldehyde	0.89	18.4	23.3	24		1	12/05/21 20:10
Endrin Ketone	0.45	20.2	22.4	10		1	12/05/21 20:10
Heptachlor	0.39	20.9	61.4	98	P	1	12/05/21 20:10
Heptachlor Epoxide	0.66	17.9	19.8	10		1	12/05/21 20:10
Methoxychlor	0.71	35.1	0.71	192	P	1	12/05/21 20:10
alpha-BHC	0.29	13.6	14.3	5		1	12/05/21 20:10
beta-BHC	0.27	19.3	24.7	25		1	12/05/21 20:10
cis-Chlordane	0.41	18.4	21.9	17		1	12/05/21 20:10
delta-BHC	0.28	20.2	21.6	7		1	12/05/21 20:10
gamma-BHC (Lindane)	0.31	17.8	18.2	2		1	12/05/21 20:10
trans-Chlordane	0.38	20.6	21.4	4		1	12/05/21 20:10

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2121494-08

Service Request: K2112572
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Toxaphene	34	629	716	13		1	12/05/21 20:48

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2121494-09

Service Request: K2112572
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Low Level Organochlorine Pesticides by GC

Analytical Method: 8081B
Prep Method: EPA 3546

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
4,4'-DDE	0.40	0.62	0.76	20	J	1	12/05/21 19:31
Methoxychlor	0.71	13	29	76	P	1	12/05/21 19:31
alpha-BHC	0.29	1.2	3.1	88	P	1	12/05/21 19:31
delta-BHC	0.28	0.66	1.6	83	JP	1	12/05/21 19:31



Polychlorinated Biphenyls (PCBs)

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/2021
Date Received: 10/27/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1221	ND	U	20	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1232	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1242	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1248	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1254	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1260	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1262	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1268	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	92	20-155	12/23/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/2021
Date Received: 10/27/2021

Polychlorinated Biphenyls (PCBs)

Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	12	3.4	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1221	ND	U	23	3.4	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1232	ND	U	12	3.4	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1242	ND	U	12	3.4	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1248	ND	U	12	3.4	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1254	ND	U	12	3.4	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1260	ND	U	12	3.4	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1262	ND	U	12	3.4	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1268	ND	U	12	3.4	1	11/03/21	12/23/21	KWG2102906	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	109	20-155	12/23/21	Acceptable

Comments: _____

Analytical Results

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG2102906-4
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1221	ND	U	17	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1232	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1242	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1248	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1254	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1260	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1262	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	
Aroclor 1268	ND	U	10	2.9	1	11/03/21	12/23/21	KWG2102906	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	111	20-155	12/23/21	Acceptable

Comments: _____

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572

**Surrogate Recovery Summary
 Polychlorinated Biphenyls (PCBs)**

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
B-30 (0-10) Comp	K2112572-003	92
B-30 (10-25) Comp	K2112572-007	109
Method Blank	KWG2102906-4	111
B-30 (0-10) CompMS	KWG2102906-1	111
B-30 (0-10) CompDMS	KWG2102906-2	110
Lab Control Sample	KWG2102906-3	89

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 20-155

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Extracted: 11/03/2021
Date Analyzed: 12/23/2021

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003
Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102906

Analyte Name	Sample Result	B-30 (0-10) CompMS KWG2102906-1 Matrix Spike			B-30 (0-10) CompDMS KWG2102906-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Aroclor 1016	ND	91.6	106	86	85.5	101	85	44-119	7	40
Aroclor 1260	ND	106	106	100	93.2	101	93	56-130	13	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Coles and Betts Environmental Consulting
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Extracted: 11/03/2021
Date Analyzed: 12/23/2021

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3546
Analysis Method: 8082A

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG2102906

Lab Control Sample
 KWG2102906-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Aroclor 1016	93.2	100	93	44-119
Aroclor 1260	97.8	100	98	56-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



Chlorinated Herbicides

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	86	7.0	1	01/04/22 20:51	12/7/21	
2,4,5-TP (Silvex)	ND U	86	4.2	1	01/04/22 20:51	12/7/21	
2,4-D	ND U	86	14	1	01/04/22 20:51	12/7/21	
2,4-DB	ND U	86	9.4	1	01/04/22 20:51	12/7/21	
Dalapon	ND U	86	9.5	1	12/09/21 21:12	12/7/21	
Dicamba	ND U	86	7.5	1	01/04/22 20:51	12/7/21	
Dichlorprop	ND U	86	5.9	1	01/04/22 20:51	12/7/21	
Dinoseb	ND U	86	4.7	1	01/04/22 20:51	12/7/21	
MCPA	ND U	8600	560	1	01/04/22 20:51	12/7/21	
MCPP	ND U	8600	800	1	01/04/22 20:51	12/7/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	52	26 - 127	01/04/22 20:51	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45

Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	85	6.8	1	01/04/22 22:08	12/7/21	
2,4,5-TP (Silvex)	ND U	85	4.1	1	01/04/22 22:08	12/7/21	
2,4-D	ND U	85	14	1	01/04/22 22:08	12/7/21	
2,4-DB	16 JP	85	9.2	1	01/04/22 22:08	12/7/21	
Dalapon	ND U	85	9.4	1	12/09/21 22:29	12/7/21	
Dicamba	ND U	85	7.3	1	01/04/22 22:08	12/7/21	
Dichlorprop	ND U	85	5.8	1	01/04/22 22:08	12/7/21	
Dinoseb	ND U	85	4.6	1	01/04/22 22:08	12/7/21	
MCPA	ND U	8500	550	1	01/04/22 22:08	12/7/21	
MCPP	ND U	8500	780	1	01/04/22 22:08	12/7/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	61	26 - 127	01/04/22 22:08	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572

SURROGATE RECOVERY SUMMARY
Chlorinated Herbicides by GC

Analysis Method: 8151A
Extraction Method: Method

Sample Name	Lab Code	2,4-Dichlorophenylacetic Acid 26-127
B-30 (0-10) Comp	K2112572-003	52
B-30 (10-25) Comp	K2112572-007	61
Method Blank	KQ2121422-04	54
Lab Control Sample	KQ2121422-03	60
B-30 (0-10) Comp	KQ2121422-01	63
B-30 (0-10) Comp	KQ2121422-02	41

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21
Date Received: 10/27/21
Date Analyzed: 12/09/21 - 01/04/22
Date Extracted: 12/7/21

Duplicate Matrix Spike Summary
Chlorinated Herbicides by GC

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003
Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry

Analyte Name	Sample Result	Matrix Spike KQ2121422-01			Duplicate Matrix Spike KQ2121422-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
2,4,5-T	ND U	255	283	90	182	287	63	21-137	34	40
2,4,5-TP (Silvex)	ND U	234	283	83	164	287	57	34-129	35	40
2,4-D	ND U	235	283	83	169	287	59	35-129	33	40
2,4-DB	ND U	352	283	124	218	287	76	20-131	47*	40
Dalapon	ND U	79.9 J	283	28	42.6 J	287	15	14-100	61*	40
Dicamba	ND U	202	283	71	142	287	50	32-129	34	40
Dichlorprop	ND U	193	283	68	135	287	47	23-140	35	40
Dinoseb	ND U	169	283	60	107	287	37	10-121	45*	40
MCPA	ND U	22000	28300	78	16200	28700	57	13-130	30	40
MCPP	ND U	19500	28300	69	13800	28700	48	10-169	35	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: KQ2121422-04

Service Request: K2112572
Date Collected: NA
Date Received: NA
Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2,4,5-T	ND U	50	4.0	1	01/04/22 20:00	12/7/21	
2,4,5-TP (Silvex)	ND U	50	2.4	1	01/04/22 20:00	12/7/21	
2,4-D	ND U	50	7.7	1	01/04/22 20:00	12/7/21	
2,4-DB	ND Ui	50	12	1	01/04/22 20:00	12/7/21	
Dalapon	ND U	50	5.5	1	12/09/21 20:21	12/7/21	
Dicamba	ND U	50	4.3	1	01/04/22 20:00	12/7/21	
Dichlorprop	ND U	50	3.4	1	01/04/22 20:00	12/7/21	
Dinoseb	ND U	50	2.7	1	01/04/22 20:00	12/7/21	
MCPA	ND U	5000	320	1	01/04/22 20:00	12/7/21	
MCPD	ND U	5000	460	1	01/04/22 20:00	12/7/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2,4-Dichlorophenylacetic Acid	54	26 - 127	01/04/22 20:00	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 01/04/22
Date Extracted: 12/07/21

Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 751109

Lab Control Sample
KQ2121422-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-T	133	167	80	44-125
2,4,5-TP (Silvex)	121	167	73	46-125
2,4-D	124	167	74	46-120
2,4-DB	159	167	95	30-126
Dicamba	112	167	67	43-119
Dichlorprop	106	167	63	47-108
Dinoseb	93.1	167	56	25-110
MCPA	11900	16700	71	40-128
MCPB	11600	16700	70	49-134

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 12/09/21
Date Extracted: 12/07/21

Lab Control Sample Summary
Chlorinated Herbicides by GC

Analysis Method: 8151A
Prep Method: Method

Units: ug/Kg
Basis: Dry
Analysis Lot: 751114

Lab Control Sample
KQ2121422-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Dalapon	38.1 J	167	23	13-100

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.7

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
2,4-DB	9.2	16	30	61	JP	1	01/04/22 22:08

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: KQ2121422-01

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.3

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Dalapon	9.4	79.9	81.2	2	J	1	12/09/21 21:38
2,4,5-T	6.8	255	261	2		1	01/04/22 21:17
2,4,5-TP (Silvex)	4.1	234	240	3		1	01/04/22 21:17
2,4-D	14	235	248	5		1	01/04/22 21:17
2,4-DB	9.2	352	394	11		1	01/04/22 21:17
Dicamba	7.4	202	206	2		1	01/04/22 21:17
Dichlorprop	5.8	193	198	3		1	01/04/22 21:17
Dinoseb	4.6	169	170	<1		1	01/04/22 21:17
MCPA	550	22000	25300	14		1	01/04/22 21:17
MCPP	790	19500	23700	19		1	01/04/22 21:17

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: KQ2121422-02

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21

Units: ug/Kg
Basis: Dry
Percent Solids: 86.3

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Dalapon	9.5	42.6	44.7	5	J	1	12/09/21 22:03
2,4,5-T	6.9	182	184	1		1	01/04/22 21:42
2,4,5-TP (Silvex)	4.2	164	169	3		1	01/04/22 21:42
2,4-D	14	169	174	3		1	01/04/22 21:42
2,4-DB	9.3	218	239	9		1	01/04/22 21:42
Dicamba	7.4	142	147	3		1	01/04/22 21:42
Dichlorprop	5.9	135	138	2		1	01/04/22 21:42
Dinoseb	4.7	107	113	5		1	01/04/22 21:42
MCPA	560	16200	16500	2		1	01/04/22 21:42
MCPP	800	13800	17100	21		1	01/04/22 21:42

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Confirmation Results

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
SRM Matrix: Soil
Sample Name: Lab Control Sample
Lab Code: KQ2121422-03

Service Request: K2112572
Date Collected: NA
Date Received:

Units: ug/Kg
Basis: Dry

Chlorinated Herbicides by GC

Analytical Method: 8151A
Prep Method: Method

	MDL	Primary Result	Confirmation Result	RPD	Q	Dilution Factor	Date Analyzed
Dalapon	5.5	38.1	40.3	6	J	1	12/09/21 20:47
2,4,5-T	4.0	133	135	1		1	01/04/22 20:26
2,4,5-TP (Silvex)	2.4	121	125	3		1	01/04/22 20:26
2,4-D	7.7	124	128	3		1	01/04/22 20:26
2,4-DB	5.4	159	194	20		1	01/04/22 20:26
Dicamba	4.3	112	115	3		1	01/04/22 20:26
Dichlorprop	3.4	106	110	4		1	01/04/22 20:26
Dinoseb	2.7	93.1	97.4	5		1	01/04/22 20:26
MCPA	320	11900	12900	8		1	01/04/22 20:26
MCPP	460	11600	13100	12		1	01/04/22 20:26



Volatile Organic Compounds by GC/MS, Unpreserved

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	6.0	0.14	1	11/04/21 14:57	*
1,1,1-Trichloroethane (TCA)	ND U	6.0	0.14	1	11/04/21 14:57	*
1,1,2,2-Tetrachloroethane	ND U	6.0	0.16	1	11/04/21 14:57	*
1,1,2-Trichloroethane	ND U	6.0	0.18	1	11/04/21 14:57	*
1,1-Dichloroethane	ND U	6.0	0.15	1	11/04/21 14:57	*
1,1-Dichloroethene	ND U	6.0	0.30	1	11/04/21 14:57	*
1,1-Dichloropropene	ND U	6.0	0.16	1	11/04/21 14:57	*
1,2,3-Trichlorobenzene	ND U	24	0.23	1	11/04/21 14:57	*
1,2,3-Trichloropropane	ND U	6.0	0.54	1	11/04/21 14:57	*
1,2,4-Trichlorobenzene	ND U	24	0.16	1	11/04/21 14:57	*
1,2,4-Trimethylbenzene	ND U	24	0.065	1	11/04/21 14:57	*
1,2-Dibromo-3-chloropropane	ND U	24	0.48	1	11/04/21 14:57	*
1,2-Dibromoethane (EDB)	ND U	24	0.12	1	11/04/21 14:57	*
1,2-Dichlorobenzene	ND U	6.0	0.092	1	11/04/21 14:57	*
1,2-Dichloroethane (EDC)	ND U	6.0	0.084	1	11/04/21 14:57	*
1,2-Dichloropropane	ND U	6.0	0.16	1	11/04/21 14:57	*
1,3,5-Trimethylbenzene	ND U	24	0.11	1	11/04/21 14:57	*
1,3-Dichlorobenzene	ND U	6.0	0.12	1	11/04/21 14:57	*
1,3-Dichloropropane	ND U	6.0	0.15	1	11/04/21 14:57	*
1,4-Dichlorobenzene	ND U	6.0	0.11	1	11/04/21 14:57	*
2,2-Dichloropropane	ND U	6.0	0.12	1	11/04/21 14:57	*
2-Butanone (MEK)	ND U	24	1.1	1	11/04/21 14:57	*
2-Chlorotoluene	ND U	24	0.15	1	11/04/21 14:57	*
2-Hexanone	ND U	24	1.2	1	11/04/21 14:57	*
4-Chlorotoluene	ND U	24	0.11	1	11/04/21 14:57	*
4-Isopropyltoluene	ND U	24	0.077	1	11/04/21 14:57	*
4-Methyl-2-pentanone (MIBK)	ND U	24	2.2	1	11/04/21 14:57	*
Acetone	13 J	24	3.5	1	11/04/21 14:57	*
Benzene	ND U	6.0	0.065	1	11/04/21 14:57	*
Bromobenzene	ND U	6.0	0.11	1	11/04/21 14:57	*
Bromochloromethane	ND U	6.0	0.29	1	11/04/21 14:57	*
Bromodichloromethane	ND U	6.0	0.20	1	11/04/21 14:57	*
Bromoform	ND U	6.0	0.17	1	11/04/21 14:57	*
Bromomethane	ND U	6.0	0.24	1	11/04/21 14:57	*
Carbon Disulfide	ND U	6.0	0.11	1	11/04/21 14:57	*
Carbon Tetrachloride	ND U	6.0	0.12	1	11/04/21 14:57	*
Chlorobenzene	ND U	6.0	0.078	1	11/04/21 14:57	*
Chloroethane	ND U	6.0	0.89	1	11/04/21 14:57	*
Chloroform	ND U	6.0	0.14	1	11/04/21 14:57	*
Chloromethane	ND U	6.0	0.22	1	11/04/21 14:57	*
Dibromochloromethane	ND U	6.0	0.22	1	11/04/21 14:57	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	6.0	0.34	1	11/04/21 14:57	*
Dichlorodifluoromethane	ND U	6.0	0.15	1	11/04/21 14:57	*
Ethylbenzene	ND U	6.0	0.12	1	11/04/21 14:57	*
Hexachlorobutadiene	ND U	24	0.48	1	11/04/21 14:57	*
Isopropylbenzene	ND U	24	0.097	1	11/04/21 14:57	*
Methylene Chloride	2.2 J	12	0.20	1	11/04/21 14:57	*
Naphthalene	ND U	24	0.16	1	11/04/21 14:57	*
Styrene	ND U	6.0	0.17	1	11/04/21 14:57	*
Tetrachloroethene (PCE)	ND U	6.0	0.20	1	11/04/21 14:57	*
Toluene	ND U	6.0	0.18	1	11/04/21 14:57	*
Trichloroethene (TCE)	ND U	6.0	0.18	1	11/04/21 14:57	*
Trichlorofluoromethane	ND U	6.0	0.11	1	11/04/21 14:57	*
Vinyl Chloride	ND U	6.0	0.22	1	11/04/21 14:57	*
cis-1,2-Dichloroethene	ND U	6.0	0.15	1	11/04/21 14:57	*
cis-1,3-Dichloropropene	ND U	6.0	0.16	1	11/04/21 14:57	*
m,p-Xylenes	ND U	6.0	0.12	1	11/04/21 14:57	*
n-Butylbenzene	ND U	24	0.083	1	11/04/21 14:57	*
n-Propylbenzene	ND U	24	0.16	1	11/04/21 14:57	*
o-Xylene	ND U	6.0	0.097	1	11/04/21 14:57	*
sec-Butylbenzene	ND U	24	0.089	1	11/04/21 14:57	*
tert-Butylbenzene	ND U	24	0.17	1	11/04/21 14:57	*
trans-1,2-Dichloroethene	ND U	6.0	0.15	1	11/04/21 14:57	*
trans-1,3-Dichloropropene	ND U	6.0	0.14	1	11/04/21 14:57	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	61 - 133	11/04/21 14:57	
Dibromofluoromethane	97	59 - 134	11/04/21 14:57	
Toluene-d8	100	77 - 122	11/04/21 14:57	

ALS Group USA, Corp.
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45

Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.8	0.13	1	11/04/21 15:18	*
1,1,1-Trichloroethane (TCA)	ND U	5.8	0.13	1	11/04/21 15:18	*
1,1,2,2-Tetrachloroethane	ND U	5.8	0.16	1	11/04/21 15:18	*
1,1,2-Trichloroethane	ND U	5.8	0.18	1	11/04/21 15:18	*
1,1-Dichloroethane	ND U	5.8	0.14	1	11/04/21 15:18	*
1,1-Dichloroethene	ND U	5.8	0.29	1	11/04/21 15:18	*
1,1-Dichloropropene	ND U	5.8	0.16	1	11/04/21 15:18	*
1,2,3-Trichlorobenzene	ND U	23	0.22	1	11/04/21 15:18	*
1,2,3-Trichloropropane	ND U	5.8	0.53	1	11/04/21 15:18	*
1,2,4-Trichlorobenzene	ND U	23	0.16	1	11/04/21 15:18	*
1,2,4-Trimethylbenzene	ND U	23	0.063	1	11/04/21 15:18	*
1,2-Dibromo-3-chloropropane	ND U	23	0.47	1	11/04/21 15:18	*
1,2-Dibromoethane (EDB)	ND U	23	0.11	1	11/04/21 15:18	*
1,2-Dichlorobenzene	ND U	5.8	0.089	1	11/04/21 15:18	*
1,2-Dichloroethane (EDC)	ND U	5.8	0.081	1	11/04/21 15:18	*
1,2-Dichloropropane	ND U	5.8	0.16	1	11/04/21 15:18	*
1,3,5-Trimethylbenzene	ND U	23	0.11	1	11/04/21 15:18	*
1,3-Dichlorobenzene	ND U	5.8	0.11	1	11/04/21 15:18	*
1,3-Dichloropropane	ND U	5.8	0.14	1	11/04/21 15:18	*
1,4-Dichlorobenzene	ND U	5.8	0.10	1	11/04/21 15:18	*
2,2-Dichloropropane	ND U	5.8	0.12	1	11/04/21 15:18	*
2-Butanone (MEK)	ND U	23	1.1	1	11/04/21 15:18	*
2-Chlorotoluene	ND U	23	0.14	1	11/04/21 15:18	*
2-Hexanone	ND U	23	1.1	1	11/04/21 15:18	*
4-Chlorotoluene	ND U	23	0.11	1	11/04/21 15:18	*
4-Isopropyltoluene	ND U	23	0.074	1	11/04/21 15:18	*
4-Methyl-2-pentanone (MIBK)	ND U	23	2.1	1	11/04/21 15:18	*
Acetone	11 J	23	3.4	1	11/04/21 15:18	*
Benzene	ND U	5.8	0.063	1	11/04/21 15:18	*
Bromobenzene	ND U	5.8	0.11	1	11/04/21 15:18	*
Bromochloromethane	ND U	5.8	0.28	1	11/04/21 15:18	*
Bromodichloromethane	ND U	5.8	0.19	1	11/04/21 15:18	*
Bromoform	ND U	5.8	0.17	1	11/04/21 15:18	*
Bromomethane	ND U	5.8	0.24	1	11/04/21 15:18	*
Carbon Disulfide	ND U	5.8	0.11	1	11/04/21 15:18	*
Carbon Tetrachloride	ND U	5.8	0.11	1	11/04/21 15:18	*
Chlorobenzene	ND U	5.8	0.076	1	11/04/21 15:18	*
Chloroethane	ND U	5.8	0.86	1	11/04/21 15:18	*
Chloroform	ND U	5.8	0.13	1	11/04/21 15:18	*
Chloromethane	ND U	5.8	0.21	1	11/04/21 15:18	*
Dibromochloromethane	ND U	5.8	0.21	1	11/04/21 15:18	*

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45

Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.8	0.33	1	11/04/21 15:18	*
Dichlorodifluoromethane	ND U	5.8	0.14	1	11/04/21 15:18	*
Ethylbenzene	ND U	5.8	0.11	1	11/04/21 15:18	*
Hexachlorobutadiene	ND U	23	0.47	1	11/04/21 15:18	*
Isopropylbenzene	ND U	23	0.094	1	11/04/21 15:18	*
Methylene Chloride	1.7 J	12	0.19	1	11/04/21 15:18	*
Naphthalene	ND U	23	0.16	1	11/04/21 15:18	*
Styrene	ND U	5.8	0.17	1	11/04/21 15:18	*
Tetrachloroethene (PCE)	ND U	5.8	0.19	1	11/04/21 15:18	*
Toluene	ND U	5.8	0.18	1	11/04/21 15:18	*
Trichloroethene (TCE)	ND U	5.8	0.18	1	11/04/21 15:18	*
Trichlorofluoromethane	ND U	5.8	0.099	1	11/04/21 15:18	*
Vinyl Chloride	ND U	5.8	0.21	1	11/04/21 15:18	*
cis-1,2-Dichloroethene	ND U	5.8	0.14	1	11/04/21 15:18	*
cis-1,3-Dichloropropene	ND U	5.8	0.16	1	11/04/21 15:18	*
m,p-Xylenes	ND U	5.8	0.12	1	11/04/21 15:18	*
n-Butylbenzene	ND U	23	0.080	1	11/04/21 15:18	*
n-Propylbenzene	ND U	23	0.16	1	11/04/21 15:18	*
o-Xylene	ND U	5.8	0.094	1	11/04/21 15:18	*
sec-Butylbenzene	ND U	23	0.086	1	11/04/21 15:18	*
tert-Butylbenzene	ND U	23	0.17	1	11/04/21 15:18	*
trans-1,2-Dichloroethene	ND U	5.8	0.14	1	11/04/21 15:18	*
trans-1,3-Dichloropropene	ND U	5.8	0.13	1	11/04/21 15:18	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	61 - 133	11/04/21 15:18	
Dibromofluoromethane	93	59 - 134	11/04/21 15:18	
Toluene-d8	102	77 - 122	11/04/21 15:18	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene	Dibromofluoromethane	Toluene-d8
		61-133	59-134	77-122
B-30 (0-10) Comp	K2112572-003	94	97	100
B-30 (10-25) Comp	K2112572-007	95	93	102
Method Blank	KQ2121838-11	98	94	101
Lab Control Sample	KQ2121838-09	98	97	101
Duplicate Lab Control Sample	KQ2121838-10	94	98	102

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121838-11

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	ND U	5.0	0.11	1	11/04/21 12:31	
1,1,1-Trichloroethane (TCA)	ND U	5.0	0.11	1	11/04/21 12:31	
1,1,2,2-Tetrachloroethane	ND U	5.0	0.13	1	11/04/21 12:31	
1,1,2-Trichloroethane	ND U	5.0	0.15	1	11/04/21 12:31	
1,1-Dichloroethane	ND U	5.0	0.12	1	11/04/21 12:31	
1,1-Dichloroethene	ND U	5.0	0.25	1	11/04/21 12:31	
1,1-Dichloropropene	ND U	5.0	0.13	1	11/04/21 12:31	
1,2,3-Trichlorobenzene	ND U	20	0.19	1	11/04/21 12:31	
1,2,3-Trichloropropane	ND U	5.0	0.45	1	11/04/21 12:31	
1,2,4-Trichlorobenzene	ND U	20	0.13	1	11/04/21 12:31	
1,2,4-Trimethylbenzene	ND U	20	0.054	1	11/04/21 12:31	
1,2-Dibromo-3-chloropropane	ND U	20	0.40	1	11/04/21 12:31	
1,2-Dibromoethane (EDB)	ND U	20	0.094	1	11/04/21 12:31	
1,2-Dichlorobenzene	ND U	5.0	0.077	1	11/04/21 12:31	
1,2-Dichloroethane (EDC)	ND U	5.0	0.070	1	11/04/21 12:31	
1,2-Dichloropropane	ND U	5.0	0.13	1	11/04/21 12:31	
1,3,5-Trimethylbenzene	ND U	20	0.092	1	11/04/21 12:31	
1,3-Dichlorobenzene	ND U	5.0	0.094	1	11/04/21 12:31	
1,3-Dichloropropane	ND U	5.0	0.12	1	11/04/21 12:31	
1,4-Dichlorobenzene	ND U	5.0	0.086	1	11/04/21 12:31	
2,2-Dichloropropane	ND U	5.0	0.098	1	11/04/21 12:31	
2-Butanone (MEK)	ND U	20	0.90	1	11/04/21 12:31	
2-Chlorotoluene	ND U	20	0.12	1	11/04/21 12:31	
2-Hexanone	ND U	20	0.93	1	11/04/21 12:31	
4-Chlorotoluene	ND U	20	0.088	1	11/04/21 12:31	
4-Isopropyltoluene	ND U	20	0.064	1	11/04/21 12:31	
4-Methyl-2-pentanone (MIBK)	ND U	20	1.8	1	11/04/21 12:31	
Acetone	4.6 J	20	2.9	1	11/04/21 12:31	
Benzene	ND U	5.0	0.054	1	11/04/21 12:31	
Bromobenzene	ND U	5.0	0.088	1	11/04/21 12:31	
Bromochloromethane	ND U	5.0	0.24	1	11/04/21 12:31	
Bromodichloromethane	ND U	5.0	0.16	1	11/04/21 12:31	
Bromoform	ND U	5.0	0.14	1	11/04/21 12:31	
Bromomethane	ND U	5.0	0.20	1	11/04/21 12:31	
Carbon Disulfide	ND U	5.0	0.092	1	11/04/21 12:31	
Carbon Tetrachloride	ND U	5.0	0.094	1	11/04/21 12:31	
Chlorobenzene	ND U	5.0	0.065	1	11/04/21 12:31	
Chloroethane	ND U	5.0	0.74	1	11/04/21 12:31	
Chloroform	ND U	5.0	0.11	1	11/04/21 12:31	
Chloromethane	ND U	5.0	0.18	1	11/04/21 12:31	
Dibromochloromethane	ND U	5.0	0.18	1	11/04/21 12:31	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121838-11

Units: ug/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Q
Dibromomethane	ND U	5.0	0.28	1	11/04/21 12:31	
Dichlorodifluoromethane	ND U	5.0	0.12	1	11/04/21 12:31	
Ethylbenzene	ND U	5.0	0.094	1	11/04/21 12:31	
Hexachlorobutadiene	ND U	20	0.40	1	11/04/21 12:31	
Isopropylbenzene	ND U	20	0.081	1	11/04/21 12:31	
Methylene Chloride	1.1 J	10	0.16	1	11/04/21 12:31	
Naphthalene	ND U	20	0.13	1	11/04/21 12:31	
Styrene	ND U	5.0	0.14	1	11/04/21 12:31	
Tetrachloroethene (PCE)	ND U	5.0	0.16	1	11/04/21 12:31	
Toluene	ND U	5.0	0.15	1	11/04/21 12:31	
Trichloroethene (TCE)	ND U	5.0	0.15	1	11/04/21 12:31	
Trichlorofluoromethane	ND U	5.0	0.085	1	11/04/21 12:31	
Vinyl Chloride	ND U	5.0	0.18	1	11/04/21 12:31	
cis-1,2-Dichloroethene	ND U	5.0	0.12	1	11/04/21 12:31	
cis-1,3-Dichloropropene	ND U	5.0	0.13	1	11/04/21 12:31	
m,p-Xylenes	ND U	5.0	0.10	1	11/04/21 12:31	
n-Butylbenzene	ND U	20	0.069	1	11/04/21 12:31	
n-Propylbenzene	ND U	20	0.13	1	11/04/21 12:31	
o-Xylene	ND U	5.0	0.081	1	11/04/21 12:31	
sec-Butylbenzene	ND U	20	0.074	1	11/04/21 12:31	
tert-Butylbenzene	ND U	20	0.14	1	11/04/21 12:31	
trans-1,2-Dichloroethene	ND U	5.0	0.12	1	11/04/21 12:31	
trans-1,3-Dichloropropene	ND U	5.0	0.11	1	11/04/21 12:31	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	61 - 133	11/04/21 12:31	
Dibromofluoromethane	94	59 - 134	11/04/21 12:31	
Toluene-d8	101	77 - 122	11/04/21 12:31	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 11/04/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 744949

Analyte Name	Lab Control Sample KQ2121838-09			Duplicate Lab Control Sample KQ2121838-10			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	37.8	50.0	76	40.5	50.0	81	71-119	7	40
1,1,1-Trichloroethane (TCA)	38.4	50.0	77	39.3	50.0	79	59-146	2	40
1,1,2,2-Tetrachloroethane	42.3	50.0	85	35.3	50.0	71	60-128	18	40
1,1,2-Trichloroethane	37.5	50.0	75	38.1	50.0	76	72-118	2	40
1,1-Dichloroethane	37.6	50.0	75	38.4	50.0	77	59-137	2	40
1,1-Dichloroethene	35.3	50.0	71	38.5	50.0	77	64-152	9	40
1,1-Dichloropropene	39.1	50.0	78	38.5	50.0	77	52-142	2	40
1,2,3-Trichlorobenzene	36.1	50.0	72	33.7	50.0	67	52-138	7	40
1,2,3-Trichloropropane	43.1	50.0	86	37.9	50.0	76	53-134	13	40
1,2,4-Trichlorobenzene	37.2	50.0	74	34.6	50.0	69	57-136	7	40
1,2,4-Trimethylbenzene	47.1	50.0	94	38.4	50.0	77	65-132	20	40
1,2-Dibromo-3-chloropropane	29.7	50.0	59	35.3	50.0	71	55-127	17	40
1,2-Dibromoethane (EDB)	40.9	50.0	82	40.6	50.0	81	71-116	<1	40
1,2-Dichlorobenzene	38.0	50.0	76	36.7	50.0	73	67-124	4	40
1,2-Dichloroethane (EDC)	37.5	50.0	75	39.0	50.0	78	65-121	4	40
1,2-Dichloropropane	37.9	50.0	76	36.6	50.0	73	71-121	3	40
1,3,5-Trimethylbenzene	46.4	50.0	93	38.3	50.0	77	66-132	19	40
1,3-Dichlorobenzene	36.7	50.0	73	36.2	50.0	72	69-128	2	40
1,3-Dichloropropane	39.3	50.0	79	39.0	50.0	78	72-118	<1	40
1,4-Dichlorobenzene	37.0	50.0	74	36.0	50.0	72	69-125	3	40
2,2-Dichloropropane	38.5	50.0	77	37.7	50.0	75	50-138	2	40
2-Butanone (MEK)	187	250	75	190	250	76	54-116	1	40
2-Chlorotoluene	46.6	50.0	93	38.1	50.0	76	65-129	20	40
2-Hexanone	206	250	82	203	250	81	67-121	2	40
4-Chlorotoluene	47.1	50.0	94	37.4	50.0	75	51-134	23	40
4-Isopropyltoluene	39.9	50.0	80	39.7	50.0	79	61-132	<1	40
4-Methyl-2-pentanone (MIBK)	197	250	79	187	250	75	69-126	6	40
Acetone	145	250	58	168	250	67	32-135	14	40
Benzene	38.6	50.0	77	37.6	50.0	75	68-122	3	40
Bromobenzene	47.8	50.0	96	40.1	50.0	80	71-124	18	40
Bromochloromethane	41.4	50.0	83	41.5	50.0	83	65-131	<1	40
Bromodichloromethane	32.8	50.0	66	33.8	50.0	68	61-143	3	40
Bromoform	32.1	50.0	64	35.1	50.0	70	62-134	9	40
Bromomethane	38.9	50.0	78	42.0	50.0	84	22-180	8	40
Carbon Disulfide	58.0	100	58	63.8	100	64	55-141	9	40
Carbon Tetrachloride	40.6	50.0	81	41.3	50.0	83	51-135	2	40
Chlorobenzene	39.3	50.0	79	38.9	50.0	78	70-116	<1	40
Chloroethane	35.8	50.0	72	38.8	50.0	78	51-122	8	40
Chloroform	38.6	50.0	77	38.9	50.0	78	61-137	<1	40
Chloromethane	34.1	50.0	68	37.2	50.0	74	37-146	9	40
cis-1,2-Dichloroethene	38.8	50.0	78	38.0	50.0	76	62-138	2	40

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 11/04/21
Date Extracted: NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analysis Method: 8260C
Prep Method: None

Units: ug/Kg
Basis: Dry
Analysis Lot: 744949

Analyte Name	Lab Control Sample KQ2121838-09			Duplicate Lab Control Sample KQ2121838-10			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
cis-1,3-Dichloropropene	36.8	50.0	74	36.0	50.0	72	58-138	2	40
Dibromochloromethane	35.0	50.0	70	38.0	50.0	76	69-120	8	40
Dibromomethane	38.2	50.0	76	38.7	50.0	77	68-125	1	40
Dichlorodifluoromethane	38.7	50.0	77	42.1	50.0	84	38-160	8	40
Ethylbenzene	41.8	50.0	84	40.9	50.0	82	70-118	2	40
Hexachlorobutadiene	40.1	50.0	80	39.7	50.0	79	54-140	1	40
Isopropylbenzene	41.0	50.0	82	38.7	50.0	77	67-133	6	40
m,p-Xylenes	83.2	100	83	80.1	100	80	69-127	4	40
Methylene Chloride	34.1	50.0	68	37.4	50.0	75	65-122	9	40
Naphthalene	34.9	50.0	70	33.6	50.0	67	54-134	4	40
n-Butylbenzene	38.2	50.0	76	37.0	50.0	74	53-139	3	40
n-Propylbenzene	49.0	50.0	98	39.6	50.0	79	57-143	21	40
o-Xylene	41.0	50.0	82	38.9	50.0	78	69-124	5	40
sec-Butylbenzene	42.9	50.0	86	38.3	50.0	77	55-146	12	40
Styrene	45.2	50.0	90	40.2	50.0	80	62-135	12	40
tert-Butylbenzene	47.3	50.0	95	38.4	50.0	77	67-131	21	40
Tetrachloroethene (PCE)	40.4	50.0	81	39.8	50.0	80	66-126	1	40
Toluene	38.8	50.0	78	38.2	50.0	76	75-117	1	40
trans-1,2-Dichloroethene	36.6	50.0	73	40.8	50.0	82	63-127	11	40
trans-1,3-Dichloropropene	35.4	50.0	71	35.5	50.0	71	63-121	<1	40
Trichloroethene (TCE)	39.2	50.0	78	38.1	50.0	76	67-126	3	40
Trichlorofluoromethane	38.6	50.0	77	42.1	50.0	84	51-140	9	40
Vinyl Chloride	36.9	50.0	74	40.4	50.0	81	54-127	9	40



Polycyclic Aromatic Hydrocarbons by GC/MS SIM

ALS Environmental—Kelso Laboratory
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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	5.6	0.42	1	11/12/21 19:07	11/3/21	
Acenaphthene	ND U	5.6	0.34	1	11/12/21 19:07	11/3/21	
Acenaphthylene	ND U	5.6	0.32	1	11/12/21 19:07	11/3/21	
Anthracene	ND U	5.6	0.33	1	11/12/21 19:07	11/3/21	
Benz(a)anthracene	0.70 J	5.6	0.26	1	11/12/21 19:07	11/3/21	
Benzo(a)pyrene	ND U	5.6	0.43	1	11/12/21 19:07	11/3/21	
Benzo(b)fluoranthene	ND U	5.6	0.43	1	11/12/21 19:07	11/3/21	
Benzo(g,h,i)perylene	ND U	5.6	0.46	1	11/12/21 19:07	11/3/21	
Benzo(k)fluoranthene	ND U	5.6	0.28	1	11/12/21 19:07	11/3/21	
Chrysene	ND U	5.6	0.35	1	11/12/21 19:07	11/3/21	
Dibenz(a,h)anthracene	ND U	5.6	0.26	1	11/12/21 19:07	11/3/21	
Dibenzofuran	ND U	5.6	0.68	1	11/12/21 19:07	11/3/21	
Fluoranthene	0.80 J	5.6	0.71	1	11/12/21 19:07	11/3/21	
Fluorene	ND U	5.6	0.65	1	11/12/21 19:07	11/3/21	
Indeno(1,2,3-cd)pyrene	ND U	5.6	0.41	1	11/12/21 19:07	11/3/21	
Naphthalene	0.91 J	5.6	0.53	1	11/12/21 19:07	11/3/21	
Phenanthrene	1.1 J	5.6	0.67	1	11/12/21 19:07	11/3/21	
Pyrene	1.3 J	5.6	0.37	1	11/12/21 19:07	11/3/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	83	28 - 112	11/12/21 19:07	
Fluorene-d10	68	34 - 106	11/12/21 19:07	
Terphenyl-d14	84	32 - 122	11/12/21 19:07	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	5.4	0.40	1	11/12/21 19:43	11/3/21	
Acenaphthene	ND U	5.4	0.33	1	11/12/21 19:43	11/3/21	
Acenaphthylene	ND U	5.4	0.31	1	11/12/21 19:43	11/3/21	
Anthracene	ND U	5.4	0.32	1	11/12/21 19:43	11/3/21	
Benz(a)anthracene	0.95 J	5.4	0.25	1	11/12/21 19:43	11/3/21	
Benzo(a)pyrene	ND U	5.4	0.41	1	11/12/21 19:43	11/3/21	
Benzo(b)fluoranthene	ND U	5.4	0.41	1	11/12/21 19:43	11/3/21	
Benzo(g,h,i)perylene	ND U	5.4	0.43	1	11/12/21 19:43	11/3/21	
Benzo(k)fluoranthene	ND U	5.4	0.26	1	11/12/21 19:43	11/3/21	
Chrysene	0.64 J	5.4	0.34	1	11/12/21 19:43	11/3/21	
Dibenz(a,h)anthracene	ND U	5.4	0.25	1	11/12/21 19:43	11/3/21	
Dibenzofuran	ND U	5.4	0.65	1	11/12/21 19:43	11/3/21	
Fluoranthene	ND U	5.4	0.68	1	11/12/21 19:43	11/3/21	
Fluorene	ND U	5.4	0.62	1	11/12/21 19:43	11/3/21	
Indeno(1,2,3-cd)pyrene	ND U	5.4	0.39	1	11/12/21 19:43	11/3/21	
Naphthalene	0.98 J	5.4	0.51	1	11/12/21 19:43	11/3/21	
Phenanthrene	1.7 J	5.4	0.64	1	11/12/21 19:43	11/3/21	
Pyrene	1.1 J	5.4	0.35	1	11/12/21 19:43	11/3/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	85	28 - 112	11/12/21 19:43	
Fluorene-d10	71	34 - 106	11/12/21 19:43	
Terphenyl-d14	83	32 - 122	11/12/21 19:43	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572

SURROGATE RECOVERY SUMMARY
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Extraction Method: EPA 3546

Sample Name	Lab Code	Fluoranthene-d10	Fluorene-d10	Terphenyl-d14
		28-112	34-106	32-122
B-30 (0-10) Comp	K2112572-003	83	68	84
B-30 (10-25) Comp	K2112572-007	85	71	83
Method Blank	KQ2121387-04	92	73	90
Lab Control Sample	KQ2121387-03	85	74	85

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121387-04

Units: ug/Kg
Basis: Dry

Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
2-Methylnaphthalene	ND U	4.6	0.37	1	11/12/21 14:11	11/3/21	
Acenaphthene	ND U	4.6	0.30	1	11/12/21 14:11	11/3/21	
Acenaphthylene	ND U	4.6	0.28	1	11/12/21 14:11	11/3/21	
Anthracene	ND U	4.6	0.29	1	11/12/21 14:11	11/3/21	
Benz(a)anthracene	0.54 J	4.6	0.23	1	11/12/21 14:11	11/3/21	
Benzo(a)pyrene	ND U	4.6	0.38	1	11/12/21 14:11	11/3/21	
Benzo(b)fluoranthene	ND U	4.6	0.38	1	11/12/21 14:11	11/3/21	
Benzo(g,h,i)perylene	ND U	4.6	0.40	1	11/12/21 14:11	11/3/21	
Benzo(k)fluoranthene	ND U	4.6	0.24	1	11/12/21 14:11	11/3/21	
Chrysene	ND U	4.6	0.31	1	11/12/21 14:11	11/3/21	
Dibenz(a,h)anthracene	ND U	4.6	0.23	1	11/12/21 14:11	11/3/21	
Dibenzofuran	ND U	4.6	0.60	1	11/12/21 14:11	11/3/21	
Fluoranthene	ND U	4.6	0.63	1	11/12/21 14:11	11/3/21	
Fluorene	ND U	4.6	0.57	1	11/12/21 14:11	11/3/21	
Indeno(1,2,3-cd)pyrene	ND U	4.6	0.36	1	11/12/21 14:11	11/3/21	
Naphthalene	0.84 J	4.6	0.47	1	11/12/21 14:11	11/3/21	
Phenanthrene	0.93 J	4.6	0.59	1	11/12/21 14:11	11/3/21	
Pyrene	ND U	4.6	0.32	1	11/12/21 14:11	11/3/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Fluoranthene-d10	92	28 - 112	11/12/21 14:11	
Fluorene-d10	73	34 - 106	11/12/21 14:11	
Terphenyl-d14	90	32 - 122	11/12/21 14:11	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 11/12/21
Date Extracted: 11/03/21

Lab Control Sample Summary
Polycyclic Aromatic Hydrocarbons by GC/MS SIM

Analysis Method: 8270D
Prep Method: EPA 3546

Units: ug/Kg
Basis: Dry
Analysis Lot: 745980

Lab Control Sample
KQ2121387-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2-Methylnaphthalene	380	500	76	43-92
Acenaphthene	389	500	78	44-95
Acenaphthylene	396	500	79	44-93
Anthracene	416	500	83	46-100
Benz(a)anthracene	448	500	90	52-105
Benzo(a)pyrene	468	500	94	52-111
Benzo(b)fluoranthene	485	500	97	52-114
Benzo(g,h,i)perylene	440	500	88	45-107
Benzo(k)fluoranthene	439	500	88	52-112
Chrysene	414	500	83	51-110
Dibenz(a,h)anthracene	476	500	95	44-110
Dibenzofuran	372	500	74	44-96
Fluoranthene	460	500	92	49-102
Fluorene	407	500	81	45-98
Indeno(1,2,3-cd)pyrene	516	500	103	44-117
Naphthalene	360	500	72	42-88
Phenanthrene	414	500	83	41-99
Pyrene	416	500	83	48-104



Low Level Semivolatile Organic Compounds by GC/MS

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	450	110	1	11/23/21 14:24	11/3/21	
Bis(2-ethylhexyl) Phthalate	ND U	110	11	1	11/23/21 14:24	11/3/21	*
Carbazole	ND U	11	4.3	1	11/23/21 14:24	11/3/21	
Di-n-butyl Phthalate	ND U	22	5.4	1	11/23/21 14:24	11/3/21	
Di-n-octyl Phthalate	ND U	22	3.6	1	11/23/21 14:24	11/3/21	
Dibenzofuran	ND U	11	3.9	1	11/23/21 14:24	11/3/21	*
2,4-Dinitrotoluene	ND U	11	2.9	1	11/23/21 14:24	11/3/21	
2-Methylphenol	ND U	11	4.7	1	11/23/21 14:24	11/3/21	*
4-Methylphenol	ND U	22	5.1	1	11/23/21 14:24	11/3/21	*
Nitrobenzene	ND U	11	3.9	1	11/23/21 14:24	11/3/21	
Pentachlorophenol (PCP)	ND U	110	6.0	1	11/23/21 14:24	11/3/21	
Phenol	ND U	34	3.5	1	11/23/21 14:24	11/3/21	*
Pyridine	ND U	220	57	1	11/23/21 14:24	11/3/21	*
2,4,5-Trichlorophenol	ND U	11	3.4	1	11/23/21 14:24	11/3/21	
2,4,6-Trichlorophenol	ND U	11	3.4	1	11/23/21 14:24	11/3/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	56	35 - 105	11/23/21 14:24	
2-Fluorophenol	56	22 - 85	11/23/21 14:24	
Nitrobenzene-d5	64	10 - 84	11/23/21 14:24	
Phenol-d6	62	39 - 109	11/23/21 14:24	
p-Terphenyl-d14	71	30 - 102	11/23/21 14:24	
2,4,6-Tribromophenol	47	10 - 124	11/23/21 14:24	

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	450	110	1	11/23/21 14:52	11/3/21	
Bis(2-ethylhexyl) Phthalate	ND U	110	10	1	11/23/21 14:52	11/3/21	*
Carbazole	ND U	11	4.3	1	11/23/21 14:52	11/3/21	
Di-n-butyl Phthalate	ND U	22	5.4	1	11/23/21 14:52	11/3/21	
Di-n-octyl Phthalate	ND U	22	3.6	1	11/23/21 14:52	11/3/21	
Dibenzofuran	ND U	11	3.9	1	11/23/21 14:52	11/3/21	*
2,4-Dinitrotoluene	ND U	11	2.8	1	11/23/21 14:52	11/3/21	
2-Methylphenol	ND U	11	4.6	1	11/23/21 14:52	11/3/21	*
4-Methylphenol	ND U	22	5.1	1	11/23/21 14:52	11/3/21	*
Nitrobenzene	ND U	11	3.9	1	11/23/21 14:52	11/3/21	
Pentachlorophenol (PCP)	ND U	110	6.0	1	11/23/21 14:52	11/3/21	
Phenol	ND U	34	3.5	1	11/23/21 14:52	11/3/21	*
Pyridine	ND U	220	56	1	11/23/21 14:52	11/3/21	*
2,4,5-Trichlorophenol	ND U	11	3.4	1	11/23/21 14:52	11/3/21	
2,4,6-Trichlorophenol	ND U	11	3.4	1	11/23/21 14:52	11/3/21	*

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	51	35 - 105	11/23/21 14:52	
2-Fluorophenol	50	22 - 85	11/23/21 14:52	
Nitrobenzene-d5	59	10 - 84	11/23/21 14:52	
Phenol-d6	56	39 - 109	11/23/21 14:52	
p-Terphenyl-d14	59	30 - 102	11/23/21 14:52	
2,4,6-Tribromophenol	45	10 - 124	11/23/21 14:52	

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	2-Fluorobiphenyl	2-Fluorophenol	Nitrobenzene-d5
		35-105	22-85	10-84
B-30 (0-10) Comp	K2112572-003	56	56	64
B-30 (10-25) Comp	K2112572-007	51	50	59
Method Blank	KQ2121388-04	78	75	88*
Lab Control Sample	KQ2121388-03	68	74	87*

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572

SURROGATE RECOVERY SUMMARY
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Extraction Method: EPA 3541

Sample Name	Lab Code	Phenol-d6	p-Terphenyl-d14	2,4,6-Tribromophenol
		39-109	30-102	10-124
B-30 (0-10) Comp	K2112572-003	62	71	47
B-30 (10-25) Comp	K2112572-007	56	59	45
Method Blank	KQ2121388-04	84	92	64
Lab Control Sample	KQ2121388-03	81	77	66

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Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ2121388-04

Units: ug/Kg
Basis: Dry

Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Benzoic Acid	ND U	390	96	1	11/23/21 12:30	11/3/21	
Bis(2-ethylhexyl) Phthalate	ND U	97	8.9	1	11/23/21 12:30	11/3/21	
Carbazole	ND U	9.7	3.8	1	11/23/21 12:30	11/3/21	
Di-n-butyl Phthalate	ND U	19	4.8	1	11/23/21 12:30	11/3/21	
Di-n-octyl Phthalate	ND U	19	3.2	1	11/23/21 12:30	11/3/21	
Dibenzofuran	ND U	9.7	3.4	1	11/23/21 12:30	11/3/21	
2,4-Dinitrotoluene	ND U	9.7	2.5	1	11/23/21 12:30	11/3/21	
2-Methylphenol	ND U	9.7	4.1	1	11/23/21 12:30	11/3/21	
4-Methylphenol	ND U	19	4.5	1	11/23/21 12:30	11/3/21	
Nitrobenzene	ND U	9.7	3.4	1	11/23/21 12:30	11/3/21	
Pentachlorophenol (PCP)	ND U	97	5.3	1	11/23/21 12:30	11/3/21	
Phenol	ND U	29	3.1	1	11/23/21 12:30	11/3/21	
Pyridine	ND U	190	50	1	11/23/21 12:30	11/3/21	
2,4,5-Trichlorophenol	ND U	9.7	3.0	1	11/23/21 12:30	11/3/21	
2,4,6-Trichlorophenol	ND U	9.7	3.0	1	11/23/21 12:30	11/3/21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
2-Fluorobiphenyl	78	35 - 105	11/23/21 12:30	
2-Fluorophenol	75	22 - 85	11/23/21 12:30	
Nitrobenzene-d5	88	10 - 84	11/23/21 12:30	*
Phenol-d6	84	39 - 109	11/23/21 12:30	
p-Terphenyl-d14	92	30 - 102	11/23/21 12:30	
2,4,6-Tribromophenol	64	10 - 124	11/23/21 12:30	

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QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 11/23/21
Date Extracted: 11/03/21

Lab Control Sample Summary
Low Level Semivolatile Organic Compounds by GC/MS

Analysis Method: 8270D
Prep Method: EPA 3541

Units: ug/Kg
Basis: Dry
Analysis Lot: 746145

Lab Control Sample
KQ2121388-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
2,4,5-Trichlorophenol	198	250	79	32-81
2,4,6-Trichlorophenol	201	250	80 *	33-79
2,4-Dinitrotoluene	189	250	76	35-93
2-Methylphenol	222	250	89 *	27-74
4-Methylphenol	262	250	105 *	26-79
Benzoic Acid	253 J	750	34	10-34
Bis(2-ethylhexyl) Phthalate	201	250	81	39-113
Carbazole	226	250	91	37-95
Dibenzofuran	215	250	86 *	30-78
Di-n-butyl Phthalate	155	250	62	30-120
Di-n-octyl Phthalate	179	250	72	41-105
Nitrobenzene	178	250	71	28-78
Pentachlorophenol (PCP)	198	250	79	19-103
Phenol	231	250	93 *	27-75
Pyridine	435	500	87 *	10-54



Subcontract Lab Results

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November 29, 2021

Service Request No:K2112572

Jill Betts
Coles and Betts Environmental Consulting, LLC
5741 NE Flanders St.
Portland, OR 97213

Laboratory Results for: EQRB

Dear Jill,

Enclosed are the results of the sample(s) submitted to our laboratory October 27, 2021
For your reference, these analyses have been assigned our service request number **K2112572**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and except as noted in the laboratory case narrative provided. All results are intended to be considered in their entirety and ALS Environmental is not responsible for use of less than the complete final report. Results apply only to the items submitted to the laboratory, as received for analysis. In accordance with the current TNI Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Corey Grandits
Project Manager

ADDRESS 10450 Stancliff Rd., Suite 210, Houston, TX 77099
PHONE +1 281 530 5656 | FAX +1 281 530 5887
ALS Group USA, Corp.
dba ALS Environmental



Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
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ALS Environmental

Client: Coles & Betts ENV
Project: EQRB
Sample Matrix: S

Service Request No.: K2112572
Date Received: 11/03/21

CASE NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Two samples were received for analysis at ALS Environmental in Houston on 11/03/21.

The samples were received in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

Precision and Accuracy:

EQ2100635: A Laboratory Control Spike (LCS) sample was analyzed and reported in addition to a MS/MSD for this extraction batch. The LCS recoveries passed. The MS/MSD was performed on an unrelated sample.

B flags – Method Blanks

The Method Blank EQ2100635-01 contained a low level of 1,2,3,4,7,8-HxCDD below the Method Reporting Limit (MRL). The associated compound in the samples in the batch is flagged with a 'B' flag where the sample result is less than ten times the level detected in the method blank.

Y flags – Cleanup Standard

The recoveries for the cleanup standard, 37Cl-2,3,7,8-TCDD are below control limits in the MBLK and LCS. The sample results are not affected since this labeled standard is provided as a means of demonstrating that both the sample extraction and subsequent cleanup steps performed as expected, and is not used in quantitation of target analytes.

Y flags – Labeled Standards

Quantification of the native 2,3,7,8-substituted congeners is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with 'Y' flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limits were below the Method Reporting Limits.

K flags

EMPC - When the ion abundance ratios associated with a particular compound are outside the QC limits, samples are flagged with a 'K' flag. A 'K' flag indicates an estimated maximum possible concentration for the associated compound.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The TEO Summary results for each sample have been calculated by ALS/Houston to include:

- WHO-2005 TEFs, The 2005 World Health Organization Reevaluation of Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-Like Compounds (M. Van den Berg et al., Toxicological Sciences 93(2):223-241, 2006)
- Non-detected compounds are not included in the 'Total'

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319

Service Request:K2112572

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
K2112572-003	B-30 (0-10) Comp	10/25/2021	1250
K2112572-007	B-30 (10-25) Comp	10/25/2021	1355

Service Request Summary

Folder #: K2112572
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA

Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: FADAIR
Date Received: 10/27/21
Internal Due Date: 11/16/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

32 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 2 oz-Glass Jar Glass WM CLEAR None
Location: K-DELILAH, K-NOT CREATED, EHRMS-WIC 10A, K-PETUNIA-07
Pressure Gas:

Lab Samp No.	Client Samp No	Matrix	Collected	KELSO		KELSO						HOUST ON	KELSO		KELSO	KELSO	
				Hg/7471B	Metals T/6020A	BUTYLINS/ALS SOP	HERB/8151A	NW_TPH/NWTPH-Dx	PCB/8082A	Pest OC LL/8081B	PCDD PCDF/8290A	PAH SIM/8270D	SVO LL/8270D	TS/160.3 Modified	NW_GAS/NWTPH-Gx	VOC Unp/8260C	VOC_FP/8260D
K2112572-003	B-30 (0-10) Comp	Soil	10/25/21 1250														
K2112572-007	B-30 (10-25) Comp	Soil	10/25/21 1355														

Service Request Summary

Folder #: K2112572
Client Name: Coles and Betts Environmental Consulting, Inc.
Project Name: EQRB
Project Number: 319

Report To: Jill Betts
 Coles and Betts Environmental Consulting, LLC
 5741 NE Flanders St.
 Portland, OR 97213
 USA

Phone Number: 503-477-6150
Cell Number: 503-619-2835
Fax Number:
E-mail: jill@colesandbetts.com

Project Chemist: Mark Harris
Originating Lab: KELSO
Logged By: FADAIR
Date Received: 10/27/21
Internal Due Date: 11/16/2021
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: Y
Report to MDL?: Y
P.O. Number:
EDD: No EDD Specified

32 8 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
 2 2 oz-Glass Jar Glass WM CLEAR None
Location: K-DELILAH, K-NOT CREATED, EHRMS-
 WIC 10A, K-PETUNIA-07
Pressure Gas:

Test Comments:

Group	Test/Method	Samples	Comments
Metals	Metals T/6020A	2	As,Ba,Cd,Cr,Pb,Se,Ag
Semivoa GC	Pest OC LL/8081B	2	Report list: 20324
Semivoa GC	HERB/8151A	2	Report list: 18726
Semivoa GC	BUTYLTINS/ALS SOP	2	Report list: 17560
Semivoa GC	NW_TPH/NWTPH-Dx	2	Report list: 22364
Semivoa GC	PCB/8082A	2	Report list: 20420
Semivoa GCMS	PAH SIM/8270D	2	Report list: 18998
Soils Prep	Sub Sample/Subsample	2	Aliquot for outside shipping and return to SMO
VOA GCMS	NW_GAS/NWTPH-Gx	2	Report list: 19509
VOA GCMS	VOC Unp/8260C	2	Report list: 20915

Data Qualifiers

Lab Standard

- + Possible Tedlar bag artifact.
- A TIC is a suspected aldol-condensation product
- B Analyte found in the associated method blank as well as in the sample.
- BC Reported results are not blank corrected.
- BH The back section of the tube yielded higher results than the front.
- BT Results indicated possible breakthrough; back section $\geq 10\%$ front section.
- C Result identification confirmed.
- D Compound identified in an analysis at a secondary dilution factor
- D Spike was diluted out
- DE Reported results are corrected for desorption efficiency.
- E Estimated value. Concentration above calibration range
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- H1 Sample analysis performed past holding time. See case narrative.
- H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
- H3 Sample was received and analyzed past holding time.
- H4 Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
- I Internal standard not within the specified limits. See case narrative.
- J Estimated Value. Concentration found below MRL.
- K A deflection in the QC ion may indicate interference with the quantitation of this ion. The concentration of this analyte should be considered as an estimate.
- K Analyte was detected above the method reporting limit prior to normalization.
- K The reference ion ratio was outside acceptance criteria, which may indicate a potential bias to this result.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- L1 Laboratory control sample recovery outside the specified limits; results may be biased high.
- L2 Laboratory control sample recovery outside the specified limits; results may be biased low.
- L3 Laboratory control sample recovery outside the specified limits.
- M Matrix interference; results may be biased high.
- M The duplicate injection precision not met.
- M1 Matrix interference due to coelution with a non-target compound; results may be biased high.
- N Presumptive evidence of a compound for TICs that have been identified based on a mass spectral library search.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.

Data Qualifiers

Lab Standard

- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- P Indicates chlorodiphenyl ether interference present at the retention time of the target compound.
- P Pesticide/Aroclor target analyte > 40% difference for detected concentrations between GC columns
- Q Indicates as estimated value because the P and P + 2 theoretical abundance ratio does not meet method criteria.
- R Duplicate Precision not met.
- R1 Duplicate precision not within the specified limits; however, the results are below the MRL and considered estimated.
- S Surrogate recovery not within specified limits.
- S The reported value was determined by the Method of Standard Additions (MSA).
- T Analyte is a tentatively identified compound, result is estimated.
- U Compound was analyzed for, but was not detected (ND).
- V1 The continuing calibration verification standard was outside (biased high) the specified limits for this compound.
- V2 The continuing calibration verification standard was outside (biased low) the specified limits for this compound.
- W Result quantified, but the corresponding peak was detected outside the generated retention time window.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- X See case narrative.
- Y Recovery outside limits
- Y The chromatogram resembles a petroleum product but does not match the calibration standard.
- Z The chromatogram does not resemble a petroleum product.
 - i The MRL/MDL has been elevated due to a matrix interference.

ALS Laboratory Group

Acronyms

Cal	Calibration
Conc	CONCEntration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01 2020	11/30/2021
Arkansas Department of Environmental Quality	19-028-0	6/30/2022
Arkansas Department of Environmental Quality	21-022-0	3/26/2022
Department of Defense	A2LA 2897.01	11/30/2021
Florida Department of Health	E87611-33	6/30/2022
Hawaii Department of Health	2021-2022	4/30/2022
Kansas Department of Health and Environment	E-10352 2022	7/31/2022
Louisiana Department of Environmental Quality	03087-2021	6/30/2022
Louisiana Department of Health and Hospitals	LA028-2021	12/31/2021
Maine Department of Health and Human Services	2020016	6/5/2022
Minnesota Department of Health	2021671	12/31/2021
Nevada Department of Conservation and Natural Resources	TX026932022-1	7/31/2022
New Hampshire Environmental Laboratory Accreditation Program	209421	4/24/2022
Pennsylvania Department of Environmental Protection	68-03441-015	6/30/2022
Tennessee Department of Environment and Conservation	04016-2021	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-27	4/30/2022
Texas Commission on Environmental Quality	T104704231-21-28	5/1/2022
United States Department of Agriculture	P330-19-00299	10/10/2022



Chain of Custody

ALS Environmental - Houston HRMS
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Intra-Network Chain of Custody

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ALS Contact: Mark Harris

Project Name: EQRB
Project Number: 319
Project Manager: Jill Betts
Company: Coles and Betts Environmental Consulting, LLC
QAP: LAB QAP

PCDD PCDF
8290A

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
K2112572-003	B-30 (0-10) Comp	1	Soil	10/25/21	1250	10/27/21	HOUSTON	II
K2112572-007	B-30 (10-25) Comp	1	Soil	10/25/21	1355	10/27/21	HOUSTON	II

<p>Special Instructions/Comments Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.</p> <p style="font-size: 2em; color: blue; margin-left: 100px;">310E</p> <p style="font-size: 1.5em; color: blue; margin-left: 100px;">0.90 +31 CIFou</p> <p>pH Checked _____</p>	<p>Turnaround Requirements</p> <p><input type="checkbox"/> RUSH (Surcharges Apply)</p> <p>PLEASE CIRCLE WORK DAYS</p> <p style="text-align: center;">1 2 3 4 5</p> <p><input checked="" type="checkbox"/> STANDARD</p> <p>Requested FAX Date: _____</p> <p>Requested Report Date: <u>11/16/21</u></p>	<p>Report Requirements</p> <p><input type="checkbox"/> I. Results Only</p> <p><input checked="" type="checkbox"/> II. Results + QC Summaries</p> <p><input type="checkbox"/> III. Results + QC and Calibration Summaries</p> <p><input type="checkbox"/> IV. Data Validation Report with Raw Data</p> <p>PQL/MDL/J <u>Y</u></p> <p>EDD <u>N</u></p>	<p>Invoice Information</p> <hr/> <p>PO# 51K2112572</p> <hr/> <p>Bill to</p>
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------

Relinquished By: *A. Reelut* *11/1/21*
Received By: *[Signature]* *11/3/2021 10:30*
Airbill Number: _____



Cooler Receipt Form

Project Chemist CG

Client/Project AL4-h

Thermometer ID 1221

Date/Time Received: 11-3-21

Initials: PG

Date/Time Logged in: 11-3-21

Initials CG

1. Method of delivery: US Mail Fed Ex UPS DHL Courier Client

2. Samples received in: Cooler Box Envelope Other

3. Were custody seals on coolers? Yes No
Were they intact? Yes No N/A
Were they signed and dated? Yes No N/A

If yes, how many and where?

1-F

4. Packing Material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Sleeves Other

5. Foreign or Regulated Soil? Yes No Location of Sampling: _____

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
<u>5325 9809 6430</u>		<u>11-3-21</u>	<u>1030</u>	<u>PG</u>	<u>0.4</u>	<input checked="" type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

6. Were custody papers properly filled out (ink, signed, dated, etc)? Yes No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? Yes No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? Yes No

9. Were appropriate bottles/containers and volumes received for the requested tests? Yes No

10. Did sample labels and tags agree with custody documents? Yes No

Notes, Discrepancies, & Resolutions:

Service request Label:



10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sample. The COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6°C.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10°C.
- ✓ Air samples are shipped and stored cold, at 0 to 6°C
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report



Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 390711
 Team: Semivoa GCMS/TWOODS

Prep Workflow: OrgExtDioxS(30)
 Prep Method: Method

Status: Prepped
 Prep Date/Time: 11/4/21 10:19

#	Lab Code	Client ID	B#	Method /Test	pH	Cl	Matrix	Amt. Ext.	Sample Description
1	E2101135-001	MFS-SS-06-2	.01	8290A/PCDD PCDF			Soil	10.081g	
2	E2101135-002	MFS-SS-07-2	.01	8290A/PCDD PCDF			Soil	10.022g	
3	E2101135-003	MFS-SS-08-2	.01	8290A/PCDD PCDF			Soil	10.126g	
4	E2101135-004	MFS-SS-09-2	.01	8290A/PCDD PCDF			Soil	10.124g	
5	E2101135-005	MFS-SS-10-2	.01	8290A/PCDD PCDF			Soil	10.222g	
6	E2101135-006	MFS-SS-11-2	.01	8290A/PCDD PCDF			Soil	10.000g	
7	E2101135-007	MFS-SS-12-2	.01	8290A/PCDD PCDF			Soil	10.067g	
8	E2101135-008	MFS-SS-13-2	.01	8290A/PCDD PCDF			Soil	10.000g	
9	E2101135-009	MFS-SS-14-2	.01	8290A/PCDD PCDF			Soil	10.238g	
10	E2101135-010	MFS-SS-15-2	.01	8290A/PCDD PCDF			Soil	10.154g	
11	E2101135-011	MFS-SS-98	.01	8290A/PCDD PCDF			Soil	10.434g	
12	E2101135-012	MFS-XX-01	.01	8290A/PCDD PCDF			Soil	10.377g	
13	E2101135-013	MFS-XX-02	.01	8290A/PCDD PCDF			Soil	10.003g	
14	E2101135-015	MFS-XX-99	.01	8290A/PCDD PCDF			Soil	10.003g	
15	E2101165-001	SWT Filtercake	.01	8290/PCDD PCDF			Solid	10.236g	black soil
16	EQ2100635-01	MB		8290A/PCDD PCDF			Solid	10.021g	
17	EQ2100635-02	LCS		8290A/PCDD PCDF			Solid	10.114g	
18	EQ2100635-03	MFS-SS-12-2 MS	.01	8290A/PCDD PCDF			Solid	10.219g	
19	EQ2100635-04	MFS-SS-12-2 DMS	.01	8290A/PCDD PCDF			Solid	10.157g	
20	K2112572-003	B-30 (0-10) Comp	.06	8290A/PCDD PCDF			Soil	10.233g	
21	K2112572-007	B-30 (10-25) Comp	.01	8290A/PCDD PCDF			Soil	10.084g	

Spiking Solutions

Name:	8290/1613B Cleanup Working Standard	Inventory ID	219817	Logbook Ref:	tw 10/15/21 219817	Expires On:	02/18/2022
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E2101135-001	100.00µL	E2101135-002	100.00µL	E2101135-003	100.00µL	E2101135-004	100.00µL	E2101135-005	100.00µL	E2101135-006	100.00µL
E2101135-007	100.00µL	E2101135-008	100.00µL	E2101135-009	100.00µL	E2101135-010	100.00µL	E2101135-011	100.00µL	E2101135-012	100.00µL
E2101135-013	100.00µL	E2101135-014.R	100.00µL	E2101135-015	100.00µL	E2101165-001	100.00µL	EQ2100635-01	100.00µL	EQ2100635-01	100.00µL
EQ2100635-02	100.00µL	EQ2100635-02	100.00µL	EQ2100635-03	100.00µL	EQ2100635-04	100.00µL	K2112572-003	100.00µL	K2112572-007	100.00µL

Name:	1613B Matrix Working Standard	Inventory ID	219968	Logbook Ref:	TW 10/22/21 SN	Expires On:	04/20/2022
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E2101135-001	100.00µL	E2101135-002	100.00µL	E2101135-003	100.00µL	E2101135-004	100.00µL	E2101135-005	100.00µL	E2101135-006	100.00µL
E2101135-007	100.00µL	E2101135-008	100.00µL	E2101135-009	100.00µL	E2101135-010	100.00µL	E2101135-011	100.00µL	E2101135-012	100.00µL
E2101135-013	100.00µL	E2101135-014.R	100.00µL	E2101135-015	100.00µL	E2101165-001	100.00µL	EQ2100635-01	100.00µL	EQ2100635-01	100.00µL
EQ2100635-02	100.00µL	EQ2100635-02	100.00µL	EQ2100635-03	100.00µL	EQ2100635-04	100.00µL	K2112572-003	100.00µL	K2112572-007	100.00µL

Preparation Information Benchsheet

Prep Run#: 390711
Team: Semivoa GCMS/TWOODS

Prep WorkFlow: OrgExtDioxS(30)
Prep Method: Method

Status: Prepped
Prep Date/Time: 11/4/21 10:19

Name: 1613B Labeled Working Standard	Inventory ID	220216	Logbook Ref: SN 11/4/21 220216 2-4 ng/ml	Expires On: 02/18/2022
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E2101135-001	1,000.00µL	E2101135-002	1,000.00µL	E2101135-003	1,000.00µL	E2101135-004	1,000.00µL	E2101135-005	1,000.00µL	E2101135-006	1,000.00µL
E2101135-007	1,000.00µL	E2101135-008	1,000.00µL	E2101135-009	1,000.00µL	E2101135-010	1,000.00µL	E2101135-011	1,000.00µL	E2101135-012	1,000.00µL
E2101135-013	1,000.00µL	E2101135-014.F	1,000.00µL	E2101135-015	1,000.00µL	E2101165-001	1,000.00µL	EQ2100635-01	1,000.00µL	EQ2100635-01	1,000.00µL
EQ2100635-02	1,000.00µL	EQ2100635-02	1,000.00µL	EQ2100635-03	1,000.00µL	EQ2100635-04	1,000.00µL	K2112572-003	1,000.00µL	K2112572-007	1,000.00µL

Preparation Steps

Step: Extraction	Step: Acid Clean	Step: Silica Gel Clean	Step: Final Volume
Started: 11/4/21 10:19	Started: 11/10/21 11:00	Started: 11/10/21 13:00	Started: 11/11/21 09:00
Finished: 11/5/21 09:00	Finished: 11/10/21 12:00	Finished: 11/10/21 16:00	Finished: 11/11/21 12:00
By: TWOODS	By: TWOODS	By: TWOODS	By: TWOODS
Comments	Comments	Comments	Comments

Comments: _____

Reviewed By: TW Date: 11/11/21

Chain of Custody

Relinquished By: _____	Date: _____	<u>Extracts Examined</u>
Received By: _____	Date: _____	Yes No

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112572

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
11/23/21	LKI	003

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
11/23/21	kw	003

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K2112572

DB-5MSUI

SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
11/24/21	LKL	007

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
11/24/21	LKL	007



Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.233g
Data File Name: P628451
ICAL Date: 10/14/21

Date Analyzed: 11/21/21 09:36
Date Extracted: 11/4/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628367
Cal Ver. File Name: P628446

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.278	0.566			1
1,2,3,7,8-PeCDD	ND	U	0.124	2.83			1
1,2,3,6,7,8-HxCDD	0.136JK		0.0925	2.83	1.99	1.000	1
1,2,3,4,7,8-HxCDD	ND	U	0.110	2.83			1
1,2,3,7,8,9-HxCDD	ND	U	0.0926	2.83			1
1,2,3,4,6,7,8-HpCDD	2.50J		0.106	2.83	1.03	1.000	1
OCDD	17.4		0.137	5.66	0.88	1.000	1
2,3,7,8-TCDF	ND	U	0.238	0.566			1
1,2,3,7,8-PeCDF	ND	U	0.0834	2.83			1
2,3,4,7,8-PeCDF	ND	U	0.0998	2.83			1
1,2,3,6,7,8-HxCDF	ND	U	0.0647	2.83			1
1,2,3,7,8,9-HxCDF	ND	U	0.0777	2.83			1
1,2,3,4,7,8-HxCDF	ND	U	0.0596	2.83			1
2,3,4,6,7,8-HxCDF	ND	U	0.0643	2.83			1
1,2,3,4,6,7,8-HpCDF	0.388J		0.0717	2.83	0.93	1.000	1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0555	2.83			1
OCDF	1.18JK		0.243	5.66	1.15	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2112572
Project:	EQRB/319	Date Collected:	10/25/21 12:50
Sample Matrix:	Soil	Date Received:	10/27/21 12:45
Sample Name:	B-30 (0-10) Comp	Units:	ng/Kg
Lab Code:	K2112572-003	Basis:	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	11/21/21 09:36
Prep Method:	Method	Date Extracted:	11/4/21
Sample Amount:	10.233g	Instrument Name:	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P628451	Blank File Name:	P628367
ICAL Date:	10/14/21	Cal Ver. File Name:	P628446

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.278	0.566			1
Total Penta-Dioxins	ND	U	0.124	2.83			1
Total Hexa-Dioxins	1.23J		0.0973	2.83	1.23		1
Total Hepta-Dioxins	5.83		0.106	2.83	0.92		1
Total Tetra-Furans	ND	U	0.238	0.566			1
Total Penta-Furans	ND	U	0.0906	2.83			1
Total Hexa-Furans	ND	U	0.0662	2.83			1
Total Hepta-Furans	0.388J		0.0620	2.83	0.93		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.233g
Data File Name: P628451
ICAL Date: 10/14/21

Date Analyzed: 11/21/21 09:36
Date Extracted: 11/4/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628367
Cal Ver. File Name: P628446

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1069.710	53		40-135	0.76	1.020
13C-1,2,3,7,8-PeCDD	2000	1245.883	62		40-135	1.52	1.173
13C-1,2,3,4,7,8-HxCDD	2000	1288.919	64		40-135	1.24	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1637.355	82		40-135	1.25	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1264.200	63		40-135	1.06	1.067
13C-OCDD	4000	1887.325	47		40-135	0.89	1.142
13C-2,3,7,8-TCDF	2000	1001.392	50		40-135	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	1571.363	79		40-135	1.60	1.133
13C-2,3,4,7,8-PeCDF	2000	1261.736	63		40-135	1.57	1.164
13C-1,2,3,4,7,8-HxCDF	2000	1458.861	73		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1351.297	68		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1303.199	65		40-135	0.51	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1420.179	71		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1151.485	58		40-135	0.43	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1784.936	89		40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	453.775	57		40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (0-10) Comp
Lab Code: K2112572-003

Service Request: K2112572
Date Collected: 10/25/21 12:50
Date Received: 10/27/21 12:45

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.278	0.566	1	1	
1,2,3,7,8-PeCDD	ND	0.124	2.83	1	1	
1,2,3,6,7,8-HxCDD	0.136	0.0925	2.83	1	0.1	0.0136
1,2,3,4,7,8-HxCDD	ND	0.110	2.83	1	0.1	
1,2,3,7,8,9-HxCDD	ND	0.0926	2.83	1	0.1	
1,2,3,4,6,7,8-HpCDD	2.50	0.106	2.83	1	0.01	0.0250
OCDD	17.4	0.137	5.66	1	0.0003	0.00522
2,3,7,8-TCDF	ND	0.238	0.566	1	0.1	
1,2,3,7,8-PeCDF	ND	0.0834	2.83	1	0.03	
2,3,4,7,8-PeCDF	ND	0.0998	2.83	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.0647	2.83	1	0.1	
1,2,3,7,8,9-HxCDF	ND	0.0777	2.83	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.0596	2.83	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.0643	2.83	1	0.1	
1,2,3,4,6,7,8-HpCDF	0.388	0.0717	2.83	1	0.01	0.00388
1,2,3,4,7,8,9-HpCDF	ND	0.0555	2.83	1	0.01	
OCDF	1.18	0.243	5.66	1	0.0003	0.000354
Total TEQ						0.0481

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.084g
Data File Name: P628452
ICAL Date: 10/14/21

Date Analyzed: 11/21/21 10:26
Date Extracted: 11/4/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628367
Cal Ver. File Name: P628446

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.415	0.572			1
1,2,3,7,8-PeCDD	ND	U	0.308	2.86			1
1,2,3,6,7,8-HxCDD	0.765JK		0.318	2.86	1.63	1.001	1
1,2,3,4,7,8-HxCDD	ND	U	0.513	2.86			1
1,2,3,7,8,9-HxCDD	0.760JK		0.361	2.86	0.98	1.007	1
1,2,3,4,6,7,8-HpCDD	18.4		0.756	2.86	0.91	1.000	1
OCDD	441		2.70	5.72	0.91	1.000	1
2,3,7,8-TCDF	ND	U	0.260	0.572			1
1,2,3,7,8-PeCDF	ND	U	0.167	2.86			1
2,3,4,7,8-PeCDF	ND	U	0.258	2.86			1
1,2,3,6,7,8-HxCDF	ND	U	0.559	2.86			1
1,2,3,7,8,9-HxCDF	ND	U	1.34	2.86			1
1,2,3,4,7,8-HxCDF	ND	U	0.622	2.86			1
2,3,4,6,7,8-HxCDF	ND	U	0.677	2.86			1
1,2,3,4,6,7,8-HpCDF	6.15K		1.20	2.86	1.47	1.000	1
1,2,3,4,7,8,9-HpCDF	1.75JK		1.64	2.86	1.26	1.000	1
OCDF	76.0		4.29	5.72	0.88	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Coles and Betts Environmental Consulting, Inc.	Service Request:	K2112572
Project:	EQRB/319	Date Collected:	10/25/21 13:55
Sample Matrix:	Soil	Date Received:	10/27/21 12:45
Sample Name:	B-30 (10-25) Comp	Units:	ng/Kg
Lab Code:	K2112572-007	Basis:	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290A	Date Analyzed:	11/21/21 10:26
Prep Method:	Method	Date Extracted:	11/4/21
Sample Amount:	10.084g	Instrument Name:	E-HRMS-08
		GC Column:	DB-5MSUI
Data File Name:	P628452	Blank File Name:	P628367
ICAL Date:	10/14/21	Cal Ver. File Name:	P628446

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.415	0.572			1
Total Penta-Dioxins	ND	U	0.308	2.86			1
Total Hexa-Dioxins	1.45J		0.380	2.86	1.31		1
Total Hepta-Dioxins	33.3		0.756	2.86	1.19		1
Total Tetra-Furans	ND	U	0.260	0.572			1
Total Penta-Furans	ND	U	0.201	2.86			1
Total Hexa-Furans	ND	U	0.720	2.86			1
Total Hepta-Furans	17.6		1.40	2.86	1.09		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45

Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.084g

Data File Name: P628452
ICAL Date: 10/14/21

Date Analyzed: 11/21/21 10:26
Date Extracted: 11/4/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628367
Cal Ver. File Name: P628446

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	659.164	33	Y	40-135	0.77	1.020
13C-1,2,3,7,8-PeCDD	2000	488.905	24	Y	40-135	1.50	1.173
13C-1,2,3,4,7,8-HxCDD	2000	187.493	9	Y	40-135	1.22	0.992
13C-1,2,3,6,7,8-HxCDD	2000	314.945	16	Y	40-135	1.30	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	157.438	8	Y	40-135	1.03	1.067
13C-OCDD	4000	119.205	3	Y	40-135	0.93	1.142
13C-2,3,7,8-TCDF	2000	622.234	31	Y	40-135	0.80	0.994
13C-1,2,3,7,8-PeCDF	2000	587.532	29	Y	40-135	1.59	1.133
13C-2,3,4,7,8-PeCDF	2000	367.150	18	Y	40-135	1.59	1.164
13C-1,2,3,4,7,8-HxCDF	2000	204.725	10	Y	40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	217.671	11	Y	40-135	0.50	0.975
13C-1,2,3,7,8,9-HxCDF	2000	114.166	6	Y	40-135	0.54	1.008
13C-2,3,4,6,7,8-HxCDF	2000	193.842	10	Y	40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	75.960	4	Y	40-135	0.44	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	69.943	3	Y	40-135	0.44	1.080
37Cl-2,3,7,8-TCDD	800	538.502	67		40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: B-30 (10-25) Comp
Lab Code: K2112572-007

Service Request: K2112572
Date Collected: 10/25/21 13:55
Date Received: 10/27/21 12:45
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Toxicity Equivalency Quotient

Analyte Name	Result	DL	MRL	Dilution Factor	TEF	TEF - Adjusted Concentration
2,3,7,8-TCDD	ND	0.415	0.572	1	1	
1,2,3,7,8-PeCDD	ND	0.308	2.86	1	1	
1,2,3,6,7,8-HxCDD	0.765	0.318	2.86	1	0.1	0.0765
1,2,3,4,7,8-HxCDD	ND	0.513	2.86	1	0.1	
1,2,3,7,8,9-HxCDD	0.760	0.361	2.86	1	0.1	0.0760
1,2,3,4,6,7,8-HpCDD	18.4	0.756	2.86	1	0.01	0.184
OCDD	441	2.70	5.72	1	0.0003	0.132
2,3,7,8-TCDF	ND	0.260	0.572	1	0.1	
1,2,3,7,8-PeCDF	ND	0.167	2.86	1	0.03	
2,3,4,7,8-PeCDF	ND	0.258	2.86	1	0.3	
1,2,3,6,7,8-HxCDF	ND	0.559	2.86	1	0.1	
1,2,3,7,8,9-HxCDF	ND	1.34	2.86	1	0.1	
1,2,3,4,7,8-HxCDF	ND	0.622	2.86	1	0.1	
2,3,4,6,7,8-HxCDF	ND	0.677	2.86	1	0.1	
1,2,3,4,6,7,8-HpCDF	6.15	1.20	2.86	1	0.01	0.0615
1,2,3,4,7,8,9-HpCDF	1.75	1.64	2.86	1	0.01	0.0175
OCDF	76.0	4.29	5.72	1	0.0003	0.0228
Total TEQ						0.570

2005 WHO TEFs, ND = 0

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil
Sample Name: Method Blank
Lab Code: EQ2100635-01

Service Request: K2112572
Date Collected: NA
Date Received: NA
Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.021g
Data File Name: P628367
ICAL Date: 10/14/21

Date Analyzed: 11/18/21 07:41
Date Extracted: 11/4/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628367
Cal Ver. File Name: P628364

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.651	0.651			1
1,2,3,7,8-PeCDD	ND	U	0.165	2.49			1
1,2,3,6,7,8-HxCDD	ND	U	0.103	2.49			1
1,2,3,4,7,8-HxCDD	0.142J		0.122	2.49	1.05	1.000	1
1,2,3,7,8,9-HxCDD	ND	U	0.103	2.49			1
1,2,3,4,6,7,8-HpCDD	ND	U	0.107	2.49			1
OCDD	ND	U	0.157	4.99			1
2,3,7,8-TCDF	ND	U	0.449	0.499			1
1,2,3,7,8-PeCDF	ND	U	0.139	2.49			1
2,3,4,7,8-PeCDF	ND	U	0.113	2.49			1
1,2,3,6,7,8-HxCDF	ND	U	0.0898	2.49			1
1,2,3,7,8,9-HxCDF	ND	U	0.0988	2.49			1
1,2,3,4,7,8-HxCDF	ND	U	0.0894	2.49			1
2,3,4,6,7,8-HxCDF	ND	U	0.0836	2.49			1
1,2,3,4,6,7,8-HpCDF	ND	U	0.0741	2.49			1
1,2,3,4,7,8,9-HpCDF	ND	U	0.0987	2.49			1
OCDF	ND	U	0.181	4.99			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100635-01

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.021g

Date Analyzed: 11/18/21 07:41
Date Extracted: 11/4/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628367
Cal Ver. File Name: P628364

Data File Name: P628367
ICAL Date: 10/14/21

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	ND	U	0.651	0.651			1
Total Penta-Dioxins	ND	U	0.165	2.49			1
Total Hexa-Dioxins	ND	U	0.109	2.49			1
Total Hepta-Dioxins	ND	U	0.107	2.49			1
Total Tetra-Furans	ND	U	0.449	0.499			1
Total Penta-Furans	ND	U	0.125	2.49			1
Total Hexa-Furans	ND	U	0.0901	2.49			1
Total Hepta-Furans	ND	U	0.0852	2.49			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: EQ2100635-01

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.021g

Data File Name: P628367
ICAL Date: 10/14/21

Date Analyzed: 11/18/21 07:41
Date Extracted: 11/4/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628367
Cal Ver. File Name: P628364

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	490.801	25	Y	40-135	0.77	1.020
13C-1,2,3,7,8-PeCDD	2000	822.837	41		40-135	1.55	1.173
13C-1,2,3,4,7,8-HxCDD	2000	1071.579	54		40-135	1.29	0.992
13C-1,2,3,6,7,8-HxCDD	2000	1356.834	68		40-135	1.27	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1220.693	61		40-135	1.06	1.066
13C-OCDD	4000	2208.141	55		40-135	0.92	1.142
13C-2,3,7,8-TCDF	2000	465.687	23	Y	40-135	0.78	0.994
13C-1,2,3,7,8-PeCDF	2000	699.688	35	Y	40-135	1.59	1.134
13C-2,3,4,7,8-PeCDF	2000	824.281	41		40-135	1.57	1.164
13C-1,2,3,4,7,8-HxCDF	2000	1059.776	53		40-135	0.52	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1060.391	53		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1093.358	55		40-135	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1195.455	60		40-135	0.53	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1169.738	58		40-135	0.45	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1021.230	51		40-135	0.42	1.079
37Cl-2,3,7,8-TCDD	800	203.079	25	Y	40-135	NA	1.020



Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Analyzed: 11/18/21
Date Extracted: 11/04/21

Lab Control Sample Summary

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method

Units: ng/Kg
Basis: Dry
Analysis Lot: 747154

Lab Control Sample

EQ2100635-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,2,3,4,6,7,8-HpCDD	84.7	98.9	86	70-130
1,2,3,4,7,8-HxCDD	95.1	98.9	96	70-130
1,2,3,6,7,8-HxCDD	86.5	98.9	87	70-130
1,2,3,7,8,9-HxCDD	89.4	98.9	90	70-130
1,2,3,7,8-PeCDD	90.6	98.9	92	70-130
2,3,7,8-TCDD	16.7	19.8	85	70-130
OCDD	176	198	89	70-130
1,2,3,4,6,7,8-HpCDF	84.5	98.9	85	70-130
1,2,3,4,7,8,9-HpCDF	87.4	98.9	88	70-130
1,2,3,4,7,8-HxCDF	81.7	98.9	83	70-130
1,2,3,6,7,8-HxCDF	86.4	98.9	87	70-130
1,2,3,7,8,9-HxCDF	84.1	98.9	85	70-130
1,2,3,7,8-PeCDF	82.7	98.9	84	70-130
2,3,4,6,7,8-HxCDF	88.5	98.9	89	70-130
2,3,4,7,8-PeCDF	85.1	98.9	86	70-130
2,3,7,8-TCDF	15.5	19.8	78	70-130
OCDF	161	198	81	70-130

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100635-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.114g

Data File Name: P628374
ICAL Date: 10/14/21

Date Analyzed: 11/18/21 13:30
Date Extracted: 11/4/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628367
Cal Ver. File Name: P628364

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	16.7		0.347	0.494	0.88	1.001	1
1,2,3,7,8-PeCDD	90.6		0.140	2.47	1.53	1.000	1
1,2,3,6,7,8-HxCDD	86.5		0.102	2.47	1.21	1.000	1
1,2,3,4,7,8-HxCDD	95.1		0.116	2.47	1.25	1.000	1
1,2,3,7,8,9-HxCDD	89.4		0.0996	2.47	1.21	1.006	1
1,2,3,4,6,7,8-HpCDD	84.7		0.0843	2.47	1.04	1.000	1
OCDD	176		0.102	4.94	0.86	1.000	1
2,3,7,8-TCDF	15.5		0.270	0.494	0.73	1.001	1
1,2,3,7,8-PeCDF	82.7		0.185	2.47	1.56	1.001	1
2,3,4,7,8-PeCDF	85.1		0.155	2.47	1.52	1.000	1
1,2,3,6,7,8-HxCDF	86.4		0.0772	2.47	1.19	1.000	1
1,2,3,7,8,9-HxCDF	84.1		0.103	2.47	1.28	1.000	1
1,2,3,4,7,8-HxCDF	81.7		0.0780	2.47	1.24	1.000	1
2,3,4,6,7,8-HxCDF	88.5		0.0798	2.47	1.27	1.000	1
1,2,3,4,6,7,8-HpCDF	84.5		0.252	2.47	1.04	1.000	1
1,2,3,4,7,8,9-HpCDF	87.4		0.356	2.47	1.06	1.000	1
OCDF	161		0.185	4.94	0.89	1.005	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100635-02

Units: ng/Kg
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.114g

Data File Name: P628374
ICAL Date: 10/14/21

Date Analyzed: 11/18/21 13:30
Date Extracted: 11/4/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628367
Cal Ver. File Name: P628364

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
Total Tetra-Dioxins	16.7		0.347	0.494	0.88		1
Total Penta-Dioxins	90.6		0.140	2.47	1.53		1
Total Hexa-Dioxins	271		0.105	2.47	1.25		1
Total Hepta-Dioxins	84.7		0.0843	2.47	1.04		1
Total Tetra-Furans	15.5		0.270	0.494	0.73		1
Total Penta-Furans	168		0.169	2.47	1.56		1
Total Hexa-Furans	341		0.0836	2.47	1.24		1
Total Hepta-Furans	172		0.298	2.47	1.04		1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Coles and Betts Environmental Consulting, Inc.
Project: EQRB/319
Sample Matrix: Soil

Service Request: K2112572
Date Collected: NA
Date Received: NA

Sample Name: Lab Control Sample
Lab Code: EQ2100635-02

Units: Percent
Basis: Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method: 8290A
Prep Method: Method
Sample Amount: 10.114g

Data File Name: P628374
ICAL Date: 10/14/21

Date Analyzed: 11/18/21 13:30
Date Extracted: 11/4/21
Instrument Name: E-HRMS-08
GC Column: DB-5MSUI
Blank File Name: P628367
Cal Ver. File Name: P628364

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	635.591	32	Y	40-135	0.77	1.019
13C-1,2,3,7,8-PeCDD	2000	1034.618	52		40-135	1.57	1.173
13C-1,2,3,4,7,8-HxCDD	2000	1330.522	67		40-135	1.27	0.991
13C-1,2,3,6,7,8-HxCDD	2000	1634.931	82		40-135	1.26	0.994
13C-1,2,3,4,6,7,8-HpCDD	2000	1375.807	69		40-135	1.08	1.066
13C-OCDD	4000	2523.853	63		40-135	0.90	1.142
13C-2,3,7,8-TCDF	2000	641.038	32	Y	40-135	0.80	0.994
13C-1,2,3,7,8-PeCDF	2000	936.847	47		40-135	1.57	1.133
13C-2,3,4,7,8-PeCDF	2000	1041.803	52		40-135	1.57	1.164
13C-1,2,3,4,7,8-HxCDF	2000	1369.764	68		40-135	0.53	0.972
13C-1,2,3,6,7,8-HxCDF	2000	1371.902	69		40-135	0.52	0.975
13C-1,2,3,7,8,9-HxCDF	2000	1226.759	61		40-135	0.53	1.008
13C-2,3,4,6,7,8-HxCDF	2000	1373.177	69		40-135	0.52	0.988
13C-1,2,3,4,6,7,8-HpCDF	2000	1347.292	67		40-135	0.42	1.041
13C-1,2,3,4,7,8,9-HpCDF	2000	1161.776	58		40-135	0.44	1.079
37Cl-2,3,7,8-TCDD	800	260.996	33	Y	40-135	NA	1.020

Appendix E

IDW Disposal Documentation

Request for Waste Profiling and Disposal

Job#: _____

Company/Generator Name: Burnside Bridge Project c/o Coles and Betts

Business Address: 1620 SE 190th Ave Gresham, OR 97233

Telephone Number 503-703-3374 Contact Person: Mike Reynolds

EPA ID: VSQG

Waste Name:	IDW Soil	Decon Water	IDW Soil/water mix
Waste Generating Process:	soil collected from investigative drilling activities	water collected from rinsing equipment used in investigative drilling activities	mixture of soil and purge water collected from investigative drilling
Flashpoint:	N/A	N/A	N/A
pH:	N/A	N/A	N/A
Heavy Metals:	N/A	N/A	N/A
RCRA VOC's:	N/A	N/A	N/A
Viscosity:	Solid	Liquid	Solid/Liquid
Chemical Composition:	NON RCRA Soil 100%	NON RCRA Water 100% soil 0-1%	NON RCRA Soil 20-80% NON RCRA Water 20-80%
Analytical or msds on file:	Yes	yes	Yes
Hazardous Waste:	No	No	No
Waste Codes:	none	none	none
Proposed Facilities:	IRM	IRM	IRM
Profile Number:	LF01	STAB01	STAB01

II. VSQG Certification (sign if applicable)

State and Federal hazardous waste regulations define a Very Small Quantity Generator (VSQG) as a hazardous waste generator that generates, in one month, no more than 100 kilograms (220 pounds or approximately 25 gals) of hazardous waste, 2.2 pounds of acutely hazardous waste, or 220 pounds of spill cleanup debris containing hazardous waste. Additionally, to be a Conditionally Exempt Generator a generator must not at any time accumulate more than 2200 pounds (approximately 250 gals) of hazardous waste on site. Generators that do not meet these requirements are no longer defined as Conditionally Exempt Generators and must comply with regulations for small quantity or large quantity generators.

Under penalty of law and for the purposes of receiving the benefits of WasteXpress's Conditionally Exempt Generator hazardous waste collection service, I certify my organization complies with all requirements for conditionally exempt generator status. I understand that only the types and quantities of waste(s) listed on the Work Order/Quote and approved by WasteXpress may be disposed through this service. Additionally, I acknowledge CEG waste being shipped to the International Resource Management will be repackaged, consolidated and shipped on a manifest along with other CEG generators to a permitted recycler, subtitle C/D landfill or TSDF per the 40 CFR for proper reclamation or waste disposal.

Signature _____ Date _____

I hereby certify that all information submitted above and attached contains true and accurate descriptions of this waste. I hereby authorize WasteXpress to proceed with submitting waste profiles, wastestream surveys and or waste approval forms on my behalf to secure necessary approvals to dispose of this waste at a hazardous waste treatment, storage, disposal facility (TSDF) or other facility that is permitted and able to manage this waste. This authorization does not obligate me in any way to direct any volume of this waste to any disposal at this time, but may be decided once waste disposal approval has been obtained. I agree to notify WasteXpress if there is any change in the waste stream information as submitted for approval. I also certify that if waste samples were obtained, they were collected according to EPA acceptable methods and the sample(s) were analyzed by a qualified certified laboratory and that the appropriate chain of custody was used.

Signature _____

Date 12/14/21

Printed Name Megan Neill

Title Engineering Services Manager
Transportation Division
Multnomah County

DRUM LOG

 	Date:	1/21/2022	<div style="background-color: #c8e6c9; width: 20px; height: 10px; display: inline-block;"></div> = Picked up by Waste Express <div style="background-color: #ffff00; width: 20px; height: 10px; display: inline-block;"></div> = Ready for disposal. Text = Hazardous waste
	Client:	Multnomah County	
	Project:	EQRB (Burnside Bridge)	

INVENTORY ALL DRUMS ONSITE

Boring(s)	Generation Date	Drum Contents	Color of Contents	Integrity of the Drum	Analytical Laboratory Report	Label Type (haz/non-haz/client specific)	Approx. Volume	Location of Drum/Notes/ Other Remarks (i.e., photo taken)	Drum ID	Disposal Date
B-17	8/23/2021	SC	Brown	Good	A1H0845	Non-haz		0-25' (actually to 65')	CB001	1/21/2022
B-18	8/23/2021	SC/DW	Brown	Good	A1H0847	Non-haz		0-25'	CB002	1/21/2022
B-16	8/27/2021	SC	Brown	Good	A1H0964	Non-haz		0-25'	CB003	1/21/2022
B-08	8/30/2021	SC	Brown	Good	A1H1020	Non-haz		First attempt 0-10'	CB004	1/21/2022
B-33	9/1/2021	SC	Brown	Good	A1I0084	Non-haz		0-25'	CB005	1/21/2022
B-19	9/7/2021	SC	Brown	Good	A1I0192	Non-haz		10-25' (label attached but faded)	CB006	1/21/2022
B-19	9/7/2021	VAC	Brown	Good	A1L0021	Non-haz	3/4	0-10' Drum contents sampled 12/1/21. (B-19 VAC 10:45)	CB007	1/21/2022
B-32	9/8/2021	VAC	Brown	Good	A1L0021	Non-haz	1/4	0-10' VAC (label attached but faded) Drum contents sampled 12/1/21. (B-32 VAC 10:50) (Slight sheen and odor.)	CB008	1/21/2022
B-32	9/8/2021	SC	Brown	Good	A1I0276	Non-haz		10-25' (label attached but faded)	CB009	1/21/2022
B-20	9/10/2021	VAC	Brown	Good	A1L0021	Non-haz	Full	0-10' VAC (1st boring location aborted) Drum contents sampled and composited with other B-20 Drum 12/1/21 (B-20 VAC 11:10)	CB010	1/21/2022
B-20	9/10/2021	VAC	Brown	Good	A1L0021	Non-haz	Full	0-10' VAC (1st boring location aborted) Drum contents sampled and composited with other B-20 Drum 12/1/21 (B-20 VAC 11:10)	CB011	1/21/2022
B-15	9/12/2021	SC	Brown	Good	A1I0449	Non-haz		0-26.5'	CB012	1/21/2022
B-7/B-8	9/14/2021	VAC	Brown	Good	A1L0021	Non-haz	3/4	Combo B-7 (0-11') & B-8 (0-14.5') per notes. Drum sampled and composited with other 2 B-7/B-8 Drums 12/1/21 (B-7/B-8 VAC 12:00)	CB013	1/21/2022
B-8	9/14/2021	SC	Brown	Good	A1I0712	Non-haz		14.5-25' (2nd round)	CB014	1/21/2022
B-7	9/16/2021	SC	Brown	Good	A1I0581	Non-haz		10-26.5'	CB015	1/21/2022
B-21	11/8/2021	SC	Brown	Good	A1K0351	Non-haz		0-25'	CB016	1/21/2022
B-23	11/2/2021	SC	Brown	Good	A1K0401	Non-haz		0-25'	CB017	1/21/2022
B-6	?	VAC	Brown	Good	A1L0021	Non-haz	1/4	Drum contents sampled 12/1/21. (B-6 VAC 11:25)	CB018	1/21/2022
B-7	9/21/2021	SC/BS	Brown	Good	A1I0581	Non-haz		0-25' (2nd Drum)	CB019	1/21/2022
B-8	?	VAC	Brown	Good	A1L0021	Non-haz	1/2	0-14.5' Drum contents sampled 12/1/21. (B-8 VAC 11:35)	CB020	1/21/2022

DRUM LOG

 	Date:	1/21/2022	<div style="display: flex; align-items: center;"> <div style="width: 20px; height: 10px; background-color: #c8e6c9; margin-right: 5px;"></div> = Picked up by Waste Express <div style="width: 20px; height: 10px; background-color: #ffff00; margin-right: 5px; margin-top: 5px;"></div> = Ready for disposal. Text = Hazardous waste </div>
	Client:	Multnomah County	
	Project:	EQRB (Burnside Bridge)	

INVENTORY ALL DRUMS ONSITE

Boring(s)	Generation Date	Drum Contents	Color of Contents	Integrity of the Drum	Analytical Laboratory Report	Label Type (haz/non-haz/client specific)	Approx. Volume	Location of Drum/Notes/ Other Remarks (i.e., photo taken)	Drum ID	Disposal Date
B-7/B-8	9/14/2021 & 9/15/2021	VAC	Brown	Good	A1L0021	Non-haz	Full	2nd drum Drum sampled and composited with other 2 B-7/B-8 Drums 12/1/21 (B-7/B-8 VAC 12:00)	CB021	1/21/2022
B-7/B-8	9/14/2021 & 9/15/2021	VAC	Brown	Good	A1L0021	Non-haz	Full	3rd drum Drum sampled and composited with other 2 B-7/B-8 Drums 12/1/21 (B-7/B-8 VAC 12:00)	CB022	1/21/2022
Drum K	?	VAC	Brown	Good	A1K1108	Non-haz	1/4	Unlabeled drum sampled 11/22/21	CB023	1/21/2022
Drum N	?	VAC	Brown	Good	A1K1108	Non-haz	Full	Unlabeled drum sampled 11/22/21	CB024	1/21/2022
Drum B	?	VAC	Brown	Good	A1K1108	Non-haz	Full	Unlabeled drum sampled 11/23/21	CB025	1/21/2022
Drum O	?	VAC	Brown	Good	A1K1108	Non-haz	3/4	Unlabeled drum sampled 11/23/21	CB026	1/21/2022

Appendix F

SW IDW Disposal Documentation

NON-HAZARDOUS
WASTE MANIFEST

1. Generator ID Number

V S Q Q

2. Page 1 of

1

3. Emergency Response Phone

503-224-3206

4. Waste Tracking Number

107747

5. Generator's Name and Mailing Address

Burnside Bridge Project of Shannon Wilson
1620 SE 190th Ave
Gresham OR 97233

Generator's Site Address (if different than mailing address)

Generator's Phone: 503 210-4753

6. Transporter 1 Company Name

WasteXpress

U.S. EPA ID Number

OR0000023150

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

11615 N Lombard St
Portland OR 97203

U.S. EPA ID Number

Facility's Phone:

503 224-3206

OR0000023150

9. Waste Shipping Name and Description

10. Containers

11. Total
Quantity

12. Unit
Wt./Vol.

No.

Type

1. Non-regulated material, Solid (LAWY Soil)

0 7

2. Non-regulated material, Liquid (LAW Water) + SOIL

14 DM 2120 P

3. Non-regulated material, Liquid (LAW Water/ Soil Mix)

2 DM 120 P

4.

13. Special Handling Instructions and Additional Information

1) LF01
2) STAB01

3) STAB01

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Offor's Printed/Typed Name

Signature

Month Day Year

Christina Walker

[Signature]

10 29 21

INT'L

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Christina Walker

[Signature]

10 29 21

Transporter 2 Printed/Typed Name

Signature

Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number V S O G	2. Page 1 of 1	3. Emergency Response Phone 503-224-3206	4. Waste Tracking Number 107972		
5. Generator's Name and Mailing Address Burnside Bridge Project c/o Shannon Wilson 1620 SE 190th Ave Gresham OR 97233 Generator's Site Address (if different than mailing address)						
Generator's Phone: 503-210-4753			U.S. EPA ID Number			
6. Transporter 1 Company Name WasteXpress			OR0000023150			
7. Transporter 2 Company Name			U.S. EPA ID Number			
8. Designated Facility Name and Site Address WasteXpress 11615 N Lombard St Portland OR 97203			U.S. EPA ID Number			
Facility's Phone: 503-224-3200			OR0000023150			
GENERATOR	9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
			No.	Type		
	1. Non-regulated material, Solid (LDW Soil)					
	2. Non-regulated material, Liquid (LDW Water)		4	Drum	800	P
	3. Non-regulated material, Liquid (LDW Water/Sol Mix)		26	Drum	12,500	P
4.						
13. Special Handling Instructions and Additional Information 1) LEU1 2) STABO1 4/5 Drum 3) STABO1 26/55 Drum						
14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.						
Generator's/Offor's Printed/Typed Name			Signature	Month	Day	Year
				12	8	01
INT'L	15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: _____			
	Transporter Signature (for exports only):		Date leaving U.S.: _____			
TRANSPORTER	16. Transporter Acknowledgment of Receipt of Materials					
	Transporter 1 Printed/Typed Name		Signature	Month	Day	Year
	KELLY Ann Smeat			12	8	01
Transporter 2 Printed/Typed Name		Signature	Month	Day	Year	
DESIGNATED FACILITY	17. Discrepancy					
	17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
	Manifest Reference Number: _____					
	17b. Alternate Facility (or Generator)			U.S. EPA ID Number		
	Facility's Phone: _____					
17c. Signature of Alternate Facility (or Generator)			Month	Day	Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name			Signature	Month	Day	Year

Please print or type
Form designed for use on 11x17 (12.7mm) typewriter

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator ID Number **V5Q6** 2. Page 1 of **1** 3. Emergency Response Phone **503224 3206** 4. Waste Tracking Number **108144-B**

5. Generator's Name and Mailing Address **Environmental Storage project 70 Shannon & Wilson
1620 SE 190th Ave
Gresham OR 97233** Generator's Site Address (if different than mailing address)

Generator's Phone: _____
6. Transporter 1 Company Name **Wastexpress** U.S. EPA ID Number **OR0000023150**

7. Transporter 2 Company Name _____ U.S. EPA ID Number _____

8. Designated Facility Name and Site Address **Wastexpress
11615 N Lombard
Portland OR 97203** U.S. EPA ID Number **OR0000023150**

Facility's Phone: _____

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. non regulated material, solid (DW soil)	5	DM	2500	P
2. non regulated material, liquid, IDW water	1	DM	300	P
3. non regulated material, IDW water/soil mix	12	DM	5000	P
4.				

13. Special Handling Instructions and Additional Information

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Generator's/Officer's Printed/Typed Name **Lee Sherman** Signature _____ Month **10** Day **21** Year **20**

15. International Shipments Import to U.S. Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name **Tom Garland** Signature _____ Month _____ Day _____ Year _____

Transporter 2 Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____

17. Discrepancy

17a. Discrepancy Indication Space Quantity Type Residue Partial Rejection Full Rejection

17b. Alternate Facility (or Generator) Manifest Reference Number: _____ U.S. EPA ID Number _____

Facility's Phone: _____

17c. Signature of Alternate Facility (or Generator) _____ Month _____ Day _____ Year _____

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____

GENERATOR
INT'L
TRANSPORTER
DESIGNATED FACILITY

Please print or type
(Form designed for use on 8 1/2" x 11" typewriter.)

2. Page 1 of 1 3. Emergency Response Phone 503-224-3206 4. Waste Tracking Number 108144

5. Generator's Name and Mailing Address
Burnside Bridge Project c/o Shannon Wilson
1620 SE 190th Ave
Gresham OR 97233
Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name WasteXpress U.S. EPA ID Number OR000023150

7. Transporter 2 Company Name U.S. EPA ID Number

8. Designated Facility Name and Site Address
WasteXpress
11615 N Lombard St.
Portland OR 97203
Facility's Phone: 503-224-3206 U.S. EPA ID Number OR000023150

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. Non-regulated material, Solid (IDW Soil)	1	DM	500	P
2. Non-regulated material, Liquid (IDW Water)	4	DM	7200	P
3. Non-regulated material, Liquid (IDW Water/ Soil Mix)	45	DM	25000	P
4.				

13. Special Handling Instructions and Additional Information
1) LF01
2) STAB01
3) STAB01

14. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Generator's/Offor's Printed/Typed Name: Lauren Sherman Signature: [Signature] Month: 01 Day: 21 Year: 22

15. International Shipments Import to U.S. Export from U.S. Port of entry/exit: Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Travis Lichtman Signature: [Signature] Month: 01 Day: 21 Year: 22
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

17. Discrepancy
17a. Discrepancy Indication Space Quantity Type Residue Partial Rejection Full Rejection

17b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Signature: Month: Day: Year:

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

VSR6

2. Page 1 of

1

3. Emergency Response Phone

502 224 3206

4. Waste Tracking Number

106 108144

5. Generator's Name and Mailing Address

Burnside Bridge project c/o Shannon + Wilson
1620 SE 190th Ave
Gresham OR 97233

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name

Wactexpress

U.S. EPA ID Number

ORQ000023150

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

Wactexpress
11615 N Lombard
Portland OR 97203

U.S. EPA ID Number

ORQ000023150

9. Waste Shipping Name and Description

1. Non Regulated material, liquid, NOS
Low water/soil mix

10. Containers

No.

Type

11. Total Quantity

12. Unit Wt./Vol.

1

DF

450

P

13. Special Handling Instructions and Additional Information

1 X 85 Salvage Drum

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeor's Printed/Typed Name

Lauren Sherman

Signature

[Signature]

Month Day Year

11 | 21 | 22

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Tracy Whitman

Signature

[Signature]

Month Day Year

01 | 21 | 22

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Shannon & Wilson - OR

Sample Delivery Group: L1399672
Samples Received: 09/04/2021
Project Number: 102636-011
Description: ERBB

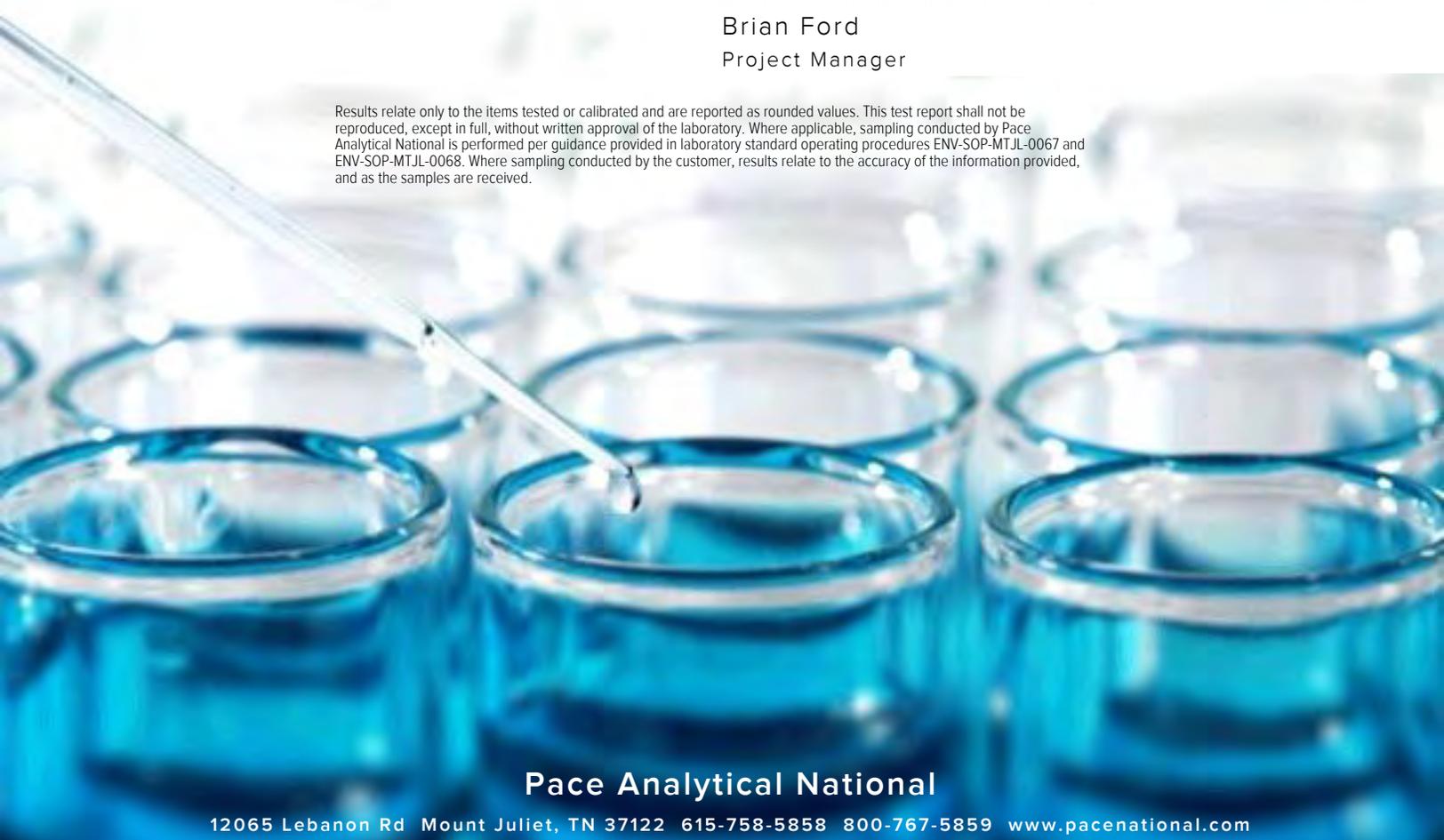
Report To: Peter Shingledecker
3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	5
Sr: Sample Results	6
B-09-COMP-SCBS L1399672-01	6
B-10-BS L1399672-02	10
B-11-COMP-SCBS L1399672-03	14
B-12-COMP-SCBS L1399672-04	18
B-13-COMP-SCBS L1399672-05	22
B-27-COMP-SCBS L1399672-06	26
Qc: Quality Control Summary	30
Total Solids by Method 2540 G-2011	30
Mercury by Method 7471B	31
Metals (ICPMS) by Method 6020B	32
Volatile Organic Compounds (GC/MS) by Method 8260D	33
Chlorinated Acid Herbicides (GC) by Method 8151A	37
Pesticides (GC) by Method 8081B	39
Polychlorinated Biphenyls (GC) by Method 8082 A	41
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	42
Gl: Glossary of Terms	48
Al: Accreditations & Locations	50
Sc: Sample Chain of Custody	51

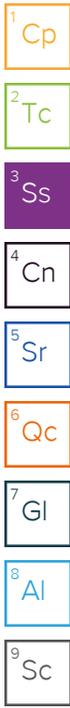


SAMPLE SUMMARY

B-09-COMP-SCBS L1399672-01 Solid

Collected by LAS Collected date/time 09/02/21 12:00 Received date/time 09/04/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1739941	1	09/15/21 14:19	09/15/21 14:28	CMK	Mt. Juliet, TN
Mercury by Method 7471B	WG1736526	1	09/08/21 10:59	09/09/21 13:44	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1735467	5	09/08/21 07:42	09/08/21 17:52	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1737836	1	09/08/21 18:53	09/10/21 15:33	DWR	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1736491	1	09/08/21 07:46	09/10/21 02:06	JMB	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1737251	1	09/09/21 19:59	09/10/21 16:59	JMB	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1737251	1	09/09/21 19:59	09/10/21 16:59	JMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1737562	1	09/10/21 06:03	09/10/21 18:44	AGW	Mt. Juliet, TN



B-10-BS L1399672-02 Solid

Collected by LAS Collected date/time 09/02/21 13:00 Received date/time 09/04/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1739941	1	09/15/21 14:19	09/15/21 14:28	CMK	Mt. Juliet, TN
Mercury by Method 7471B	WG1736526	1	09/08/21 10:59	09/09/21 13:47	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1735467	5	09/08/21 07:42	09/08/21 17:56	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1737836	1	09/08/21 18:53	09/10/21 15:52	DWR	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1736491	1	09/08/21 07:46	09/10/21 02:21	JMB	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1737251	1	09/09/21 19:59	09/10/21 17:09	JMB	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1737251	1	09/09/21 19:59	09/10/21 17:09	JMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1737562	1	09/10/21 06:03	09/10/21 23:02	AGW	Mt. Juliet, TN

B-11-COMP-SCBS L1399672-03 Solid

Collected by LAS Collected date/time 09/02/21 13:30 Received date/time 09/04/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1739941	1	09/15/21 14:19	09/15/21 14:28	CMK	Mt. Juliet, TN
Mercury by Method 7471B	WG1736526	1	09/08/21 10:59	09/09/21 13:50	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1735467	5	09/08/21 07:42	09/08/21 17:59	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1737836	1	09/08/21 18:53	09/10/21 16:11	DWR	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1736491	1	09/08/21 07:46	09/10/21 02:35	JMB	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1737251	1	09/09/21 19:59	09/10/21 17:20	JMB	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1737251	1	09/09/21 19:59	09/10/21 17:20	JMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1737562	1	09/10/21 06:03	09/10/21 19:31	AGW	Mt. Juliet, TN

B-12-COMP-SCBS L1399672-04 Solid

Collected by LAS Collected date/time 09/02/21 13:50 Received date/time 09/04/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1739941	1	09/15/21 14:19	09/15/21 14:28	CMK	Mt. Juliet, TN
Mercury by Method 7471B	WG1736526	1	09/08/21 10:59	09/09/21 13:57	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1735467	5	09/08/21 07:42	09/08/21 18:02	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1737836	1	09/08/21 18:53	09/10/21 16:30	DWR	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1736491	1	09/08/21 07:46	09/10/21 02:50	JMB	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1737251	1	09/09/21 19:59	09/10/21 17:30	JMB	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1737251	1	09/09/21 19:59	09/10/21 17:30	JMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1737562	1	09/10/21 06:03	09/10/21 20:41	AGW	Mt. Juliet, TN

SAMPLE SUMMARY

B-13-COMP-SCBS L1399672-05 Solid

Collected by: LAS
 Collected date/time: 09/02/21 14:20
 Received date/time: 09/04/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1739941	1	09/15/21 14:19	09/15/21 14:28	CMK	Mt. Juliet, TN
Mercury by Method 7471B	WG1736526	1	09/08/21 10:59	09/09/21 14:00	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1735467	5	09/08/21 07:42	09/08/21 18:05	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1737836	1	09/08/21 18:53	09/10/21 16:49	DWR	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1736491	1	09/08/21 07:46	09/10/21 03:04	JMB	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1737251	1	09/09/21 19:59	09/10/21 17:41	JMB	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1737251	1	09/09/21 19:59	09/10/21 17:41	JMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1737562	1	09/10/21 06:03	09/10/21 19:54	AGW	Mt. Juliet, TN

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

B-27-COMP-SCBS L1399672-06 Solid

Collected by: LAS
 Collected date/time: 09/02/21 14:40
 Received date/time: 09/04/21 09:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1739941	1	09/15/21 14:19	09/15/21 14:28	CMK	Mt. Juliet, TN
Mercury by Method 7471B	WG1736526	1	09/08/21 10:59	09/09/21 14:02	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1735467	5	09/08/21 07:42	09/08/21 18:09	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1737836	1	09/08/21 18:53	09/10/21 17:08	DWR	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1737223	1	09/09/21 07:31	09/10/21 05:14	JMB	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1737251	1	09/09/21 19:59	09/10/21 17:51	JMB	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1737251	1	09/09/21 19:59	09/10/21 17:51	JMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1737562	1	09/10/21 06:03	09/10/21 20:18	AGW	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	26.2		1	09/15/2021 14:28	WG1739941

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0687	0.153	1	09/09/2021 13:44	WG1736526

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	3.39	J	0.382	3.82	5	09/08/2021 17:52	WG1735467
Barium	179		0.580	9.54	5	09/08/2021 17:52	WG1735467
Cadmium	U		0.326	3.82	5	09/08/2021 17:52	WG1735467
Chromium	30.9		1.13	19.1	5	09/08/2021 17:52	WG1735467
Lead	8.78		0.378	7.63	5	09/08/2021 17:52	WG1735467
Selenium	1.30	J	0.687	9.54	5	09/08/2021 17:52	WG1735467
Silver	U		0.330	1.91	5	09/08/2021 17:52	WG1735467

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.242	0.332	1	09/10/2021 15:33	WG1737836
Acrylonitrile	U	C3	0.0240	0.0830	1	09/10/2021 15:33	WG1737836
Benzene	U		0.00310	0.00664	1	09/10/2021 15:33	WG1737836
Bromobenzene	U		0.00597	0.0830	1	09/10/2021 15:33	WG1737836
Bromodichloromethane	U		0.00481	0.0166	1	09/10/2021 15:33	WG1737836
Bromoform	U		0.00777	0.166	1	09/10/2021 15:33	WG1737836
Bromomethane	U		0.0131	0.0830	1	09/10/2021 15:33	WG1737836
n-Butylbenzene	U		0.0349	0.0830	1	09/10/2021 15:33	WG1737836
sec-Butylbenzene	U		0.0191	0.0830	1	09/10/2021 15:33	WG1737836
tert-Butylbenzene	U		0.0129	0.0332	1	09/10/2021 15:33	WG1737836
Carbon tetrachloride	U		0.00596	0.0332	1	09/10/2021 15:33	WG1737836
Chlorobenzene	U		0.00139	0.0166	1	09/10/2021 15:33	WG1737836
Chlorodibromomethane	U		0.00406	0.0166	1	09/10/2021 15:33	WG1737836
Chloroethane	U		0.0113	0.0332	1	09/10/2021 15:33	WG1737836
Chloroform	U		0.00684	0.0166	1	09/10/2021 15:33	WG1737836
Chloromethane	U		0.0289	0.0830	1	09/10/2021 15:33	WG1737836
2-Chlorotoluene	U		0.00574	0.0166	1	09/10/2021 15:33	WG1737836
4-Chlorotoluene	U		0.00299	0.0332	1	09/10/2021 15:33	WG1737836
1,2-Dibromo-3-Chloropropane	U		0.0259	0.166	1	09/10/2021 15:33	WG1737836
1,2-Dibromoethane	U		0.00430	0.0166	1	09/10/2021 15:33	WG1737836
Dibromomethane	U		0.00498	0.0332	1	09/10/2021 15:33	WG1737836
1,2-Dichlorobenzene	U		0.00282	0.0332	1	09/10/2021 15:33	WG1737836
1,3-Dichlorobenzene	U		0.00398	0.0332	1	09/10/2021 15:33	WG1737836
1,4-Dichlorobenzene	U		0.00465	0.0332	1	09/10/2021 15:33	WG1737836
Dichlorodifluoromethane	U		0.0107	0.0166	1	09/10/2021 15:33	WG1737836
1,1-Dichloroethane	U		0.00326	0.0166	1	09/10/2021 15:33	WG1737836
1,2-Dichloroethane	U		0.00431	0.0166	1	09/10/2021 15:33	WG1737836
1,1-Dichloroethene	U		0.00402	0.0166	1	09/10/2021 15:33	WG1737836
cis-1,2-Dichloroethene	U		0.00487	0.0166	1	09/10/2021 15:33	WG1737836
trans-1,2-Dichloroethene	U		0.00690	0.0332	1	09/10/2021 15:33	WG1737836
1,2-Dichloropropane	U		0.00943	0.0332	1	09/10/2021 15:33	WG1737836
1,1-Dichloropropene	U		0.00537	0.0166	1	09/10/2021 15:33	WG1737836
1,3-Dichloropropane	U		0.00333	0.0332	1	09/10/2021 15:33	WG1737836



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	U		0.00503	0.0166	1	09/10/2021 15:33	WG1737836
trans-1,3-Dichloropropene	U		0.00757	0.0332	1	09/10/2021 15:33	WG1737836
2,2-Dichloropropane	U	J4	0.00916	0.0166	1	09/10/2021 15:33	WG1737836
Di-isopropyl ether	U		0.00272	0.00664	1	09/10/2021 15:33	WG1737836
Ethylbenzene	U		0.00489	0.0166	1	09/10/2021 15:33	WG1737836
Hexachloro-1,3-butadiene	U		0.0398	0.166	1	09/10/2021 15:33	WG1737836
Isopropylbenzene	U		0.00282	0.0166	1	09/10/2021 15:33	WG1737836
p-Isopropyltoluene	U		0.0169	0.0332	1	09/10/2021 15:33	WG1737836
2-Butanone (MEK)	U		0.422	0.664	1	09/10/2021 15:33	WG1737836
Methylene Chloride	U	C3 J3	0.0441	0.166	1	09/10/2021 15:33	WG1737836
4-Methyl-2-pentanone (MIBK)	U		0.0151	0.166	1	09/10/2021 15:33	WG1737836
Methyl tert-butyl ether	U		0.00232	0.00664	1	09/10/2021 15:33	WG1737836
Naphthalene	U		0.0324	0.0830	1	09/10/2021 15:33	WG1737836
n-Propylbenzene	U		0.00631	0.0332	1	09/10/2021 15:33	WG1737836
Styrene	U		0.00152	0.0830	1	09/10/2021 15:33	WG1737836
1,1,1,2-Tetrachloroethane	U		0.00629	0.0166	1	09/10/2021 15:33	WG1737836
1,1,2,2-Tetrachloroethane	U		0.00461	0.0166	1	09/10/2021 15:33	WG1737836
1,1,2-Trichlorotrifluoroethane	U		0.00501	0.0166	1	09/10/2021 15:33	WG1737836
Tetrachloroethene	U		0.00595	0.0166	1	09/10/2021 15:33	WG1737836
Toluene	0.0252	J	0.00863	0.0332	1	09/10/2021 15:33	WG1737836
1,2,3-Trichlorobenzene	U	C4	0.0487	0.0830	1	09/10/2021 15:33	WG1737836
1,2,4-Trichlorobenzene	U		0.0292	0.0830	1	09/10/2021 15:33	WG1737836
1,1,1-Trichloroethane	U		0.00613	0.0166	1	09/10/2021 15:33	WG1737836
1,1,2-Trichloroethane	U		0.00396	0.0166	1	09/10/2021 15:33	WG1737836
Trichloroethene	U		0.00388	0.00664	1	09/10/2021 15:33	WG1737836
Trichlorofluoromethane	U		0.00549	0.0166	1	09/10/2021 15:33	WG1737836
1,2,3-Trichloropropane	U		0.0108	0.0830	1	09/10/2021 15:33	WG1737836
1,2,4-Trimethylbenzene	U		0.0105	0.0332	1	09/10/2021 15:33	WG1737836
1,2,3-Trimethylbenzene	U		0.0105	0.0332	1	09/10/2021 15:33	WG1737836
1,3,5-Trimethylbenzene	U		0.0133	0.0332	1	09/10/2021 15:33	WG1737836
Vinyl chloride	U		0.00770	0.0166	1	09/10/2021 15:33	WG1737836
Xylenes, Total	U		0.00584	0.0432	1	09/10/2021 15:33	WG1737836
(S) Toluene-d8	99.9			75.0-131		09/10/2021 15:33	WG1737836
(S) 4-Bromofluorobenzene	99.5			67.0-138		09/10/2021 15:33	WG1737836
(S) 1,2-Dichloroethane-d4	91.6			70.0-130		09/10/2021 15:33	WG1737836

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.0268	0.267	1	09/10/2021 02:06	WG1736491
Dalapon	U		0.0431	0.267	1	09/10/2021 02:06	WG1736491
2,4-DB	U		0.113	0.267	1	09/10/2021 02:06	WG1736491
Dicamba	U		0.0599	0.267	1	09/10/2021 02:06	WG1736491
Dichloroprop	U		0.0935	0.267	1	09/10/2021 02:06	WG1736491
Dinoseb	U		0.0266	0.267	1	09/10/2021 02:06	WG1736491
MCPA	U	J4	1.69	24.8	1	09/10/2021 02:06	WG1736491
MCPP	U	J4	1.40	24.8	1	09/10/2021 02:06	WG1736491
2,4,5-T	U		0.0325	0.267	1	09/10/2021 02:06	WG1736491
2,4,5-TP (Silvex)	U		0.0408	0.267	1	09/10/2021 02:06	WG1736491
(S) 2,4-Dichlorophenyl Acetic Acid	60.6			22.0-132		09/10/2021 02:06	WG1736491

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.0143	0.0763	1	09/10/2021 16:59	WG1737251
Alpha BHC	U		0.0140	0.0763	1	09/10/2021 16:59	WG1737251
Beta BHC	U		0.0145	0.0763	1	09/10/2021 16:59	WG1737251
Delta BHC	U		0.0132	0.0763	1	09/10/2021 16:59	WG1737251
Gamma BHC	U		0.0131	0.0763	1	09/10/2021 16:59	WG1737251
Chlordane	U		0.393	1.14	1	09/10/2021 16:59	WG1737251
4,4-DDD	U		0.0141	0.0763	1	09/10/2021 16:59	WG1737251
4,4-DDE	U		0.0140	0.0763	1	09/10/2021 16:59	WG1737251
4,4-DDT	U		0.0239	0.0763	1	09/10/2021 16:59	WG1737251
Dieldrin	U		0.0131	0.0763	1	09/10/2021 16:59	WG1737251
Endosulfan I	U		0.0139	0.0763	1	09/10/2021 16:59	WG1737251
Endosulfan II	U		0.0128	0.0763	1	09/10/2021 16:59	WG1737251
Endosulfan sulfate	U		0.0139	0.0763	1	09/10/2021 16:59	WG1737251
Endrin	U		0.0134	0.0763	1	09/10/2021 16:59	WG1737251
Endrin aldehyde	U		0.0129	0.0763	1	09/10/2021 16:59	WG1737251
Endrin ketone	U		0.0271	0.0763	1	09/10/2021 16:59	WG1737251
Heptachlor	U		0.0163	0.0763	1	09/10/2021 16:59	WG1737251
Heptachlor epoxide	U		0.0129	0.0763	1	09/10/2021 16:59	WG1737251
Hexachlorobenzene	U		0.0132	0.0763	1	09/10/2021 16:59	WG1737251
Methoxychlor	U		0.0185	0.0763	1	09/10/2021 16:59	WG1737251
Toxaphene	U		0.473	1.53	1	09/10/2021 16:59	WG1737251
(S) Decachlorobiphenyl	88.2			10.0-135		09/10/2021 16:59	WG1737251
(S) Tetrachloro-m-xylene	86.0			10.0-139		09/10/2021 16:59	WG1737251

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0450	0.130	1	09/10/2021 16:59	WG1737251
PCB 1221	U		0.0450	0.130	1	09/10/2021 16:59	WG1737251
PCB 1232	U		0.0450	0.130	1	09/10/2021 16:59	WG1737251
PCB 1242	U		0.0450	0.130	1	09/10/2021 16:59	WG1737251
PCB 1248	U		0.0282	0.0649	1	09/10/2021 16:59	WG1737251
PCB 1254	U		0.0282	0.0649	1	09/10/2021 16:59	WG1737251
PCB 1260	U		0.0282	0.0649	1	09/10/2021 16:59	WG1737251
(S) Decachlorobiphenyl	87.6			10.0-135		09/10/2021 16:59	WG1737251
(S) Tetrachloro-m-xylene	84.8			10.0-139		09/10/2021 16:59	WG1737251

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0206	0.127	1	09/10/2021 18:44	WG1737562
Acenaphthylene	U		0.0179	0.127	1	09/10/2021 18:44	WG1737562
Anthracene	U		0.0226	0.127	1	09/10/2021 18:44	WG1737562
Benzo(a)anthracene	U		0.0224	0.127	1	09/10/2021 18:44	WG1737562
Benzo(b)fluoranthene	U		0.0237	0.127	1	09/10/2021 18:44	WG1737562
Benzo(k)fluoranthene	U		0.0226	0.127	1	09/10/2021 18:44	WG1737562
Benzo(g,h,i)perylene	U		0.0232	0.127	1	09/10/2021 18:44	WG1737562
Benzo(a)pyrene	U		0.0236	0.127	1	09/10/2021 18:44	WG1737562
Bis(2-chloroethoxy)methane	U		0.0382	1.27	1	09/10/2021 18:44	WG1737562
Bis(2-chloroethyl)ether	U		0.0420	1.27	1	09/10/2021 18:44	WG1737562
2,2-Oxybis(1-Chloropropane)	U		0.0550	1.27	1	09/10/2021 18:44	WG1737562
4-Bromophenyl-phenylether	U		0.0447	1.27	1	09/10/2021 18:44	WG1737562
2-Chloronaphthalene	U		0.0223	0.127	1	09/10/2021 18:44	WG1737562
4-Chlorophenyl-phenylether	U		0.0443	1.27	1	09/10/2021 18:44	WG1737562
Chrysene	U		0.0253	0.127	1	09/10/2021 18:44	WG1737562

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dibenz(a,h)anthracene	U		0.0352	0.127	1	09/10/2021 18:44	WG1737562
3,3-Dichlorobenzidine	U		0.0469	1.27	1	09/10/2021 18:44	WG1737562
2,4-Dinitrotoluene	U		0.0364	1.27	1	09/10/2021 18:44	WG1737562
2,6-Dinitrotoluene	U		0.0416	1.27	1	09/10/2021 18:44	WG1737562
Fluoranthene	U		0.0229	0.127	1	09/10/2021 18:44	WG1737562
Fluorene	U		0.0207	0.127	1	09/10/2021 18:44	WG1737562
Hexachlorobenzene	U		0.0450	1.27	1	09/10/2021 18:44	WG1737562
Hexachloro-1,3-butadiene	U		0.0427	1.27	1	09/10/2021 18:44	WG1737562
Hexachlorocyclopentadiene	U	C3	0.0668	1.27	1	09/10/2021 18:44	WG1737562
Hexachloroethane	U		0.0500	1.27	1	09/10/2021 18:44	WG1737562
Indeno(1,2,3-cd)pyrene	U		0.0359	0.127	1	09/10/2021 18:44	WG1737562
Isophorone	U		0.0389	1.27	1	09/10/2021 18:44	WG1737562
Naphthalene	U		0.0319	0.127	1	09/10/2021 18:44	WG1737562
Nitrobenzene	U		0.0443	1.27	1	09/10/2021 18:44	WG1737562
n-Nitrosodimethylamine	U	C3	0.189	1.27	1	09/10/2021 18:44	WG1737562
n-Nitrosodiphenylamine	U		0.0962	1.27	1	09/10/2021 18:44	WG1737562
n-Nitrosodi-n-propylamine	U		0.0424	1.27	1	09/10/2021 18:44	WG1737562
Phenanthrene	U		0.0252	0.127	1	09/10/2021 18:44	WG1737562
Pyridine	U		0.0840	1.27	1	09/10/2021 18:44	WG1737562
Benzylbutyl phthalate	U		0.0397	1.27	1	09/10/2021 18:44	WG1737562
Bis(2-ethylhexyl)phthalate	U		0.161	1.27	1	09/10/2021 18:44	WG1737562
Di-n-butyl phthalate	U		0.0435	1.27	1	09/10/2021 18:44	WG1737562
Diethyl phthalate	U		0.0420	1.27	1	09/10/2021 18:44	WG1737562
Dimethyl phthalate	U		0.269	1.27	1	09/10/2021 18:44	WG1737562
Di-n-octyl phthalate	U		0.0859	1.27	1	09/10/2021 18:44	WG1737562
Pyrene	U		0.0247	0.127	1	09/10/2021 18:44	WG1737562
1,2,4-Trichlorobenzene	U		0.0397	1.27	1	09/10/2021 18:44	WG1737562
4-Chloro-3-methylphenol	U		0.0412	1.27	1	09/10/2021 18:44	WG1737562
2-Chlorophenol	U		0.0420	1.27	1	09/10/2021 18:44	WG1737562
2,4-Dichlorophenol	U		0.0370	1.27	1	09/10/2021 18:44	WG1737562
2,4-Dimethylphenol	U		0.0332	1.27	1	09/10/2021 18:44	WG1737562
4,6-Dinitro-2-methylphenol	U		0.288	1.27	1	09/10/2021 18:44	WG1737562
2,4-Dinitrophenol	U		0.297	1.27	1	09/10/2021 18:44	WG1737562
2-Methylphenol	U		0.0382	1.27	1	09/10/2021 18:44	WG1737562
3&4-Methyl Phenol	U		0.0397	1.27	1	09/10/2021 18:44	WG1737562
2-Nitrophenol	U		0.0454	1.27	1	09/10/2021 18:44	WG1737562
4-Nitrophenol	U		0.0397	1.27	1	09/10/2021 18:44	WG1737562
Pentachlorophenol	U		0.0342	1.27	1	09/10/2021 18:44	WG1737562
Phenol	U		0.0511	1.27	1	09/10/2021 18:44	WG1737562
2,4,6-Trichlorophenol	U		0.0408	1.27	1	09/10/2021 18:44	WG1737562
2,4,5-Trichlorophenol	U		0.0431	1.27	1	09/10/2021 18:44	WG1737562
(S) 2-Fluorophenol	55.7			12.0-120		09/10/2021 18:44	WG1737562
(S) Phenol-d5	53.2			10.0-120		09/10/2021 18:44	WG1737562
(S) Nitrobenzene-d5	54.6			10.0-122		09/10/2021 18:44	WG1737562
(S) 2-Fluorobiphenyl	52.8			15.0-120		09/10/2021 18:44	WG1737562
(S) 2,4,6-Tribromophenol	57.5			10.0-127		09/10/2021 18:44	WG1737562
(S) p-Terphenyl-d14	61.7			10.0-120		09/10/2021 18:44	WG1737562

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	72.9		1	09/15/2021 14:28	WG1739941

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0247	0.0549	1	09/09/2021 13:47	WG1736526

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	1.40		0.137	1.37	5	09/08/2021 17:56	WG1735467
Barium	828		0.209	3.43	5	09/08/2021 17:56	WG1735467
Cadmium	U		0.117	1.37	5	09/08/2021 17:56	WG1735467
Chromium	3.85	J	0.406	6.86	5	09/08/2021 17:56	WG1735467
Lead	2.80		0.136	2.74	5	09/08/2021 17:56	WG1735467
Selenium	0.384	J	0.247	3.43	5	09/08/2021 17:56	WG1735467
Silver	U		0.119	0.686	5	09/08/2021 17:56	WG1735467

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0637	0.0873	1	09/10/2021 15:52	WG1737836
Acrylonitrile	U	C3	0.00630	0.0218	1	09/10/2021 15:52	WG1737836
Benzene	U		0.000816	0.00175	1	09/10/2021 15:52	WG1737836
Bromobenzene	U		0.00157	0.0218	1	09/10/2021 15:52	WG1737836
Bromodichloromethane	U		0.00127	0.00437	1	09/10/2021 15:52	WG1737836
Bromoform	U		0.00204	0.0437	1	09/10/2021 15:52	WG1737836
Bromomethane	U		0.00344	0.0218	1	09/10/2021 15:52	WG1737836
n-Butylbenzene	U		0.00917	0.0218	1	09/10/2021 15:52	WG1737836
sec-Butylbenzene	U		0.00503	0.0218	1	09/10/2021 15:52	WG1737836
tert-Butylbenzene	U		0.00341	0.00873	1	09/10/2021 15:52	WG1737836
Carbon tetrachloride	U		0.00157	0.00873	1	09/10/2021 15:52	WG1737836
Chlorobenzene	U		0.000367	0.00437	1	09/10/2021 15:52	WG1737836
Chlorodibromomethane	U		0.00107	0.00437	1	09/10/2021 15:52	WG1737836
Chloroethane	U		0.00297	0.00873	1	09/10/2021 15:52	WG1737836
Chloroform	U		0.00180	0.00437	1	09/10/2021 15:52	WG1737836
Chloromethane	U		0.00760	0.0218	1	09/10/2021 15:52	WG1737836
2-Chlorotoluene	U		0.00151	0.00437	1	09/10/2021 15:52	WG1737836
4-Chlorotoluene	U		0.000786	0.00873	1	09/10/2021 15:52	WG1737836
1,2-Dibromo-3-Chloropropane	U		0.00681	0.0437	1	09/10/2021 15:52	WG1737836
1,2-Dibromoethane	U		0.00113	0.00437	1	09/10/2021 15:52	WG1737836
Dibromomethane	U		0.00131	0.00873	1	09/10/2021 15:52	WG1737836
1,2-Dichlorobenzene	U		0.000742	0.00873	1	09/10/2021 15:52	WG1737836
1,3-Dichlorobenzene	U		0.00105	0.00873	1	09/10/2021 15:52	WG1737836
1,4-Dichlorobenzene	U		0.00122	0.00873	1	09/10/2021 15:52	WG1737836
Dichlorodifluoromethane	U		0.00281	0.00437	1	09/10/2021 15:52	WG1737836
1,1-Dichloroethane	U		0.000857	0.00437	1	09/10/2021 15:52	WG1737836
1,2-Dichloroethane	U		0.00113	0.00437	1	09/10/2021 15:52	WG1737836
1,1-Dichloroethene	U		0.00106	0.00437	1	09/10/2021 15:52	WG1737836
cis-1,2-Dichloroethene	U		0.00128	0.00437	1	09/10/2021 15:52	WG1737836
trans-1,2-Dichloroethene	U		0.00182	0.00873	1	09/10/2021 15:52	WG1737836
1,2-Dichloropropane	U		0.00248	0.00873	1	09/10/2021 15:52	WG1737836
1,1-Dichloropropene	U		0.00141	0.00437	1	09/10/2021 15:52	WG1737836
1,3-Dichloropropane	U		0.000875	0.00873	1	09/10/2021 15:52	WG1737836

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	U		0.00132	0.00437	1	09/10/2021 15:52	WG1737836
trans-1,3-Dichloropropene	U		0.00199	0.00873	1	09/10/2021 15:52	WG1737836
2,2-Dichloropropane	U	J4	0.00241	0.00437	1	09/10/2021 15:52	WG1737836
Di-isopropyl ether	U		0.000716	0.00175	1	09/10/2021 15:52	WG1737836
Ethylbenzene	U		0.00129	0.00437	1	09/10/2021 15:52	WG1737836
Hexachloro-1,3-butadiene	U		0.0105	0.0437	1	09/10/2021 15:52	WG1737836
Isopropylbenzene	U		0.000742	0.00437	1	09/10/2021 15:52	WG1737836
p-Isopropyltoluene	U		0.00445	0.00873	1	09/10/2021 15:52	WG1737836
2-Butanone (MEK)	U		0.111	0.175	1	09/10/2021 15:52	WG1737836
Methylene Chloride	U	C3 J3	0.0116	0.0437	1	09/10/2021 15:52	WG1737836
4-Methyl-2-pentanone (MIBK)	U		0.00398	0.0437	1	09/10/2021 15:52	WG1737836
Methyl tert-butyl ether	U		0.000611	0.00175	1	09/10/2021 15:52	WG1737836
Naphthalene	U		0.00852	0.0218	1	09/10/2021 15:52	WG1737836
n-Propylbenzene	U		0.00166	0.00873	1	09/10/2021 15:52	WG1737836
Styrene	U		0.000400	0.0218	1	09/10/2021 15:52	WG1737836
1,1,1,2-Tetrachloroethane	U		0.00166	0.00437	1	09/10/2021 15:52	WG1737836
1,1,2,2-Tetrachloroethane	U		0.00121	0.00437	1	09/10/2021 15:52	WG1737836
1,1,2-Trichlorotrifluoroethane	U		0.00132	0.00437	1	09/10/2021 15:52	WG1737836
Tetrachloroethene	U		0.00156	0.00437	1	09/10/2021 15:52	WG1737836
Toluene	U		0.00227	0.00873	1	09/10/2021 15:52	WG1737836
1,2,3-Trichlorobenzene	U	C4	0.0128	0.0218	1	09/10/2021 15:52	WG1737836
1,2,4-Trichlorobenzene	U		0.00768	0.0218	1	09/10/2021 15:52	WG1737836
1,1,1-Trichloroethane	U		0.00161	0.00437	1	09/10/2021 15:52	WG1737836
1,1,2-Trichloroethane	U		0.00104	0.00437	1	09/10/2021 15:52	WG1737836
Trichloroethene	U		0.00102	0.00175	1	09/10/2021 15:52	WG1737836
Trichlorofluoromethane	U		0.00144	0.00437	1	09/10/2021 15:52	WG1737836
1,2,3-Trichloropropane	U		0.00283	0.0218	1	09/10/2021 15:52	WG1737836
1,2,4-Trimethylbenzene	U		0.00276	0.00873	1	09/10/2021 15:52	WG1737836
1,2,3-Trimethylbenzene	U		0.00276	0.00873	1	09/10/2021 15:52	WG1737836
1,3,5-Trimethylbenzene	U		0.00349	0.00873	1	09/10/2021 15:52	WG1737836
Vinyl chloride	U		0.00203	0.00437	1	09/10/2021 15:52	WG1737836
Xylenes, Total	U		0.00154	0.0114	1	09/10/2021 15:52	WG1737836
(S) Toluene-d8	99.7			75.0-131		09/10/2021 15:52	WG1737836
(S) 4-Bromofluorobenzene	98.1			67.0-138		09/10/2021 15:52	WG1737836
(S) 1,2-Dichloroethane-d4	97.5			70.0-130		09/10/2021 15:52	WG1737836

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.00963	0.0960	1	09/10/2021 02:21	WG1736491
Dalapon	U		0.0155	0.0960	1	09/10/2021 02:21	WG1736491
2,4-DB	U		0.0407	0.0960	1	09/10/2021 02:21	WG1736491
Dicamba	U		0.0215	0.0960	1	09/10/2021 02:21	WG1736491
Dichloroprop	U		0.0336	0.0960	1	09/10/2021 02:21	WG1736491
Dinoseb	U		0.00956	0.0960	1	09/10/2021 02:21	WG1736491
MCPA	U	J4	0.608	8.92	1	09/10/2021 02:21	WG1736491
MCPP	U	J4	0.504	8.92	1	09/10/2021 02:21	WG1736491
2,4,5-T	U		0.0117	0.0960	1	09/10/2021 02:21	WG1736491
2,4,5-TP (Silvex)	U		0.0147	0.0960	1	09/10/2021 02:21	WG1736491
(S) 2,4-Dichlorophenyl Acetic Acid	60.2			22.0-132		09/10/2021 02:21	WG1736491

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00516	0.0274	1	09/10/2021 17:09	WG1737251
Alpha BHC	U		0.00505	0.0274	1	09/10/2021 17:09	WG1737251
Beta BHC	U		0.00520	0.0274	1	09/10/2021 17:09	WG1737251
Delta BHC	U		0.00475	0.0274	1	09/10/2021 17:09	WG1737251
Gamma BHC	U		0.00472	0.0274	1	09/10/2021 17:09	WG1737251
Chlordane	U		0.141	0.412	1	09/10/2021 17:09	WG1737251
4,4-DDD	U		0.00508	0.0274	1	09/10/2021 17:09	WG1737251
4,4-DDE	U		0.00502	0.0274	1	09/10/2021 17:09	WG1737251
4,4-DDT	U		0.00860	0.0274	1	09/10/2021 17:09	WG1737251
Dieldrin	U		0.00472	0.0274	1	09/10/2021 17:09	WG1737251
Endosulfan I	U		0.00498	0.0274	1	09/10/2021 17:09	WG1737251
Endosulfan II	U		0.00460	0.0274	1	09/10/2021 17:09	WG1737251
Endosulfan sulfate	U		0.00499	0.0274	1	09/10/2021 17:09	WG1737251
Endrin	U		0.00480	0.0274	1	09/10/2021 17:09	WG1737251
Endrin aldehyde	U		0.00465	0.0274	1	09/10/2021 17:09	WG1737251
Endrin ketone	U		0.00976	0.0274	1	09/10/2021 17:09	WG1737251
Heptachlor	U		0.00587	0.0274	1	09/10/2021 17:09	WG1737251
Heptachlor epoxide	U		0.00465	0.0274	1	09/10/2021 17:09	WG1737251
Hexachlorobenzene	U		0.00475	0.0274	1	09/10/2021 17:09	WG1737251
Methoxychlor	U		0.00664	0.0274	1	09/10/2021 17:09	WG1737251
Toxaphene	U		0.170	0.549	1	09/10/2021 17:09	WG1737251
(S) Decachlorobiphenyl	84.6			10.0-135		09/10/2021 17:09	WG1737251
(S) Tetrachloro-m-xylene	86.7			10.0-139		09/10/2021 17:09	WG1737251

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U	J5	0.0162	0.0466	1	09/10/2021 17:09	WG1737251
PCB 1221	U		0.0162	0.0466	1	09/10/2021 17:09	WG1737251
PCB 1232	U		0.0162	0.0466	1	09/10/2021 17:09	WG1737251
PCB 1242	U		0.0162	0.0466	1	09/10/2021 17:09	WG1737251
PCB 1248	U		0.0101	0.0233	1	09/10/2021 17:09	WG1737251
PCB 1254	U		0.0101	0.0233	1	09/10/2021 17:09	WG1737251
PCB 1260	U		0.0101	0.0233	1	09/10/2021 17:09	WG1737251
(S) Decachlorobiphenyl	86.1			10.0-135		09/10/2021 17:09	WG1737251
(S) Tetrachloro-m-xylene	86.1			10.0-139		09/10/2021 17:09	WG1737251

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00740	0.0457	1	09/10/2021 23:02	WG1737562
Acenaphthylene	U		0.00643	0.0457	1	09/10/2021 23:02	WG1737562
Anthracene	U		0.00814	0.0457	1	09/10/2021 23:02	WG1737562
Benzo(a)anthracene	U		0.00805	0.0457	1	09/10/2021 23:02	WG1737562
Benzo(b)fluoranthene	U		0.00852	0.0457	1	09/10/2021 23:02	WG1737562
Benzo(k)fluoranthene	U		0.00812	0.0457	1	09/10/2021 23:02	WG1737562
Benzo(g,h,i)perylene	U		0.00836	0.0457	1	09/10/2021 23:02	WG1737562
Benzo(a)pyrene	U		0.00849	0.0457	1	09/10/2021 23:02	WG1737562
Bis(2-chloroethoxy)methane	U		0.0137	0.457	1	09/10/2021 23:02	WG1737562
Bis(2-chloroethyl)ether	U	J3	0.0151	0.457	1	09/10/2021 23:02	WG1737562
2,2-Oxybis(1-Chloropropane)	U	J3	0.0198	0.457	1	09/10/2021 23:02	WG1737562
4-Bromophenyl-phenylether	U		0.0161	0.457	1	09/10/2021 23:02	WG1737562
2-Chloronaphthalene	U	J3	0.00803	0.0457	1	09/10/2021 23:02	WG1737562
4-Chlorophenyl-phenylether	U		0.0159	0.457	1	09/10/2021 23:02	WG1737562
Chrysene	U		0.00908	0.0457	1	09/10/2021 23:02	WG1737562

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dibenz(a,h)anthracene	U		0.0127	0.0457	1	09/10/2021 23:02	WG1737562
3,3-Dichlorobenzidine	U		0.0169	0.457	1	09/10/2021 23:02	WG1737562
2,4-Dinitrotoluene	U		0.0131	0.457	1	09/10/2021 23:02	WG1737562
2,6-Dinitrotoluene	U		0.0150	0.457	1	09/10/2021 23:02	WG1737562
Fluoranthene	U		0.00825	0.0457	1	09/10/2021 23:02	WG1737562
Fluorene	U		0.00744	0.0457	1	09/10/2021 23:02	WG1737562
Hexachlorobenzene	U		0.0162	0.457	1	09/10/2021 23:02	WG1737562
Hexachloro-1,3-butadiene	U	J3	0.0154	0.457	1	09/10/2021 23:02	WG1737562
Hexachlorocyclopentadiene	U	C3	0.0240	0.457	1	09/10/2021 23:02	WG1737562
Hexachloroethane	U	J3	0.0180	0.457	1	09/10/2021 23:02	WG1737562
Indeno(1,2,3-cd)pyrene	U		0.0129	0.0457	1	09/10/2021 23:02	WG1737562
Isophorone	U		0.0140	0.457	1	09/10/2021 23:02	WG1737562
Naphthalene	U	J3	0.0115	0.0457	1	09/10/2021 23:02	WG1737562
Nitrobenzene	U	J3	0.0159	0.457	1	09/10/2021 23:02	WG1737562
n-Nitrosodimethylamine	U	C3	0.0678	0.457	1	09/10/2021 23:02	WG1737562
n-Nitrosodiphenylamine	U		0.0346	0.457	1	09/10/2021 23:02	WG1737562
n-Nitrosodi-n-propylamine	U		0.0152	0.457	1	09/10/2021 23:02	WG1737562
Phenanthrene	U		0.00907	0.0457	1	09/10/2021 23:02	WG1737562
Pyridine	U	J3	0.0302	0.457	1	09/10/2021 23:02	WG1737562
Benzylbutyl phthalate	U		0.0143	0.457	1	09/10/2021 23:02	WG1737562
Bis(2-ethylhexyl)phthalate	U		0.0579	0.457	1	09/10/2021 23:02	WG1737562
Di-n-butyl phthalate	U		0.0156	0.457	1	09/10/2021 23:02	WG1737562
Diethyl phthalate	U		0.0151	0.457	1	09/10/2021 23:02	WG1737562
Dimethyl phthalate	U		0.0969	0.457	1	09/10/2021 23:02	WG1737562
Di-n-octyl phthalate	0.0698	J	0.0309	0.457	1	09/10/2021 23:02	WG1737562
Pyrene	U		0.00889	0.0457	1	09/10/2021 23:02	WG1737562
1,2,4-Trichlorobenzene	U	J3	0.0143	0.457	1	09/10/2021 23:02	WG1737562
4-Chloro-3-methylphenol	U		0.0148	0.457	1	09/10/2021 23:02	WG1737562
2-Chlorophenol	U		0.0151	0.457	1	09/10/2021 23:02	WG1737562
2,4-Dichlorophenol	U		0.0133	0.457	1	09/10/2021 23:02	WG1737562
2,4-Dimethylphenol	U		0.0119	0.457	1	09/10/2021 23:02	WG1737562
4,6-Dinitro-2-methylphenol	U		0.104	0.457	1	09/10/2021 23:02	WG1737562
2,4-Dinitrophenol	U		0.107	0.457	1	09/10/2021 23:02	WG1737562
2-Methylphenol	U		0.0137	0.457	1	09/10/2021 23:02	WG1737562
3&4-Methyl Phenol	U		0.0143	0.457	1	09/10/2021 23:02	WG1737562
2-Nitrophenol	U		0.0163	0.457	1	09/10/2021 23:02	WG1737562
4-Nitrophenol	U		0.0143	0.457	1	09/10/2021 23:02	WG1737562
Pentachlorophenol	U		0.0123	0.457	1	09/10/2021 23:02	WG1737562
Phenol	U		0.0184	0.457	1	09/10/2021 23:02	WG1737562
2,4,6-Trichlorophenol	U		0.0147	0.457	1	09/10/2021 23:02	WG1737562
2,4,5-Trichlorophenol	U		0.0155	0.457	1	09/10/2021 23:02	WG1737562
(S) 2-Fluorophenol	53.7			12.0-120		09/10/2021 23:02	WG1737562
(S) Phenol-d5	52.3			10.0-120		09/10/2021 23:02	WG1737562
(S) Nitrobenzene-d5	52.6			10.0-122		09/10/2021 23:02	WG1737562
(S) 2-Fluorobiphenyl	51.4			15.0-120		09/10/2021 23:02	WG1737562
(S) 2,4,6-Tribromophenol	60.1			10.0-127		09/10/2021 23:02	WG1737562
(S) p-Terphenyl-d14	60.4			10.0-120		09/10/2021 23:02	WG1737562

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	74.4		1	09/15/2021 14:28	WG1739941

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0242	0.0538	1	09/09/2021 13:50	WG1736526

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Arsenic	1.23	J	0.134	1.34	5	09/08/2021 17:59	WG1735467
Barium	52.8		0.204	3.36	5	09/08/2021 17:59	WG1735467
Cadmium	U		0.115	1.34	5	09/08/2021 17:59	WG1735467
Chromium	7.99		0.398	6.72	5	09/08/2021 17:59	WG1735467
Lead	3.15		0.133	2.69	5	09/08/2021 17:59	WG1735467
Selenium	0.462	J	0.242	3.36	5	09/08/2021 17:59	WG1735467
Silver	U		0.116	0.672	5	09/08/2021 17:59	WG1735467

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U		0.0618	0.0846	1	09/10/2021 16:11	WG1737836
Acrylonitrile	U	C3	0.00611	0.0212	1	09/10/2021 16:11	WG1737836
Benzene	U		0.000790	0.00169	1	09/10/2021 16:11	WG1737836
Bromobenzene	U		0.00152	0.0212	1	09/10/2021 16:11	WG1737836
Bromodichloromethane	U		0.00123	0.00423	1	09/10/2021 16:11	WG1737836
Bromoform	U		0.00198	0.0423	1	09/10/2021 16:11	WG1737836
Bromomethane	U		0.00333	0.0212	1	09/10/2021 16:11	WG1737836
n-Butylbenzene	U		0.00889	0.0212	1	09/10/2021 16:11	WG1737836
sec-Butylbenzene	U		0.00487	0.0212	1	09/10/2021 16:11	WG1737836
tert-Butylbenzene	U		0.00330	0.00846	1	09/10/2021 16:11	WG1737836
Carbon tetrachloride	U		0.00152	0.00846	1	09/10/2021 16:11	WG1737836
Chlorobenzene	U		0.000355	0.00423	1	09/10/2021 16:11	WG1737836
Chlorodibromomethane	U		0.00104	0.00423	1	09/10/2021 16:11	WG1737836
Chloroethane	U		0.00288	0.00846	1	09/10/2021 16:11	WG1737836
Chloroform	U		0.00174	0.00423	1	09/10/2021 16:11	WG1737836
Chloromethane	U		0.00736	0.0212	1	09/10/2021 16:11	WG1737836
2-Chlorotoluene	U		0.00146	0.00423	1	09/10/2021 16:11	WG1737836
4-Chlorotoluene	U		0.000762	0.00846	1	09/10/2021 16:11	WG1737836
1,2-Dibromo-3-Chloropropane	U		0.00660	0.0423	1	09/10/2021 16:11	WG1737836
1,2-Dibromoethane	U		0.00110	0.00423	1	09/10/2021 16:11	WG1737836
Dibromomethane	U		0.00127	0.00846	1	09/10/2021 16:11	WG1737836
1,2-Dichlorobenzene	U		0.000719	0.00846	1	09/10/2021 16:11	WG1737836
1,3-Dichlorobenzene	U		0.00102	0.00846	1	09/10/2021 16:11	WG1737836
1,4-Dichlorobenzene	U		0.00118	0.00846	1	09/10/2021 16:11	WG1737836
Dichlorodifluoromethane	U		0.00273	0.00423	1	09/10/2021 16:11	WG1737836
1,1-Dichloroethane	U		0.000831	0.00423	1	09/10/2021 16:11	WG1737836
1,2-Dichloroethane	U		0.00110	0.00423	1	09/10/2021 16:11	WG1737836
1,1-Dichloroethene	U		0.00103	0.00423	1	09/10/2021 16:11	WG1737836
cis-1,2-Dichloroethene	U		0.00124	0.00423	1	09/10/2021 16:11	WG1737836
trans-1,2-Dichloroethene	U		0.00176	0.00846	1	09/10/2021 16:11	WG1737836
1,2-Dichloropropane	U		0.00240	0.00846	1	09/10/2021 16:11	WG1737836
1,1-Dichloropropene	U		0.00137	0.00423	1	09/10/2021 16:11	WG1737836
1,3-Dichloropropane	U		0.000848	0.00846	1	09/10/2021 16:11	WG1737836

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	U		0.00128	0.00423	1	09/10/2021 16:11	WG1737836
trans-1,3-Dichloropropene	U		0.00193	0.00846	1	09/10/2021 16:11	WG1737836
2,2-Dichloropropane	U	J4	0.00234	0.00423	1	09/10/2021 16:11	WG1737836
Di-isopropyl ether	U		0.000694	0.00169	1	09/10/2021 16:11	WG1737836
Ethylbenzene	U		0.00125	0.00423	1	09/10/2021 16:11	WG1737836
Hexachloro-1,3-butadiene	U		0.0102	0.0423	1	09/10/2021 16:11	WG1737836
Isopropylbenzene	U		0.000719	0.00423	1	09/10/2021 16:11	WG1737836
p-Isopropyltoluene	U		0.00432	0.00846	1	09/10/2021 16:11	WG1737836
2-Butanone (MEK)	U		0.107	0.169	1	09/10/2021 16:11	WG1737836
Methylene Chloride	U	C3 J3	0.0112	0.0423	1	09/10/2021 16:11	WG1737836
4-Methyl-2-pentanone (MIBK)	U		0.00386	0.0423	1	09/10/2021 16:11	WG1737836
Methyl tert-butyl ether	U		0.000592	0.00169	1	09/10/2021 16:11	WG1737836
Naphthalene	U		0.00826	0.0212	1	09/10/2021 16:11	WG1737836
n-Propylbenzene	U		0.00161	0.00846	1	09/10/2021 16:11	WG1737836
Styrene	U		0.000388	0.0212	1	09/10/2021 16:11	WG1737836
1,1,1,2-Tetrachloroethane	U		0.00160	0.00423	1	09/10/2021 16:11	WG1737836
1,1,2,2-Tetrachloroethane	U		0.00118	0.00423	1	09/10/2021 16:11	WG1737836
1,1,2-Trichlorotrifluoroethane	U		0.00128	0.00423	1	09/10/2021 16:11	WG1737836
Tetrachloroethene	U		0.00152	0.00423	1	09/10/2021 16:11	WG1737836
Toluene	U		0.00220	0.00846	1	09/10/2021 16:11	WG1737836
1,2,3-Trichlorobenzene	U	C4	0.0124	0.0212	1	09/10/2021 16:11	WG1737836
1,2,4-Trichlorobenzene	U		0.00745	0.0212	1	09/10/2021 16:11	WG1737836
1,1,1-Trichloroethane	U		0.00156	0.00423	1	09/10/2021 16:11	WG1737836
1,1,2-Trichloroethane	U		0.00101	0.00423	1	09/10/2021 16:11	WG1737836
Trichloroethene	U		0.000988	0.00169	1	09/10/2021 16:11	WG1737836
Trichlorofluoromethane	U		0.00140	0.00423	1	09/10/2021 16:11	WG1737836
1,2,3-Trichloropropane	U		0.00274	0.0212	1	09/10/2021 16:11	WG1737836
1,2,4-Trimethylbenzene	U		0.00267	0.00846	1	09/10/2021 16:11	WG1737836
1,2,3-Trimethylbenzene	U		0.00267	0.00846	1	09/10/2021 16:11	WG1737836
1,3,5-Trimethylbenzene	U		0.00339	0.00846	1	09/10/2021 16:11	WG1737836
Vinyl chloride	U		0.00196	0.00423	1	09/10/2021 16:11	WG1737836
Xylenes, Total	U		0.00149	0.0110	1	09/10/2021 16:11	WG1737836
(S) Toluene-d8	96.4			75.0-131		09/10/2021 16:11	WG1737836
(S) 4-Bromofluorobenzene	105			67.0-138		09/10/2021 16:11	WG1737836
(S) 1,2-Dichloroethane-d4	96.1			70.0-130		09/10/2021 16:11	WG1737836

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.00944	0.0941	1	09/10/2021 02:35	WG1736491
Dalapon	U		0.0152	0.0941	1	09/10/2021 02:35	WG1736491
2,4-DB	U		0.0399	0.0941	1	09/10/2021 02:35	WG1736491
Dicamba	U		0.0211	0.0941	1	09/10/2021 02:35	WG1736491
Dichloroprop	U		0.0329	0.0941	1	09/10/2021 02:35	WG1736491
Dinoseb	U		0.00937	0.0941	1	09/10/2021 02:35	WG1736491
MCPA	U	J4	0.596	8.74	1	09/10/2021 02:35	WG1736491
MCPP	U	J4	0.493	8.74	1	09/10/2021 02:35	WG1736491
2,4,5-T	U		0.0115	0.0941	1	09/10/2021 02:35	WG1736491
2,4,5-TP (Silvex)	U		0.0144	0.0941	1	09/10/2021 02:35	WG1736491
(S) 2,4-Dichlorophenyl Acetic Acid	64.7			22.0-132		09/10/2021 02:35	WG1736491

B-11-COMP-SCBS

SAMPLE RESULTS - 03

Collected date/time: 09/02/21 13:30

L1399672

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00506	0.0269	1	09/10/2021 17:20	WG1737251
Alpha BHC	U		0.00495	0.0269	1	09/10/2021 17:20	WG1737251
Beta BHC	U		0.00510	0.0269	1	09/10/2021 17:20	WG1737251
Delta BHC	U		0.00465	0.0269	1	09/10/2021 17:20	WG1737251
Gamma BHC	U		0.00463	0.0269	1	09/10/2021 17:20	WG1737251
Chlordane	U		0.138	0.403	1	09/10/2021 17:20	WG1737251
4,4-DDD	U		0.00497	0.0269	1	09/10/2021 17:20	WG1737251
4,4-DDE	U		0.00492	0.0269	1	09/10/2021 17:20	WG1737251
4,4-DDT	U		0.00843	0.0269	1	09/10/2021 17:20	WG1737251
Dieldrin	U		0.00463	0.0269	1	09/10/2021 17:20	WG1737251
Endosulfan I	U		0.00488	0.0269	1	09/10/2021 17:20	WG1737251
Endosulfan II	U		0.00450	0.0269	1	09/10/2021 17:20	WG1737251
Endosulfan sulfate	U		0.00489	0.0269	1	09/10/2021 17:20	WG1737251
Endrin	U		0.00471	0.0269	1	09/10/2021 17:20	WG1737251
Endrin aldehyde	U		0.00456	0.0269	1	09/10/2021 17:20	WG1737251
Endrin ketone	U		0.00956	0.0269	1	09/10/2021 17:20	WG1737251
Heptachlor	U		0.00575	0.0269	1	09/10/2021 17:20	WG1737251
Heptachlor epoxide	U		0.00456	0.0269	1	09/10/2021 17:20	WG1737251
Hexachlorobenzene	U		0.00465	0.0269	1	09/10/2021 17:20	WG1737251
Methoxychlor	U		0.00651	0.0269	1	09/10/2021 17:20	WG1737251
Toxaphene	U		0.167	0.538	1	09/10/2021 17:20	WG1737251
(S) Decachlorobiphenyl	85.0			10.0-135		09/10/2021 17:20	WG1737251
(S) Tetrachloro-m-xylene	85.9			10.0-139		09/10/2021 17:20	WG1737251

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0159	0.0457	1	09/10/2021 17:20	WG1737251
PCB 1221	U		0.0159	0.0457	1	09/10/2021 17:20	WG1737251
PCB 1232	U		0.0159	0.0457	1	09/10/2021 17:20	WG1737251
PCB 1242	U		0.0159	0.0457	1	09/10/2021 17:20	WG1737251
PCB 1248	U		0.00992	0.0229	1	09/10/2021 17:20	WG1737251
PCB 1254	U		0.00992	0.0229	1	09/10/2021 17:20	WG1737251
PCB 1260	U		0.00992	0.0229	1	09/10/2021 17:20	WG1737251
(S) Decachlorobiphenyl	87.9			10.0-135		09/10/2021 17:20	WG1737251
(S) Tetrachloro-m-xylene	85.3			10.0-139		09/10/2021 17:20	WG1737251

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00725	0.0448	1	09/10/2021 19:31	WG1737562
Acenaphthylene	U		0.00631	0.0448	1	09/10/2021 19:31	WG1737562
Anthracene	U		0.00797	0.0448	1	09/10/2021 19:31	WG1737562
Benzo(a)anthracene	U		0.00789	0.0448	1	09/10/2021 19:31	WG1737562
Benzo(b)fluoranthene	U		0.00835	0.0448	1	09/10/2021 19:31	WG1737562
Benzo(k)fluoranthene	U		0.00796	0.0448	1	09/10/2021 19:31	WG1737562
Benzo(g,h,i)perylene	U		0.00819	0.0448	1	09/10/2021 19:31	WG1737562
Benzo(a)pyrene	U		0.00832	0.0448	1	09/10/2021 19:31	WG1737562
Bis(2-chlorethoxy)methane	U		0.0134	0.448	1	09/10/2021 19:31	WG1737562
Bis(2-chloroethyl)ether	U		0.0148	0.448	1	09/10/2021 19:31	WG1737562
2,2-Oxybis(1-Chloropropane)	U		0.0194	0.448	1	09/10/2021 19:31	WG1737562
4-Bromophenyl-phenylether	U		0.0157	0.448	1	09/10/2021 19:31	WG1737562
2-Chloronaphthalene	U		0.00787	0.0448	1	09/10/2021 19:31	WG1737562
4-Chlorophenyl-phenylether	U		0.0156	0.448	1	09/10/2021 19:31	WG1737562
Chrysene	U		0.00890	0.0448	1	09/10/2021 19:31	WG1737562

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dibenz(a,h)anthracene	U		0.0124	0.0448	1	09/10/2021 19:31	WG1737562
3,3-Dichlorobenzidine	U		0.0165	0.448	1	09/10/2021 19:31	WG1737562
2,4-Dinitrotoluene	U		0.0128	0.448	1	09/10/2021 19:31	WG1737562
2,6-Dinitrotoluene	U		0.0147	0.448	1	09/10/2021 19:31	WG1737562
Fluoranthene	U		0.00808	0.0448	1	09/10/2021 19:31	WG1737562
Fluorene	U		0.00729	0.0448	1	09/10/2021 19:31	WG1737562
Hexachlorobenzene	U		0.0159	0.448	1	09/10/2021 19:31	WG1737562
Hexachloro-1,3-butadiene	U		0.0151	0.448	1	09/10/2021 19:31	WG1737562
Hexachlorocyclopentadiene	U	C3	0.0235	0.448	1	09/10/2021 19:31	WG1737562
Hexachloroethane	U		0.0176	0.448	1	09/10/2021 19:31	WG1737562
Indeno(1,2,3-cd)pyrene	U		0.0127	0.0448	1	09/10/2021 19:31	WG1737562
Isophorone	U		0.0137	0.448	1	09/10/2021 19:31	WG1737562
Naphthalene	U		0.0112	0.0448	1	09/10/2021 19:31	WG1737562
Nitrobenzene	U		0.0156	0.448	1	09/10/2021 19:31	WG1737562
n-Nitrosodimethylamine	U	C3	0.0664	0.448	1	09/10/2021 19:31	WG1737562
n-Nitrosodiphenylamine	U		0.0339	0.448	1	09/10/2021 19:31	WG1737562
n-Nitrosodi-n-propylamine	U		0.0149	0.448	1	09/10/2021 19:31	WG1737562
Phenanthrene	U		0.00889	0.0448	1	09/10/2021 19:31	WG1737562
Pyridine	U		0.0296	0.448	1	09/10/2021 19:31	WG1737562
Benzylbutyl phthalate	U		0.0140	0.448	1	09/10/2021 19:31	WG1737562
Bis(2-ethylhexyl)phthalate	U		0.0567	0.448	1	09/10/2021 19:31	WG1737562
Di-n-butyl phthalate	U		0.0153	0.448	1	09/10/2021 19:31	WG1737562
Diethyl phthalate	U		0.0148	0.448	1	09/10/2021 19:31	WG1737562
Dimethyl phthalate	U		0.0949	0.448	1	09/10/2021 19:31	WG1737562
Di-n-octyl phthalate	U		0.0303	0.448	1	09/10/2021 19:31	WG1737562
Pyrene	U		0.00871	0.0448	1	09/10/2021 19:31	WG1737562
1,2,4-Trichlorobenzene	U		0.0140	0.448	1	09/10/2021 19:31	WG1737562
4-Chloro-3-methylphenol	U		0.0145	0.448	1	09/10/2021 19:31	WG1737562
2-Chlorophenol	U		0.0148	0.448	1	09/10/2021 19:31	WG1737562
2,4-Dichlorophenol	U		0.0130	0.448	1	09/10/2021 19:31	WG1737562
2,4-Dimethylphenol	U		0.0117	0.448	1	09/10/2021 19:31	WG1737562
4,6-Dinitro-2-methylphenol	U		0.102	0.448	1	09/10/2021 19:31	WG1737562
2,4-Dinitrophenol	U		0.105	0.448	1	09/10/2021 19:31	WG1737562
2-Methylphenol	U		0.0134	0.448	1	09/10/2021 19:31	WG1737562
3&4-Methyl Phenol	U		0.0140	0.448	1	09/10/2021 19:31	WG1737562
2-Nitrophenol	U		0.0160	0.448	1	09/10/2021 19:31	WG1737562
4-Nitrophenol	U		0.0140	0.448	1	09/10/2021 19:31	WG1737562
Pentachlorophenol	U		0.0120	0.448	1	09/10/2021 19:31	WG1737562
Phenol	U		0.0180	0.448	1	09/10/2021 19:31	WG1737562
2,4,6-Trichlorophenol	U		0.0144	0.448	1	09/10/2021 19:31	WG1737562
2,4,5-Trichlorophenol	U		0.0152	0.448	1	09/10/2021 19:31	WG1737562
(S) 2-Fluorophenol	44.7			12.0-120		09/10/2021 19:31	WG1737562
(S) Phenol-d5	43.0			10.0-120		09/10/2021 19:31	WG1737562
(S) Nitrobenzene-d5	43.5			10.0-122		09/10/2021 19:31	WG1737562
(S) 2-Fluorobiphenyl	40.1			15.0-120		09/10/2021 19:31	WG1737562
(S) 2,4,6-Tribromophenol	55.0			10.0-127		09/10/2021 19:31	WG1737562
(S) p-Terphenyl-d14	53.2			10.0-120		09/10/2021 19:31	WG1737562

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	83.7		1	09/15/2021 14:28	WG1739941

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0215	0.0478	1	09/09/2021 13:57	WG1736526

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Arsenic	1.74		0.120	1.20	5	09/08/2021 18:02	WG1735467
Barium	72.4		0.182	2.99	5	09/08/2021 18:02	WG1735467
Cadmium	U		0.102	1.20	5	09/08/2021 18:02	WG1735467
Chromium	7.29		0.354	5.98	5	09/08/2021 18:02	WG1735467
Lead	2.37	J	0.118	2.39	5	09/08/2021 18:02	WG1735467
Selenium	0.386	J	0.215	2.99	5	09/08/2021 18:02	WG1735467
Silver	U		0.103	0.598	5	09/08/2021 18:02	WG1735467

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U		0.0508	0.0696	1	09/10/2021 16:30	WG1737836
Acrylonitrile	U	C3	0.00502	0.0174	1	09/10/2021 16:30	WG1737836
Benzene	U		0.000650	0.00139	1	09/10/2021 16:30	WG1737836
Bromobenzene	U		0.00125	0.0174	1	09/10/2021 16:30	WG1737836
Bromodichloromethane	U		0.00101	0.00348	1	09/10/2021 16:30	WG1737836
Bromoform	U		0.00163	0.0348	1	09/10/2021 16:30	WG1737836
Bromomethane	U		0.00274	0.0174	1	09/10/2021 16:30	WG1737836
n-Butylbenzene	U		0.00730	0.0174	1	09/10/2021 16:30	WG1737836
sec-Butylbenzene	U		0.00401	0.0174	1	09/10/2021 16:30	WG1737836
tert-Butylbenzene	U		0.00271	0.00696	1	09/10/2021 16:30	WG1737836
Carbon tetrachloride	U		0.00125	0.00696	1	09/10/2021 16:30	WG1737836
Chlorobenzene	U		0.000292	0.00348	1	09/10/2021 16:30	WG1737836
Chlorodibromomethane	U		0.000851	0.00348	1	09/10/2021 16:30	WG1737836
Chloroethane	U		0.00236	0.00696	1	09/10/2021 16:30	WG1737836
Chloroform	U		0.00143	0.00348	1	09/10/2021 16:30	WG1737836
Chloromethane	U		0.00605	0.0174	1	09/10/2021 16:30	WG1737836
2-Chlorotoluene	U		0.00120	0.00348	1	09/10/2021 16:30	WG1737836
4-Chlorotoluene	U		0.000626	0.00696	1	09/10/2021 16:30	WG1737836
1,2-Dibromo-3-Chloropropane	U		0.00542	0.0348	1	09/10/2021 16:30	WG1737836
1,2-Dibromoethane	U		0.000901	0.00348	1	09/10/2021 16:30	WG1737836
Dibromomethane	U		0.00104	0.00696	1	09/10/2021 16:30	WG1737836
1,2-Dichlorobenzene	U		0.000591	0.00696	1	09/10/2021 16:30	WG1737836
1,3-Dichlorobenzene	U		0.000835	0.00696	1	09/10/2021 16:30	WG1737836
1,4-Dichlorobenzene	U		0.000974	0.00696	1	09/10/2021 16:30	WG1737836
Dichlorodifluoromethane	U		0.00224	0.00348	1	09/10/2021 16:30	WG1737836
1,1-Dichloroethane	U		0.000683	0.00348	1	09/10/2021 16:30	WG1737836
1,2-Dichloroethane	U		0.000903	0.00348	1	09/10/2021 16:30	WG1737836
1,1-Dichloroethene	U		0.000843	0.00348	1	09/10/2021 16:30	WG1737836
cis-1,2-Dichloroethene	U		0.00102	0.00348	1	09/10/2021 16:30	WG1737836
trans-1,2-Dichloroethene	U		0.00145	0.00696	1	09/10/2021 16:30	WG1737836
1,2-Dichloropropane	U		0.00198	0.00696	1	09/10/2021 16:30	WG1737836
1,1-Dichloropropene	U		0.00113	0.00348	1	09/10/2021 16:30	WG1737836
1,3-Dichloropropane	U		0.000697	0.00696	1	09/10/2021 16:30	WG1737836



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	U		0.00105	0.00348	1	09/10/2021 16:30	WG1737836
trans-1,3-Dichloropropene	U		0.00159	0.00696	1	09/10/2021 16:30	WG1737836
2,2-Dichloropropane	U	J4	0.00192	0.00348	1	09/10/2021 16:30	WG1737836
Di-isopropyl ether	U		0.000570	0.00139	1	09/10/2021 16:30	WG1737836
Ethylbenzene	U		0.00103	0.00348	1	09/10/2021 16:30	WG1737836
Hexachloro-1,3-butadiene	U		0.00835	0.0348	1	09/10/2021 16:30	WG1737836
Isopropylbenzene	U		0.000591	0.00348	1	09/10/2021 16:30	WG1737836
p-Isopropyltoluene	U		0.00355	0.00696	1	09/10/2021 16:30	WG1737836
2-Butanone (MEK)	U		0.0883	0.139	1	09/10/2021 16:30	WG1737836
Methylene Chloride	U	C3 J3	0.00924	0.0348	1	09/10/2021 16:30	WG1737836
4-Methyl-2-pentanone (MIBK)	U		0.00317	0.0348	1	09/10/2021 16:30	WG1737836
Methyl tert-butyl ether	U		0.000487	0.00139	1	09/10/2021 16:30	WG1737836
Naphthalene	U		0.00679	0.0174	1	09/10/2021 16:30	WG1737836
n-Propylbenzene	U		0.00132	0.00696	1	09/10/2021 16:30	WG1737836
Styrene	U		0.000319	0.0174	1	09/10/2021 16:30	WG1737836
1,1,1,2-Tetrachloroethane	U		0.00132	0.00348	1	09/10/2021 16:30	WG1737836
1,1,2,2-Tetrachloroethane	U		0.000967	0.00348	1	09/10/2021 16:30	WG1737836
1,1,2-Trichlorotrifluoroethane	U		0.00105	0.00348	1	09/10/2021 16:30	WG1737836
Tetrachloroethene	U		0.00125	0.00348	1	09/10/2021 16:30	WG1737836
Toluene	U		0.00181	0.00696	1	09/10/2021 16:30	WG1737836
1,2,3-Trichlorobenzene	U	C4	0.0102	0.0174	1	09/10/2021 16:30	WG1737836
1,2,4-Trichlorobenzene	U		0.00612	0.0174	1	09/10/2021 16:30	WG1737836
1,1,1-Trichloroethane	U		0.00128	0.00348	1	09/10/2021 16:30	WG1737836
1,1,2-Trichloroethane	U		0.000830	0.00348	1	09/10/2021 16:30	WG1737836
Trichloroethene	U		0.000812	0.00139	1	09/10/2021 16:30	WG1737836
Trichlorofluoromethane	U		0.00115	0.00348	1	09/10/2021 16:30	WG1737836
1,2,3-Trichloropropane	U		0.00225	0.0174	1	09/10/2021 16:30	WG1737836
1,2,4-Trimethylbenzene	U		0.00220	0.00696	1	09/10/2021 16:30	WG1737836
1,2,3-Trimethylbenzene	U		0.00220	0.00696	1	09/10/2021 16:30	WG1737836
1,3,5-Trimethylbenzene	U		0.00278	0.00696	1	09/10/2021 16:30	WG1737836
Vinyl chloride	U		0.00161	0.00348	1	09/10/2021 16:30	WG1737836
Xylenes, Total	U		0.00122	0.00904	1	09/10/2021 16:30	WG1737836
(S) Toluene-d8	100			75.0-131		09/10/2021 16:30	WG1737836
(S) 4-Bromofluorobenzene	98.8			67.0-138		09/10/2021 16:30	WG1737836
(S) 1,2-Dichloroethane-d4	94.5			70.0-130		09/10/2021 16:30	WG1737836



Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.00839	0.0837	1	09/10/2021 02:50	WG1736491
Dalapon	U		0.0135	0.0837	1	09/10/2021 02:50	WG1736491
2,4-DB	U		0.0355	0.0837	1	09/10/2021 02:50	WG1736491
Dicamba	U		0.0188	0.0837	1	09/10/2021 02:50	WG1736491
Dichloroprop	U		0.0293	0.0837	1	09/10/2021 02:50	WG1736491
Dinoseb	U		0.00833	0.0837	1	09/10/2021 02:50	WG1736491
MCPA	U	J4	0.529	7.77	1	09/10/2021 02:50	WG1736491
MCPP	U	J4	0.439	7.77	1	09/10/2021 02:50	WG1736491
2,4,5-T	U		0.0102	0.0837	1	09/10/2021 02:50	WG1736491
2,4,5-TP (Silvex)	U		0.0128	0.0837	1	09/10/2021 02:50	WG1736491
(S) 2,4-Dichlorophenyl Acetic Acid	60.0			22.0-132		09/10/2021 02:50	WG1736491

B-12-COMP-SCBS

SAMPLE RESULTS - 04

Collected date/time: 09/02/21 13:50

L1399672

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00449	0.0239	1	09/10/2021 17:30	WG1737251
Alpha BHC	U		0.00440	0.0239	1	09/10/2021 17:30	WG1737251
Beta BHC	U		0.00453	0.0239	1	09/10/2021 17:30	WG1737251
Delta BHC	U		0.00414	0.0239	1	09/10/2021 17:30	WG1737251
Gamma BHC	U		0.00411	0.0239	1	09/10/2021 17:30	WG1737251
Chlordane	U		0.123	0.359	1	09/10/2021 17:30	WG1737251
4,4-DDD	U		0.00442	0.0239	1	09/10/2021 17:30	WG1737251
4,4-DDE	U		0.00437	0.0239	1	09/10/2021 17:30	WG1737251
4,4-DDT	U		0.00749	0.0239	1	09/10/2021 17:30	WG1737251
Dieldrin	U		0.00411	0.0239	1	09/10/2021 17:30	WG1737251
Endosulfan I	U		0.00434	0.0239	1	09/10/2021 17:30	WG1737251
Endosulfan II	U		0.00400	0.0239	1	09/10/2021 17:30	WG1737251
Endosulfan sulfate	U		0.00435	0.0239	1	09/10/2021 17:30	WG1737251
Endrin	U		0.00418	0.0239	1	09/10/2021 17:30	WG1737251
Endrin aldehyde	U		0.00405	0.0239	1	09/10/2021 17:30	WG1737251
Endrin ketone	U		0.00850	0.0239	1	09/10/2021 17:30	WG1737251
Heptachlor	U		0.00512	0.0239	1	09/10/2021 17:30	WG1737251
Heptachlor epoxide	U		0.00405	0.0239	1	09/10/2021 17:30	WG1737251
Hexachlorobenzene	U		0.00414	0.0239	1	09/10/2021 17:30	WG1737251
Methoxychlor	U		0.00578	0.0239	1	09/10/2021 17:30	WG1737251
Toxaphene	U		0.148	0.478	1	09/10/2021 17:30	WG1737251
(S) Decachlorobiphenyl	79.9			10.0-135		09/10/2021 17:30	WG1737251
(S) Tetrachloro-m-xylene	76.7			10.0-139		09/10/2021 17:30	WG1737251

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0141	0.0406	1	09/10/2021 17:30	WG1737251
PCB 1221	U		0.0141	0.0406	1	09/10/2021 17:30	WG1737251
PCB 1232	U		0.0141	0.0406	1	09/10/2021 17:30	WG1737251
PCB 1242	U		0.0141	0.0406	1	09/10/2021 17:30	WG1737251
PCB 1248	U		0.00882	0.0203	1	09/10/2021 17:30	WG1737251
PCB 1254	U		0.00882	0.0203	1	09/10/2021 17:30	WG1737251
PCB 1260	U		0.00882	0.0203	1	09/10/2021 17:30	WG1737251
(S) Decachlorobiphenyl	77.9			10.0-135		09/10/2021 17:30	WG1737251
(S) Tetrachloro-m-xylene	76.1			10.0-139		09/10/2021 17:30	WG1737251

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00644	0.0398	1	09/10/2021 20:41	WG1737562
Acenaphthylene	U		0.00561	0.0398	1	09/10/2021 20:41	WG1737562
Anthracene	U		0.00709	0.0398	1	09/10/2021 20:41	WG1737562
Benzo(a)anthracene	U		0.00702	0.0398	1	09/10/2021 20:41	WG1737562
Benzo(b)fluoranthene	U		0.00742	0.0398	1	09/10/2021 20:41	WG1737562
Benzo(k)fluoranthene	U		0.00708	0.0398	1	09/10/2021 20:41	WG1737562
Benzo(g,h,i)perylene	U		0.00728	0.0398	1	09/10/2021 20:41	WG1737562
Benzo(a)pyrene	U		0.00740	0.0398	1	09/10/2021 20:41	WG1737562
Bis(2-chloroethoxy)methane	U		0.0120	0.398	1	09/10/2021 20:41	WG1737562
Bis(2-chloroethyl)ether	U		0.0131	0.398	1	09/10/2021 20:41	WG1737562
2,2-Oxybis(1-Chloropropane)	U		0.0172	0.398	1	09/10/2021 20:41	WG1737562
4-Bromophenyl-phenylether	U		0.0140	0.398	1	09/10/2021 20:41	WG1737562
2-Chloronaphthalene	U		0.00699	0.0398	1	09/10/2021 20:41	WG1737562
4-Chlorophenyl-phenylether	U		0.0139	0.398	1	09/10/2021 20:41	WG1737562
Chrysene	U		0.00791	0.0398	1	09/10/2021 20:41	WG1737562

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dibenz(a,h)anthracene	U		0.0110	0.0398	1	09/10/2021 20:41	WG1737562
3,3-Dichlorobenzidine	U		0.0147	0.398	1	09/10/2021 20:41	WG1737562
2,4-Dinitrotoluene	U		0.0114	0.398	1	09/10/2021 20:41	WG1737562
2,6-Dinitrotoluene	U		0.0130	0.398	1	09/10/2021 20:41	WG1737562
Fluoranthene	U		0.00718	0.0398	1	09/10/2021 20:41	WG1737562
Fluorene	U		0.00648	0.0398	1	09/10/2021 20:41	WG1737562
Hexachlorobenzene	U		0.0141	0.398	1	09/10/2021 20:41	WG1737562
Hexachloro-1,3-butadiene	U		0.0134	0.398	1	09/10/2021 20:41	WG1737562
Hexachlorocyclopentadiene	U	C3	0.0209	0.398	1	09/10/2021 20:41	WG1737562
Hexachloroethane	U		0.0157	0.398	1	09/10/2021 20:41	WG1737562
Indeno(1,2,3-cd)pyrene	U		0.0112	0.0398	1	09/10/2021 20:41	WG1737562
Isophorone	U		0.0122	0.398	1	09/10/2021 20:41	WG1737562
Naphthalene	U		0.00999	0.0398	1	09/10/2021 20:41	WG1737562
Nitrobenzene	U		0.0139	0.398	1	09/10/2021 20:41	WG1737562
n-Nitrosodimethylamine	U	C3	0.0590	0.398	1	09/10/2021 20:41	WG1737562
n-Nitrosodiphenylamine	U		0.0301	0.398	1	09/10/2021 20:41	WG1737562
n-Nitrosodi-n-propylamine	U		0.0133	0.398	1	09/10/2021 20:41	WG1737562
Phenanthrene	U		0.00790	0.0398	1	09/10/2021 20:41	WG1737562
Pyridine	U		0.0263	0.398	1	09/10/2021 20:41	WG1737562
Benzylbutyl phthalate	U		0.0124	0.398	1	09/10/2021 20:41	WG1737562
Bis(2-ethylhexyl)phthalate	U		0.0504	0.398	1	09/10/2021 20:41	WG1737562
Di-n-butyl phthalate	U		0.0136	0.398	1	09/10/2021 20:41	WG1737562
Diethyl phthalate	U		0.0131	0.398	1	09/10/2021 20:41	WG1737562
Dimethyl phthalate	U		0.0844	0.398	1	09/10/2021 20:41	WG1737562
Di-n-octyl phthalate	U		0.0269	0.398	1	09/10/2021 20:41	WG1737562
Pyrene	U		0.00775	0.0398	1	09/10/2021 20:41	WG1737562
1,2,4-Trichlorobenzene	U		0.0124	0.398	1	09/10/2021 20:41	WG1737562
4-Chloro-3-methylphenol	U		0.0129	0.398	1	09/10/2021 20:41	WG1737562
2-Chlorophenol	U		0.0131	0.398	1	09/10/2021 20:41	WG1737562
2,4-Dichlorophenol	U		0.0116	0.398	1	09/10/2021 20:41	WG1737562
2,4-Dimethylphenol	U		0.0104	0.398	1	09/10/2021 20:41	WG1737562
4,6-Dinitro-2-methylphenol	U		0.0902	0.398	1	09/10/2021 20:41	WG1737562
2,4-Dinitrophenol	U		0.0931	0.398	1	09/10/2021 20:41	WG1737562
2-Methylphenol	U		0.0120	0.398	1	09/10/2021 20:41	WG1737562
3&4-Methyl Phenol	U		0.0124	0.398	1	09/10/2021 20:41	WG1737562
2-Nitrophenol	U		0.0142	0.398	1	09/10/2021 20:41	WG1737562
4-Nitrophenol	U		0.0124	0.398	1	09/10/2021 20:41	WG1737562
Pentachlorophenol	U		0.0107	0.398	1	09/10/2021 20:41	WG1737562
Phenol	U		0.0160	0.398	1	09/10/2021 20:41	WG1737562
2,4,6-Trichlorophenol	U		0.0128	0.398	1	09/10/2021 20:41	WG1737562
2,4,5-Trichlorophenol	U		0.0135	0.398	1	09/10/2021 20:41	WG1737562
(S) 2-Fluorophenol	54.5			12.0-120		09/10/2021 20:41	WG1737562
(S) Phenol-d5	53.9			10.0-120		09/10/2021 20:41	WG1737562
(S) Nitrobenzene-d5	52.8			10.0-122		09/10/2021 20:41	WG1737562
(S) 2-Fluorobiphenyl	49.4			15.0-120		09/10/2021 20:41	WG1737562
(S) 2,4,6-Tribromophenol	59.7			10.0-127		09/10/2021 20:41	WG1737562
(S) p-Terphenyl-d14	55.3			10.0-120		09/10/2021 20:41	WG1737562

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	66.8		1	09/15/2021 14:28	WG1739941

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0269	0.0598	1	09/09/2021 14:00	WG1736526

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Arsenic	1.11	J	0.150	1.50	5	09/08/2021 18:05	WG1735467
Barium	101		0.227	3.74	5	09/08/2021 18:05	WG1735467
Cadmium	U		0.128	1.50	5	09/08/2021 18:05	WG1735467
Chromium	5.74	J	0.443	7.48	5	09/08/2021 18:05	WG1735467
Lead	3.06		0.148	2.99	5	09/08/2021 18:05	WG1735467
Selenium	0.486	J	0.269	3.74	5	09/08/2021 18:05	WG1735467
Silver	U		0.129	0.748	5	09/08/2021 18:05	WG1735467

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0728	0.0998	1	09/10/2021 16:49	WG1737836
Acrylonitrile	U	C3	0.00720	0.0249	1	09/10/2021 16:49	WG1737836
Benzene	U		0.000932	0.00200	1	09/10/2021 16:49	WG1737836
Bromobenzene	U		0.00180	0.0249	1	09/10/2021 16:49	WG1737836
Bromodichloromethane	U		0.00145	0.00499	1	09/10/2021 16:49	WG1737836
Bromoform	U		0.00233	0.0499	1	09/10/2021 16:49	WG1737836
Bromomethane	U		0.00393	0.0249	1	09/10/2021 16:49	WG1737836
n-Butylbenzene	U		0.0105	0.0249	1	09/10/2021 16:49	WG1737836
sec-Butylbenzene	U		0.00575	0.0249	1	09/10/2021 16:49	WG1737836
tert-Butylbenzene	U		0.00389	0.00998	1	09/10/2021 16:49	WG1737836
Carbon tetrachloride	U		0.00179	0.00998	1	09/10/2021 16:49	WG1737836
Chlorobenzene	U		0.000419	0.00499	1	09/10/2021 16:49	WG1737836
Chlorodibromomethane	U		0.00122	0.00499	1	09/10/2021 16:49	WG1737836
Chloroethane	U		0.00339	0.00998	1	09/10/2021 16:49	WG1737836
Chloroform	U		0.00206	0.00499	1	09/10/2021 16:49	WG1737836
Chloromethane	U		0.00868	0.0249	1	09/10/2021 16:49	WG1737836
2-Chlorotoluene	U		0.00173	0.00499	1	09/10/2021 16:49	WG1737836
4-Chlorotoluene	U		0.000898	0.00998	1	09/10/2021 16:49	WG1737836
1,2-Dibromo-3-Chloropropane	U		0.00778	0.0499	1	09/10/2021 16:49	WG1737836
1,2-Dibromoethane	U		0.00129	0.00499	1	09/10/2021 16:49	WG1737836
Dibromomethane	U		0.00150	0.00998	1	09/10/2021 16:49	WG1737836
1,2-Dichlorobenzene	U		0.000848	0.00998	1	09/10/2021 16:49	WG1737836
1,3-Dichlorobenzene	U		0.00120	0.00998	1	09/10/2021 16:49	WG1737836
1,4-Dichlorobenzene	U		0.00140	0.00998	1	09/10/2021 16:49	WG1737836
Dichlorodifluoromethane	U		0.00321	0.00499	1	09/10/2021 16:49	WG1737836
1,1-Dichloroethane	U		0.000980	0.00499	1	09/10/2021 16:49	WG1737836
1,2-Dichloroethane	U		0.00130	0.00499	1	09/10/2021 16:49	WG1737836
1,1-Dichloroethene	U		0.00121	0.00499	1	09/10/2021 16:49	WG1737836
cis-1,2-Dichloroethene	U		0.00146	0.00499	1	09/10/2021 16:49	WG1737836
trans-1,2-Dichloroethene	U		0.00208	0.00998	1	09/10/2021 16:49	WG1737836
1,2-Dichloropropane	U		0.00283	0.00998	1	09/10/2021 16:49	WG1737836
1,1-Dichloropropene	U		0.00161	0.00499	1	09/10/2021 16:49	WG1737836
1,3-Dichloropropane	U		0.00100	0.00998	1	09/10/2021 16:49	WG1737836



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	U		0.00151	0.00499	1	09/10/2021 16:49	WG1737836
trans-1,3-Dichloropropene	U		0.00227	0.00998	1	09/10/2021 16:49	WG1737836
2,2-Dichloropropane	U	J4	0.00275	0.00499	1	09/10/2021 16:49	WG1737836
Di-isopropyl ether	U		0.000818	0.00200	1	09/10/2021 16:49	WG1737836
Ethylbenzene	U		0.00147	0.00499	1	09/10/2021 16:49	WG1737836
Hexachloro-1,3-butadiene	U		0.0120	0.0499	1	09/10/2021 16:49	WG1737836
Isopropylbenzene	U		0.000848	0.00499	1	09/10/2021 16:49	WG1737836
p-Isopropyltoluene	U		0.00509	0.00998	1	09/10/2021 16:49	WG1737836
2-Butanone (MEK)	U		0.127	0.200	1	09/10/2021 16:49	WG1737836
Methylene Chloride	U	C3 J3	0.0133	0.0499	1	09/10/2021 16:49	WG1737836
4-Methyl-2-pentanone (MIBK)	U		0.00455	0.0499	1	09/10/2021 16:49	WG1737836
Methyl tert-butyl ether	U		0.000698	0.00200	1	09/10/2021 16:49	WG1737836
Naphthalene	U		0.00974	0.0249	1	09/10/2021 16:49	WG1737836
n-Propylbenzene	U		0.00190	0.00998	1	09/10/2021 16:49	WG1737836
Styrene	U		0.000457	0.0249	1	09/10/2021 16:49	WG1737836
1,1,1,2-Tetrachloroethane	U		0.00189	0.00499	1	09/10/2021 16:49	WG1737836
1,1,2,2-Tetrachloroethane	U		0.00139	0.00499	1	09/10/2021 16:49	WG1737836
1,1,2-Trichlorotrifluoroethane	U		0.00150	0.00499	1	09/10/2021 16:49	WG1737836
Tetrachloroethene	U		0.00179	0.00499	1	09/10/2021 16:49	WG1737836
Toluene	U		0.00259	0.00998	1	09/10/2021 16:49	WG1737836
1,2,3-Trichlorobenzene	U	C4	0.0146	0.0249	1	09/10/2021 16:49	WG1737836
1,2,4-Trichlorobenzene	U		0.00878	0.0249	1	09/10/2021 16:49	WG1737836
1,1,1-Trichloroethane	U		0.00184	0.00499	1	09/10/2021 16:49	WG1737836
1,1,2-Trichloroethane	U		0.00119	0.00499	1	09/10/2021 16:49	WG1737836
Trichloroethene	U		0.00117	0.00200	1	09/10/2021 16:49	WG1737836
Trichlorofluoromethane	U		0.00165	0.00499	1	09/10/2021 16:49	WG1737836
1,2,3-Trichloropropane	U		0.00323	0.0249	1	09/10/2021 16:49	WG1737836
1,2,4-Trimethylbenzene	U		0.00315	0.00998	1	09/10/2021 16:49	WG1737836
1,2,3-Trimethylbenzene	U		0.00315	0.00998	1	09/10/2021 16:49	WG1737836
1,3,5-Trimethylbenzene	U		0.00399	0.00998	1	09/10/2021 16:49	WG1737836
Vinyl chloride	U		0.00231	0.00499	1	09/10/2021 16:49	WG1737836
Xylenes, Total	U		0.00176	0.0130	1	09/10/2021 16:49	WG1737836
(S) Toluene-d8	99.2			75.0-131		09/10/2021 16:49	WG1737836
(S) 4-Bromofluorobenzene	96.1			67.0-138		09/10/2021 16:49	WG1737836
(S) 1,2-Dichloroethane-d4	91.6			70.0-130		09/10/2021 16:49	WG1737836



Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.0105	0.105	1	09/10/2021 03:04	WG1736491
Dalapon	U		0.0169	0.105	1	09/10/2021 03:04	WG1736491
2,4-DB	U		0.0444	0.105	1	09/10/2021 03:04	WG1736491
Dicamba	U		0.0235	0.105	1	09/10/2021 03:04	WG1736491
Dichloroprop	U		0.0367	0.105	1	09/10/2021 03:04	WG1736491
Dinoseb	U		0.0104	0.105	1	09/10/2021 03:04	WG1736491
MCPA	U	J4	0.663	9.72	1	09/10/2021 03:04	WG1736491
MCPP	U	J4	0.549	9.72	1	09/10/2021 03:04	WG1736491
2,4,5-T	U		0.0127	0.105	1	09/10/2021 03:04	WG1736491
2,4,5-TP (Silvex)	U		0.0160	0.105	1	09/10/2021 03:04	WG1736491
(S) 2,4-Dichlorophenyl Acetic Acid	48.9			22.0-132		09/10/2021 03:04	WG1736491

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00563	0.0299	1	09/10/2021 17:41	WG1737251
Alpha BHC	U		0.00551	0.0299	1	09/10/2021 17:41	WG1737251
Beta BHC	U		0.00567	0.0299	1	09/10/2021 17:41	WG1737251
Delta BHC	U		0.00518	0.0299	1	09/10/2021 17:41	WG1737251
Gamma BHC	U		0.00515	0.0299	1	09/10/2021 17:41	WG1737251
Chlordane	U		0.154	0.449	1	09/10/2021 17:41	WG1737251
4,4-DDD	U		0.00554	0.0299	1	09/10/2021 17:41	WG1737251
4,4-DDE	U		0.00548	0.0299	1	09/10/2021 17:41	WG1737251
4,4-DDT	U		0.00938	0.0299	1	09/10/2021 17:41	WG1737251
Dieldrin	U		0.00515	0.0299	1	09/10/2021 17:41	WG1737251
Endosulfan I	U		0.00543	0.0299	1	09/10/2021 17:41	WG1737251
Endosulfan II	U		0.00501	0.0299	1	09/10/2021 17:41	WG1737251
Endosulfan sulfate	U		0.00545	0.0299	1	09/10/2021 17:41	WG1737251
Endrin	U		0.00524	0.0299	1	09/10/2021 17:41	WG1737251
Endrin aldehyde	U		0.00507	0.0299	1	09/10/2021 17:41	WG1737251
Endrin ketone	U		0.0106	0.0299	1	09/10/2021 17:41	WG1737251
Heptachlor	U		0.00640	0.0299	1	09/10/2021 17:41	WG1737251
Heptachlor epoxide	U		0.00507	0.0299	1	09/10/2021 17:41	WG1737251
Hexachlorobenzene	U		0.00518	0.0299	1	09/10/2021 17:41	WG1737251
Methoxychlor	U		0.00724	0.0299	1	09/10/2021 17:41	WG1737251
Toxaphene	U		0.186	0.598	1	09/10/2021 17:41	WG1737251
(S) Decachlorobiphenyl	76.7			10.0-135		09/10/2021 17:41	WG1737251
(S) Tetrachloro-m-xylene	80.2			10.0-139		09/10/2021 17:41	WG1737251

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0177	0.0509	1	09/10/2021 17:41	WG1737251
PCB 1221	U		0.0177	0.0509	1	09/10/2021 17:41	WG1737251
PCB 1232	U		0.0177	0.0509	1	09/10/2021 17:41	WG1737251
PCB 1242	U		0.0177	0.0509	1	09/10/2021 17:41	WG1737251
PCB 1248	U		0.0110	0.0254	1	09/10/2021 17:41	WG1737251
PCB 1254	U		0.0110	0.0254	1	09/10/2021 17:41	WG1737251
PCB 1260	U		0.0110	0.0254	1	09/10/2021 17:41	WG1737251
(S) Decachlorobiphenyl	74.8			10.0-135		09/10/2021 17:41	WG1737251
(S) Tetrachloro-m-xylene	79.3			10.0-139		09/10/2021 17:41	WG1737251

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00806	0.0498	1	09/10/2021 19:54	WG1737562
Acenaphthylene	U		0.00702	0.0498	1	09/10/2021 19:54	WG1737562
Anthracene	U		0.00887	0.0498	1	09/10/2021 19:54	WG1737562
Benzo(a)anthracene	U		0.00878	0.0498	1	09/10/2021 19:54	WG1737562
Benzo(b)fluoranthene	U		0.00929	0.0498	1	09/10/2021 19:54	WG1737562
Benzo(k)fluoranthene	U		0.00886	0.0498	1	09/10/2021 19:54	WG1737562
Benzo(g,h,i)perylene	U		0.00911	0.0498	1	09/10/2021 19:54	WG1737562
Benzo(a)pyrene	U		0.00926	0.0498	1	09/10/2021 19:54	WG1737562
Bis(2-chlorethoxy)methane	U		0.0150	0.498	1	09/10/2021 19:54	WG1737562
Bis(2-chloroethyl)ether	U		0.0165	0.498	1	09/10/2021 19:54	WG1737562
2,2-Oxybis(1-Chloropropane)	U		0.0215	0.498	1	09/10/2021 19:54	WG1737562
4-Bromophenyl-phenylether	U		0.0175	0.498	1	09/10/2021 19:54	WG1737562
2-Chloronaphthalene	U		0.00875	0.0498	1	09/10/2021 19:54	WG1737562
4-Chlorophenyl-phenylether	U		0.0174	0.498	1	09/10/2021 19:54	WG1737562
Chrysene	U		0.00990	0.0498	1	09/10/2021 19:54	WG1737562

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dibenz(a,h)anthracene	U		0.0138	0.0498	1	09/10/2021 19:54	WG1737562
3,3-Dichlorobenzidine	U		0.0184	0.498	1	09/10/2021 19:54	WG1737562
2,4-Dinitrotoluene	U		0.0143	0.498	1	09/10/2021 19:54	WG1737562
2,6-Dinitrotoluene	U		0.0163	0.498	1	09/10/2021 19:54	WG1737562
Fluoranthene	U		0.00899	0.0498	1	09/10/2021 19:54	WG1737562
Fluorene	U		0.00811	0.0498	1	09/10/2021 19:54	WG1737562
Hexachlorobenzene	U		0.0177	0.498	1	09/10/2021 19:54	WG1737562
Hexachloro-1,3-butadiene	U		0.0168	0.498	1	09/10/2021 19:54	WG1737562
Hexachlorocyclopentadiene	U	C3	0.0262	0.498	1	09/10/2021 19:54	WG1737562
Hexachloroethane	U		0.0196	0.498	1	09/10/2021 19:54	WG1737562
Indeno(1,2,3-cd)pyrene	U		0.0141	0.0498	1	09/10/2021 19:54	WG1737562
Isophorone	U		0.0153	0.498	1	09/10/2021 19:54	WG1737562
Naphthalene	U		0.0125	0.0498	1	09/10/2021 19:54	WG1737562
Nitrobenzene	U		0.0174	0.498	1	09/10/2021 19:54	WG1737562
n-Nitrosodimethylamine	U	C3	0.0739	0.498	1	09/10/2021 19:54	WG1737562
n-Nitrosodiphenylamine	U		0.0377	0.498	1	09/10/2021 19:54	WG1737562
n-Nitrosodi-n-propylamine	U		0.0166	0.498	1	09/10/2021 19:54	WG1737562
Phenanthrene	U		0.00989	0.0498	1	09/10/2021 19:54	WG1737562
Pyridine	U		0.0329	0.498	1	09/10/2021 19:54	WG1737562
Benzylbutyl phthalate	U		0.0156	0.498	1	09/10/2021 19:54	WG1737562
Bis(2-ethylhexyl)phthalate	U		0.0631	0.498	1	09/10/2021 19:54	WG1737562
Di-n-butyl phthalate	U		0.0171	0.498	1	09/10/2021 19:54	WG1737562
Diethyl phthalate	U		0.0165	0.498	1	09/10/2021 19:54	WG1737562
Dimethyl phthalate	U		0.106	0.498	1	09/10/2021 19:54	WG1737562
Di-n-octyl phthalate	U		0.0337	0.498	1	09/10/2021 19:54	WG1737562
Pyrene	U		0.00969	0.0498	1	09/10/2021 19:54	WG1737562
1,2,4-Trichlorobenzene	U		0.0156	0.498	1	09/10/2021 19:54	WG1737562
4-Chloro-3-methylphenol	U		0.0162	0.498	1	09/10/2021 19:54	WG1737562
2-Chlorophenol	U		0.0165	0.498	1	09/10/2021 19:54	WG1737562
2,4-Dichlorophenol	U		0.0145	0.498	1	09/10/2021 19:54	WG1737562
2,4-Dimethylphenol	U		0.0130	0.498	1	09/10/2021 19:54	WG1737562
4,6-Dinitro-2-methylphenol	U		0.113	0.498	1	09/10/2021 19:54	WG1737562
2,4-Dinitrophenol	U		0.117	0.498	1	09/10/2021 19:54	WG1737562
2-Methylphenol	U		0.0150	0.498	1	09/10/2021 19:54	WG1737562
3&4-Methyl Phenol	U		0.0156	0.498	1	09/10/2021 19:54	WG1737562
2-Nitrophenol	U		0.0178	0.498	1	09/10/2021 19:54	WG1737562
4-Nitrophenol	U		0.0156	0.498	1	09/10/2021 19:54	WG1737562
Pentachlorophenol	U		0.0134	0.498	1	09/10/2021 19:54	WG1737562
Phenol	U		0.0200	0.498	1	09/10/2021 19:54	WG1737562
2,4,6-Trichlorophenol	U		0.0160	0.498	1	09/10/2021 19:54	WG1737562
2,4,5-Trichlorophenol	U		0.0169	0.498	1	09/10/2021 19:54	WG1737562
(S) 2-Fluorophenol	50.3			12.0-120		09/10/2021 19:54	WG1737562
(S) Phenol-d5	48.9			10.0-120		09/10/2021 19:54	WG1737562
(S) Nitrobenzene-d5	50.6			10.0-122		09/10/2021 19:54	WG1737562
(S) 2-Fluorobiphenyl	52.1			15.0-120		09/10/2021 19:54	WG1737562
(S) 2,4,6-Tribromophenol	59.0			10.0-127		09/10/2021 19:54	WG1737562
(S) p-Terphenyl-d14	62.9			10.0-120		09/10/2021 19:54	WG1737562

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	72.8		1	09/15/2021 14:28	WG1739941

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0247	0.0549	1	09/09/2021 14:02	WG1736526

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Arsenic	1.18	J	0.137	1.37	5	09/08/2021 18:09	WG1735467
Barium	150		0.209	3.43	5	09/08/2021 18:09	WG1735467
Cadmium	U		0.117	1.37	5	09/08/2021 18:09	WG1735467
Chromium	5.99	J	0.406	6.87	5	09/08/2021 18:09	WG1735467
Lead	3.10		0.136	2.75	5	09/08/2021 18:09	WG1735467
Selenium	0.531	J	0.247	3.43	5	09/08/2021 18:09	WG1735467
Silver	U		0.119	0.687	5	09/08/2021 18:09	WG1735467

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U		0.0637	0.0873	1	09/10/2021 17:08	WG1737836
Acrylonitrile	U	C3	0.00630	0.0218	1	09/10/2021 17:08	WG1737836
Benzene	U		0.000816	0.00175	1	09/10/2021 17:08	WG1737836
Bromobenzene	U		0.00157	0.0218	1	09/10/2021 17:08	WG1737836
Bromodichloromethane	U		0.00127	0.00437	1	09/10/2021 17:08	WG1737836
Bromoform	U		0.00204	0.0437	1	09/10/2021 17:08	WG1737836
Bromomethane	U		0.00344	0.0218	1	09/10/2021 17:08	WG1737836
n-Butylbenzene	U		0.00917	0.0218	1	09/10/2021 17:08	WG1737836
sec-Butylbenzene	U		0.00503	0.0218	1	09/10/2021 17:08	WG1737836
tert-Butylbenzene	U		0.00341	0.00873	1	09/10/2021 17:08	WG1737836
Carbon tetrachloride	U		0.00157	0.00873	1	09/10/2021 17:08	WG1737836
Chlorobenzene	U		0.000367	0.00437	1	09/10/2021 17:08	WG1737836
Chlorodibromomethane	U		0.00107	0.00437	1	09/10/2021 17:08	WG1737836
Chloroethane	U		0.00297	0.00873	1	09/10/2021 17:08	WG1737836
Chloroform	U		0.00180	0.00437	1	09/10/2021 17:08	WG1737836
Chloromethane	U		0.00760	0.0218	1	09/10/2021 17:08	WG1737836
2-Chlorotoluene	U		0.00151	0.00437	1	09/10/2021 17:08	WG1737836
4-Chlorotoluene	U		0.000786	0.00873	1	09/10/2021 17:08	WG1737836
1,2-Dibromo-3-Chloropropane	U		0.00681	0.0437	1	09/10/2021 17:08	WG1737836
1,2-Dibromoethane	U		0.00113	0.00437	1	09/10/2021 17:08	WG1737836
Dibromomethane	U		0.00131	0.00873	1	09/10/2021 17:08	WG1737836
1,2-Dichlorobenzene	U		0.000742	0.00873	1	09/10/2021 17:08	WG1737836
1,3-Dichlorobenzene	U		0.00105	0.00873	1	09/10/2021 17:08	WG1737836
1,4-Dichlorobenzene	U		0.00122	0.00873	1	09/10/2021 17:08	WG1737836
Dichlorodifluoromethane	U		0.00281	0.00437	1	09/10/2021 17:08	WG1737836
1,1-Dichloroethane	U		0.000858	0.00437	1	09/10/2021 17:08	WG1737836
1,2-Dichloroethane	U		0.00113	0.00437	1	09/10/2021 17:08	WG1737836
1,1-Dichloroethene	U		0.00106	0.00437	1	09/10/2021 17:08	WG1737836
cis-1,2-Dichloroethene	U		0.00128	0.00437	1	09/10/2021 17:08	WG1737836
trans-1,2-Dichloroethene	U		0.00182	0.00873	1	09/10/2021 17:08	WG1737836
1,2-Dichloropropane	U		0.00248	0.00873	1	09/10/2021 17:08	WG1737836
1,1-Dichloropropene	U		0.00141	0.00437	1	09/10/2021 17:08	WG1737836
1,3-Dichloropropane	U		0.000875	0.00873	1	09/10/2021 17:08	WG1737836



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
cis-1,3-Dichloropropene	U		0.00132	0.00437	1	09/10/2021 17:08	WG1737836
trans-1,3-Dichloropropene	U		0.00199	0.00873	1	09/10/2021 17:08	WG1737836
2,2-Dichloropropane	U	J4	0.00241	0.00437	1	09/10/2021 17:08	WG1737836
Di-isopropyl ether	U		0.000716	0.00175	1	09/10/2021 17:08	WG1737836
Ethylbenzene	U		0.00129	0.00437	1	09/10/2021 17:08	WG1737836
Hexachloro-1,3-butadiene	U		0.0105	0.0437	1	09/10/2021 17:08	WG1737836
Isopropylbenzene	U		0.000742	0.00437	1	09/10/2021 17:08	WG1737836
p-Isopropyltoluene	U		0.00445	0.00873	1	09/10/2021 17:08	WG1737836
2-Butanone (MEK)	U		0.111	0.175	1	09/10/2021 17:08	WG1737836
Methylene Chloride	U	C3 J3	0.0116	0.0437	1	09/10/2021 17:08	WG1737836
4-Methyl-2-pentanone (MIBK)	U		0.00398	0.0437	1	09/10/2021 17:08	WG1737836
Methyl tert-butyl ether	U		0.000611	0.00175	1	09/10/2021 17:08	WG1737836
Naphthalene	U		0.00852	0.0218	1	09/10/2021 17:08	WG1737836
n-Propylbenzene	U		0.00166	0.00873	1	09/10/2021 17:08	WG1737836
Styrene	U		0.000400	0.0218	1	09/10/2021 17:08	WG1737836
1,1,1,2-Tetrachloroethane	U		0.00166	0.00437	1	09/10/2021 17:08	WG1737836
1,1,2,2-Tetrachloroethane	U		0.00121	0.00437	1	09/10/2021 17:08	WG1737836
1,1,2-Trichlorotrifluoroethane	U		0.00132	0.00437	1	09/10/2021 17:08	WG1737836
Tetrachloroethene	U		0.00156	0.00437	1	09/10/2021 17:08	WG1737836
Toluene	U		0.00227	0.00873	1	09/10/2021 17:08	WG1737836
1,2,3-Trichlorobenzene	U	C4	0.0128	0.0218	1	09/10/2021 17:08	WG1737836
1,2,4-Trichlorobenzene	U		0.00768	0.0218	1	09/10/2021 17:08	WG1737836
1,1,1-Trichloroethane	U		0.00161	0.00437	1	09/10/2021 17:08	WG1737836
1,1,2-Trichloroethane	U		0.00104	0.00437	1	09/10/2021 17:08	WG1737836
Trichloroethene	U		0.00102	0.00175	1	09/10/2021 17:08	WG1737836
Trichlorofluoromethane	U		0.00144	0.00437	1	09/10/2021 17:08	WG1737836
1,2,3-Trichloropropane	U		0.00283	0.0218	1	09/10/2021 17:08	WG1737836
1,2,4-Trimethylbenzene	U		0.00276	0.00873	1	09/10/2021 17:08	WG1737836
1,2,3-Trimethylbenzene	U		0.00276	0.00873	1	09/10/2021 17:08	WG1737836
1,3,5-Trimethylbenzene	U		0.00349	0.00873	1	09/10/2021 17:08	WG1737836
Vinyl chloride	U		0.00203	0.00437	1	09/10/2021 17:08	WG1737836
Xylenes, Total	U		0.00154	0.0114	1	09/10/2021 17:08	WG1737836
(S) Toluene-d8	97.0			75.0-131		09/10/2021 17:08	WG1737836
(S) 4-Bromofluorobenzene	98.9			67.0-138		09/10/2021 17:08	WG1737836
(S) 1,2-Dichloroethane-d4	96.0			70.0-130		09/10/2021 17:08	WG1737836

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.00964	0.0961	1	09/10/2021 05:14	WG1737223
Dalapon	U		0.0155	0.0961	1	09/10/2021 05:14	WG1737223
2,4-DB	U		0.0408	0.0961	1	09/10/2021 05:14	WG1737223
Dicamba	U		0.0216	0.0961	1	09/10/2021 05:14	WG1737223
Dichloroprop	U		0.0336	0.0961	1	09/10/2021 05:14	WG1737223
Dinoseb	U		0.00957	0.0961	1	09/10/2021 05:14	WG1737223
MCPA	U	J4	0.608	8.93	1	09/10/2021 05:14	WG1737223
MCPP	U	J4	0.504	8.93	1	09/10/2021 05:14	WG1737223
2,4,5-T	U		0.0117	0.0961	1	09/10/2021 05:14	WG1737223
2,4,5-TP (Silvex)	U		0.0147	0.0961	1	09/10/2021 05:14	WG1737223
(S) 2,4-Dichlorophenyl Acetic Acid	63.6			22.0-132		09/10/2021 05:14	WG1737223

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00516	0.0275	1	09/10/2021 17:51	WG1737251
Alpha BHC	U		0.00505	0.0275	1	09/10/2021 17:51	WG1737251
Beta BHC	U		0.00520	0.0275	1	09/10/2021 17:51	WG1737251
Delta BHC	U		0.00475	0.0275	1	09/10/2021 17:51	WG1737251
Gamma BHC	U		0.00472	0.0275	1	09/10/2021 17:51	WG1737251
Chlordane	U		0.141	0.412	1	09/10/2021 17:51	WG1737251
4,4-DDD	U		0.00508	0.0275	1	09/10/2021 17:51	WG1737251
4,4-DDE	U		0.00503	0.0275	1	09/10/2021 17:51	WG1737251
4,4-DDT	U		0.00861	0.0275	1	09/10/2021 17:51	WG1737251
Dieldrin	U		0.00472	0.0275	1	09/10/2021 17:51	WG1737251
Endosulfan I	U		0.00498	0.0275	1	09/10/2021 17:51	WG1737251
Endosulfan II	U		0.00460	0.0275	1	09/10/2021 17:51	WG1737251
Endosulfan sulfate	U		0.00500	0.0275	1	09/10/2021 17:51	WG1737251
Endrin	U		0.00481	0.0275	1	09/10/2021 17:51	WG1737251
Endrin aldehyde	U		0.00466	0.0275	1	09/10/2021 17:51	WG1737251
Endrin ketone	U		0.00976	0.0275	1	09/10/2021 17:51	WG1737251
Heptachlor	U		0.00588	0.0275	1	09/10/2021 17:51	WG1737251
Heptachlor epoxide	U		0.00466	0.0275	1	09/10/2021 17:51	WG1737251
Hexachlorobenzene	U		0.00475	0.0275	1	09/10/2021 17:51	WG1737251
Methoxychlor	U		0.00665	0.0275	1	09/10/2021 17:51	WG1737251
Toxaphene	U		0.170	0.549	1	09/10/2021 17:51	WG1737251
(S) Decachlorobiphenyl	75.3			10.0-135		09/10/2021 17:51	WG1737251
(S) Tetrachloro-m-xylene	73.5			10.0-139		09/10/2021 17:51	WG1737251

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0162	0.0467	1	09/10/2021 17:51	WG1737251
PCB 1221	U		0.0162	0.0467	1	09/10/2021 17:51	WG1737251
PCB 1232	U		0.0162	0.0467	1	09/10/2021 17:51	WG1737251
PCB 1242	U		0.0162	0.0467	1	09/10/2021 17:51	WG1737251
PCB 1248	U		0.0101	0.0233	1	09/10/2021 17:51	WG1737251
PCB 1254	U		0.0101	0.0233	1	09/10/2021 17:51	WG1737251
PCB 1260	U		0.0101	0.0233	1	09/10/2021 17:51	WG1737251
(S) Decachlorobiphenyl	74.3			10.0-135		09/10/2021 17:51	WG1737251
(S) Tetrachloro-m-xylene	72.6			10.0-139		09/10/2021 17:51	WG1737251

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00740	0.0457	1	09/10/2021 20:18	WG1737562
Acenaphthylene	U		0.00644	0.0457	1	09/10/2021 20:18	WG1737562
Anthracene	U		0.00814	0.0457	1	09/10/2021 20:18	WG1737562
Benzo(a)anthracene	U		0.00806	0.0457	1	09/10/2021 20:18	WG1737562
Benzo(b)fluoranthene	U		0.00853	0.0457	1	09/10/2021 20:18	WG1737562
Benzo(k)fluoranthene	U		0.00813	0.0457	1	09/10/2021 20:18	WG1737562
Benzo(g,h,i)perylene	U		0.00836	0.0457	1	09/10/2021 20:18	WG1737562
Benzo(a)pyrene	U		0.00850	0.0457	1	09/10/2021 20:18	WG1737562
Bis(2-chloroethoxy)methane	U		0.0137	0.457	1	09/10/2021 20:18	WG1737562
Bis(2-chloroethyl)ether	U		0.0151	0.457	1	09/10/2021 20:18	WG1737562
2,2-Oxybis(1-Chloropropane)	U		0.0198	0.457	1	09/10/2021 20:18	WG1737562
4-Bromophenyl-phenylether	U		0.0161	0.457	1	09/10/2021 20:18	WG1737562
2-Chloronaphthalene	U		0.00803	0.0457	1	09/10/2021 20:18	WG1737562
4-Chlorophenyl-phenylether	U		0.0159	0.457	1	09/10/2021 20:18	WG1737562
Chrysene	U		0.00909	0.0457	1	09/10/2021 20:18	WG1737562

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dibenz(a,h)anthracene	U		0.0127	0.0457	1	09/10/2021 20:18	WG1737562
3,3-Dichlorobenzidine	U		0.0169	0.457	1	09/10/2021 20:18	WG1737562
2,4-Dinitrotoluene	U		0.0131	0.457	1	09/10/2021 20:18	WG1737562
2,6-Dinitrotoluene	U		0.0150	0.457	1	09/10/2021 20:18	WG1737562
Fluoranthene	U		0.00825	0.0457	1	09/10/2021 20:18	WG1737562
Fluorene	U		0.00744	0.0457	1	09/10/2021 20:18	WG1737562
Hexachlorobenzene	U		0.0162	0.457	1	09/10/2021 20:18	WG1737562
Hexachloro-1,3-butadiene	U		0.0154	0.457	1	09/10/2021 20:18	WG1737562
Hexachlorocyclopentadiene	U	C3	0.0240	0.457	1	09/10/2021 20:18	WG1737562
Hexachloroethane	U		0.0180	0.457	1	09/10/2021 20:18	WG1737562
Indeno(1,2,3-cd)pyrene	U		0.0129	0.0457	1	09/10/2021 20:18	WG1737562
Isophorone	U		0.0140	0.457	1	09/10/2021 20:18	WG1737562
Naphthalene	U		0.0115	0.0457	1	09/10/2021 20:18	WG1737562
Nitrobenzene	U		0.0159	0.457	1	09/10/2021 20:18	WG1737562
n-Nitrosodimethylamine	U	C3	0.0678	0.457	1	09/10/2021 20:18	WG1737562
n-Nitrosodiphenylamine	U		0.0346	0.457	1	09/10/2021 20:18	WG1737562
n-Nitrosodi-n-propylamine	U		0.0152	0.457	1	09/10/2021 20:18	WG1737562
Phenanthrene	U		0.00908	0.0457	1	09/10/2021 20:18	WG1737562
Pyridine	U		0.0302	0.457	1	09/10/2021 20:18	WG1737562
Benzylbutyl phthalate	U		0.0143	0.457	1	09/10/2021 20:18	WG1737562
Bis(2-ethylhexyl)phthalate	U		0.0580	0.457	1	09/10/2021 20:18	WG1737562
Di-n-butyl phthalate	U		0.0157	0.457	1	09/10/2021 20:18	WG1737562
Diethyl phthalate	U		0.0151	0.457	1	09/10/2021 20:18	WG1737562
Dimethyl phthalate	U		0.0970	0.457	1	09/10/2021 20:18	WG1737562
Di-n-octyl phthalate	U		0.0309	0.457	1	09/10/2021 20:18	WG1737562
Pyrene	U		0.00890	0.0457	1	09/10/2021 20:18	WG1737562
1,2,4-Trichlorobenzene	U		0.0143	0.457	1	09/10/2021 20:18	WG1737562
4-Chloro-3-methylphenol	U		0.0148	0.457	1	09/10/2021 20:18	WG1737562
2-Chlorophenol	U		0.0151	0.457	1	09/10/2021 20:18	WG1737562
2,4-Dichlorophenol	U		0.0133	0.457	1	09/10/2021 20:18	WG1737562
2,4-Dimethylphenol	U		0.0119	0.457	1	09/10/2021 20:18	WG1737562
4,6-Dinitro-2-methylphenol	U		0.104	0.457	1	09/10/2021 20:18	WG1737562
2,4-Dinitrophenol	U		0.107	0.457	1	09/10/2021 20:18	WG1737562
2-Methylphenol	U		0.0137	0.457	1	09/10/2021 20:18	WG1737562
3&4-Methyl Phenol	U		0.0143	0.457	1	09/10/2021 20:18	WG1737562
2-Nitrophenol	U		0.0163	0.457	1	09/10/2021 20:18	WG1737562
4-Nitrophenol	U		0.0143	0.457	1	09/10/2021 20:18	WG1737562
Pentachlorophenol	U		0.0123	0.457	1	09/10/2021 20:18	WG1737562
Phenol	U		0.0184	0.457	1	09/10/2021 20:18	WG1737562
2,4,6-Trichlorophenol	U		0.0147	0.457	1	09/10/2021 20:18	WG1737562
2,4,5-Trichlorophenol	U		0.0155	0.457	1	09/10/2021 20:18	WG1737562
(S) 2-Fluorophenol	49.1			12.0-120		09/10/2021 20:18	WG1737562
(S) Phenol-d5	48.0			10.0-120		09/10/2021 20:18	WG1737562
(S) Nitrobenzene-d5	48.3			10.0-122		09/10/2021 20:18	WG1737562
(S) 2-Fluorobiphenyl	50.2			15.0-120		09/10/2021 20:18	WG1737562
(S) 2,4,6-Tribromophenol	70.7			10.0-127		09/10/2021 20:18	WG1737562
(S) p-Terphenyl-d14	69.0			10.0-120		09/10/2021 20:18	WG1737562

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3704941-1 09/15/21 14:28

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

1 Cp

2 Tc

3 Ss

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3704941-3 09/15/21 14:28

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
		%		%		%
Total Solids		80.9	1	0.0721		10

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3704941-2 09/15/21 14:28

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	49.9	99.8	85.0-115	

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3702311-1 09/09/21 13:08

Analyte	MB Result mg/kg	<u>MB Qualifier</u>	MB MDL mg/kg	MB RDL mg/kg
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3702311-2 09/09/21 13:11

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Mercury	0.500	0.519	104	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3701886-1 09/08/21 18:18

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Chromium	U		0.297	5.00
Lead	U		0.0990	2.00
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

Laboratory Control Sample (LCS)

(LCS) R3701886-2 09/08/21 18:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Arsenic	100	91.4	91.4	80.0-120	
Barium	100	94.7	94.7	80.0-120	
Cadmium	100	95.7	95.7	80.0-120	
Chromium	100	94.1	94.1	80.0-120	
Lead	100	96.2	96.2	80.0-120	
Selenium	100	94.9	94.9	80.0-120	
Silver	20.0	19.9	99.7	80.0-120	

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

L1399295-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1399295-11 09/08/21 18:25 • (MS) R3701886-5 09/08/21 18:35 • (MSD) R3701886-6 09/08/21 18:38

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	120	6.28	106	108	83.2	84.5	5	75.0-125			1.45	20
Barium	120	188	304	280	96.6	76.5	5	75.0-125			8.25	20
Cadmium	120	0.157	108	110	89.9	91.4	5	75.0-125			1.65	20
Chromium	120	27.0	130	134	85.4	88.9	5	75.0-125			3.18	20
Lead	120	15.4	127	129	92.6	95.0	5	75.0-125			2.21	20
Selenium	120	1.16	111	112	91.3	92.0	5	75.0-125			0.781	20
Silver	24.0	U	23.1	22.9	96.3	95.5	5	75.0-125			0.797	20

Method Blank (MB)

(MB) R3703510-3 09/10/21 10:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

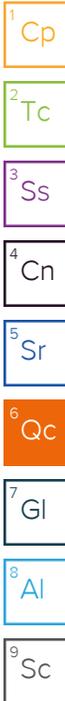
⁸Al

⁹Sc

Method Blank (MB)

(MB) R3703510-3 09/10/21 10:03

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	100			75.0-131
(S) 4-Bromofluorobenzene	98.3			67.0-138
(S) 1,2-Dichloroethane-d4	92.6			70.0-130



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3703510-1 09/10/21 08:47 • (LCSD) R3703510-2 09/10/21 09:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.690	0.595	110	95.2	10.0-160			14.8	31
Acrylonitrile	0.625	0.483	0.450	77.3	72.0	45.0-153			7.07	22
Benzene	0.125	0.130	0.131	104	105	70.0-123			0.766	20
Bromobenzene	0.125	0.119	0.126	95.2	101	73.0-121			5.71	20
Bromodichloromethane	0.125	0.124	0.126	99.2	101	73.0-121			1.60	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3703510-1 09/10/21 08:47 • (LCSD) R3703510-2 09/10/21 09:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromoform	0.125	0.113	0.113	90.4	90.4	64.0-132			0.000	20
Bromomethane	0.125	0.138	0.132	110	106	56.0-147			4.44	20
n-Butylbenzene	0.125	0.123	0.124	98.4	99.2	68.0-135			0.810	20
sec-Butylbenzene	0.125	0.126	0.129	101	103	74.0-130			2.35	20
tert-Butylbenzene	0.125	0.119	0.124	95.2	99.2	75.0-127			4.12	20
Carbon tetrachloride	0.125	0.128	0.126	102	101	66.0-128			1.57	20
Chlorobenzene	0.125	0.115	0.118	92.0	94.4	76.0-128			2.58	20
Chlorodibromomethane	0.125	0.115	0.123	92.0	98.4	74.0-127			6.72	20
Chloroethane	0.125	0.130	0.126	104	101	61.0-134			3.12	20
Chloroform	0.125	0.129	0.127	103	102	72.0-123			1.56	20
Chloromethane	0.125	0.105	0.108	84.0	86.4	51.0-138			2.82	20
2-Chlorotoluene	0.125	0.119	0.130	95.2	104	75.0-124			8.84	20
4-Chlorotoluene	0.125	0.126	0.128	101	102	75.0-124			1.57	20
1,2-Dibromo-3-Chloropropane	0.125	0.113	0.106	90.4	84.8	59.0-130			6.39	20
1,2-Dibromoethane	0.125	0.121	0.125	96.8	100	74.0-128			3.25	20
Dibromomethane	0.125	0.126	0.131	101	105	75.0-122			3.89	20
1,2-Dichlorobenzene	0.125	0.128	0.126	102	101	76.0-124			1.57	20
1,3-Dichlorobenzene	0.125	0.115	0.122	92.0	97.6	76.0-125			5.91	20
1,4-Dichlorobenzene	0.125	0.110	0.116	88.0	92.8	77.0-121			5.31	20
Dichlorodifluoromethane	0.125	0.126	0.125	101	100	43.0-156			0.797	20
1,1-Dichloroethane	0.125	0.118	0.118	94.4	94.4	70.0-127			0.000	20
1,2-Dichloroethane	0.125	0.116	0.118	92.8	94.4	65.0-131			1.71	20
1,1-Dichloroethene	0.125	0.107	0.107	85.6	85.6	65.0-131			0.000	20
cis-1,2-Dichloroethene	0.125	0.130	0.133	104	106	73.0-125			2.28	20
trans-1,2-Dichloroethene	0.125	0.126	0.123	101	98.4	71.0-125			2.41	20
1,2-Dichloropropane	0.125	0.110	0.113	88.0	90.4	74.0-125			2.69	20
1,1-Dichloropropene	0.125	0.138	0.136	110	109	73.0-125			1.46	20
1,3-Dichloropropane	0.125	0.131	0.133	105	106	80.0-125			1.52	20
cis-1,3-Dichloropropene	0.125	0.145	0.141	116	113	76.0-127			2.80	20
trans-1,3-Dichloropropene	0.125	0.124	0.126	99.2	101	73.0-127			1.60	20
2,2-Dichloropropane	0.125	0.175	0.185	140	148	59.0-135	J4	J4	5.56	20
Di-isopropyl ether	0.125	0.106	0.103	84.8	82.4	60.0-136			2.87	20
Ethylbenzene	0.125	0.129	0.125	103	100	74.0-126			3.15	20
Hexachloro-1,3-butadiene	0.125	0.158	0.150	126	120	57.0-150			5.19	20
Isopropylbenzene	0.125	0.124	0.122	99.2	97.6	72.0-127			1.63	20
p-Isopropyltoluene	0.125	0.123	0.125	98.4	100	72.0-133			1.61	20
2-Butanone (MEK)	0.625	0.548	0.530	87.7	84.8	30.0-160			3.34	24
Methylene Chloride	0.125	0.0939	0.127	75.1	102	68.0-123		J3	30.0	20
4-Methyl-2-pentanone (MIBK)	0.625	0.550	0.551	88.0	88.2	56.0-143			0.182	20
Methyl tert-butyl ether	0.125	0.127	0.126	102	101	66.0-132			0.791	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3703510-1 09/10/21 08:47 • (LCSD) R3703510-2 09/10/21 09:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Naphthalene	0.125	0.128	0.119	102	95.2	59.0-130			7.29	20
n-Propylbenzene	0.125	0.122	0.128	97.6	102	74.0-126			4.80	20
Styrene	0.125	0.128	0.130	102	104	72.0-127			1.55	20
1,1,1,2-Tetrachloroethane	0.125	0.121	0.120	96.8	96.0	74.0-129			0.830	20
1,1,2,2-Tetrachloroethane	0.125	0.131	0.134	105	107	68.0-128			2.26	20
Tetrachloroethene	0.125	0.120	0.125	96.0	100	70.0-136			4.08	20
Toluene	0.125	0.121	0.123	96.8	98.4	75.0-121			1.64	20
1,1,2-Trichlorotrifluoroethane	0.125	0.104	0.0992	83.2	79.4	61.0-139			4.72	20
1,2,3-Trichlorobenzene	0.125	0.102	0.100	81.6	80.0	59.0-139			1.98	20
1,2,4-Trichlorobenzene	0.125	0.135	0.128	108	102	62.0-137			5.32	20
1,1,1-Trichloroethane	0.125	0.131	0.128	105	102	69.0-126			2.32	20
1,1,2-Trichloroethane	0.125	0.125	0.126	100	101	78.0-123			0.797	20
Trichloroethene	0.125	0.124	0.122	99.2	97.6	76.0-126			1.63	20
Trichlorofluoromethane	0.125	0.112	0.108	89.6	86.4	61.0-142			3.64	20
1,2,3-Trichloropropane	0.125	0.117	0.126	93.6	101	67.0-129			7.41	20
1,2,3-Trimethylbenzene	0.125	0.115	0.114	92.0	91.2	74.0-124			0.873	20
1,2,4-Trimethylbenzene	0.125	0.121	0.120	96.8	96.0	70.0-126			0.830	20
1,3,5-Trimethylbenzene	0.125	0.122	0.127	97.6	102	73.0-127			4.02	20
Vinyl chloride	0.125	0.130	0.131	104	105	63.0-134			0.766	20
Xylenes, Total	0.375	0.377	0.377	101	101	72.0-127			0.000	20
<i>(S) Toluene-d8</i>				99.1	99.9	75.0-131				
<i>(S) 4-Bromofluorobenzene</i>				102	100	67.0-138				
<i>(S) 1,2-Dichloroethane-d4</i>				98.6	99.1	70.0-130				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R3703759-1 09/09/21 18:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
2,4-D	U		0.00702	0.0700
Dalapon	U		0.0113	0.0700
2,4-DB	U		0.0297	0.0700
Dicamba	U		0.0157	0.0700
Dichloroprop	U		0.0245	0.0700
Dinoseb	U		0.00697	0.0700
MCPA	U		0.443	6.50
MCPP	U		0.367	6.50
2,4,5-T	U		0.00852	0.0700
2,4,5-TP (Silvex)	U		0.0107	0.0700
<i>(S) 2,4-Dichlorophenyl Acetic Acid</i>	40.1			22.0-132

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3703759-2 09/09/21 18:22

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,4-D	0.167	0.117	70.1	40.0-120	
Dalapon	0.167	0.101	60.5	15.0-120	
2,4-DB	0.167	0.131	78.4	25.0-143	
Dicamba	0.167	0.115	68.9	43.0-120	
Dichloroprop	0.167	0.122	73.1	32.0-129	
Dinoseb	0.167	0.0944	56.5	10.0-120	
MCPA	1.67	13.2	790	31.0-121	E J4
MCPP	1.67	14.9	892	28.0-133	E J4 P
2,4,5-T	0.167	0.117	70.1	41.0-120	
2,4,5-TP (Silvex)	0.167	0.121	72.5	42.0-120	
<i>(S) 2,4-Dichlorophenyl Acetic Acid</i>			67.7	22.0-132	

Method Blank (MB)

(MB) R3703777-1 09/10/21 04:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
2,4-D	U		0.00702	0.0700
Dalapon	U		0.0113	0.0700
2,4-DB	U		0.0297	0.0700
Dicamba	U		0.0157	0.0700
Dichloroprop	U		0.0245	0.0700
Dinoseb	U		0.00697	0.0700
MCPA	U		0.443	6.50
MCPP	U		0.367	6.50
2,4,5-T	U		0.00852	0.0700
2,4,5-TP (Silvex)	U		0.0107	0.0700
<i>(S) 2,4-Dichlorophenyl Acetic Acid</i>	67.1			22.0-132

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3703777-2 09/10/21 04:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
2,4-D	0.167	0.110	65.9	40.0-120	
Dalapon	0.167	0.0936	56.0	15.0-120	
2,4-DB	0.167	0.119	71.3	25.0-143	
Dicamba	0.167	0.102	61.1	43.0-120	
Dichloroprop	0.167	0.109	65.3	32.0-129	
Dinoseb	0.167	0.0861	51.6	10.0-120	
MCPA	1.67	12.2	731	31.0-121	E J4
MCPP	1.67	13.5	808	28.0-133	E J4
2,4,5-T	0.167	0.107	64.1	41.0-120	
2,4,5-TP (Silvex)	0.167	0.108	64.7	42.0-120	
<i>(S) 2,4-Dichlorophenyl Acetic Acid</i>			62.3	22.0-132	

Method Blank (MB)

(MB) R3703330-1 09/10/21 15:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00376	0.0200
Alpha BHC	U		0.00368	0.0200
Beta BHC	U		0.00379	0.0200
Delta BHC	U		0.00346	0.0200
Gamma BHC	U		0.00344	0.0200
4,4-DDD	U		0.00370	0.0200
4,4-DDE	U		0.00366	0.0200
4,4-DDT	U		0.00627	0.0200
Dieldrin	U		0.00344	0.0200
Endosulfan I	U		0.00363	0.0200
Endosulfan II	U		0.00335	0.0200
Endosulfan sulfate	U		0.00364	0.0200
Endrin	U		0.00350	0.0200
Endrin aldehyde	U		0.00339	0.0200
Endrin ketone	U		0.00711	0.0200
Heptachlor	U		0.00428	0.0200
Heptachlor epoxide	U		0.00339	0.0200
Hexachlorobenzene	U		0.00346	0.0200
Methoxychlor	U		0.00484	0.0200
Chlordane	U		0.103	0.300
Toxaphene	U		0.124	0.400
(S) Decachlorobiphenyl	91.4			10.0-135
(S) Tetrachloro-m-xylene	83.3			10.0-139

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Laboratory Control Sample (LCS)

(LCS) R3703330-2 09/10/21 16:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0615	92.3	34.0-136	
Alpha BHC	0.0666	0.0606	91.0	34.0-139	
Beta BHC	0.0666	0.0578	86.8	34.0-133	
Delta BHC	0.0666	0.0619	92.9	34.0-135	
Gamma BHC	0.0666	0.0610	91.6	34.0-136	
4,4-DDD	0.0666	0.0625	93.8	33.0-141	
4,4-DDE	0.0666	0.0617	92.6	34.0-134	
4,4-DDT	0.0666	0.0646	97.0	30.0-143	
Dieldrin	0.0666	0.0616	92.5	35.0-137	
Endosulfan I	0.0666	0.0612	91.9	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R3703330-2 09/10/21 16:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Endosulfan II	0.0666	0.0637	95.6	35.0-132	
Endosulfan sulfate	0.0666	0.0617	92.6	35.0-132	
Endrin	0.0666	0.0605	90.8	34.0-137	
Endrin aldehyde	0.0666	0.0482	72.4	23.0-121	
Endrin ketone	0.0666	0.0635	95.3	35.0-144	
Heptachlor	0.0666	0.0592	88.9	36.0-141	
Heptachlor epoxide	0.0666	0.0626	94.0	36.0-134	
Hexachlorobenzene	0.0666	0.0618	92.8	33.0-129	
Methoxychlor	0.0666	0.0599	89.9	28.0-150	
<i>(S) Decachlorobiphenyl</i>			88.3	10.0-135	
<i>(S) Tetrachloro-m-xylene</i>			81.8	10.0-139	

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3703330-1 09/10/21 15:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
PCB 1016	U		0.0118	0.0340
PCB 1221	U		0.0118	0.0340
PCB 1232	U		0.0118	0.0340
PCB 1242	U		0.0118	0.0340
PCB 1248	U		0.00738	0.0170
PCB 1254	U		0.00738	0.0170
PCB 1260	U		0.00738	0.0170
(S) Decachlorobiphenyl	83.5			10.0-135
(S) Tetrachloro-m-xylene	82.3			10.0-139

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS)

(LCS) R3703330-5 09/10/21 16:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1260	0.167	0.150	89.8	37.0-145	
PCB 1016	0.167	0.232	139	36.0-141	P
(S) Decachlorobiphenyl			86.0	10.0-135	
(S) Tetrachloro-m-xylene			85.6	10.0-139	

7 Gl

8 Al

9 Sc

L1399672-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1399672-02 09/10/21 17:09 • (MS) R3703330-6 09/10/21 20:16 • (MSD) R3703330-7 09/10/21 20:27

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
PCB 1260	0.229	U	0.173	0.181	75.4	79.0	1	10.0-160			4.65	38
PCB 1016	0.229	U	1.02	1.12	445	487	1	10.0-160	J5 P	J5 P	9.00	37
(S) Decachlorobiphenyl					71.5	74.3		10.0-135				
(S) Tetrachloro-m-xylene					74.0	75.2		10.0-139				

Method Blank (MB)

(MB) R3703135-2 09/10/21 18:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00539	0.0333
Acenaphthylene	U		0.00469	0.0333
Anthracene	U		0.00593	0.0333
Benzo(a)anthracene	U		0.00587	0.0333
Benzo(b)fluoranthene	U		0.00621	0.0333
Benzo(k)fluoranthene	U		0.00592	0.0333
Benzo(g,h,i)perylene	U		0.00609	0.0333
Benzo(a)pyrene	U		0.00619	0.0333
Bis(2-chlorethoxy)methane	U		0.0100	0.333
Bis(2-chloroethyl)ether	U		0.0110	0.333
2,2-oxybis(1-chloropropane)	U		0.0144	0.333
4-Bromophenyl-phenylether	U		0.0117	0.333
2-Chloronaphthalene	U		0.00585	0.0333
4-Chlorophenyl-phenylether	U		0.0116	0.333
Chrysene	U		0.00662	0.0333
Dibenz(a,h)anthracene	U		0.00923	0.0333
3,3-Dichlorobenzidine	U		0.0123	0.333
2,4-Dinitrotoluene	U		0.00955	0.333
2,6-Dinitrotoluene	U		0.0109	0.333
Fluoranthene	U		0.00601	0.0333
Fluorene	U		0.00542	0.0333
Hexachlorobenzene	U		0.0118	0.333
Hexachloro-1,3-butadiene	U		0.0112	0.333
Hexachlorocyclopentadiene	U		0.0175	0.333
Hexachloroethane	U		0.0131	0.333
Indeno(1,2,3-cd)pyrene	U		0.00941	0.0333
Isophorone	U		0.0102	0.333
Naphthalene	U		0.00836	0.0333
Nitrobenzene	U		0.0116	0.333
n-Nitrosodimethylamine	U		0.0494	0.333
n-Nitrosodiphenylamine	U		0.0252	0.333
n-Nitrosodi-n-propylamine	U		0.0111	0.333
Phenanthrene	U		0.00661	0.0333
Benzylbutyl phthalate	U		0.0104	0.333
Bis(2-ethylhexyl)phthalate	U		0.0422	0.333
Di-n-butyl phthalate	U		0.0114	0.333
Diethyl phthalate	U		0.0110	0.333
Dimethyl phthalate	U		0.0706	0.333
Di-n-octyl phthalate	U		0.0225	0.333
Pyrene	U		0.00648	0.0333

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3703135-2 09/10/21 18:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyridine	U		0.0220	0.333
1,2,4-Trichlorobenzene	U		0.0104	0.333
4-Chloro-3-methylphenol	U		0.0108	0.333
2-Chlorophenol	U		0.0110	0.333
2-Methylphenol	U		0.0100	0.333
3&4-Methyl Phenol	U		0.0104	0.333
2,4-Dichlorophenol	U		0.00970	0.333
2,4-Dimethylphenol	U		0.00870	0.333
4,6-Dinitro-2-methylphenol	U		0.0755	0.333
2,4-Dinitrophenol	U		0.0779	0.333
2-Nitrophenol	U		0.0119	0.333
4-Nitrophenol	U		0.0104	0.333
Pentachlorophenol	U		0.00896	0.333
Phenol	U		0.0134	0.333
2,4,5-Trichlorophenol	U		0.0113	0.333
2,4,6-Trichlorophenol	U		0.0107	0.333
<i>(S) Nitrobenzene-d5</i>	67.0			10.0-122
<i>(S) 2-Fluorobiphenyl</i>	66.1			15.0-120
<i>(S) p-Terphenyl-d14</i>	83.2			10.0-120
<i>(S) Phenol-d5</i>	71.0			10.0-120
<i>(S) 2-Fluorophenol</i>	69.8			12.0-120
<i>(S) 2,4,6-Tribromophenol</i>	67.6			10.0-127

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3703135-1 09/10/21 17:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.666	0.460	69.1	38.0-120	
Acenaphthylene	0.666	0.502	75.4	40.0-120	
Anthracene	0.666	0.498	74.8	42.0-120	
Benzo(a)anthracene	0.666	0.539	80.9	44.0-120	
Benzo(b)fluoranthene	0.666	0.479	71.9	43.0-120	
Benzo(k)fluoranthene	0.666	0.472	70.9	44.0-120	
Benzo(g,h,i)perylene	0.666	0.463	69.5	43.0-120	
Benzo(a)pyrene	0.666	0.481	72.2	45.0-120	
Bis(2-chlorethoxy)methane	0.666	0.405	60.8	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.494	74.2	16.0-120	
2,2-Oxybis(1-Chloropropane)	0.666	0.436	65.5	23.0-120	

Laboratory Control Sample (LCS)

(LCS) R3703135-1 09/10/21 17:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
4-Bromophenyl-phenylether	0.666	0.521	78.2	40.0-120	
2-Chloronaphthalene	0.666	0.469	70.4	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.500	75.1	40.0-120	
Chrysene	0.666	0.507	76.1	43.0-120	
Dibenz(a,h)anthracene	0.666	0.469	70.4	44.0-120	
3,3-Dichlorobenzidine	1.33	1.05	78.9	28.0-120	
2,4-Dinitrotoluene	0.666	0.628	94.3	45.0-120	
2,6-Dinitrotoluene	0.666	0.563	84.5	42.0-120	
Fluoranthene	0.666	0.512	76.9	44.0-120	
Fluorene	0.666	0.503	75.5	41.0-120	
Hexachlorobenzene	0.666	0.547	82.1	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.369	55.4	15.0-120	
Hexachlorocyclopentadiene	0.666	0.411	61.7	15.0-120	
Hexachloroethane	0.666	0.479	71.9	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.483	72.5	45.0-120	
Isophorone	0.666	0.416	62.5	23.0-120	
Naphthalene	0.666	0.370	55.6	18.0-120	
Nitrobenzene	0.666	0.384	57.7	17.0-120	
n-Nitrosodimethylamine	0.666	0.302	45.3	10.0-125	
n-Nitrosodiphenylamine	0.666	0.519	77.9	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.510	76.6	26.0-120	
Phenanthrene	0.666	0.508	76.3	42.0-120	
Benzylbutyl phthalate	0.666	0.614	92.2	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.596	89.5	41.0-120	
Di-n-butyl phthalate	0.666	0.582	87.4	43.0-120	
Diethyl phthalate	0.666	0.547	82.1	43.0-120	
Dimethyl phthalate	0.666	0.525	78.8	43.0-120	
Di-n-octyl phthalate	0.666	0.621	93.2	40.0-120	
Pyrene	0.666	0.531	79.7	41.0-120	
Pyridine	0.666	0.251	37.7	10.0-120	
1,2,4-Trichlorobenzene	0.666	0.378	56.8	17.0-120	
4-Chloro-3-methylphenol	0.666	0.432	64.9	28.0-120	
2-Chlorophenol	0.666	0.503	75.5	28.0-120	
2-Methylphenol	0.666	0.541	81.2	35.0-120	
3&4-Methyl Phenol	0.666	0.586	88.0	42.0-120	
2,4-Dichlorophenol	0.666	0.403	60.5	25.0-120	
2,4-Dimethylphenol	0.666	0.421	63.2	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.495	74.3	16.0-120	
2,4-Dinitrophenol	0.666	0.319	47.9	10.0-120	
2-Nitrophenol	0.666	0.401	60.2	20.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3703135-1 09/10/21 17:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Nitrophenol	0.666	0.524	78.7	27.0-120	
Pentachlorophenol	0.666	0.490	73.6	29.0-120	
Phenol	0.666	0.469	70.4	28.0-120	
2,4,5-Trichlorophenol	0.666	0.482	72.4	38.0-120	
2,4,6-Trichlorophenol	0.666	0.504	75.7	37.0-120	
(S) Nitrobenzene-d5			61.6	10.0-122	
(S) 2-Fluorobiphenyl			71.8	15.0-120	
(S) p-Terphenyl-d14			87.7	10.0-120	
(S) Phenol-d5			72.5	10.0-120	
(S) 2-Fluorophenol			74.0	12.0-120	
(S) 2,4,6-Tribromophenol			86.9	10.0-127	

L1399672-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1399672-02 09/10/21 23:02 • (MS) R3703135-3 09/10/21 23:26 • (MSD) R3703135-4 09/10/21 23:50

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.881	U	0.383	0.292	43.5	33.5	1	18.0-120			26.8	32
Acenaphthylene	0.881	U	0.417	0.316	47.4	36.2	1	25.0-120			27.7	32
Anthracene	0.881	U	0.429	0.394	48.8	45.1	1	22.0-120			8.67	29
Benzo(a)anthracene	0.881	U	0.424	0.469	48.1	53.8	1	25.0-120			10.1	29
Benzo(b)fluoranthene	0.881	U	0.417	0.429	47.4	49.2	1	19.0-122			2.92	31
Benzo(k)fluoranthene	0.881	U	0.412	0.429	46.7	49.2	1	23.0-120			4.24	30
Benzo(g,h,i)perylene	0.881	U	0.405	0.427	46.0	48.9	1	10.0-120			5.28	33
Benzo(a)pyrene	0.881	U	0.418	0.435	47.5	49.8	1	24.0-120			3.86	30
Bis(2-chloroethoxy)methane	0.881	U	0.357	0.258	40.5	29.6	1	10.0-120			32.1	34
Bis(2-chloroethyl)ether	0.881	U	0.394	0.257	44.7	29.4	1	10.0-120		J3	42.2	40
2,2-Oxybis(1-Chloropropane)	0.881	U	0.362	0.206	41.1	23.6	1	10.0-120		J3	55.1	40
4-Bromophenyl-phenylether	0.881	U	0.442	0.388	50.2	44.5	1	27.0-120			12.9	30
2-Chloronaphthalene	0.881	U	0.387	0.279	43.9	31.9	1	20.0-120		J3	32.6	32
4-Chlorophenyl-phenylether	0.881	U	0.398	0.340	45.2	39.0	1	24.0-120			15.6	29
Chrysene	0.881	U	0.399	0.450	45.3	51.6	1	21.0-120			12.0	29
Dibenz(a,h)anthracene	0.881	U	0.402	0.429	45.6	49.2	1	10.0-120			6.60	32
3,3-Dichlorobenzidine	1.76	U	0.804	0.929	45.8	53.3	1	10.0-120			14.4	34
2,4-Dinitrotoluene	0.881	U	0.535	0.521	60.7	59.7	1	30.0-120			2.60	31
2,6-Dinitrotoluene	0.881	U	0.465	0.405	52.8	46.4	1	25.0-120			13.9	31
Fluoranthene	0.881	U	0.447	0.458	50.8	52.5	1	18.0-126			2.42	32
Fluorene	0.881	U	0.418	0.344	47.5	39.5	1	25.0-120			19.4	30
Hexachlorobenzene	0.881	U	0.460	0.413	52.2	47.3	1	27.0-120			10.7	28

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1399672-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1399672-02 09/10/21 23:02 • (MS) R3703135-3 09/10/21 23:26 • (MSD) R3703135-4 09/10/21 23:50

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	0.881	U	0.321	0.170	36.4	19.5	1	10.0-120		J3	61.5	38
Hexachlorocyclopentadiene	0.881	U	0.199	0.140	22.6	16.0	1	10.0-120			34.8	40
Hexachloroethane	0.881	U	0.373	0.189	42.4	21.7	1	10.0-120		J3	65.4	40
Indeno(1,2,3-cd)pyrene	0.881	U	0.418	0.439	47.5	50.3	1	10.0-120			4.80	32
Isophorone	0.881	U	0.355	0.273	40.3	31.3	1	13.0-120			26.2	34
Naphthalene	0.881	U	0.321	0.199	36.4	22.8	1	10.0-120		J3	47.0	35
Nitrobenzene	0.881	U	0.347	0.224	39.4	25.6	1	10.0-120		J3	43.3	36
n-Nitrosodimethylamine	0.881	U	0.252	0.199	28.7	22.8	1	10.0-127			23.7	40
n-Nitrosodiphenylamine	0.881	U	0.447	0.395	50.8	45.3	1	17.0-120			12.4	29
n-Nitrosodi-n-propylamine	0.881	U	0.403	0.291	45.8	33.3	1	10.0-120			32.4	37
Phenanthrene	0.881	U	0.442	0.403	50.2	46.2	1	17.0-120			9.09	31
Benzylbutyl phthalate	0.881	U	0.487	0.525	55.3	60.2	1	23.0-120			7.59	30
Bis(2-ethylhexyl)phthalate	0.881	U	0.508	0.563	57.6	64.5	1	17.0-126			10.3	30
Di-n-butyl phthalate	0.881	U	0.499	0.501	56.7	57.4	1	30.0-120			0.274	29
Diethyl phthalate	0.881	U	0.460	0.434	52.2	49.7	1	26.0-120			5.84	28
Dimethyl phthalate	0.881	U	0.435	0.391	49.4	44.8	1	25.0-120			10.6	29
Di-n-octyl phthalate	0.881	0.0698	0.510	0.578	50.0	58.2	1	21.0-123			12.4	29
Pyrene	0.881	U	0.420	0.461	47.7	52.8	1	16.0-121			9.35	32
Pyridine	0.881	U	0.254	0.155	28.8	17.8	1	10.0-120		J3	48.3	40
1,2,4-Trichlorobenzene	0.881	U	0.329	0.191	37.4	21.9	1	12.0-120		J3	53.3	37
4-Chloro-3-methylphenol	0.881	U	0.391	0.329	44.4	37.7	1	15.0-120			17.1	30
2-Chlorophenol	0.881	U	0.395	0.300	44.9	34.4	1	15.0-120			27.2	37
2-Methylphenol	0.881	U	0.460	0.387	52.2	44.3	1	11.0-120			17.2	40
3&4-Methyl Phenol	0.881	U	0.535	0.392	60.7	45.0	1	12.0-123			30.8	38
2,4-Dichlorophenol	0.881	U	0.350	0.284	39.7	32.5	1	20.0-120			20.8	31
2,4-Dimethylphenol	0.881	U	0.328	0.258	37.2	29.6	1	10.0-120			23.9	33
4,6-Dinitro-2-methylphenol	0.881	U	0.505	0.516	57.3	59.1	1	10.0-120			2.15	39
2,4-Dinitrophenol	0.881	U	0.421	0.435	47.8	49.8	1	10.0-121			3.21	40
2-Nitrophenol	0.881	U	0.364	0.261	41.3	29.9	1	12.0-120			33.0	39
4-Nitrophenol	0.881	U	0.427	0.464	48.4	53.1	1	10.0-137			8.32	32
Pentachlorophenol	0.881	U	0.449	0.431	50.9	49.4	1	10.0-160			4.06	31
Phenol	0.881	U	0.358	0.303	40.7	34.7	1	12.0-120			16.6	38
2,4,5-Trichlorophenol	0.881	U	0.410	0.375	46.6	42.9	1	20.0-120			9.09	30
2,4,6-Trichlorophenol	0.881	U	0.413	0.336	46.9	38.5	1	19.0-120			20.5	32
(S) Nitrobenzene-d5					42.7	28.7		10.0-122				
(S) 2-Fluorobiphenyl					49.8	35.8		15.0-120				
(S) p-Terphenyl-d14					58.6	65.1		10.0-120				
(S) Phenol-d5					48.8	42.5		10.0-120				
(S) 2-Fluorophenol					49.5	38.5		12.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1399672-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1399672-02 09/10/21 23:02 • (MS) R3703135-3 09/10/21 23:26 • (MSD) R3703135-4 09/10/21 23:50

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 2,4,6-Tribromophenol					59.8	60.8		10.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.



GLOSSARY OF TERMS

Qualifier	Description
P	RPD between the primary and confirmatory analysis exceeded 40%.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Billing Information: _____

Analysis / Container / Preservative

Chain of Custody Page ___ of ___

Pres Chk



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Report to: **PETER SHINGLEDECKER**

Email To: **PJS@SHANWIL.COM**

Project Description: **ERBB**

City/State Collected: **PORTLAND, OR**

Please Circle: PT MT CT ET

Phone: **503-210-4792**

Client Project #: **102636-011**

Lab Project #

Collected by (print): **LAS**

Site/Facility ID #

P.O. #

Collected by (signature):
 Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
 ___ Same Day ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Two Day ___ 10 Day (Rad Only)
 ___ Three Day

Quote #
 Date Results Needed

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs
B-09-COMP-SCBS	COMP		0-150'	9/2/21	1200	
B-10-BS	COMP		0-25'		1300	
B-11-COMP-SCBS	COMP		0-180'		1330	
B-12-COMP-SCBS	COMP		0-130'		1350	
B-13-COMP-SCBS	COMP		0-160'		1420	
B-27-COMP-SCBS	COMP		0-170'		1440	

SVOCs BY 8270	VOCs BY 8260	PCRA8 METALS BY 6020/7471	OCPs/PCBs BY 8081/8082	HEXACHLORIDES BY 8151	TCLP Barium	TCLP PCRA8 METALS BY 1311/6020/7471
---------------	--------------	---------------------------	------------------------	-----------------------	-------------	-------------------------------------

SDG # **1399672**
A026

Acctnum:
 Template:
 Prelogin:
 PM:
 PB:

Shipped Via:

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: **X = RUN, H = HOLD FOR FOLLOWUPS**
REPORT MDLS

pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist
 COC Seal Present/Intact: NP Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 If Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature) **[Signature]**
 Date: **09/03/21** Time: **1300**

Samples returned via:
 ___ UPS ___ FedEx ___ Courier

Tracking # **5217 3314 5387**

Received by: (Signature) **[Signature]**
 Trip Blank Received: Yes/No HCL/MeOH TBR
 Temp: **8.8** °C Bottles Received: **12**

Received for lab by: (Signature) **[Signature]**
 Date: **9/4/21** Time: **930**
 Hold: _____ Condition: NCF / OK

Shannon & Wilson - OR

Sample Delivery Group: L1418104
Samples Received: 10/14/2021
Project Number: 102636
Description:

Report To: Lauren Sherman
3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1	1 Cp
Tc: Table of Contents	2	2 Tc
Ss: Sample Summary	3	3 Ss
Cn: Case Narrative	7	4 Cn
Sr: Sample Results	8	5 Sr
B-15-COMP-SCBS L1418104-01	8	
B-16-COMP-SCBS L1418104-02	11	
B-17-COMP-SCBS L1418104-03	14	
B-18-COMP-SCBS L1418104-04	17	
B-19-COMP-SCBS L1418104-05	20	6 Qc
B-12A-SCBS L1418104-06	23	
B-24-SC L1418104-07	28	7 Gl
B-25-SC L1418104-08	33	
B-26-SC L1418104-09	38	8 Al
B-20-SCBS L1418104-10	43	
B-16-DW L1418104-11	46	
B-17-DW L1418104-12	49	
B-18-DW L1418104-13	52	9 Sc
Qc: Quality Control Summary	55	
Total Solids by Method 2540 G-2011	55	
Mercury by Method 7470A	57	
Mercury by Method 7471B	58	
Metals (ICPMS) by Method 6020B	61	
Volatile Organic Compounds (GC) by Method NWTPHGX	64	
Volatile Organic Compounds (GC/MS) by Method 8260D	67	
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	79	
Chlorinated Acid Herbicides (GC) by Method 8151A	81	
Pesticides (GC) by Method 8081B	83	
Polychlorinated Biphenyls (GC) by Method 8082 A	85	
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	86	
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	92	
Gl: Glossary of Terms	96	
Al: Accreditations & Locations	98	
Sc: Sample Chain of Custody	99	

SAMPLE SUMMARY

B-15-COMP-SCBS L1418104-01 Solid

Collected by Lauren Sherman Collected date/time 10/08/21 12:10 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1759017	1	10/19/21 16:56	10/19/21 17:10	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1758977	1	10/18/21 12:54	10/19/21 11:32	MRW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1761001	5	10/25/21 13:54	10/25/21 23:49	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1760034	33	10/19/21 22:24	10/21/21 05:40	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760484	1.32	10/19/21 22:24	10/21/21 03:51	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761238	1	10/22/21 07:39	10/22/21 12:18	WCR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1761256	1	10/21/21 23:03	10/22/21 13:43	AAT	Mt. Juliet, TN



B-16-COMP-SCBS L1418104-02 Solid

Collected by Lauren Sherman Collected date/time 10/08/21 12:40 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1759017	1	10/19/21 16:56	10/19/21 17:10	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1758977	1	10/18/21 12:54	10/19/21 11:34	MRW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1761001	5	10/25/21 13:54	10/25/21 23:52	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1760034	27.5	10/19/21 22:24	10/21/21 06:09	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760359	1.1	10/19/21 22:24	10/20/21 15:37	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761238	1	10/22/21 07:39	10/22/21 12:32	WCR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1761256	1	10/21/21 23:03	10/22/21 14:03	AAT	Mt. Juliet, TN

B-17-COMP-SCBS L1418104-03 Solid

Collected by Lauren Sherman Collected date/time 10/08/21 13:40 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1759017	1	10/19/21 16:56	10/19/21 17:10	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1758977	1	10/18/21 12:54	10/19/21 11:37	MRW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1761001	5	10/25/21 13:54	10/25/21 23:55	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1760034	25	10/19/21 22:24	10/21/21 06:36	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760359	1	10/19/21 22:24	10/20/21 15:56	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761238	1	10/22/21 07:39	10/22/21 16:03	WCR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1761256	1	10/21/21 23:03	10/22/21 14:23	AAT	Mt. Juliet, TN

B-18-COMP-SCBS L1418104-04 Solid

Collected by Lauren Sherman Collected date/time 10/08/21 14:10 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1759017	1	10/19/21 16:56	10/19/21 17:10	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1758977	1	10/18/21 12:54	10/19/21 11:40	MRW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1761001	5	10/25/21 13:54	10/26/21 00:08	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1760034	29.5	10/19/21 22:24	10/21/21 06:58	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760359	1.18	10/19/21 22:24	10/20/21 16:15	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761238	1	10/22/21 07:39	10/22/21 12:45	WCR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1761256	1	10/21/21 23:03	10/22/21 14:43	AAT	Mt. Juliet, TN

B-19-COMP-SCBS L1418104-05 Solid

Collected by Lauren Sherman Collected date/time 10/08/21 14:50 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1759017	1	10/19/21 16:56	10/19/21 17:10	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1758977	1	10/18/21 12:54	10/19/21 11:42	MRW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1761001	5	10/25/21 13:54	10/26/21 00:11	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1760034	30.8	10/19/21 22:24	10/21/21 07:22	ACG	Mt. Juliet, TN

SAMPLE SUMMARY

B-19-COMP-SCBS L1418104-05 Solid

Collected by Lauren Sherman Collected date/time 10/08/21 14:50 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760359	1.23	10/19/21 22:24	10/20/21 16:34	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761238	1	10/22/21 07:39	10/22/21 12:59	WCR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1761256	1	10/21/21 23:03	10/22/21 15:03	AAT	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

B-12A-SCBS L1418104-06 Solid

Collected by Lauren Sherman Collected date/time 10/08/21 10:10 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1759017	1	10/19/21 16:56	10/19/21 17:10	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1758977	1	10/18/21 12:54	10/19/21 11:45	MRW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1761001	5	10/25/21 13:54	10/26/21 00:15	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1760034	25	10/19/21 22:24	10/21/21 07:44	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760359	1	10/19/21 22:24	10/20/21 16:53	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761238	1	10/22/21 07:39	10/22/21 13:12	WCR	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1759267	1	10/19/21 08:03	10/21/21 00:35	HMH	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1760459	1	10/20/21 22:39	10/21/21 14:08	MTJ	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1760459	1	10/20/21 22:39	10/21/21 14:08	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1760416	1	10/21/21 00:55	10/22/21 00:54	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1761256	1	10/21/21 23:03	10/22/21 15:22	AAT	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

B-24-SC L1418104-07 Solid

Collected by Lauren Sherman Collected date/time 10/08/21 10:50 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1759017	1	10/19/21 16:56	10/19/21 17:10	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1758977	1	10/18/21 12:54	10/19/21 11:53	MRW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1761001	5	10/25/21 13:54	10/26/21 00:18	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1760785	35.8	10/19/21 22:24	10/21/21 17:35	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760359	1.43	10/19/21 22:24	10/20/21 17:12	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761238	1	10/22/21 07:39	10/22/21 13:26	WCR	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1759267	1	10/19/21 08:03	10/21/21 00:50	HMH	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1760459	1	10/20/21 22:39	10/21/21 14:17	MTJ	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1760459	1	10/20/21 22:39	10/21/21 14:17	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1760416	1	10/21/21 00:55	10/21/21 19:13	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1761256	1	10/21/21 23:03	10/22/21 15:42	AAT	Mt. Juliet, TN

B-25-SC L1418104-08 Solid

Collected by Lauren Sherman Collected date/time 10/08/21 10:30 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1759017	1	10/19/21 16:56	10/19/21 17:10	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1758977	1	10/18/21 12:54	10/19/21 11:55	MRW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1761001	5	10/25/21 13:54	10/26/21 00:22	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1760785	25	10/19/21 22:24	10/21/21 19:25	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760359	1	10/19/21 22:24	10/20/21 17:31	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761238	1	10/22/21 07:39	10/22/21 13:39	WCR	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1759267	1	10/19/21 08:03	10/21/21 01:04	HMH	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1760459	1	10/20/21 22:39	10/21/21 14:26	MTJ	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1760459	1	10/20/21 22:39	10/21/21 14:26	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1760416	1	10/21/21 00:55	10/21/21 20:14	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1761256	1	10/21/21 23:03	10/22/21 16:02	AAT	Mt. Juliet, TN

SAMPLE SUMMARY

B-26-SC L1418104-09 Solid

Collected by Lauren Sherman Collected date/time 10/08/21 11:15 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1759017	1	10/19/21 16:56	10/19/21 17:10	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1759285	1	10/19/21 08:14	10/19/21 16:43	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1761001	5	10/25/21 13:54	10/26/21 00:25	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1760785	25	10/19/21 22:24	10/21/21 19:47	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760359	1	10/19/21 22:24	10/20/21 17:50	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761238	1	10/22/21 07:39	10/22/21 14:19	WCR	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1759267	1	10/19/21 08:03	10/21/21 01:19	HMH	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1760459	1	10/20/21 22:39	10/21/21 14:35	MTJ	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1760459	1	10/20/21 22:39	10/21/21 14:35	MTJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1760416	1	10/21/21 00:55	10/21/21 20:34	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1761256	1	10/21/21 23:03	10/23/21 14:20	AAT	Mt. Juliet, TN

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

B-20-SCBS L1418104-10 Solid

Collected by Lauren Sherman Collected date/time 10/08/21 11:40 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1759066	1	10/19/21 15:29	10/19/21 15:41	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1758992	1	10/18/21 13:27	10/19/21 12:11	MRW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1761001	5	10/25/21 13:54	10/26/21 00:29	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1760785	25	10/19/21 22:24	10/21/21 20:09	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760359	1	10/19/21 22:24	10/20/21 18:09	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761238	1	10/22/21 07:39	10/22/21 14:31	WCR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1761256	1	10/21/21 23:03	10/23/21 15:20	AAT	Mt. Juliet, TN

B-16-DW L1418104-11 GW

Collected by Lauren Sherman Collected date/time 10/08/21 09:50 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1759555	1	10/20/21 11:17	10/20/21 18:35	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765493	1	10/31/21 15:17	11/01/21 10:04	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1759563	1	10/19/21 20:56	10/19/21 20:56	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760657	1	10/20/21 23:15	10/20/21 23:15	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761285	1	10/21/21 16:11	10/22/21 15:44	WCR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1757875	1	10/16/21 18:22	10/17/21 14:24	SHG	Mt. Juliet, TN

B-17-DW L1418104-12 GW

Collected by Lauren Sherman Collected date/time 10/08/21 09:00 Received date/time 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1759555	1	10/20/21 11:17	10/20/21 18:41	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765493	1	10/31/21 15:17	11/01/21 10:07	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1759563	1	10/19/21 21:18	10/19/21 21:18	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760657	1	10/20/21 23:37	10/20/21 23:37	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761285	1	10/21/21 16:11	10/22/21 16:12	WCR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1757875	1	10/16/21 18:22	10/17/21 14:42	SHG	Mt. Juliet, TN

SAMPLE SUMMARY

B-18-DW L1418104-13 GW

Collected by: Lauren Sherman
 Collected date/time: 10/08/21 09:20
 Received date/time: 10/14/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1759555	1	10/20/21 11:17	10/20/21 18:43	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1765493	1	10/31/21 15:17	11/01/21 10:10	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1759563	1	10/19/21 21:40	10/19/21 21:40	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1760657	1	10/20/21 23:58	10/20/21 23:58	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1761285	1	10/21/21 16:11	10/22/21 16:40	WCR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1757875	1	10/16/21 18:22	10/17/21 14:59	SHG	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Project Narrative

VOCs,GX: field prepped terracore vials were compeltely filled with soil and were therefore not usable. Terracore vials were lab prepped.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	22.4		1	10/19/2021 17:10	WG1759017

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0804	0.179	1	10/19/2021 11:32	WG1758977

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	0.793	J	0.742	13.4	5	10/25/2021 23:49	WG1761001
Arsenic	4.67		0.447	4.47	5	10/25/2021 23:49	WG1761001
Barium	96.2		0.679	11.2	5	10/25/2021 23:49	WG1761001
Cadmium	U		0.382	4.47	5	10/25/2021 23:49	WG1761001
Chromium	20.3	J	1.32	22.3	5	10/25/2021 23:49	WG1761001
Copper	14.0	J	0.590	22.3	5	10/25/2021 23:49	WG1761001
Lead	11.9		0.442	8.94	5	10/25/2021 23:49	WG1761001
Selenium	U		0.804	11.2	5	10/25/2021 23:49	WG1761001
Silver	U		0.387	2.23	5	10/25/2021 23:49	WG1761001
Zinc	58.5	J	3.31	112	5	10/25/2021 23:49	WG1761001

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		7.96	23.4	33	10/21/2021 05:40	WG1760034
(S) a,a,a-Trifluorotoluene(FID)	94.3			77.0-120		10/21/2021 05:40	WG1760034

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	J4	0.342	0.469	1.32	10/21/2021 03:51	WG1760484
Acrylonitrile	U		0.0339	0.117	1.32	10/21/2021 03:51	WG1760484
Benzene	U		0.00438	0.00938	1.32	10/21/2021 03:51	WG1760484
Bromobenzene	U		0.00845	0.117	1.32	10/21/2021 03:51	WG1760484
Bromodichloromethane	U		0.00680	0.0234	1.32	10/21/2021 03:51	WG1760484
Bromoform	U		0.0109	0.234	1.32	10/21/2021 03:51	WG1760484
Bromomethane	U		0.0185	0.117	1.32	10/21/2021 03:51	WG1760484
n-Butylbenzene	U		0.0492	0.117	1.32	10/21/2021 03:51	WG1760484
sec-Butylbenzene	U		0.0270	0.117	1.32	10/21/2021 03:51	WG1760484
tert-Butylbenzene	U		0.0183	0.0469	1.32	10/21/2021 03:51	WG1760484
Carbon tetrachloride	U		0.00845	0.0469	1.32	10/21/2021 03:51	WG1760484
Chlorobenzene	U		0.00197	0.0234	1.32	10/21/2021 03:51	WG1760484
Chlorodibromomethane	U		0.00574	0.0234	1.32	10/21/2021 03:51	WG1760484
Chloroethane	U		0.0159	0.0469	1.32	10/21/2021 03:51	WG1760484
Chloroform	U		0.00966	0.0234	1.32	10/21/2021 03:51	WG1760484
Chloromethane	U		0.0408	0.117	1.32	10/21/2021 03:51	WG1760484
2-Chlorotoluene	U		0.00810	0.0234	1.32	10/21/2021 03:51	WG1760484
4-Chlorotoluene	U		0.00422	0.0469	1.32	10/21/2021 03:51	WG1760484
1,2-Dibromo-3-Chloropropane	U		0.0366	0.234	1.32	10/21/2021 03:51	WG1760484
1,2-Dibromoethane	U		0.00607	0.0234	1.32	10/21/2021 03:51	WG1760484
Dibromomethane	U		0.00703	0.0469	1.32	10/21/2021 03:51	WG1760484
1,2-Dichlorobenzene	U		0.00399	0.0469	1.32	10/21/2021 03:51	WG1760484
1,3-Dichlorobenzene	U		0.00563	0.0469	1.32	10/21/2021 03:51	WG1760484
1,4-Dichlorobenzene	U		0.00656	0.0469	1.32	10/21/2021 03:51	WG1760484



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.0151	0.0234	1.32	10/21/2021 03:51	WG1760484
1,1-Dichloroethane	U		0.00460	0.0234	1.32	10/21/2021 03:51	WG1760484
1,2-Dichloroethane	U		0.00609	0.0234	1.32	10/21/2021 03:51	WG1760484
1,1-Dichloroethene	U		0.00568	0.0234	1.32	10/21/2021 03:51	WG1760484
cis-1,2-Dichloroethene	U		0.00688	0.0234	1.32	10/21/2021 03:51	WG1760484
trans-1,2-Dichloroethene	U		0.00973	0.0469	1.32	10/21/2021 03:51	WG1760484
1,2-Dichloropropane	U		0.0133	0.0469	1.32	10/21/2021 03:51	WG1760484
1,1-Dichloropropene	U		0.00760	0.0234	1.32	10/21/2021 03:51	WG1760484
1,3-Dichloropropane	U		0.00470	0.0469	1.32	10/21/2021 03:51	WG1760484
cis-1,3-Dichloropropene	U		0.00710	0.0234	1.32	10/21/2021 03:51	WG1760484
trans-1,3-Dichloropropene	U		0.0107	0.0469	1.32	10/21/2021 03:51	WG1760484
2,2-Dichloropropane	U		0.0129	0.0234	1.32	10/21/2021 03:51	WG1760484
Di-isopropyl ether	U		0.00384	0.00938	1.32	10/21/2021 03:51	WG1760484
Ethylbenzene	U		0.00691	0.0234	1.32	10/21/2021 03:51	WG1760484
Hexachloro-1,3-butadiene	U		0.0563	0.234	1.32	10/21/2021 03:51	WG1760484
Isopropylbenzene	U		0.00399	0.0234	1.32	10/21/2021 03:51	WG1760484
p-Isopropyltoluene	U		0.0239	0.0469	1.32	10/21/2021 03:51	WG1760484
2-Butanone (MEK)	U		0.595	0.938	1.32	10/21/2021 03:51	WG1760484
Methylene Chloride	0.0698	U	0.0622	0.234	1.32	10/21/2021 03:51	WG1760484
4-Methyl-2-pentanone (MIBK)	U		0.0214	0.234	1.32	10/21/2021 03:51	WG1760484
Methyl tert-butyl ether	U		0.00328	0.00938	1.32	10/21/2021 03:51	WG1760484
Naphthalene	U		0.0458	0.117	1.32	10/21/2021 03:51	WG1760484
n-Propylbenzene	U		0.00888	0.0469	1.32	10/21/2021 03:51	WG1760484
Styrene	U		0.00215	0.117	1.32	10/21/2021 03:51	WG1760484
1,1,1,2-Tetrachloroethane	U		0.00888	0.0234	1.32	10/21/2021 03:51	WG1760484
1,1,2,2-Tetrachloroethane	U		0.00651	0.0234	1.32	10/21/2021 03:51	WG1760484
1,1,2-Trichlorotrifluoroethane	U		0.00707	0.0234	1.32	10/21/2021 03:51	WG1760484
Tetrachloroethene	U		0.00838	0.0234	1.32	10/21/2021 03:51	WG1760484
Toluene	U		0.0122	0.0469	1.32	10/21/2021 03:51	WG1760484
1,2,3-Trichlorobenzene	U		0.0688	0.117	1.32	10/21/2021 03:51	WG1760484
1,2,4-Trichlorobenzene	U		0.0413	0.117	1.32	10/21/2021 03:51	WG1760484
1,1,1-Trichloroethane	U		0.00867	0.0234	1.32	10/21/2021 03:51	WG1760484
1,1,2-Trichloroethane	U		0.00560	0.0234	1.32	10/21/2021 03:51	WG1760484
Trichloroethene	U		0.00548	0.00938	1.32	10/21/2021 03:51	WG1760484
Trichlorofluoromethane	U		0.00774	0.0234	1.32	10/21/2021 03:51	WG1760484
1,2,3-Trichloropropane	U		0.0152	0.117	1.32	10/21/2021 03:51	WG1760484
1,2,4-Trimethylbenzene	U		0.0148	0.0469	1.32	10/21/2021 03:51	WG1760484
1,2,3-Trimethylbenzene	U		0.0148	0.0469	1.32	10/21/2021 03:51	WG1760484
1,3,5-Trimethylbenzene	U		0.0188	0.0469	1.32	10/21/2021 03:51	WG1760484
Vinyl chloride	U		0.0109	0.0234	1.32	10/21/2021 03:51	WG1760484
Xylenes, Total	U		0.00824	0.0610	1.32	10/21/2021 03:51	WG1760484
(S) Toluene-d8	104			75.0-131		10/21/2021 03:51	WG1760484
(S) 4-Bromofluorobenzene	102			67.0-138		10/21/2021 03:51	WG1760484
(S) 1,2-Dichloroethane-d4	107			70.0-130		10/21/2021 03:51	WG1760484

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		5.94	17.9	1	10/22/2021 12:18	WG1761238
Residual Range Organics (RRO)	U		14.9	44.7	1	10/22/2021 12:18	WG1761238
(S) o-Terphenyl	55.0			18.0-148		10/22/2021 12:18	WG1761238

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.0103	0.0268	1	10/22/2021 13:43	WG1761256
Acenaphthene	U		0.00934	0.0268	1	10/22/2021 13:43	WG1761256
Acenaphthylene	U		0.00965	0.0268	1	10/22/2021 13:43	WG1761256
Benzo(a)anthracene	U		0.00773	0.0268	1	10/22/2021 13:43	WG1761256
Benzo(a)pyrene	U		0.00800	0.0268	1	10/22/2021 13:43	WG1761256
Benzo(b)fluoranthene	U		0.00684	0.0268	1	10/22/2021 13:43	WG1761256
Benzo(g,h,i)perylene	U		0.00791	0.0268	1	10/22/2021 13:43	WG1761256
Benzo(k)fluoranthene	U		0.00961	0.0268	1	10/22/2021 13:43	WG1761256
Chrysene	U		0.0104	0.0268	1	10/22/2021 13:43	WG1761256
Dibenz(a,h)anthracene	U		0.00769	0.0268	1	10/22/2021 13:43	WG1761256
Fluoranthene	U		0.0101	0.0268	1	10/22/2021 13:43	WG1761256
Fluorene	U		0.00916	0.0268	1	10/22/2021 13:43	WG1761256
Indeno(1,2,3-cd)pyrene	U		0.00809	0.0268	1	10/22/2021 13:43	WG1761256
Naphthalene	U		0.0182	0.0894	1	10/22/2021 13:43	WG1761256
Phenanthrene	U		0.0103	0.0268	1	10/22/2021 13:43	WG1761256
Pyrene	U		0.00894	0.0268	1	10/22/2021 13:43	WG1761256
1-Methylnaphthalene	U		0.0201	0.0894	1	10/22/2021 13:43	WG1761256
2-Methylnaphthalene	U		0.0191	0.0894	1	10/22/2021 13:43	WG1761256
2-Chloronaphthalene	U		0.0208	0.0894	1	10/22/2021 13:43	WG1761256
(S) Nitrobenzene-d5	70.9			14.0-149		10/22/2021 13:43	WG1761256
(S) 2-Fluorobiphenyl	73.9			34.0-125		10/22/2021 13:43	WG1761256
(S) p-Terphenyl-d14	87.9			23.0-120		10/22/2021 13:43	WG1761256

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	24.8		1	10/19/2021 17:10	WG1759017

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0725	0.161	1	10/19/2021 11:34	WG1758977

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.668	12.1	5	10/25/2021 23:52	WG1761001
Arsenic	4.54		0.403	4.03	5	10/25/2021 23:52	WG1761001
Barium	142		0.612	10.1	5	10/25/2021 23:52	WG1761001
Cadmium	U		0.344	4.03	5	10/25/2021 23:52	WG1761001
Chromium	28.1		1.19	20.1	5	10/25/2021 23:52	WG1761001
Copper	23.7		0.531	20.1	5	10/25/2021 23:52	WG1761001
Lead	10.4		0.398	8.05	5	10/25/2021 23:52	WG1761001
Selenium	U		0.725	10.1	5	10/25/2021 23:52	WG1761001
Silver	U		0.348	2.01	5	10/25/2021 23:52	WG1761001
Zinc	75.8	J	2.98	101	5	10/25/2021 23:52	WG1761001

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		6.30	18.6	27.5	10/21/2021 06:09	WG1760034
(S) a,a,a-Trifluorotoluene(FID)	94.2			77.0-120		10/21/2021 06:09	WG1760034

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.271	0.372	1.1	10/20/2021 15:37	WG1760359
Acrylonitrile	U		0.0268	0.0933	1.1	10/20/2021 15:37	WG1760359
Benzene	U		0.00348	0.00744	1.1	10/20/2021 15:37	WG1760359
Bromobenzene	U		0.00670	0.0933	1.1	10/20/2021 15:37	WG1760359
Bromodichloromethane	U		0.00539	0.0186	1.1	10/20/2021 15:37	WG1760359
Bromoform	U		0.00872	0.186	1.1	10/20/2021 15:37	WG1760359
Bromomethane	U		0.0147	0.0933	1.1	10/20/2021 15:37	WG1760359
n-Butylbenzene	U		0.0391	0.0933	1.1	10/20/2021 15:37	WG1760359
sec-Butylbenzene	U		0.0214	0.0933	1.1	10/20/2021 15:37	WG1760359
tert-Butylbenzene	U		0.0145	0.0372	1.1	10/20/2021 15:37	WG1760359
Carbon tetrachloride	U		0.00668	0.0372	1.1	10/20/2021 15:37	WG1760359
Chlorobenzene	U		0.00156	0.0186	1.1	10/20/2021 15:37	WG1760359
Chlorodibromomethane	U		0.00455	0.0186	1.1	10/20/2021 15:37	WG1760359
Chloroethane	U		0.0126	0.0372	1.1	10/20/2021 15:37	WG1760359
Chloroform	U		0.00764	0.0186	1.1	10/20/2021 15:37	WG1760359
Chloromethane	U		0.0324	0.0933	1.1	10/20/2021 15:37	WG1760359
2-Chlorotoluene	U		0.00644	0.0186	1.1	10/20/2021 15:37	WG1760359
4-Chlorotoluene	U		0.00335	0.0372	1.1	10/20/2021 15:37	WG1760359
1,2-Dibromo-3-Chloropropane	U		0.0290	0.186	1.1	10/20/2021 15:37	WG1760359
1,2-Dibromoethane	U		0.00482	0.0186	1.1	10/20/2021 15:37	WG1760359
Dibromomethane	U		0.00558	0.0372	1.1	10/20/2021 15:37	WG1760359
1,2-Dichlorobenzene	U		0.00316	0.0372	1.1	10/20/2021 15:37	WG1760359
1,3-Dichlorobenzene	U		0.00446	0.0372	1.1	10/20/2021 15:37	WG1760359
1,4-Dichlorobenzene	U		0.00521	0.0372	1.1	10/20/2021 15:37	WG1760359



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.0120	0.0186	1.1	10/20/2021 15:37	WG1760359
1,1-Dichloroethane	U		0.00365	0.0186	1.1	10/20/2021 15:37	WG1760359
1,2-Dichloroethane	U		0.00483	0.0186	1.1	10/20/2021 15:37	WG1760359
1,1-Dichloroethene	U		0.00451	0.0186	1.1	10/20/2021 15:37	WG1760359
cis-1,2-Dichloroethene	U		0.00546	0.0186	1.1	10/20/2021 15:37	WG1760359
trans-1,2-Dichloroethene	U		0.00771	0.0372	1.1	10/20/2021 15:37	WG1760359
1,2-Dichloropropane	U		0.0105	0.0372	1.1	10/20/2021 15:37	WG1760359
1,1-Dichloropropene	U		0.00602	0.0186	1.1	10/20/2021 15:37	WG1760359
1,3-Dichloropropane	U		0.00373	0.0372	1.1	10/20/2021 15:37	WG1760359
cis-1,3-Dichloropropene	U		0.00563	0.0186	1.1	10/20/2021 15:37	WG1760359
trans-1,3-Dichloropropene	U		0.00845	0.0372	1.1	10/20/2021 15:37	WG1760359
2,2-Dichloropropane	U		0.0103	0.0186	1.1	10/20/2021 15:37	WG1760359
Di-isopropyl ether	U		0.00305	0.00744	1.1	10/20/2021 15:37	WG1760359
Ethylbenzene	U		0.00548	0.0186	1.1	10/20/2021 15:37	WG1760359
Hexachloro-1,3-butadiene	U	<u>C3</u>	0.0446	0.186	1.1	10/20/2021 15:37	WG1760359
Isopropylbenzene	U		0.00316	0.0186	1.1	10/20/2021 15:37	WG1760359
p-Isopropyltoluene	U		0.0190	0.0372	1.1	10/20/2021 15:37	WG1760359
2-Butanone (MEK)	U		0.473	0.744	1.1	10/20/2021 15:37	WG1760359
Methylene Chloride	0.0893	<u>J</u>	0.0494	0.186	1.1	10/20/2021 15:37	WG1760359
4-Methyl-2-pentanone (MIBK)	U		0.0170	0.186	1.1	10/20/2021 15:37	WG1760359
Methyl tert-butyl ether	U		0.00260	0.00744	1.1	10/20/2021 15:37	WG1760359
Naphthalene	U		0.0363	0.0933	1.1	10/20/2021 15:37	WG1760359
n-Propylbenzene	U		0.00710	0.0372	1.1	10/20/2021 15:37	WG1760359
Styrene	U		0.00170	0.0933	1.1	10/20/2021 15:37	WG1760359
1,1,1,2-Tetrachloroethane	U		0.00703	0.0186	1.1	10/20/2021 15:37	WG1760359
1,1,2,2-Tetrachloroethane	U	<u>C3 J4</u>	0.00517	0.0186	1.1	10/20/2021 15:37	WG1760359
1,1,2-Trichlorotrifluoroethane	U		0.00561	0.0186	1.1	10/20/2021 15:37	WG1760359
Tetrachloroethene	U		0.00667	0.0186	1.1	10/20/2021 15:37	WG1760359
Toluene	0.0117	<u>J</u>	0.00967	0.0372	1.1	10/20/2021 15:37	WG1760359
1,2,3-Trichlorobenzene	U		0.0545	0.0933	1.1	10/20/2021 15:37	WG1760359
1,2,4-Trichlorobenzene	U		0.0327	0.0933	1.1	10/20/2021 15:37	WG1760359
1,1,1-Trichloroethane	U		0.00690	0.0186	1.1	10/20/2021 15:37	WG1760359
1,1,2-Trichloroethane	U		0.00444	0.0186	1.1	10/20/2021 15:37	WG1760359
Trichloroethene	U	<u>J4</u>	0.00434	0.00744	1.1	10/20/2021 15:37	WG1760359
Trichlorofluoromethane	U		0.00615	0.0186	1.1	10/20/2021 15:37	WG1760359
1,2,3-Trichloropropane	U		0.0120	0.0933	1.1	10/20/2021 15:37	WG1760359
1,2,4-Trimethylbenzene	U		0.0118	0.0372	1.1	10/20/2021 15:37	WG1760359
1,2,3-Trimethylbenzene	U		0.0118	0.0372	1.1	10/20/2021 15:37	WG1760359
1,3,5-Trimethylbenzene	U		0.0149	0.0372	1.1	10/20/2021 15:37	WG1760359
Vinyl chloride	U		0.00866	0.0186	1.1	10/20/2021 15:37	WG1760359
Xylenes, Total	U		0.00655	0.0484	1.1	10/20/2021 15:37	WG1760359
(S) Toluene-d8	108			75.0-131		10/20/2021 15:37	WG1760359
(S) 4-Bromofluorobenzene	102			67.0-138		10/20/2021 15:37	WG1760359
(S) 1,2-Dichloroethane-d4	92.4			70.0-130		10/20/2021 15:37	WG1760359

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		5.35	16.1	1	10/22/2021 12:32	WG1761238
Residual Range Organics (RRO)	U		13.4	40.3	1	10/22/2021 12:32	WG1761238
(S) o-Terphenyl	58.8			18.0-148		10/22/2021 12:32	WG1761238

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00926	0.0242	1	10/22/2021 14:03	WG1761256
Acenaphthene	U		0.00841	0.0242	1	10/22/2021 14:03	WG1761256
Acenaphthylene	U		0.00869	0.0242	1	10/22/2021 14:03	WG1761256
Benzo(a)anthracene	U		0.00696	0.0242	1	10/22/2021 14:03	WG1761256
Benzo(a)pyrene	U		0.00720	0.0242	1	10/22/2021 14:03	WG1761256
Benzo(b)fluoranthene	U		0.00616	0.0242	1	10/22/2021 14:03	WG1761256
Benzo(g,h,i)perylene	U		0.00712	0.0242	1	10/22/2021 14:03	WG1761256
Benzo(k)fluoranthene	U		0.00865	0.0242	1	10/22/2021 14:03	WG1761256
Chrysene	U		0.00934	0.0242	1	10/22/2021 14:03	WG1761256
Dibenz(a,h)anthracene	U		0.00692	0.0242	1	10/22/2021 14:03	WG1761256
Fluoranthene	U		0.00914	0.0242	1	10/22/2021 14:03	WG1761256
Fluorene	U		0.00825	0.0242	1	10/22/2021 14:03	WG1761256
Indeno(1,2,3-cd)pyrene	U		0.00729	0.0242	1	10/22/2021 14:03	WG1761256
Naphthalene	U		0.0164	0.0805	1	10/22/2021 14:03	WG1761256
Phenanthrene	U		0.00930	0.0242	1	10/22/2021 14:03	WG1761256
Pyrene	U		0.00805	0.0242	1	10/22/2021 14:03	WG1761256
1-Methylnaphthalene	U		0.0181	0.0805	1	10/22/2021 14:03	WG1761256
2-Methylnaphthalene	U		0.0172	0.0805	1	10/22/2021 14:03	WG1761256
2-Chloronaphthalene	U		0.0188	0.0805	1	10/22/2021 14:03	WG1761256
(S) Nitrobenzene-d5	56.0			14.0-149		10/22/2021 14:03	WG1761256
(S) 2-Fluorobiphenyl	63.3			34.0-125		10/22/2021 14:03	WG1761256
(S) p-Terphenyl-d14	69.1			23.0-120		10/22/2021 14:03	WG1761256

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	52.5		1	10/19/2021 17:10	WG1759017

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0763		0.0343	0.0763	1	10/19/2021 11:37	WG1758977

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.316	5.72	5	10/25/2021 23:55	WG1761001
Arsenic	3.68		0.191	1.91	5	10/25/2021 23:55	WG1761001
Barium	123		0.290	4.77	5	10/25/2021 23:55	WG1761001
Cadmium	U		0.163	1.91	5	10/25/2021 23:55	WG1761001
Chromium	24.9		0.564	9.53	5	10/25/2021 23:55	WG1761001
Copper	23.1		0.252	9.53	5	10/25/2021 23:55	WG1761001
Lead	25.7		0.189	3.81	5	10/25/2021 23:55	WG1761001
Selenium	U		0.343	4.77	5	10/25/2021 23:55	WG1761001
Silver	U		0.165	0.953	5	10/25/2021 23:55	WG1761001
Zinc	61.7		1.41	47.7	5	10/25/2021 23:55	WG1761001

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		2.47	7.27	25	10/21/2021 06:36	WG1760034
(S) a,a,a-Trifluorotoluene(FID)	95.8			77.0-120		10/21/2021 06:36	WG1760034

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.106	0.145	1	10/20/2021 15:56	WG1760359
Acrylonitrile	U		0.0105	0.0363	1	10/20/2021 15:56	WG1760359
Benzene	0.00199	J	0.00136	0.00291	1	10/20/2021 15:56	WG1760359
Bromobenzene	U		0.00262	0.0363	1	10/20/2021 15:56	WG1760359
Bromodichloromethane	U		0.00211	0.00727	1	10/20/2021 15:56	WG1760359
Bromoform	U		0.00340	0.0727	1	10/20/2021 15:56	WG1760359
Bromomethane	U		0.00573	0.0363	1	10/20/2021 15:56	WG1760359
n-Butylbenzene	U		0.0153	0.0363	1	10/20/2021 15:56	WG1760359
sec-Butylbenzene	U		0.00837	0.0363	1	10/20/2021 15:56	WG1760359
tert-Butylbenzene	U		0.00567	0.0145	1	10/20/2021 15:56	WG1760359
Carbon tetrachloride	U		0.00261	0.0145	1	10/20/2021 15:56	WG1760359
Chlorobenzene	U		0.000611	0.00727	1	10/20/2021 15:56	WG1760359
Chlorodibromomethane	U		0.00178	0.00727	1	10/20/2021 15:56	WG1760359
Chloroethane	U		0.00494	0.0145	1	10/20/2021 15:56	WG1760359
Chloroform	U		0.00299	0.00727	1	10/20/2021 15:56	WG1760359
Chloromethane	U		0.0126	0.0363	1	10/20/2021 15:56	WG1760359
2-Chlorotoluene	U		0.00251	0.00727	1	10/20/2021 15:56	WG1760359
4-Chlorotoluene	U		0.00131	0.0145	1	10/20/2021 15:56	WG1760359
1,2-Dibromo-3-Chloropropane	U		0.0113	0.0727	1	10/20/2021 15:56	WG1760359
1,2-Dibromoethane	U		0.00188	0.00727	1	10/20/2021 15:56	WG1760359
Dibromomethane	U		0.00218	0.0145	1	10/20/2021 15:56	WG1760359
1,2-Dichlorobenzene	U		0.00124	0.0145	1	10/20/2021 15:56	WG1760359
1,3-Dichlorobenzene	U		0.00174	0.0145	1	10/20/2021 15:56	WG1760359
1,4-Dichlorobenzene	U		0.00204	0.0145	1	10/20/2021 15:56	WG1760359



B-17-COMP-SCBS

SAMPLE RESULTS - 03

Collected date/time: 10/08/21 13:40

L1418104

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00468	0.00727	1	10/20/2021 15:56	WG1760359
1,1-Dichloroethane	U		0.00143	0.00727	1	10/20/2021 15:56	WG1760359
1,2-Dichloroethane	U		0.00189	0.00727	1	10/20/2021 15:56	WG1760359
1,1-Dichloroethene	U		0.00176	0.00727	1	10/20/2021 15:56	WG1760359
cis-1,2-Dichloroethene	U		0.00213	0.00727	1	10/20/2021 15:56	WG1760359
trans-1,2-Dichloroethene	U		0.00302	0.0145	1	10/20/2021 15:56	WG1760359
1,2-Dichloropropane	U		0.00413	0.0145	1	10/20/2021 15:56	WG1760359
1,1-Dichloropropene	U		0.00235	0.00727	1	10/20/2021 15:56	WG1760359
1,3-Dichloropropane	U		0.00146	0.0145	1	10/20/2021 15:56	WG1760359
cis-1,3-Dichloropropene	U		0.00220	0.00727	1	10/20/2021 15:56	WG1760359
trans-1,3-Dichloropropene	U		0.00331	0.0145	1	10/20/2021 15:56	WG1760359
2,2-Dichloropropane	U		0.00401	0.00727	1	10/20/2021 15:56	WG1760359
Di-isopropyl ether	U		0.00119	0.00291	1	10/20/2021 15:56	WG1760359
Ethylbenzene	U		0.00214	0.00727	1	10/20/2021 15:56	WG1760359
Hexachloro-1,3-butadiene	U	C3	0.0174	0.0727	1	10/20/2021 15:56	WG1760359
Isopropylbenzene	U		0.00124	0.00727	1	10/20/2021 15:56	WG1760359
p-Isopropyltoluene	U		0.00741	0.0145	1	10/20/2021 15:56	WG1760359
2-Butanone (MEK)	U		0.185	0.291	1	10/20/2021 15:56	WG1760359
Methylene Chloride	0.0349	J	0.0193	0.0727	1	10/20/2021 15:56	WG1760359
4-Methyl-2-pentanone (MIBK)	0.0170	J	0.00663	0.0727	1	10/20/2021 15:56	WG1760359
Methyl tert-butyl ether	U		0.00102	0.00291	1	10/20/2021 15:56	WG1760359
Naphthalene	U		0.0142	0.0363	1	10/20/2021 15:56	WG1760359
n-Propylbenzene	U		0.00276	0.0145	1	10/20/2021 15:56	WG1760359
Styrene	U		0.000666	0.0363	1	10/20/2021 15:56	WG1760359
1,1,1,2-Tetrachloroethane	U		0.00276	0.00727	1	10/20/2021 15:56	WG1760359
1,1,2,2-Tetrachloroethane	U	C3 J4	0.00202	0.00727	1	10/20/2021 15:56	WG1760359
1,1,2-Trichlorotrifluoroethane	U		0.00219	0.00727	1	10/20/2021 15:56	WG1760359
Tetrachloroethene	U		0.00260	0.00727	1	10/20/2021 15:56	WG1760359
Toluene	0.00515	J	0.00378	0.0145	1	10/20/2021 15:56	WG1760359
1,2,3-Trichlorobenzene	U		0.0213	0.0363	1	10/20/2021 15:56	WG1760359
1,2,4-Trichlorobenzene	U		0.0128	0.0363	1	10/20/2021 15:56	WG1760359
1,1,1-Trichloroethane	U		0.00268	0.00727	1	10/20/2021 15:56	WG1760359
1,1,2-Trichloroethane	U		0.00174	0.00727	1	10/20/2021 15:56	WG1760359
Trichloroethene	U	J4	0.00170	0.00291	1	10/20/2021 15:56	WG1760359
Trichlorofluoromethane	U		0.00240	0.00727	1	10/20/2021 15:56	WG1760359
1,2,3-Trichloropropane	U		0.00471	0.0363	1	10/20/2021 15:56	WG1760359
1,2,4-Trimethylbenzene	0.00628	J	0.00459	0.0145	1	10/20/2021 15:56	WG1760359
1,2,3-Trimethylbenzene	U		0.00459	0.0145	1	10/20/2021 15:56	WG1760359
1,3,5-Trimethylbenzene	U		0.00581	0.0145	1	10/20/2021 15:56	WG1760359
Vinyl chloride	U		0.00337	0.00727	1	10/20/2021 15:56	WG1760359
Xylenes, Total	0.0155	J	0.00256	0.0189	1	10/20/2021 15:56	WG1760359
(S) Toluene-d8	108			75.0-131		10/20/2021 15:56	WG1760359
(S) 4-Bromofluorobenzene	104			67.0-138		10/20/2021 15:56	WG1760359
(S) 1,2-Dichloroethane-d4	92.9			70.0-130		10/20/2021 15:56	WG1760359

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4.40	B J	2.54	7.63	1	10/22/2021 16:03	WG1761238
Residual Range Organics (RRO)	19.8		6.35	19.1	1	10/22/2021 16:03	WG1761238
(S) o-Terphenyl	65.5			18.0-148		10/22/2021 16:03	WG1761238

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00641	U	0.00438	0.0114	1	10/22/2021 14:23	WG1761256
Acenaphthene	0.00408	U	0.00398	0.0114	1	10/22/2021 14:23	WG1761256
Acenaphthylene	U		0.00412	0.0114	1	10/22/2021 14:23	WG1761256
Benzo(a)anthracene	0.0146		0.00330	0.0114	1	10/22/2021 14:23	WG1761256
Benzo(a)pyrene	0.00997	U	0.00341	0.0114	1	10/22/2021 14:23	WG1761256
Benzo(b)fluoranthene	0.0113	U	0.00292	0.0114	1	10/22/2021 14:23	WG1761256
Benzo(g,h,i)perylene	0.00763	U	0.00337	0.0114	1	10/22/2021 14:23	WG1761256
Benzo(k)fluoranthene	0.00440	U	0.00410	0.0114	1	10/22/2021 14:23	WG1761256
Chrysene	0.0136		0.00442	0.0114	1	10/22/2021 14:23	WG1761256
Dibenz(a,h)anthracene	U		0.00328	0.0114	1	10/22/2021 14:23	WG1761256
Fluoranthene	0.0301		0.00433	0.0114	1	10/22/2021 14:23	WG1761256
Fluorene	0.00419	U	0.00391	0.0114	1	10/22/2021 14:23	WG1761256
Indeno(1,2,3-cd)pyrene	0.00726	U	0.00345	0.0114	1	10/22/2021 14:23	WG1761256
Naphthalene	U		0.00778	0.0381	1	10/22/2021 14:23	WG1761256
Phenanthrene	0.0254		0.00440	0.0114	1	10/22/2021 14:23	WG1761256
Pyrene	0.0278		0.00381	0.0114	1	10/22/2021 14:23	WG1761256
1-Methylnaphthalene	U		0.00856	0.0381	1	10/22/2021 14:23	WG1761256
2-Methylnaphthalene	U		0.00814	0.0381	1	10/22/2021 14:23	WG1761256
2-Chloronaphthalene	U		0.00888	0.0381	1	10/22/2021 14:23	WG1761256
(S) Nitrobenzene-d5	65.7			14.0-149		10/22/2021 14:23	WG1761256
(S) 2-Fluorobiphenyl	79.1			34.0-125		10/22/2021 14:23	WG1761256
(S) p-Terphenyl-d14	93.5			23.0-120		10/22/2021 14:23	WG1761256

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	31.8		1	10/19/2021 17:10	WG1759017

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0566	0.126	1	10/19/2021 11:40	WG1758977

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	0.706	J	0.522	9.43	5	10/26/2021 00:08	WG1761001
Arsenic	2.62	J	0.314	3.14	5	10/26/2021 00:08	WG1761001
Barium	142		0.478	7.86	5	10/26/2021 00:08	WG1761001
Cadmium	U		0.269	3.14	5	10/26/2021 00:08	WG1761001
Chromium	25.0		0.931	15.7	5	10/26/2021 00:08	WG1761001
Copper	25.0		0.415	15.7	5	10/26/2021 00:08	WG1761001
Lead	9.51		0.311	6.29	5	10/26/2021 00:08	WG1761001
Selenium	U		0.566	7.86	5	10/26/2021 00:08	WG1761001
Silver	U		0.272	1.57	5	10/26/2021 00:08	WG1761001
Zinc	65.9	J	2.33	78.6	5	10/26/2021 00:08	WG1761001

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		4.97	14.7	29.5	10/21/2021 06:58	WG1760034
(S) a,a,a-Trifluorotoluene(FID)	95.2			77.0-120		10/21/2021 06:58	WG1760034

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U		0.214	0.293	1.18	10/20/2021 16:15	WG1760359
Acrylonitrile	U		0.0212	0.0730	1.18	10/20/2021 16:15	WG1760359
Benzene	U		0.00274	0.00586	1.18	10/20/2021 16:15	WG1760359
Bromobenzene	U		0.00526	0.0730	1.18	10/20/2021 16:15	WG1760359
Bromodichloromethane	U		0.00425	0.0147	1.18	10/20/2021 16:15	WG1760359
Bromoform	U		0.00685	0.147	1.18	10/20/2021 16:15	WG1760359
Bromomethane	U		0.0115	0.0730	1.18	10/20/2021 16:15	WG1760359
n-Butylbenzene	U		0.0307	0.0730	1.18	10/20/2021 16:15	WG1760359
sec-Butylbenzene	U		0.0169	0.0730	1.18	10/20/2021 16:15	WG1760359
tert-Butylbenzene	U		0.0114	0.0293	1.18	10/20/2021 16:15	WG1760359
Carbon tetrachloride	U		0.00526	0.0293	1.18	10/20/2021 16:15	WG1760359
Chlorobenzene	U		0.00123	0.0147	1.18	10/20/2021 16:15	WG1760359
Chlorodibromomethane	U		0.00359	0.0147	1.18	10/20/2021 16:15	WG1760359
Chloroethane	U		0.00998	0.0293	1.18	10/20/2021 16:15	WG1760359
Chloroform	U		0.00606	0.0147	1.18	10/20/2021 16:15	WG1760359
Chloromethane	U		0.0255	0.0730	1.18	10/20/2021 16:15	WG1760359
2-Chlorotoluene	U		0.00507	0.0147	1.18	10/20/2021 16:15	WG1760359
4-Chlorotoluene	U		0.00264	0.0293	1.18	10/20/2021 16:15	WG1760359
1,2-Dibromo-3-Chloropropane	U		0.0228	0.147	1.18	10/20/2021 16:15	WG1760359
1,2-Dibromoethane	U		0.00380	0.0147	1.18	10/20/2021 16:15	WG1760359
Dibromomethane	U		0.00440	0.0293	1.18	10/20/2021 16:15	WG1760359
1,2-Dichlorobenzene	U		0.00249	0.0293	1.18	10/20/2021 16:15	WG1760359
1,3-Dichlorobenzene	U		0.00352	0.0293	1.18	10/20/2021 16:15	WG1760359
1,4-Dichlorobenzene	U		0.00410	0.0293	1.18	10/20/2021 16:15	WG1760359



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00944	0.0147	1.18	10/20/2021 16:15	WG1760359
1,1-Dichloroethane	U		0.00288	0.0147	1.18	10/20/2021 16:15	WG1760359
1,2-Dichloroethane	U		0.00380	0.0147	1.18	10/20/2021 16:15	WG1760359
1,1-Dichloroethene	U		0.00355	0.0147	1.18	10/20/2021 16:15	WG1760359
cis-1,2-Dichloroethene	U		0.00430	0.0147	1.18	10/20/2021 16:15	WG1760359
trans-1,2-Dichloroethene	U		0.00611	0.0293	1.18	10/20/2021 16:15	WG1760359
1,2-Dichloropropane	U		0.00834	0.0293	1.18	10/20/2021 16:15	WG1760359
1,1-Dichloropropene	U		0.00474	0.0147	1.18	10/20/2021 16:15	WG1760359
1,3-Dichloropropane	U		0.00294	0.0293	1.18	10/20/2021 16:15	WG1760359
cis-1,3-Dichloropropene	U		0.00443	0.0147	1.18	10/20/2021 16:15	WG1760359
trans-1,3-Dichloropropene	U		0.00670	0.0293	1.18	10/20/2021 16:15	WG1760359
2,2-Dichloropropane	U		0.00810	0.0147	1.18	10/20/2021 16:15	WG1760359
Di-isopropyl ether	U		0.00240	0.00586	1.18	10/20/2021 16:15	WG1760359
Ethylbenzene	U		0.00432	0.0147	1.18	10/20/2021 16:15	WG1760359
Hexachloro-1,3-butadiene	U	C3	0.0352	0.147	1.18	10/20/2021 16:15	WG1760359
Isopropylbenzene	U		0.00249	0.0147	1.18	10/20/2021 16:15	WG1760359
p-Isopropyltoluene	U		0.0149	0.0293	1.18	10/20/2021 16:15	WG1760359
2-Butanone (MEK)	U		0.372	0.586	1.18	10/20/2021 16:15	WG1760359
Methylene Chloride	U		0.0389	0.147	1.18	10/20/2021 16:15	WG1760359
4-Methyl-2-pentanone (MIBK)	U		0.0134	0.147	1.18	10/20/2021 16:15	WG1760359
Methyl tert-butyl ether	U		0.00205	0.00586	1.18	10/20/2021 16:15	WG1760359
Naphthalene	U		0.0286	0.0730	1.18	10/20/2021 16:15	WG1760359
n-Propylbenzene	U		0.00556	0.0293	1.18	10/20/2021 16:15	WG1760359
Styrene	U		0.00134	0.0730	1.18	10/20/2021 16:15	WG1760359
1,1,1,2-Tetrachloroethane	U		0.00556	0.0147	1.18	10/20/2021 16:15	WG1760359
1,1,2,2-Tetrachloroethane	U	C3 J4	0.00407	0.0147	1.18	10/20/2021 16:15	WG1760359
1,1,2-Trichlorotrifluoroethane	U		0.00442	0.0147	1.18	10/20/2021 16:15	WG1760359
Tetrachloroethene	U		0.00526	0.0147	1.18	10/20/2021 16:15	WG1760359
Toluene	U		0.00760	0.0293	1.18	10/20/2021 16:15	WG1760359
1,2,3-Trichlorobenzene	U		0.0430	0.0730	1.18	10/20/2021 16:15	WG1760359
1,2,4-Trichlorobenzene	U		0.0258	0.0730	1.18	10/20/2021 16:15	WG1760359
1,1,1-Trichloroethane	U		0.00541	0.0147	1.18	10/20/2021 16:15	WG1760359
1,1,2-Trichloroethane	U		0.00350	0.0147	1.18	10/20/2021 16:15	WG1760359
Trichloroethene	U	J4	0.00342	0.00586	1.18	10/20/2021 16:15	WG1760359
Trichlorofluoromethane	U		0.00485	0.0147	1.18	10/20/2021 16:15	WG1760359
1,2,3-Trichloropropane	U		0.00949	0.0730	1.18	10/20/2021 16:15	WG1760359
1,2,4-Trimethylbenzene	U		0.00924	0.0293	1.18	10/20/2021 16:15	WG1760359
1,2,3-Trimethylbenzene	U		0.00924	0.0293	1.18	10/20/2021 16:15	WG1760359
1,3,5-Trimethylbenzene	U		0.0117	0.0293	1.18	10/20/2021 16:15	WG1760359
Vinyl chloride	U		0.00680	0.0147	1.18	10/20/2021 16:15	WG1760359
Xylenes, Total	U		0.00517	0.0381	1.18	10/20/2021 16:15	WG1760359
(S) Toluene-d8	107			75.0-131		10/20/2021 16:15	WG1760359
(S) 4-Bromofluorobenzene	103			67.0-138		10/20/2021 16:15	WG1760359
(S) 1,2-Dichloroethane-d4	90.9			70.0-130		10/20/2021 16:15	WG1760359

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		4.18	12.6	1	10/22/2021 12:45	WG1761238
Residual Range Organics (RRO)	U		10.5	31.4	1	10/22/2021 12:45	WG1761238
(S) o-Terphenyl	60.2			18.0-148		10/22/2021 12:45	WG1761238

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00723	0.0189	1	10/22/2021 14:43	WG1761256
Acenaphthene	U		0.00657	0.0189	1	10/22/2021 14:43	WG1761256
Acenaphthylene	U		0.00679	0.0189	1	10/22/2021 14:43	WG1761256
Benzo(a)anthracene	U		0.00544	0.0189	1	10/22/2021 14:43	WG1761256
Benzo(a)pyrene	U		0.00563	0.0189	1	10/22/2021 14:43	WG1761256
Benzo(b)fluoranthene	U		0.00481	0.0189	1	10/22/2021 14:43	WG1761256
Benzo(g,h,i)perylene	U		0.00556	0.0189	1	10/22/2021 14:43	WG1761256
Benzo(k)fluoranthene	U		0.00676	0.0189	1	10/22/2021 14:43	WG1761256
Chrysene	U		0.00729	0.0189	1	10/22/2021 14:43	WG1761256
Dibenz(a,h)anthracene	U		0.00541	0.0189	1	10/22/2021 14:43	WG1761256
Fluoranthene	U		0.00714	0.0189	1	10/22/2021 14:43	WG1761256
Fluorene	U		0.00645	0.0189	1	10/22/2021 14:43	WG1761256
Indeno(1,2,3-cd)pyrene	U		0.00569	0.0189	1	10/22/2021 14:43	WG1761256
Naphthalene	U		0.0128	0.0629	1	10/22/2021 14:43	WG1761256
Phenanthrene	U		0.00726	0.0189	1	10/22/2021 14:43	WG1761256
Pyrene	U		0.00629	0.0189	1	10/22/2021 14:43	WG1761256
1-Methylnaphthalene	U		0.0141	0.0629	1	10/22/2021 14:43	WG1761256
2-Methylnaphthalene	U		0.0134	0.0629	1	10/22/2021 14:43	WG1761256
2-Chloronaphthalene	U		0.0147	0.0629	1	10/22/2021 14:43	WG1761256
(S) Nitrobenzene-d5	69.3			14.0-149		10/22/2021 14:43	WG1761256
(S) 2-Fluorobiphenyl	82.9			34.0-125		10/22/2021 14:43	WG1761256
(S) p-Terphenyl-d14	101			23.0-120		10/22/2021 14:43	WG1761256

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	25.0		1	10/19/2021 17:10	WG1759017

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0721	0.160	1	10/19/2021 11:42	WG1758977

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.665	12.0	5	10/26/2021 00:11	WG1761001
Arsenic	3.99	J	0.401	4.01	5	10/26/2021 00:11	WG1761001
Barium	106		0.609	10.0	5	10/26/2021 00:11	WG1761001
Cadmium	U		0.342	4.01	5	10/26/2021 00:11	WG1761001
Chromium	12.2	J	1.19	20.0	5	10/26/2021 00:11	WG1761001
Copper	11.8	J	0.529	20.0	5	10/26/2021 00:11	WG1761001
Lead	11.6		0.397	8.01	5	10/26/2021 00:11	WG1761001
Selenium	U		0.721	10.0	5	10/26/2021 00:11	WG1761001
Silver	U		0.346	2.00	5	10/26/2021 00:11	WG1761001
Zinc	52.6	J	2.96	100	5	10/26/2021 00:11	WG1761001

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		6.70	19.9	30.8	10/21/2021 07:22	WG1760034
(S) a,a,a-Trifluorotoluene(FID)	95.0			77.0-120		10/21/2021 07:22	WG1760034

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.289	0.396	1.23	10/20/2021 16:34	WG1760359
Acrylonitrile	U		0.0286	0.0993	1.23	10/20/2021 16:34	WG1760359
Benzene	U		0.00370	0.00793	1.23	10/20/2021 16:34	WG1760359
Bromobenzene	U		0.00716	0.0993	1.23	10/20/2021 16:34	WG1760359
Bromodichloromethane	U		0.00575	0.0199	1.23	10/20/2021 16:34	WG1760359
Bromoform	U		0.00928	0.199	1.23	10/20/2021 16:34	WG1760359
Bromomethane	U		0.0156	0.0993	1.23	10/20/2021 16:34	WG1760359
n-Butylbenzene	U		0.0416	0.0993	1.23	10/20/2021 16:34	WG1760359
sec-Butylbenzene	U		0.0228	0.0993	1.23	10/20/2021 16:34	WG1760359
tert-Butylbenzene	U		0.0155	0.0396	1.23	10/20/2021 16:34	WG1760359
Carbon tetrachloride	U		0.00709	0.0396	1.23	10/20/2021 16:34	WG1760359
Chlorobenzene	U		0.00166	0.0199	1.23	10/20/2021 16:34	WG1760359
Chlorodibromomethane	U		0.00485	0.0199	1.23	10/20/2021 16:34	WG1760359
Chloroethane	U		0.0135	0.0396	1.23	10/20/2021 16:34	WG1760359
Chloroform	U		0.00819	0.0199	1.23	10/20/2021 16:34	WG1760359
Chloromethane	U		0.0345	0.0993	1.23	10/20/2021 16:34	WG1760359
2-Chlorotoluene	U		0.00683	0.0199	1.23	10/20/2021 16:34	WG1760359
4-Chlorotoluene	U		0.00357	0.0396	1.23	10/20/2021 16:34	WG1760359
1,2-Dibromo-3-Chloropropane	U		0.0309	0.199	1.23	10/20/2021 16:34	WG1760359
1,2-Dibromoethane	U		0.00514	0.0199	1.23	10/20/2021 16:34	WG1760359
Dibromomethane	U		0.00595	0.0396	1.23	10/20/2021 16:34	WG1760359
1,2-Dichlorobenzene	U		0.00337	0.0396	1.23	10/20/2021 16:34	WG1760359
1,3-Dichlorobenzene	U		0.00476	0.0396	1.23	10/20/2021 16:34	WG1760359
1,4-Dichlorobenzene	U		0.00555	0.0396	1.23	10/20/2021 16:34	WG1760359



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.0128	0.0199	1.23	10/20/2021 16:34	WG1760359
1,1-Dichloroethane	U		0.00389	0.0199	1.23	10/20/2021 16:34	WG1760359
1,2-Dichloroethane	U		0.00514	0.0199	1.23	10/20/2021 16:34	WG1760359
1,1-Dichloroethene	U		0.00480	0.0199	1.23	10/20/2021 16:34	WG1760359
cis-1,2-Dichloroethene	U		0.00582	0.0199	1.23	10/20/2021 16:34	WG1760359
trans-1,2-Dichloroethene	U		0.00825	0.0396	1.23	10/20/2021 16:34	WG1760359
1,2-Dichloropropane	U		0.0113	0.0396	1.23	10/20/2021 16:34	WG1760359
1,1-Dichloropropene	U		0.00641	0.0199	1.23	10/20/2021 16:34	WG1760359
1,3-Dichloropropane	U		0.00397	0.0396	1.23	10/20/2021 16:34	WG1760359
cis-1,3-Dichloropropene	U		0.00600	0.0199	1.23	10/20/2021 16:34	WG1760359
trans-1,3-Dichloropropene	U		0.00902	0.0396	1.23	10/20/2021 16:34	WG1760359
2,2-Dichloropropane	U		0.0110	0.0199	1.23	10/20/2021 16:34	WG1760359
Di-isopropyl ether	U		0.00325	0.00793	1.23	10/20/2021 16:34	WG1760359
Ethylbenzene	U		0.00585	0.0199	1.23	10/20/2021 16:34	WG1760359
Hexachloro-1,3-butadiene	U	C3	0.0476	0.199	1.23	10/20/2021 16:34	WG1760359
Isopropylbenzene	U		0.00337	0.0199	1.23	10/20/2021 16:34	WG1760359
p-Isopropyltoluene	U		0.0202	0.0396	1.23	10/20/2021 16:34	WG1760359
2-Butanone (MEK)	U		0.503	0.793	1.23	10/20/2021 16:34	WG1760359
Methylene Chloride	U		0.0527	0.199	1.23	10/20/2021 16:34	WG1760359
4-Methyl-2-pentanone (MIBK)	U		0.0180	0.199	1.23	10/20/2021 16:34	WG1760359
Methyl tert-butyl ether	U		0.00278	0.00793	1.23	10/20/2021 16:34	WG1760359
Naphthalene	U		0.0387	0.0993	1.23	10/20/2021 16:34	WG1760359
n-Propylbenzene	U		0.00754	0.0396	1.23	10/20/2021 16:34	WG1760359
Styrene	U		0.00182	0.0993	1.23	10/20/2021 16:34	WG1760359
1,1,1,2-Tetrachloroethane	U		0.00754	0.0199	1.23	10/20/2021 16:34	WG1760359
1,1,2,2-Tetrachloroethane	U	C3 J4	0.00551	0.0199	1.23	10/20/2021 16:34	WG1760359
1,1,2-Trichlorotrifluoroethane	U		0.00598	0.0199	1.23	10/20/2021 16:34	WG1760359
Tetrachloroethene	U		0.00709	0.0199	1.23	10/20/2021 16:34	WG1760359
Toluene	U		0.0103	0.0396	1.23	10/20/2021 16:34	WG1760359
1,2,3-Trichlorobenzene	U		0.0581	0.0993	1.23	10/20/2021 16:34	WG1760359
1,2,4-Trichlorobenzene	U		0.0349	0.0993	1.23	10/20/2021 16:34	WG1760359
1,1,1-Trichloroethane	U		0.00735	0.0199	1.23	10/20/2021 16:34	WG1760359
1,1,2-Trichloroethane	U		0.00473	0.0199	1.23	10/20/2021 16:34	WG1760359
Trichloroethene	U	J4	0.00463	0.00793	1.23	10/20/2021 16:34	WG1760359
Trichlorofluoromethane	U		0.00657	0.0199	1.23	10/20/2021 16:34	WG1760359
1,2,3-Trichloropropane	U		0.0128	0.0993	1.23	10/20/2021 16:34	WG1760359
1,2,4-Trimethylbenzene	U		0.0125	0.0396	1.23	10/20/2021 16:34	WG1760359
1,2,3-Trimethylbenzene	U		0.0125	0.0396	1.23	10/20/2021 16:34	WG1760359
1,3,5-Trimethylbenzene	U		0.0159	0.0396	1.23	10/20/2021 16:34	WG1760359
Vinyl chloride	U		0.00922	0.0199	1.23	10/20/2021 16:34	WG1760359
Xylenes, Total	U		0.00696	0.0516	1.23	10/20/2021 16:34	WG1760359
(S) Toluene-d8	106			75.0-131		10/20/2021 16:34	WG1760359
(S) 4-Bromofluorobenzene	102			67.0-138		10/20/2021 16:34	WG1760359
(S) 1,2-Dichloroethane-d4	92.9			70.0-130		10/20/2021 16:34	WG1760359



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		5.33	16.0	1	10/22/2021 12:59	WG1761238
Residual Range Organics (RRO)	U		13.3	40.1	1	10/22/2021 12:59	WG1761238
(S) o-Terphenyl	70.5			18.0-148		10/22/2021 12:59	WG1761238

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00921	0.0240	1	10/22/2021 15:03	WG1761256
Acenaphthene	U		0.00837	0.0240	1	10/22/2021 15:03	WG1761256
Acenaphthylene	U		0.00865	0.0240	1	10/22/2021 15:03	WG1761256
Benzo(a)anthracene	U		0.00693	0.0240	1	10/22/2021 15:03	WG1761256
Benzo(a)pyrene	U		0.00717	0.0240	1	10/22/2021 15:03	WG1761256
Benzo(b)fluoranthene	U		0.00613	0.0240	1	10/22/2021 15:03	WG1761256
Benzo(g,h,i)perylene	U		0.00709	0.0240	1	10/22/2021 15:03	WG1761256
Benzo(k)fluoranthene	U		0.00861	0.0240	1	10/22/2021 15:03	WG1761256
Chrysene	U		0.00929	0.0240	1	10/22/2021 15:03	WG1761256
Dibenz(a,h)anthracene	U		0.00689	0.0240	1	10/22/2021 15:03	WG1761256
Fluoranthene	U		0.00909	0.0240	1	10/22/2021 15:03	WG1761256
Fluorene	U		0.00821	0.0240	1	10/22/2021 15:03	WG1761256
Indeno(1,2,3-cd)pyrene	U		0.00725	0.0240	1	10/22/2021 15:03	WG1761256
Naphthalene	U		0.0163	0.0801	1	10/22/2021 15:03	WG1761256
Phenanthrene	U		0.00925	0.0240	1	10/22/2021 15:03	WG1761256
Pyrene	U		0.00801	0.0240	1	10/22/2021 15:03	WG1761256
1-Methylnaphthalene	U		0.0180	0.0801	1	10/22/2021 15:03	WG1761256
2-Methylnaphthalene	U		0.0171	0.0801	1	10/22/2021 15:03	WG1761256
2-Chloronaphthalene	U		0.0187	0.0801	1	10/22/2021 15:03	WG1761256
(S) Nitrobenzene-d5	68.8			14.0-149		10/22/2021 15:03	WG1761256
(S) 2-Fluorobiphenyl	80.2			34.0-125		10/22/2021 15:03	WG1761256
(S) p-Terphenyl-d14	99.1			23.0-120		10/22/2021 15:03	WG1761256

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	69.1		1	10/19/2021 17:10	WG1759017

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0261	0.0579	1	10/19/2021 11:45	WG1758977

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	U		0.240	4.34	5	10/26/2021 00:15	WG1761001
Arsenic	1.96		0.145	1.45	5	10/26/2021 00:15	WG1761001
Barium	467		0.220	3.62	5	10/26/2021 00:15	WG1761001
Cadmium	U		0.124	1.45	5	10/26/2021 00:15	WG1761001
Chromium	10.4		0.429	7.24	5	10/26/2021 00:15	WG1761001
Copper	11.4		0.191	7.24	5	10/26/2021 00:15	WG1761001
Lead	3.45		0.143	2.90	5	10/26/2021 00:15	WG1761001
Selenium	U		0.261	3.62	5	10/26/2021 00:15	WG1761001
Silver	U		0.125	0.724	5	10/26/2021 00:15	WG1761001
Zinc	46.7		1.07	36.2	5	10/26/2021 00:15	WG1761001

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		1.63	4.81	25	10/21/2021 07:44	WG1760034
(S) a,a,a-Trifluorotoluene(FID)	96.4			77.0-120		10/21/2021 07:44	WG1760034

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U		0.0703	0.0963	1	10/20/2021 16:53	WG1760359
Acrylonitrile	U		0.00695	0.0241	1	10/20/2021 16:53	WG1760359
Benzene	U		0.000899	0.00193	1	10/20/2021 16:53	WG1760359
Bromobenzene	U		0.00173	0.0241	1	10/20/2021 16:53	WG1760359
Bromodichloromethane	U		0.00140	0.00481	1	10/20/2021 16:53	WG1760359
Bromoform	U		0.00225	0.0481	1	10/20/2021 16:53	WG1760359
Bromomethane	U		0.00379	0.0241	1	10/20/2021 16:53	WG1760359
n-Butylbenzene	U		0.0101	0.0241	1	10/20/2021 16:53	WG1760359
sec-Butylbenzene	U		0.00554	0.0241	1	10/20/2021 16:53	WG1760359
tert-Butylbenzene	U		0.00375	0.00963	1	10/20/2021 16:53	WG1760359
Carbon tetrachloride	U		0.00173	0.00963	1	10/20/2021 16:53	WG1760359
Chlorobenzene	U		0.000404	0.00481	1	10/20/2021 16:53	WG1760359
Chlorodibromomethane	U		0.00118	0.00481	1	10/20/2021 16:53	WG1760359
Chloroethane	U		0.00327	0.00963	1	10/20/2021 16:53	WG1760359
Chloroform	U		0.00198	0.00481	1	10/20/2021 16:53	WG1760359
Chloromethane	U		0.00837	0.0241	1	10/20/2021 16:53	WG1760359
2-Chlorotoluene	U		0.00167	0.00481	1	10/20/2021 16:53	WG1760359
4-Chlorotoluene	U		0.000866	0.00963	1	10/20/2021 16:53	WG1760359
1,2-Dibromo-3-Chloropropane	U		0.00751	0.0481	1	10/20/2021 16:53	WG1760359
1,2-Dibromoethane	U		0.00125	0.00481	1	10/20/2021 16:53	WG1760359
Dibromomethane	U		0.00144	0.00963	1	10/20/2021 16:53	WG1760359
1,2-Dichlorobenzene	U		0.000818	0.00963	1	10/20/2021 16:53	WG1760359
1,3-Dichlorobenzene	U		0.00116	0.00963	1	10/20/2021 16:53	WG1760359
1,4-Dichlorobenzene	U		0.00135	0.00963	1	10/20/2021 16:53	WG1760359



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00310	0.00481	1	10/20/2021 16:53	WG1760359
1,1-Dichloroethane	U		0.000945	0.00481	1	10/20/2021 16:53	WG1760359
1,2-Dichloroethane	U		0.00125	0.00481	1	10/20/2021 16:53	WG1760359
1,1-Dichloroethene	U		0.00117	0.00481	1	10/20/2021 16:53	WG1760359
cis-1,2-Dichloroethene	U		0.00141	0.00481	1	10/20/2021 16:53	WG1760359
trans-1,2-Dichloroethene	U		0.00200	0.00963	1	10/20/2021 16:53	WG1760359
1,2-Dichloropropane	U		0.00273	0.00963	1	10/20/2021 16:53	WG1760359
1,1-Dichloropropene	U		0.00156	0.00481	1	10/20/2021 16:53	WG1760359
1,3-Dichloropropane	U		0.000964	0.00963	1	10/20/2021 16:53	WG1760359
cis-1,3-Dichloropropene	U		0.00146	0.00481	1	10/20/2021 16:53	WG1760359
trans-1,3-Dichloropropene	U		0.00219	0.00963	1	10/20/2021 16:53	WG1760359
2,2-Dichloropropane	U		0.00266	0.00481	1	10/20/2021 16:53	WG1760359
Di-isopropyl ether	U		0.000789	0.00193	1	10/20/2021 16:53	WG1760359
Ethylbenzene	U		0.00142	0.00481	1	10/20/2021 16:53	WG1760359
Hexachloro-1,3-butadiene	U	C3	0.0116	0.0481	1	10/20/2021 16:53	WG1760359
Isopropylbenzene	0.00208	J	0.000818	0.00481	1	10/20/2021 16:53	WG1760359
p-Isopropyltoluene	U		0.00491	0.00963	1	10/20/2021 16:53	WG1760359
2-Butanone (MEK)	U		0.122	0.193	1	10/20/2021 16:53	WG1760359
Methylene Chloride	U		0.0128	0.0481	1	10/20/2021 16:53	WG1760359
4-Methyl-2-pentanone (MIBK)	U		0.00439	0.0481	1	10/20/2021 16:53	WG1760359
Methyl tert-butyl ether	U		0.000674	0.00193	1	10/20/2021 16:53	WG1760359
Naphthalene	U		0.00939	0.0241	1	10/20/2021 16:53	WG1760359
n-Propylbenzene	U		0.00183	0.00963	1	10/20/2021 16:53	WG1760359
Styrene	U		0.000441	0.0241	1	10/20/2021 16:53	WG1760359
1,1,1,2-Tetrachloroethane	U		0.00182	0.00481	1	10/20/2021 16:53	WG1760359
1,1,2,2-Tetrachloroethane	U	C3 J4	0.00134	0.00481	1	10/20/2021 16:53	WG1760359
1,1,2-Trichlorotrifluoroethane	U		0.00145	0.00481	1	10/20/2021 16:53	WG1760359
Tetrachloroethene	U		0.00172	0.00481	1	10/20/2021 16:53	WG1760359
Toluene	0.00620	J	0.00250	0.00963	1	10/20/2021 16:53	WG1760359
1,2,3-Trichlorobenzene	U		0.0141	0.0241	1	10/20/2021 16:53	WG1760359
1,2,4-Trichlorobenzene	U		0.00847	0.0241	1	10/20/2021 16:53	WG1760359
1,1,1-Trichloroethane	U		0.00178	0.00481	1	10/20/2021 16:53	WG1760359
1,1,2-Trichloroethane	U		0.00115	0.00481	1	10/20/2021 16:53	WG1760359
Trichloroethene	U	J4	0.00112	0.00193	1	10/20/2021 16:53	WG1760359
Trichlorofluoromethane	U		0.00159	0.00481	1	10/20/2021 16:53	WG1760359
1,2,3-Trichloropropane	U		0.00312	0.0241	1	10/20/2021 16:53	WG1760359
1,2,4-Trimethylbenzene	0.0164		0.00304	0.00963	1	10/20/2021 16:53	WG1760359
1,2,3-Trimethylbenzene	0.0123		0.00304	0.00963	1	10/20/2021 16:53	WG1760359
1,3,5-Trimethylbenzene	0.0134		0.00385	0.00963	1	10/20/2021 16:53	WG1760359
Vinyl chloride	U		0.00223	0.00481	1	10/20/2021 16:53	WG1760359
Xylenes, Total	0.0275		0.00169	0.0125	1	10/20/2021 16:53	WG1760359
(S) Toluene-d8	106			75.0-131		10/20/2021 16:53	WG1760359
(S) 4-Bromofluorobenzene	102			67.0-138		10/20/2021 16:53	WG1760359
(S) 1,2-Dichloroethane-d4	91.8			70.0-130		10/20/2021 16:53	WG1760359

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3.05	B J	1.93	5.79	1	10/22/2021 13:12	WG1761238
Residual Range Organics (RRO)	6.95	J	4.82	14.5	1	10/22/2021 13:12	WG1761238
(S) o-Terphenyl	66.8			18.0-148		10/22/2021 13:12	WG1761238

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.0102	0.101	1	10/21/2021 00:35	WG1759267
Dalapon	U		0.0164	0.101	1	10/21/2021 00:35	WG1759267
2,4-DB	U		0.0430	0.101	1	10/21/2021 00:35	WG1759267
Dicamba	U		0.0227	0.101	1	10/21/2021 00:35	WG1759267
Dichloroprop	U		0.0355	0.101	1	10/21/2021 00:35	WG1759267
Dinoseb	U		0.0101	0.101	1	10/21/2021 00:35	WG1759267
MCPA	U		0.641	9.41	1	10/21/2021 00:35	WG1759267
MCPP	U		0.531	9.41	1	10/21/2021 00:35	WG1759267
2,4,5-T	U		0.0123	0.101	1	10/21/2021 00:35	WG1759267
2,4,5-TP (Silvex)	U		0.0155	0.101	1	10/21/2021 00:35	WG1759267
(S) 2,4-Dichlorophenyl Acetic Acid	60.6			22.0-132		10/21/2021 00:35	WG1759267

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00544	0.0290	1	10/21/2021 14:08	WG1760459
Alpha BHC	U		0.00533	0.0290	1	10/21/2021 14:08	WG1760459
Beta BHC	U		0.00549	0.0290	1	10/21/2021 14:08	WG1760459
Delta BHC	U		0.00501	0.0290	1	10/21/2021 14:08	WG1760459
Gamma BHC	U		0.00498	0.0290	1	10/21/2021 14:08	WG1760459
Chlordane	U		0.149	0.434	1	10/21/2021 14:08	WG1760459
4,4-DDD	U		0.00536	0.0290	1	10/21/2021 14:08	WG1760459
4,4-DDE	U		0.00530	0.0290	1	10/21/2021 14:08	WG1760459
4,4-DDT	U		0.00908	0.0290	1	10/21/2021 14:08	WG1760459
Dieldrin	U		0.00498	0.0290	1	10/21/2021 14:08	WG1760459
Endosulfan I	U		0.00526	0.0290	1	10/21/2021 14:08	WG1760459
Endosulfan II	U		0.00485	0.0290	1	10/21/2021 14:08	WG1760459
Endosulfan sulfate	U		0.00527	0.0290	1	10/21/2021 14:08	WG1760459
Endrin	U		0.00507	0.0290	1	10/21/2021 14:08	WG1760459
Endrin aldehyde	U		0.00491	0.0290	1	10/21/2021 14:08	WG1760459
Endrin ketone	U		0.0103	0.0290	1	10/21/2021 14:08	WG1760459
Heptachlor	U		0.00620	0.0290	1	10/21/2021 14:08	WG1760459
Heptachlor epoxide	U		0.00491	0.0290	1	10/21/2021 14:08	WG1760459
Hexachlorobenzene	U		0.00501	0.0290	1	10/21/2021 14:08	WG1760459
Methoxychlor	U		0.00701	0.0290	1	10/21/2021 14:08	WG1760459
Toxaphene	U		0.180	0.579	1	10/21/2021 14:08	WG1760459
(S) Decachlorobiphenyl	77.5			10.0-135		10/21/2021 14:08	WG1760459
(S) Tetrachloro-m-xylene	78.0			10.0-139		10/21/2021 14:08	WG1760459

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0171	0.0492	1	10/21/2021 14:08	WG1760459
PCB 1221	U		0.0171	0.0492	1	10/21/2021 14:08	WG1760459
PCB 1232	U		0.0171	0.0492	1	10/21/2021 14:08	WG1760459
PCB 1242	U		0.0171	0.0492	1	10/21/2021 14:08	WG1760459
PCB 1248	U		0.0107	0.0246	1	10/21/2021 14:08	WG1760459
PCB 1254	U		0.0107	0.0246	1	10/21/2021 14:08	WG1760459
PCB 1260	U		0.0107	0.0246	1	10/21/2021 14:08	WG1760459
(S) Decachlorobiphenyl	78.1			10.0-135		10/21/2021 14:08	WG1760459
(S) Tetrachloro-m-xylene	84.6			10.0-139		10/21/2021 14:08	WG1760459

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00780	0.0482	1	10/22/2021 00:54	WG1760416
Acenaphthylene	U		0.00679	0.0482	1	10/22/2021 00:54	WG1760416
Anthracene	U		0.00859	0.0482	1	10/22/2021 00:54	WG1760416
Benzo(a)anthracene	U		0.00850	0.0482	1	10/22/2021 00:54	WG1760416
Benzo(b)fluoranthene	U		0.00899	0.0482	1	10/22/2021 00:54	WG1760416
Benzo(k)fluoranthene	U		0.00857	0.0482	1	10/22/2021 00:54	WG1760416
Benzo(g,h,i)perylene	U		0.00882	0.0482	1	10/22/2021 00:54	WG1760416
Benzo(a)pyrene	U		0.00896	0.0482	1	10/22/2021 00:54	WG1760416
Bis(2-chloroethoxy)methane	U		0.0145	0.482	1	10/22/2021 00:54	WG1760416
Bis(2-chloroethyl)ether	U	C3	0.0159	0.482	1	10/22/2021 00:54	WG1760416
2,2-Oxybis(1-Chloropropane)	U		0.0208	0.482	1	10/22/2021 00:54	WG1760416
4-Bromophenyl-phenylether	U		0.0169	0.482	1	10/22/2021 00:54	WG1760416
2-Chloronaphthalene	U		0.00847	0.0482	1	10/22/2021 00:54	WG1760416
4-Chlorophenyl-phenylether	U		0.0168	0.482	1	10/22/2021 00:54	WG1760416
Chrysene	U		0.00958	0.0482	1	10/22/2021 00:54	WG1760416
Dibenz(a,h)anthracene	U		0.0134	0.0482	1	10/22/2021 00:54	WG1760416
3,3-Dichlorobenzidine	U		0.0178	0.482	1	10/22/2021 00:54	WG1760416
2,4-Dinitrotoluene	U		0.0138	0.482	1	10/22/2021 00:54	WG1760416
2,6-Dinitrotoluene	U		0.0158	0.482	1	10/22/2021 00:54	WG1760416
Fluoranthene	U		0.00870	0.0482	1	10/22/2021 00:54	WG1760416
Fluorene	U		0.00785	0.0482	1	10/22/2021 00:54	WG1760416
Hexachlorobenzene	U		0.0171	0.482	1	10/22/2021 00:54	WG1760416
Hexachloro-1,3-butadiene	U		0.0162	0.482	1	10/22/2021 00:54	WG1760416
Hexachlorocyclopentadiene	U		0.0253	0.482	1	10/22/2021 00:54	WG1760416
Hexachloroethane	U		0.0190	0.482	1	10/22/2021 00:54	WG1760416
Indeno(1,2,3-cd)pyrene	U		0.0136	0.0482	1	10/22/2021 00:54	WG1760416
Isophorone	U		0.0148	0.482	1	10/22/2021 00:54	WG1760416
Naphthalene	U		0.0121	0.0482	1	10/22/2021 00:54	WG1760416
Nitrobenzene	U		0.0168	0.482	1	10/22/2021 00:54	WG1760416
n-Nitrosodimethylamine	U		0.0715	0.482	1	10/22/2021 00:54	WG1760416
n-Nitrosodiphenylamine	U		0.0365	0.482	1	10/22/2021 00:54	WG1760416
n-Nitrosodi-n-propylamine	U		0.0161	0.482	1	10/22/2021 00:54	WG1760416
Phenanthrene	U		0.00957	0.0482	1	10/22/2021 00:54	WG1760416
Pyridine	U		0.0319	0.482	1	10/22/2021 00:54	WG1760416
Benzylbutyl phthalate	U		0.0151	0.482	1	10/22/2021 00:54	WG1760416
Bis(2-ethylhexyl)phthalate	U		0.0611	0.482	1	10/22/2021 00:54	WG1760416
Di-n-butyl phthalate	U		0.0165	0.482	1	10/22/2021 00:54	WG1760416
Diethyl phthalate	U		0.0159	0.482	1	10/22/2021 00:54	WG1760416
Dimethyl phthalate	U		0.102	0.482	1	10/22/2021 00:54	WG1760416
Di-n-octyl phthalate	U		0.0326	0.482	1	10/22/2021 00:54	WG1760416
Pyrene	U		0.00938	0.0482	1	10/22/2021 00:54	WG1760416
1,2,4-Trichlorobenzene	U		0.0151	0.482	1	10/22/2021 00:54	WG1760416
4-Chloro-3-methylphenol	U		0.0156	0.482	1	10/22/2021 00:54	WG1760416
2-Chlorophenol	U		0.0159	0.482	1	10/22/2021 00:54	WG1760416
2,4-Dichlorophenol	U		0.0140	0.482	1	10/22/2021 00:54	WG1760416
2,4-Dimethylphenol	U		0.0126	0.482	1	10/22/2021 00:54	WG1760416
4,6-Dinitro-2-methylphenol	U		0.109	0.482	1	10/22/2021 00:54	WG1760416
2,4-Dinitrophenol	U		0.113	0.482	1	10/22/2021 00:54	WG1760416
2-Methylphenol	U		0.0145	0.482	1	10/22/2021 00:54	WG1760416
3&4-Methyl Phenol	U		0.0151	0.482	1	10/22/2021 00:54	WG1760416
2-Nitrophenol	U		0.0172	0.482	1	10/22/2021 00:54	WG1760416
4-Nitrophenol	U		0.0151	0.482	1	10/22/2021 00:54	WG1760416
Pentachlorophenol	U		0.0130	0.482	1	10/22/2021 00:54	WG1760416
Phenol	U		0.0194	0.482	1	10/22/2021 00:54	WG1760416
2,4,6-Trichlorophenol	U		0.0155	0.482	1	10/22/2021 00:54	WG1760416
2,4,5-Trichlorophenol	U		0.0164	0.482	1	10/22/2021 00:54	WG1760416

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	45.3			12.0-120		10/22/2021 00:54	WG1760416
(S) Phenol-d5	31.1			10.0-120		10/22/2021 00:54	WG1760416
(S) Nitrobenzene-d5	37.5			10.0-122		10/22/2021 00:54	WG1760416
(S) 2-Fluorobiphenyl	43.6			15.0-120		10/22/2021 00:54	WG1760416
(S) 2,4,6-Tribromophenol	46.3			10.0-127		10/22/2021 00:54	WG1760416
(S) p-Terphenyl-d14	50.3			10.0-120		10/22/2021 00:54	WG1760416

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00333	0.00869	1	10/22/2021 15:22	WG1761256
Acenaphthene	U		0.00303	0.00869	1	10/22/2021 15:22	WG1761256
Acenaphthylene	U		0.00313	0.00869	1	10/22/2021 15:22	WG1761256
Benzo(a)anthracene	U		0.00250	0.00869	1	10/22/2021 15:22	WG1761256
Benzo(a)pyrene	U		0.00259	0.00869	1	10/22/2021 15:22	WG1761256
Benzo(b)fluoranthene	U		0.00222	0.00869	1	10/22/2021 15:22	WG1761256
Benzo(g,h,i)perylene	U		0.00256	0.00869	1	10/22/2021 15:22	WG1761256
Benzo(k)fluoranthene	U		0.00311	0.00869	1	10/22/2021 15:22	WG1761256
Chrysene	U		0.00336	0.00869	1	10/22/2021 15:22	WG1761256
Dibenz(a,h)anthracene	U		0.00249	0.00869	1	10/22/2021 15:22	WG1761256
Fluoranthene	U		0.00329	0.00869	1	10/22/2021 15:22	WG1761256
Fluorene	U		0.00297	0.00869	1	10/22/2021 15:22	WG1761256
Indeno(1,2,3-cd)pyrene	U		0.00262	0.00869	1	10/22/2021 15:22	WG1761256
Naphthalene	U		0.00591	0.0290	1	10/22/2021 15:22	WG1761256
Phenanthrene	U		0.00334	0.00869	1	10/22/2021 15:22	WG1761256
Pyrene	U		0.00290	0.00869	1	10/22/2021 15:22	WG1761256
1-Methylnaphthalene	U		0.00650	0.0290	1	10/22/2021 15:22	WG1761256
2-Methylnaphthalene	U		0.00618	0.0290	1	10/22/2021 15:22	WG1761256
2-Chloronaphthalene	U		0.00675	0.0290	1	10/22/2021 15:22	WG1761256
(S) Nitrobenzene-d5	62.2			14.0-149		10/22/2021 15:22	WG1761256
(S) 2-Fluorobiphenyl	75.1			34.0-125		10/22/2021 15:22	WG1761256
(S) p-Terphenyl-d14	88.5			23.0-120		10/22/2021 15:22	WG1761256

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	72.7		1	10/19/2021 17:10	WG1759017

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0248	0.0551	1	10/19/2021 11:53	WG1758977

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.228	4.13	5	10/26/2021 00:18	WG1761001
Arsenic	2.11		0.138	1.38	5	10/26/2021 00:18	WG1761001
Barium	312		0.209	3.44	5	10/26/2021 00:18	WG1761001
Cadmium	U		0.118	1.38	5	10/26/2021 00:18	WG1761001
Chromium	28.5		0.407	6.88	5	10/26/2021 00:18	WG1761001
Copper	26.0		0.182	6.88	5	10/26/2021 00:18	WG1761001
Lead	3.92		0.136	2.75	5	10/26/2021 00:18	WG1761001
Selenium	0.351	J	0.248	3.44	5	10/26/2021 00:18	WG1761001
Silver	U		0.119	0.688	5	10/26/2021 00:18	WG1761001
Zinc	70.3		1.02	34.4	5	10/26/2021 00:18	WG1761001

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	3.64	J	1.98	5.87	35.8	10/21/2021 17:35	WG1760785
(S) a,a,a-Trifluorotoluene(FID)	90.9			77.0-120		10/21/2021 17:35	WG1760785

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0856	0.117	1.43	10/20/2021 17:12	WG1760359
Acrylonitrile	U		0.00846	0.0294	1.43	10/20/2021 17:12	WG1760359
Benzene	0.0267		0.00110	0.00235	1.43	10/20/2021 17:12	WG1760359
Bromobenzene	U		0.00212	0.0294	1.43	10/20/2021 17:12	WG1760359
Bromodichloromethane	U		0.00171	0.00587	1.43	10/20/2021 17:12	WG1760359
Bromoform	U		0.00274	0.0586	1.43	10/20/2021 17:12	WG1760359
Bromomethane	U		0.00463	0.0294	1.43	10/20/2021 17:12	WG1760359
n-Butylbenzene	U		0.0123	0.0294	1.43	10/20/2021 17:12	WG1760359
sec-Butylbenzene	U		0.00676	0.0294	1.43	10/20/2021 17:12	WG1760359
tert-Butylbenzene	U		0.00458	0.0117	1.43	10/20/2021 17:12	WG1760359
Carbon tetrachloride	U		0.00210	0.0117	1.43	10/20/2021 17:12	WG1760359
Chlorobenzene	U		0.000492	0.00587	1.43	10/20/2021 17:12	WG1760359
Chlorodibromomethane	U		0.00144	0.00587	1.43	10/20/2021 17:12	WG1760359
Chloroethane	U		0.00399	0.0117	1.43	10/20/2021 17:12	WG1760359
Chloroform	U		0.00241	0.00587	1.43	10/20/2021 17:12	WG1760359
Chloromethane	U		0.0102	0.0294	1.43	10/20/2021 17:12	WG1760359
2-Chlorotoluene	U		0.00203	0.00587	1.43	10/20/2021 17:12	WG1760359
4-Chlorotoluene	U		0.00106	0.0117	1.43	10/20/2021 17:12	WG1760359
1,2-Dibromo-3-Chloropropane	U		0.00915	0.0586	1.43	10/20/2021 17:12	WG1760359
1,2-Dibromoethane	U		0.00152	0.00587	1.43	10/20/2021 17:12	WG1760359
Dibromomethane	U		0.00175	0.0117	1.43	10/20/2021 17:12	WG1760359
1,2-Dichlorobenzene	U		0.000997	0.0117	1.43	10/20/2021 17:12	WG1760359
1,3-Dichlorobenzene	U		0.00141	0.0117	1.43	10/20/2021 17:12	WG1760359
1,4-Dichlorobenzene	U		0.00164	0.0117	1.43	10/20/2021 17:12	WG1760359



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00377	0.00587	1.43	10/20/2021 17:12	WG1760359
1,1-Dichloroethane	U		0.00115	0.00587	1.43	10/20/2021 17:12	WG1760359
1,2-Dichloroethane	U		0.00152	0.00587	1.43	10/20/2021 17:12	WG1760359
1,1-Dichloroethene	U		0.00142	0.00587	1.43	10/20/2021 17:12	WG1760359
cis-1,2-Dichloroethene	U		0.00172	0.00587	1.43	10/20/2021 17:12	WG1760359
trans-1,2-Dichloroethene	U		0.00244	0.0117	1.43	10/20/2021 17:12	WG1760359
1,2-Dichloropropane	U		0.00333	0.0117	1.43	10/20/2021 17:12	WG1760359
1,1-Dichloropropene	U		0.00190	0.00587	1.43	10/20/2021 17:12	WG1760359
1,3-Dichloropropane	U		0.00117	0.0117	1.43	10/20/2021 17:12	WG1760359
cis-1,3-Dichloropropene	U		0.00177	0.00587	1.43	10/20/2021 17:12	WG1760359
trans-1,3-Dichloropropene	U		0.00267	0.0117	1.43	10/20/2021 17:12	WG1760359
2,2-Dichloropropane	U		0.00323	0.00587	1.43	10/20/2021 17:12	WG1760359
Di-isopropyl ether	U		0.000961	0.00235	1.43	10/20/2021 17:12	WG1760359
Ethylbenzene	0.00604		0.00172	0.00587	1.43	10/20/2021 17:12	WG1760359
Hexachloro-1,3-butadiene	U	C3	0.0141	0.0586	1.43	10/20/2021 17:12	WG1760359
Isopropylbenzene	U		0.000997	0.00587	1.43	10/20/2021 17:12	WG1760359
p-Isopropyltoluene	U		0.00599	0.0117	1.43	10/20/2021 17:12	WG1760359
2-Butanone (MEK)	U		0.149	0.235	1.43	10/20/2021 17:12	WG1760359
Methylene Chloride	0.0354	J	0.0156	0.0586	1.43	10/20/2021 17:12	WG1760359
4-Methyl-2-pentanone (MIBK)	U		0.00535	0.0586	1.43	10/20/2021 17:12	WG1760359
Methyl tert-butyl ether	U		0.000820	0.00235	1.43	10/20/2021 17:12	WG1760359
Naphthalene	U		0.0114	0.0294	1.43	10/20/2021 17:12	WG1760359
n-Propylbenzene	U		0.00223	0.0117	1.43	10/20/2021 17:12	WG1760359
Styrene	0.00123	J	0.000536	0.0294	1.43	10/20/2021 17:12	WG1760359
1,1,1,2-Tetrachloroethane	U		0.00223	0.00587	1.43	10/20/2021 17:12	WG1760359
1,1,2,2-Tetrachloroethane	U	C3 J4	0.00163	0.00587	1.43	10/20/2021 17:12	WG1760359
1,1,2-Trichlorotrifluoroethane	U		0.00177	0.00587	1.43	10/20/2021 17:12	WG1760359
Tetrachloroethene	U		0.00210	0.00587	1.43	10/20/2021 17:12	WG1760359
Toluene	0.0202		0.00305	0.0117	1.43	10/20/2021 17:12	WG1760359
1,2,3-Trichlorobenzene	U		0.0172	0.0294	1.43	10/20/2021 17:12	WG1760359
1,2,4-Trichlorobenzene	U		0.0103	0.0294	1.43	10/20/2021 17:12	WG1760359
1,1,1-Trichloroethane	U		0.00216	0.00587	1.43	10/20/2021 17:12	WG1760359
1,1,2-Trichloroethane	U		0.00140	0.00587	1.43	10/20/2021 17:12	WG1760359
Trichloroethene	U	J4	0.00137	0.00235	1.43	10/20/2021 17:12	WG1760359
Trichlorofluoromethane	U		0.00194	0.00587	1.43	10/20/2021 17:12	WG1760359
1,2,3-Trichloropropane	U		0.00381	0.0294	1.43	10/20/2021 17:12	WG1760359
1,2,4-Trimethylbenzene	0.00469	J	0.00371	0.0117	1.43	10/20/2021 17:12	WG1760359
1,2,3-Trimethylbenzene	U		0.00371	0.0117	1.43	10/20/2021 17:12	WG1760359
1,3,5-Trimethylbenzene	U		0.00469	0.0117	1.43	10/20/2021 17:12	WG1760359
Vinyl chloride	U		0.00272	0.00587	1.43	10/20/2021 17:12	WG1760359
Xylenes, Total	0.0152	J	0.00207	0.0152	1.43	10/20/2021 17:12	WG1760359
(S) Toluene-d8	106			75.0-131		10/20/2021 17:12	WG1760359
(S) 4-Bromofluorobenzene	103			67.0-138		10/20/2021 17:12	WG1760359
(S) 1,2-Dichloroethane-d4	87.6			70.0-130		10/20/2021 17:12	WG1760359

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	32.8		1.83	5.51	1	10/22/2021 13:26	WG1761238
Residual Range Organics (RRO)	14.5		4.58	13.8	1	10/22/2021 13:26	WG1761238
(S) o-Terphenyl	54.9			18.0-148		10/22/2021 13:26	WG1761238

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.00966	0.0963	1	10/21/2021 00:50	WG1759267
Dalapon	U		0.0156	0.0963	1	10/21/2021 00:50	WG1759267
2,4-DB	U		0.0409	0.0963	1	10/21/2021 00:50	WG1759267
Dicamba	U		0.0216	0.0963	1	10/21/2021 00:50	WG1759267
Dichloroprop	U		0.0337	0.0963	1	10/21/2021 00:50	WG1759267
Dinoseb	U		0.00959	0.0963	1	10/21/2021 00:50	WG1759267
MCPA	U		0.610	8.95	1	10/21/2021 00:50	WG1759267
MCPP	U		0.505	8.95	1	10/21/2021 00:50	WG1759267
2,4,5-T	U		0.0117	0.0963	1	10/21/2021 00:50	WG1759267
2,4,5-TP (Silvex)	U		0.0147	0.0963	1	10/21/2021 00:50	WG1759267
(S) 2,4-Dichlorophenyl Acetic Acid	58.0			22.0-132		10/21/2021 00:50	WG1759267

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00517	0.0275	1	10/21/2021 14:17	WG1760459
Alpha BHC	U		0.00506	0.0275	1	10/21/2021 14:17	WG1760459
Beta BHC	U		0.00522	0.0275	1	10/21/2021 14:17	WG1760459
Delta BHC	U		0.00476	0.0275	1	10/21/2021 14:17	WG1760459
Gamma BHC	U		0.00473	0.0275	1	10/21/2021 14:17	WG1760459
Chlordane	U		0.142	0.413	1	10/21/2021 14:17	WG1760459
4,4-DDD	U		0.00509	0.0275	1	10/21/2021 14:17	WG1760459
4,4-DDE	U		0.00504	0.0275	1	10/21/2021 14:17	WG1760459
4,4-DDT	U		0.00863	0.0275	1	10/21/2021 14:17	WG1760459
Dieldrin	U		0.00473	0.0275	1	10/21/2021 14:17	WG1760459
Endosulfan I	U		0.00500	0.0275	1	10/21/2021 14:17	WG1760459
Endosulfan II	U		0.00461	0.0275	1	10/21/2021 14:17	WG1760459
Endosulfan sulfate	U		0.00501	0.0275	1	10/21/2021 14:17	WG1760459
Endrin	U		0.00482	0.0275	1	10/21/2021 14:17	WG1760459
Endrin aldehyde	U		0.00467	0.0275	1	10/21/2021 14:17	WG1760459
Endrin ketone	U		0.00979	0.0275	1	10/21/2021 14:17	WG1760459
Heptachlor	U		0.00589	0.0275	1	10/21/2021 14:17	WG1760459
Heptachlor epoxide	U		0.00467	0.0275	1	10/21/2021 14:17	WG1760459
Hexachlorobenzene	U		0.00476	0.0275	1	10/21/2021 14:17	WG1760459
Methoxychlor	U		0.00666	0.0275	1	10/21/2021 14:17	WG1760459
Toxaphene	U		0.171	0.551	1	10/21/2021 14:17	WG1760459
(S) Decachlorobiphenyl	47.6			10.0-135		10/21/2021 14:17	WG1760459
(S) Tetrachloro-m-xylene	50.9			10.0-139		10/21/2021 14:17	WG1760459

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0162	0.0468	1	10/21/2021 14:17	WG1760459
PCB 1221	U		0.0162	0.0468	1	10/21/2021 14:17	WG1760459
PCB 1232	U		0.0162	0.0468	1	10/21/2021 14:17	WG1760459
PCB 1242	U		0.0162	0.0468	1	10/21/2021 14:17	WG1760459
PCB 1248	U		0.0102	0.0234	1	10/21/2021 14:17	WG1760459
PCB 1254	U		0.0102	0.0234	1	10/21/2021 14:17	WG1760459
PCB 1260	U		0.0102	0.0234	1	10/21/2021 14:17	WG1760459
(S) Decachlorobiphenyl	47.3			10.0-135		10/21/2021 14:17	WG1760459
(S) Tetrachloro-m-xylene	55.9			10.0-139		10/21/2021 14:17	WG1760459

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00742	0.0458	1	10/21/2021 19:13	WG1760416
Acenaphthylene	U		0.00645	0.0458	1	10/21/2021 19:13	WG1760416
Anthracene	U		0.00816	0.0458	1	10/21/2021 19:13	WG1760416
Benzo(a)anthracene	U		0.00808	0.0458	1	10/21/2021 19:13	WG1760416
Benzo(b)fluoranthene	U		0.00855	0.0458	1	10/21/2021 19:13	WG1760416
Benzo(k)fluoranthene	U		0.00815	0.0458	1	10/21/2021 19:13	WG1760416
Benzo(g,h,i)perylene	U		0.00838	0.0458	1	10/21/2021 19:13	WG1760416
Benzo(a)pyrene	U		0.00852	0.0458	1	10/21/2021 19:13	WG1760416
Bis(2-chloroethoxy)methane	U		0.0138	0.458	1	10/21/2021 19:13	WG1760416
Bis(2-chloroethyl)ether	U	C3	0.0151	0.458	1	10/21/2021 19:13	WG1760416
2,2-Oxybis(1-Chloropropane)	U		0.0198	0.458	1	10/21/2021 19:13	WG1760416
4-Bromophenyl-phenylether	U		0.0161	0.458	1	10/21/2021 19:13	WG1760416
2-Chloronaphthalene	U		0.00805	0.0458	1	10/21/2021 19:13	WG1760416
4-Chlorophenyl-phenylether	U		0.0160	0.458	1	10/21/2021 19:13	WG1760416
Chrysene	U		0.00911	0.0458	1	10/21/2021 19:13	WG1760416
Dibenz(a,h)anthracene	U		0.0127	0.0458	1	10/21/2021 19:13	WG1760416
3,3-Dichlorobenzidine	U		0.0169	0.458	1	10/21/2021 19:13	WG1760416
2,4-Dinitrotoluene	U		0.0131	0.458	1	10/21/2021 19:13	WG1760416
2,6-Dinitrotoluene	U		0.0150	0.458	1	10/21/2021 19:13	WG1760416
Fluoranthene	0.0102	J	0.00827	0.0458	1	10/21/2021 19:13	WG1760416
Fluorene	U		0.00746	0.0458	1	10/21/2021 19:13	WG1760416
Hexachlorobenzene	U		0.0162	0.458	1	10/21/2021 19:13	WG1760416
Hexachloro-1,3-butadiene	U		0.0154	0.458	1	10/21/2021 19:13	WG1760416
Hexachlorocyclopentadiene	U	J6	0.0241	0.458	1	10/21/2021 19:13	WG1760416
Hexachloroethane	U		0.0180	0.458	1	10/21/2021 19:13	WG1760416
Indeno(1,2,3-cd)pyrene	U		0.0130	0.0458	1	10/21/2021 19:13	WG1760416
Isophorone	U		0.0140	0.458	1	10/21/2021 19:13	WG1760416
Naphthalene	U		0.0115	0.0458	1	10/21/2021 19:13	WG1760416
Nitrobenzene	U		0.0160	0.458	1	10/21/2021 19:13	WG1760416
n-Nitrosodimethylamine	U		0.0680	0.458	1	10/21/2021 19:13	WG1760416
n-Nitrosodiphenylamine	U		0.0347	0.458	1	10/21/2021 19:13	WG1760416
n-Nitrosodi-n-propylamine	U	C3	0.0153	0.458	1	10/21/2021 19:13	WG1760416
Phenanthrene	U		0.00910	0.0458	1	10/21/2021 19:13	WG1760416
Pyridine	U		0.0303	0.458	1	10/21/2021 19:13	WG1760416
Benzylbutyl phthalate	U	J3 J5	0.0143	0.458	1	10/21/2021 19:13	WG1760416
Bis(2-ethylhexyl)phthalate	U		0.0581	0.458	1	10/21/2021 19:13	WG1760416
Di-n-butyl phthalate	U		0.0157	0.458	1	10/21/2021 19:13	WG1760416
Diethyl phthalate	U		0.0151	0.458	1	10/21/2021 19:13	WG1760416
Dimethyl phthalate	U		0.0972	0.458	1	10/21/2021 19:13	WG1760416
Di-n-octyl phthalate	U		0.0310	0.458	1	10/21/2021 19:13	WG1760416
Pyrene	U		0.00892	0.0458	1	10/21/2021 19:13	WG1760416
1,2,4-Trichlorobenzene	U		0.0143	0.458	1	10/21/2021 19:13	WG1760416
4-Chloro-3-methylphenol	U		0.0149	0.458	1	10/21/2021 19:13	WG1760416
2-Chlorophenol	U		0.0151	0.458	1	10/21/2021 19:13	WG1760416
2,4-Dichlorophenol	U		0.0134	0.458	1	10/21/2021 19:13	WG1760416
2,4-Dimethylphenol	U		0.0120	0.458	1	10/21/2021 19:13	WG1760416
4,6-Dinitro-2-methylphenol	U		0.104	0.458	1	10/21/2021 19:13	WG1760416
2,4-Dinitrophenol	U		0.107	0.458	1	10/21/2021 19:13	WG1760416
2-Methylphenol	U		0.0138	0.458	1	10/21/2021 19:13	WG1760416
3&4-Methyl Phenol	U		0.0143	0.458	1	10/21/2021 19:13	WG1760416
2-Nitrophenol	U		0.0164	0.458	1	10/21/2021 19:13	WG1760416
4-Nitrophenol	U		0.0143	0.458	1	10/21/2021 19:13	WG1760416
Pentachlorophenol	U		0.0123	0.458	1	10/21/2021 19:13	WG1760416
Phenol	U		0.0184	0.458	1	10/21/2021 19:13	WG1760416
2,4,6-Trichlorophenol	U		0.0147	0.458	1	10/21/2021 19:13	WG1760416
2,4,5-Trichlorophenol	U		0.0156	0.458	1	10/21/2021 19:13	WG1760416

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	60.8			12.0-120		10/21/2021 19:13	WG1760416
(S) Phenol-d5	54.4			10.0-120		10/21/2021 19:13	WG1760416
(S) Nitrobenzene-d5	47.4			10.0-122		10/21/2021 19:13	WG1760416
(S) 2-Fluorobiphenyl	60.1			15.0-120		10/21/2021 19:13	WG1760416
(S) 2,4,6-Tribromophenol	106			10.0-127		10/21/2021 19:13	WG1760416
(S) p-Terphenyl-d14	63.7			10.0-120		10/21/2021 19:13	WG1760416

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00317	0.00826	1	10/22/2021 15:42	WG1761256
Acenaphthene	U		0.00288	0.00826	1	10/22/2021 15:42	WG1761256
Acenaphthylene	U		0.00297	0.00826	1	10/22/2021 15:42	WG1761256
Benzo(a)anthracene	0.00303	J	0.00238	0.00826	1	10/22/2021 15:42	WG1761256
Benzo(a)pyrene	U		0.00246	0.00826	1	10/22/2021 15:42	WG1761256
Benzo(b)fluoranthene	0.00461	J	0.00211	0.00826	1	10/22/2021 15:42	WG1761256
Benzo(g,h,i)perylene	U		0.00244	0.00826	1	10/22/2021 15:42	WG1761256
Benzo(k)fluoranthene	U		0.00296	0.00826	1	10/22/2021 15:42	WG1761256
Chrysene	0.00574	J	0.00319	0.00826	1	10/22/2021 15:42	WG1761256
Dibenz(a,h)anthracene	U		0.00237	0.00826	1	10/22/2021 15:42	WG1761256
Fluoranthene	0.0323		0.00312	0.00826	1	10/22/2021 15:42	WG1761256
Fluorene	U		0.00282	0.00826	1	10/22/2021 15:42	WG1761256
Indeno(1,2,3-cd)pyrene	U		0.00249	0.00826	1	10/22/2021 15:42	WG1761256
Naphthalene	0.00585	J	0.00562	0.0275	1	10/22/2021 15:42	WG1761256
Phenanthrene	0.0200		0.00318	0.00826	1	10/22/2021 15:42	WG1761256
Pyrene	0.0198		0.00275	0.00826	1	10/22/2021 15:42	WG1761256
1-Methylnaphthalene	U		0.00618	0.0275	1	10/22/2021 15:42	WG1761256
2-Methylnaphthalene	U		0.00588	0.0275	1	10/22/2021 15:42	WG1761256
2-Chloronaphthalene	U		0.00641	0.0275	1	10/22/2021 15:42	WG1761256
(S) Nitrobenzene-d5	65.9			14.0-149		10/22/2021 15:42	WG1761256
(S) 2-Fluorobiphenyl	72.2			34.0-125		10/22/2021 15:42	WG1761256
(S) p-Terphenyl-d14	82.3			23.0-120		10/22/2021 15:42	WG1761256



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	77.2		1	10/19/2021 17:10	WG1759017

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0233	0.0518	1	10/19/2021 11:55	WG1758977

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	U		0.215	3.89	5	10/26/2021 00:22	WG1761001
Arsenic	1.80		0.130	1.30	5	10/26/2021 00:22	WG1761001
Barium	154		0.197	3.24	5	10/26/2021 00:22	WG1761001
Cadmium	U		0.111	1.30	5	10/26/2021 00:22	WG1761001
Chromium	32.0		0.383	6.48	5	10/26/2021 00:22	WG1761001
Copper	19.2		0.171	6.48	5	10/26/2021 00:22	WG1761001
Lead	2.70		0.128	2.59	5	10/26/2021 00:22	WG1761001
Selenium	U		0.233	3.24	5	10/26/2021 00:22	WG1761001
Silver	U		0.112	0.648	5	10/26/2021 00:22	WG1761001
Zinc	58.1		0.959	32.4	5	10/26/2021 00:22	WG1761001

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		1.40	4.12	25	10/21/2021 19:25	WG1760785
(S) a,a,a-Trifluorotoluene(FID)	97.9			77.0-120		10/21/2021 19:25	WG1760785

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U		0.0602	0.0825	1	10/20/2021 17:31	WG1760359
Acrylonitrile	U		0.00595	0.0206	1	10/20/2021 17:31	WG1760359
Benzene	U		0.000770	0.00165	1	10/20/2021 17:31	WG1760359
Bromobenzene	U		0.00148	0.0206	1	10/20/2021 17:31	WG1760359
Bromodichloromethane	U		0.00120	0.00412	1	10/20/2021 17:31	WG1760359
Bromoform	U		0.00193	0.0412	1	10/20/2021 17:31	WG1760359
Bromomethane	U		0.00325	0.0206	1	10/20/2021 17:31	WG1760359
n-Butylbenzene	U		0.00866	0.0206	1	10/20/2021 17:31	WG1760359
sec-Butylbenzene	U		0.00475	0.0206	1	10/20/2021 17:31	WG1760359
tert-Butylbenzene	U		0.00322	0.00825	1	10/20/2021 17:31	WG1760359
Carbon tetrachloride	U		0.00148	0.00825	1	10/20/2021 17:31	WG1760359
Chlorobenzene	U		0.000346	0.00412	1	10/20/2021 17:31	WG1760359
Chlorodibromomethane	U		0.00101	0.00412	1	10/20/2021 17:31	WG1760359
Chloroethane	U		0.00280	0.00825	1	10/20/2021 17:31	WG1760359
Chloroform	U		0.00170	0.00412	1	10/20/2021 17:31	WG1760359
Chloromethane	U		0.00717	0.0206	1	10/20/2021 17:31	WG1760359
2-Chlorotoluene	U		0.00143	0.00412	1	10/20/2021 17:31	WG1760359
4-Chlorotoluene	U		0.000742	0.00825	1	10/20/2021 17:31	WG1760359
1,2-Dibromo-3-Chloropropane	U		0.00643	0.0412	1	10/20/2021 17:31	WG1760359
1,2-Dibromoethane	U		0.00107	0.00412	1	10/20/2021 17:31	WG1760359
Dibromomethane	U		0.00124	0.00825	1	10/20/2021 17:31	WG1760359
1,2-Dichlorobenzene	U		0.000701	0.00825	1	10/20/2021 17:31	WG1760359
1,3-Dichlorobenzene	U		0.000990	0.00825	1	10/20/2021 17:31	WG1760359
1,4-Dichlorobenzene	U		0.00115	0.00825	1	10/20/2021 17:31	WG1760359

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00266	0.00412	1	10/20/2021 17:31	WG1760359
1,1-Dichloroethane	U		0.000810	0.00412	1	10/20/2021 17:31	WG1760359
1,2-Dichloroethane	U		0.00107	0.00412	1	10/20/2021 17:31	WG1760359
1,1-Dichloroethene	U		0.00100	0.00412	1	10/20/2021 17:31	WG1760359
cis-1,2-Dichloroethene	U		0.00121	0.00412	1	10/20/2021 17:31	WG1760359
trans-1,2-Dichloroethene	U		0.00172	0.00825	1	10/20/2021 17:31	WG1760359
1,2-Dichloropropane	U		0.00234	0.00825	1	10/20/2021 17:31	WG1760359
1,1-Dichloropropene	U		0.00133	0.00412	1	10/20/2021 17:31	WG1760359
1,3-Dichloropropane	U		0.000826	0.00825	1	10/20/2021 17:31	WG1760359
cis-1,3-Dichloropropene	U		0.00125	0.00412	1	10/20/2021 17:31	WG1760359
trans-1,3-Dichloropropene	U		0.00188	0.00825	1	10/20/2021 17:31	WG1760359
2,2-Dichloropropane	U		0.00228	0.00412	1	10/20/2021 17:31	WG1760359
Di-isopropyl ether	U		0.000676	0.00165	1	10/20/2021 17:31	WG1760359
Ethylbenzene	U		0.00122	0.00412	1	10/20/2021 17:31	WG1760359
Hexachloro-1,3-butadiene	U	C3	0.00990	0.0412	1	10/20/2021 17:31	WG1760359
Isopropylbenzene	U		0.000701	0.00412	1	10/20/2021 17:31	WG1760359
p-Isopropyltoluene	U		0.00421	0.00825	1	10/20/2021 17:31	WG1760359
2-Butanone (MEK)	U		0.105	0.165	1	10/20/2021 17:31	WG1760359
Methylene Chloride	U		0.0110	0.0412	1	10/20/2021 17:31	WG1760359
4-Methyl-2-pentanone (MIBK)	U		0.00376	0.0412	1	10/20/2021 17:31	WG1760359
Methyl tert-butyl ether	U		0.000577	0.00165	1	10/20/2021 17:31	WG1760359
Naphthalene	U		0.00805	0.0206	1	10/20/2021 17:31	WG1760359
n-Propylbenzene	U		0.00157	0.00825	1	10/20/2021 17:31	WG1760359
Styrene	U		0.000378	0.0206	1	10/20/2021 17:31	WG1760359
1,1,1,2-Tetrachloroethane	U		0.00156	0.00412	1	10/20/2021 17:31	WG1760359
1,1,2,2-Tetrachloroethane	U	C3 J4	0.00115	0.00412	1	10/20/2021 17:31	WG1760359
1,1,2-Trichlorotrifluoroethane	U		0.00124	0.00412	1	10/20/2021 17:31	WG1760359
Tetrachloroethene	U		0.00148	0.00412	1	10/20/2021 17:31	WG1760359
Toluene	U		0.00214	0.00825	1	10/20/2021 17:31	WG1760359
1,2,3-Trichlorobenzene	U		0.0121	0.0206	1	10/20/2021 17:31	WG1760359
1,2,4-Trichlorobenzene	U		0.00726	0.0206	1	10/20/2021 17:31	WG1760359
1,1,1-Trichloroethane	U		0.00152	0.00412	1	10/20/2021 17:31	WG1760359
1,1,2-Trichloroethane	U		0.000985	0.00412	1	10/20/2021 17:31	WG1760359
Trichloroethene	U	J4	0.000963	0.00165	1	10/20/2021 17:31	WG1760359
Trichlorofluoromethane	U		0.00136	0.00412	1	10/20/2021 17:31	WG1760359
1,2,3-Trichloropropane	U		0.00267	0.0206	1	10/20/2021 17:31	WG1760359
1,2,4-Trimethylbenzene	U		0.00261	0.00825	1	10/20/2021 17:31	WG1760359
1,2,3-Trimethylbenzene	U		0.00261	0.00825	1	10/20/2021 17:31	WG1760359
1,3,5-Trimethylbenzene	U		0.00330	0.00825	1	10/20/2021 17:31	WG1760359
Vinyl chloride	U		0.00191	0.00412	1	10/20/2021 17:31	WG1760359
Xylenes, Total	U		0.00145	0.0107	1	10/20/2021 17:31	WG1760359
(S) Toluene-d8	105			75.0-131		10/20/2021 17:31	WG1760359
(S) 4-Bromofluorobenzene	99.2			67.0-138		10/20/2021 17:31	WG1760359
(S) 1,2-Dichloroethane-d4	90.8			70.0-130		10/20/2021 17:31	WG1760359

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	7.25	B	1.72	5.18	1	10/22/2021 13:39	WG1761238
Residual Range Organics (RRO)	4.87	J	4.31	13.0	1	10/22/2021 13:39	WG1761238
(S) o-Terphenyl	71.7			18.0-148		10/22/2021 13:39	WG1761238

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.00909	0.0907	1	10/21/2021 01:04	WG1759267
Dalapon	U		0.0146	0.0907	1	10/21/2021 01:04	WG1759267
2,4-DB	U		0.0385	0.0907	1	10/21/2021 01:04	WG1759267
Dicamba	U		0.0203	0.0907	1	10/21/2021 01:04	WG1759267
Dichloroprop	U		0.0317	0.0907	1	10/21/2021 01:04	WG1759267
Dinoseb	U		0.00903	0.0907	1	10/21/2021 01:04	WG1759267
MCPA	U		0.574	8.42	1	10/21/2021 01:04	WG1759267
MCPP	U		0.475	8.42	1	10/21/2021 01:04	WG1759267
2,4,5-T	U		0.0110	0.0907	1	10/21/2021 01:04	WG1759267
2,4,5-TP (Silvex)	U		0.0139	0.0907	1	10/21/2021 01:04	WG1759267
(S) 2,4-Dichlorophenyl Acetic Acid	62.8			22.0-132		10/21/2021 01:04	WG1759267

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00487	0.0259	1	10/21/2021 14:26	WG1760459
Alpha BHC	U		0.00477	0.0259	1	10/21/2021 14:26	WG1760459
Beta BHC	U		0.00491	0.0259	1	10/21/2021 14:26	WG1760459
Delta BHC	U		0.00448	0.0259	1	10/21/2021 14:26	WG1760459
Gamma BHC	U		0.00446	0.0259	1	10/21/2021 14:26	WG1760459
Chlordane	U		0.133	0.389	1	10/21/2021 14:26	WG1760459
4,4-DDD	U		0.00479	0.0259	1	10/21/2021 14:26	WG1760459
4,4-DDE	U		0.00474	0.0259	1	10/21/2021 14:26	WG1760459
4,4-DDT	U		0.00812	0.0259	1	10/21/2021 14:26	WG1760459
Dieldrin	U		0.00446	0.0259	1	10/21/2021 14:26	WG1760459
Endosulfan I	U		0.00470	0.0259	1	10/21/2021 14:26	WG1760459
Endosulfan II	U		0.00434	0.0259	1	10/21/2021 14:26	WG1760459
Endosulfan sulfate	U		0.00472	0.0259	1	10/21/2021 14:26	WG1760459
Endrin	U		0.00453	0.0259	1	10/21/2021 14:26	WG1760459
Endrin aldehyde	U		0.00439	0.0259	1	10/21/2021 14:26	WG1760459
Endrin ketone	U		0.00921	0.0259	1	10/21/2021 14:26	WG1760459
Heptachlor	U		0.00554	0.0259	1	10/21/2021 14:26	WG1760459
Heptachlor epoxide	U		0.00439	0.0259	1	10/21/2021 14:26	WG1760459
Hexachlorobenzene	U		0.00448	0.0259	1	10/21/2021 14:26	WG1760459
Methoxychlor	U		0.00627	0.0259	1	10/21/2021 14:26	WG1760459
Toxaphene	U		0.161	0.518	1	10/21/2021 14:26	WG1760459
(S) Decachlorobiphenyl	56.3			10.0-135		10/21/2021 14:26	WG1760459
(S) Tetrachloro-m-xylene	57.2			10.0-139		10/21/2021 14:26	WG1760459

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0153	0.0440	1	10/21/2021 14:26	WG1760459
PCB 1221	U		0.0153	0.0440	1	10/21/2021 14:26	WG1760459
PCB 1232	U		0.0153	0.0440	1	10/21/2021 14:26	WG1760459
PCB 1242	U		0.0153	0.0440	1	10/21/2021 14:26	WG1760459
PCB 1248	U		0.00956	0.0220	1	10/21/2021 14:26	WG1760459
PCB 1254	U		0.00956	0.0220	1	10/21/2021 14:26	WG1760459
PCB 1260	U		0.00956	0.0220	1	10/21/2021 14:26	WG1760459
(S) Decachlorobiphenyl	56.8			10.0-135		10/21/2021 14:26	WG1760459
(S) Tetrachloro-m-xylene	62.4			10.0-139		10/21/2021 14:26	WG1760459

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00698	0.0431	1	10/21/2021 20:14	WG1760416
Acenaphthylene	U		0.00608	0.0431	1	10/21/2021 20:14	WG1760416
Anthracene	U		0.00768	0.0431	1	10/21/2021 20:14	WG1760416
Benzo(a)anthracene	U		0.00760	0.0431	1	10/21/2021 20:14	WG1760416
Benzo(b)fluoranthene	U		0.00804	0.0431	1	10/21/2021 20:14	WG1760416
Benzo(k)fluoranthene	U		0.00767	0.0431	1	10/21/2021 20:14	WG1760416
Benzo(g,h,i)perylene	U		0.00789	0.0431	1	10/21/2021 20:14	WG1760416
Benzo(a)pyrene	U		0.00802	0.0431	1	10/21/2021 20:14	WG1760416
Bis(2-chloroethoxy)methane	U		0.0130	0.431	1	10/21/2021 20:14	WG1760416
Bis(2-chloroethyl)ether	U	C3	0.0142	0.431	1	10/21/2021 20:14	WG1760416
2,2-Oxybis(1-Chloropropane)	U		0.0187	0.431	1	10/21/2021 20:14	WG1760416
4-Bromophenyl-phenylether	U		0.0152	0.431	1	10/21/2021 20:14	WG1760416
2-Chloronaphthalene	U		0.00758	0.0431	1	10/21/2021 20:14	WG1760416
4-Chlorophenyl-phenylether	U		0.0150	0.431	1	10/21/2021 20:14	WG1760416
Chrysene	U		0.00858	0.0431	1	10/21/2021 20:14	WG1760416
Dibenz(a,h)anthracene	U		0.0120	0.0431	1	10/21/2021 20:14	WG1760416
3,3-Dichlorobenzidine	U		0.0159	0.431	1	10/21/2021 20:14	WG1760416
2,4-Dinitrotoluene	U		0.0124	0.431	1	10/21/2021 20:14	WG1760416
2,6-Dinitrotoluene	U		0.0141	0.431	1	10/21/2021 20:14	WG1760416
Fluoranthene	U		0.00779	0.0431	1	10/21/2021 20:14	WG1760416
Fluorene	U		0.00702	0.0431	1	10/21/2021 20:14	WG1760416
Hexachlorobenzene	U		0.0153	0.431	1	10/21/2021 20:14	WG1760416
Hexachloro-1,3-butadiene	U		0.0145	0.431	1	10/21/2021 20:14	WG1760416
Hexachlorocyclopentadiene	U		0.0227	0.431	1	10/21/2021 20:14	WG1760416
Hexachloroethane	U		0.0170	0.431	1	10/21/2021 20:14	WG1760416
Indeno(1,2,3-cd)pyrene	U		0.0122	0.0431	1	10/21/2021 20:14	WG1760416
Isophorone	U		0.0132	0.431	1	10/21/2021 20:14	WG1760416
Naphthalene	U		0.0108	0.0431	1	10/21/2021 20:14	WG1760416
Nitrobenzene	U		0.0150	0.431	1	10/21/2021 20:14	WG1760416
n-Nitrosodimethylamine	U		0.0640	0.431	1	10/21/2021 20:14	WG1760416
n-Nitrosodiphenylamine	U		0.0326	0.431	1	10/21/2021 20:14	WG1760416
n-Nitrosodi-n-propylamine	U	C3	0.0144	0.431	1	10/21/2021 20:14	WG1760416
Phenanthrene	U		0.00856	0.0431	1	10/21/2021 20:14	WG1760416
Pyridine	U		0.0285	0.431	1	10/21/2021 20:14	WG1760416
Benzylbutyl phthalate	U		0.0135	0.431	1	10/21/2021 20:14	WG1760416
Bis(2-ethylhexyl)phthalate	U		0.0547	0.431	1	10/21/2021 20:14	WG1760416
Di-n-butyl phthalate	U		0.0148	0.431	1	10/21/2021 20:14	WG1760416
Diethyl phthalate	U		0.0142	0.431	1	10/21/2021 20:14	WG1760416
Dimethyl phthalate	U		0.0915	0.431	1	10/21/2021 20:14	WG1760416
Di-n-octyl phthalate	U		0.0291	0.431	1	10/21/2021 20:14	WG1760416
Pyrene	U		0.00839	0.0431	1	10/21/2021 20:14	WG1760416
1,2,4-Trichlorobenzene	U		0.0135	0.431	1	10/21/2021 20:14	WG1760416
4-Chloro-3-methylphenol	U		0.0140	0.431	1	10/21/2021 20:14	WG1760416
2-Chlorophenol	U		0.0142	0.431	1	10/21/2021 20:14	WG1760416
2,4-Dichlorophenol	U		0.0126	0.431	1	10/21/2021 20:14	WG1760416
2,4-Dimethylphenol	U		0.0113	0.431	1	10/21/2021 20:14	WG1760416
4,6-Dinitro-2-methylphenol	U		0.0978	0.431	1	10/21/2021 20:14	WG1760416
2,4-Dinitrophenol	U		0.101	0.431	1	10/21/2021 20:14	WG1760416
2-Methylphenol	U		0.0130	0.431	1	10/21/2021 20:14	WG1760416
3&4-Methyl Phenol	U		0.0135	0.431	1	10/21/2021 20:14	WG1760416
2-Nitrophenol	U		0.0154	0.431	1	10/21/2021 20:14	WG1760416
4-Nitrophenol	U		0.0135	0.431	1	10/21/2021 20:14	WG1760416
Pentachlorophenol	U		0.0116	0.431	1	10/21/2021 20:14	WG1760416
Phenol	U		0.0174	0.431	1	10/21/2021 20:14	WG1760416
2,4,6-Trichlorophenol	U		0.0139	0.431	1	10/21/2021 20:14	WG1760416
2,4,5-Trichlorophenol	U		0.0146	0.431	1	10/21/2021 20:14	WG1760416

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	67.1			12.0-120		10/21/2021 20:14	WG1760416
(S) Phenol-d5	59.1			10.0-120		10/21/2021 20:14	WG1760416
(S) Nitrobenzene-d5	50.6			10.0-122		10/21/2021 20:14	WG1760416
(S) 2-Fluorobiphenyl	63.8			15.0-120		10/21/2021 20:14	WG1760416
(S) 2,4,6-Tribromophenol	111			10.0-127		10/21/2021 20:14	WG1760416
(S) p-Terphenyl-d14	69.2			10.0-120		10/21/2021 20:14	WG1760416

1 Cp

2 Tc

3 Ss

4 Cn

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00298	0.00777	1	10/22/2021 16:02	WG1761256
Acenaphthene	U		0.00271	0.00777	1	10/22/2021 16:02	WG1761256
Acenaphthylene	U		0.00280	0.00777	1	10/22/2021 16:02	WG1761256
Benzo(a)anthracene	U		0.00224	0.00777	1	10/22/2021 16:02	WG1761256
Benzo(a)pyrene	U		0.00232	0.00777	1	10/22/2021 16:02	WG1761256
Benzo(b)fluoranthene	U		0.00198	0.00777	1	10/22/2021 16:02	WG1761256
Benzo(g,h,i)perylene	U		0.00229	0.00777	1	10/22/2021 16:02	WG1761256
Benzo(k)fluoranthene	U		0.00279	0.00777	1	10/22/2021 16:02	WG1761256
Chrysene	U		0.00301	0.00777	1	10/22/2021 16:02	WG1761256
Dibenz(a,h)anthracene	U		0.00223	0.00777	1	10/22/2021 16:02	WG1761256
Fluoranthene	U		0.00294	0.00777	1	10/22/2021 16:02	WG1761256
Fluorene	U		0.00266	0.00777	1	10/22/2021 16:02	WG1761256
Indeno(1,2,3-cd)pyrene	U		0.00234	0.00777	1	10/22/2021 16:02	WG1761256
Naphthalene	U		0.00529	0.0259	1	10/22/2021 16:02	WG1761256
Phenanthrene	U		0.00299	0.00777	1	10/22/2021 16:02	WG1761256
Pyrene	U		0.00259	0.00777	1	10/22/2021 16:02	WG1761256
1-Methylnaphthalene	U		0.00582	0.0259	1	10/22/2021 16:02	WG1761256
2-Methylnaphthalene	U		0.00553	0.0259	1	10/22/2021 16:02	WG1761256
2-Chloronaphthalene	U		0.00604	0.0259	1	10/22/2021 16:02	WG1761256
(S) Nitrobenzene-d5	59.2			14.0-149		10/22/2021 16:02	WG1761256
(S) 2-Fluorobiphenyl	66.0			34.0-125		10/22/2021 16:02	WG1761256
(S) p-Terphenyl-d14	71.0			23.0-120		10/22/2021 16:02	WG1761256

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	81.2		1	10/19/2021 17:10	WG1759017

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0222	0.0493	1	10/19/2021 16:43	WG1759285

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	U		0.204	3.70	5	10/26/2021 00:25	WG1761001
Arsenic	1.60		0.123	1.23	5	10/26/2021 00:25	WG1761001
Barium	88.6		0.187	3.08	5	10/26/2021 00:25	WG1761001
Cadmium	U		0.105	1.23	5	10/26/2021 00:25	WG1761001
Chromium	20.1		0.365	6.16	5	10/26/2021 00:25	WG1761001
Copper	14.0		0.163	6.16	5	10/26/2021 00:25	WG1761001
Lead	3.09		0.122	2.46	5	10/26/2021 00:25	WG1761001
Selenium	0.262	J	0.222	3.08	5	10/26/2021 00:25	WG1761001
Silver	U		0.107	0.616	5	10/26/2021 00:25	WG1761001
Zinc	51.5		0.912	30.8	5	10/26/2021 00:25	WG1761001

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		1.32	3.91	25	10/21/2021 19:47	WG1760785
(S) a,a,a-Trifluorotoluene(FID)	97.3			77.0-120		10/21/2021 19:47	WG1760785

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U		0.0570	0.0781	1	10/20/2021 17:50	WG1760359
Acrylonitrile	U		0.00564	0.0195	1	10/20/2021 17:50	WG1760359
Benzene	U		0.000730	0.00156	1	10/20/2021 17:50	WG1760359
Bromobenzene	U		0.00141	0.0195	1	10/20/2021 17:50	WG1760359
Bromodichloromethane	U		0.00113	0.00391	1	10/20/2021 17:50	WG1760359
Bromoform	U		0.00183	0.0391	1	10/20/2021 17:50	WG1760359
Bromomethane	U		0.00308	0.0195	1	10/20/2021 17:50	WG1760359
n-Butylbenzene	U		0.00820	0.0195	1	10/20/2021 17:50	WG1760359
sec-Butylbenzene	U		0.00450	0.0195	1	10/20/2021 17:50	WG1760359
tert-Butylbenzene	U		0.00305	0.00781	1	10/20/2021 17:50	WG1760359
Carbon tetrachloride	U		0.00140	0.00781	1	10/20/2021 17:50	WG1760359
Chlorobenzene	U		0.000328	0.00391	1	10/20/2021 17:50	WG1760359
Chlorodibromomethane	U		0.000956	0.00391	1	10/20/2021 17:50	WG1760359
Chloroethane	U		0.00266	0.00781	1	10/20/2021 17:50	WG1760359
Chloroform	U		0.00161	0.00391	1	10/20/2021 17:50	WG1760359
Chloromethane	U		0.00680	0.0195	1	10/20/2021 17:50	WG1760359
2-Chlorotoluene	U		0.00135	0.00391	1	10/20/2021 17:50	WG1760359
4-Chlorotoluene	U		0.000703	0.00781	1	10/20/2021 17:50	WG1760359
1,2-Dibromo-3-Chloropropane	U		0.00609	0.0391	1	10/20/2021 17:50	WG1760359
1,2-Dibromoethane	U		0.00101	0.00391	1	10/20/2021 17:50	WG1760359
Dibromomethane	U		0.00117	0.00781	1	10/20/2021 17:50	WG1760359
1,2-Dichlorobenzene	U		0.000664	0.00781	1	10/20/2021 17:50	WG1760359
1,3-Dichlorobenzene	U		0.000937	0.00781	1	10/20/2021 17:50	WG1760359
1,4-Dichlorobenzene	U		0.00109	0.00781	1	10/20/2021 17:50	WG1760359



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00252	0.00391	1	10/20/2021 17:50	WG1760359
1,1-Dichloroethane	U		0.000767	0.00391	1	10/20/2021 17:50	WG1760359
1,2-Dichloroethane	U		0.00101	0.00391	1	10/20/2021 17:50	WG1760359
1,1-Dichloroethene	U		0.000947	0.00391	1	10/20/2021 17:50	WG1760359
cis-1,2-Dichloroethene	U		0.00115	0.00391	1	10/20/2021 17:50	WG1760359
trans-1,2-Dichloroethene	U		0.00162	0.00781	1	10/20/2021 17:50	WG1760359
1,2-Dichloropropane	U		0.00222	0.00781	1	10/20/2021 17:50	WG1760359
1,1-Dichloropropene	U		0.00126	0.00391	1	10/20/2021 17:50	WG1760359
1,3-Dichloropropane	U		0.000783	0.00781	1	10/20/2021 17:50	WG1760359
cis-1,3-Dichloropropene	U		0.00118	0.00391	1	10/20/2021 17:50	WG1760359
trans-1,3-Dichloropropene	U		0.00178	0.00781	1	10/20/2021 17:50	WG1760359
2,2-Dichloropropane	U		0.00216	0.00391	1	10/20/2021 17:50	WG1760359
Di-isopropyl ether	U		0.000640	0.00156	1	10/20/2021 17:50	WG1760359
Ethylbenzene	U		0.00115	0.00391	1	10/20/2021 17:50	WG1760359
Hexachloro-1,3-butadiene	U	C3	0.00937	0.0391	1	10/20/2021 17:50	WG1760359
Isopropylbenzene	U		0.000664	0.00391	1	10/20/2021 17:50	WG1760359
p-Isopropyltoluene	U		0.00398	0.00781	1	10/20/2021 17:50	WG1760359
2-Butanone (MEK)	U		0.0992	0.156	1	10/20/2021 17:50	WG1760359
Methylene Chloride	U		0.0104	0.0391	1	10/20/2021 17:50	WG1760359
4-Methyl-2-pentanone (MIBK)	U		0.00356	0.0391	1	10/20/2021 17:50	WG1760359
Methyl tert-butyl ether	U		0.000547	0.00156	1	10/20/2021 17:50	WG1760359
Naphthalene	U		0.00762	0.0195	1	10/20/2021 17:50	WG1760359
n-Propylbenzene	U		0.00148	0.00781	1	10/20/2021 17:50	WG1760359
Styrene	U		0.000358	0.0195	1	10/20/2021 17:50	WG1760359
1,1,1,2-Tetrachloroethane	U		0.00148	0.00391	1	10/20/2021 17:50	WG1760359
1,1,2,2-Tetrachloroethane	U	C3 J4	0.00109	0.00391	1	10/20/2021 17:50	WG1760359
1,1,2-Trichlorotrifluoroethane	U		0.00118	0.00391	1	10/20/2021 17:50	WG1760359
Tetrachloroethene	U		0.00140	0.00391	1	10/20/2021 17:50	WG1760359
Toluene	U		0.00203	0.00781	1	10/20/2021 17:50	WG1760359
1,2,3-Trichlorobenzene	U		0.0115	0.0195	1	10/20/2021 17:50	WG1760359
1,2,4-Trichlorobenzene	U		0.00687	0.0195	1	10/20/2021 17:50	WG1760359
1,1,1-Trichloroethane	U		0.00144	0.00391	1	10/20/2021 17:50	WG1760359
1,1,2-Trichloroethane	U		0.000933	0.00391	1	10/20/2021 17:50	WG1760359
Trichloroethene	U	J4	0.000912	0.00156	1	10/20/2021 17:50	WG1760359
Trichlorofluoromethane	U		0.00129	0.00391	1	10/20/2021 17:50	WG1760359
1,2,3-Trichloropropane	U		0.00253	0.0195	1	10/20/2021 17:50	WG1760359
1,2,4-Trimethylbenzene	U		0.00247	0.00781	1	10/20/2021 17:50	WG1760359
1,2,3-Trimethylbenzene	U		0.00247	0.00781	1	10/20/2021 17:50	WG1760359
1,3,5-Trimethylbenzene	U		0.00312	0.00781	1	10/20/2021 17:50	WG1760359
Vinyl chloride	U		0.00181	0.00391	1	10/20/2021 17:50	WG1760359
Xylenes, Total	U		0.00137	0.0102	1	10/20/2021 17:50	WG1760359
(S) Toluene-d8	106			75.0-131		10/20/2021 17:50	WG1760359
(S) 4-Bromofluorobenzene	102			67.0-138		10/20/2021 17:50	WG1760359
(S) 1,2-Dichloroethane-d4	92.1			70.0-130		10/20/2021 17:50	WG1760359

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	4.19	BJ	1.64	4.93	1	10/22/2021 14:19	WG1761238
Residual Range Organics (RRO)	U		4.10	12.3	1	10/22/2021 14:19	WG1761238
(S) o-Terphenyl	61.2			18.0-148		10/22/2021 14:19	WG1761238

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.00865	0.0862	1	10/21/2021 01:19	WG1759267
Dalapon	U		0.0139	0.0862	1	10/21/2021 01:19	WG1759267
2,4-DB	U		0.0366	0.0862	1	10/21/2021 01:19	WG1759267
Dicamba	U		0.0193	0.0862	1	10/21/2021 01:19	WG1759267
Dichloroprop	U		0.0302	0.0862	1	10/21/2021 01:19	WG1759267
Dinoseb	U		0.00859	0.0862	1	10/21/2021 01:19	WG1759267
MCPA	U		0.546	8.01	1	10/21/2021 01:19	WG1759267
MCPP	U		0.452	8.01	1	10/21/2021 01:19	WG1759267
2,4,5-T	U		0.0105	0.0862	1	10/21/2021 01:19	WG1759267
2,4,5-TP (Silvex)	U		0.0132	0.0862	1	10/21/2021 01:19	WG1759267
(S) 2,4-Dichlorophenyl Acetic Acid	60.6			22.0-132		10/21/2021 01:19	WG1759267

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00463	0.0246	1	10/21/2021 14:35	WG1760459
Alpha BHC	U		0.00453	0.0246	1	10/21/2021 14:35	WG1760459
Beta BHC	U		0.00467	0.0246	1	10/21/2021 14:35	WG1760459
Delta BHC	U		0.00426	0.0246	1	10/21/2021 14:35	WG1760459
Gamma BHC	U		0.00424	0.0246	1	10/21/2021 14:35	WG1760459
Chlordane	U		0.127	0.370	1	10/21/2021 14:35	WG1760459
4,4-DDD	U		0.00456	0.0246	1	10/21/2021 14:35	WG1760459
4,4-DDE	U		0.00451	0.0246	1	10/21/2021 14:35	WG1760459
4,4-DDT	U		0.00772	0.0246	1	10/21/2021 14:35	WG1760459
Dieldrin	U		0.00424	0.0246	1	10/21/2021 14:35	WG1760459
Endosulfan I	U		0.00447	0.0246	1	10/21/2021 14:35	WG1760459
Endosulfan II	U		0.00413	0.0246	1	10/21/2021 14:35	WG1760459
Endosulfan sulfate	U		0.00448	0.0246	1	10/21/2021 14:35	WG1760459
Endrin	U		0.00431	0.0246	1	10/21/2021 14:35	WG1760459
Endrin aldehyde	U		0.00418	0.0246	1	10/21/2021 14:35	WG1760459
Endrin ketone	U		0.00876	0.0246	1	10/21/2021 14:35	WG1760459
Heptachlor	U		0.00527	0.0246	1	10/21/2021 14:35	WG1760459
Heptachlor epoxide	U		0.00418	0.0246	1	10/21/2021 14:35	WG1760459
Hexachlorobenzene	U		0.00426	0.0246	1	10/21/2021 14:35	WG1760459
Methoxychlor	U		0.00596	0.0246	1	10/21/2021 14:35	WG1760459
Toxaphene	U		0.153	0.493	1	10/21/2021 14:35	WG1760459
(S) Decachlorobiphenyl	52.9			10.0-135		10/21/2021 14:35	WG1760459
(S) Tetrachloro-m-xylene	59.8			10.0-139		10/21/2021 14:35	WG1760459

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0145	0.0419	1	10/21/2021 14:35	WG1760459
PCB 1221	U		0.0145	0.0419	1	10/21/2021 14:35	WG1760459
PCB 1232	U		0.0145	0.0419	1	10/21/2021 14:35	WG1760459
PCB 1242	U		0.0145	0.0419	1	10/21/2021 14:35	WG1760459
PCB 1248	U		0.00909	0.0209	1	10/21/2021 14:35	WG1760459
PCB 1254	U		0.00909	0.0209	1	10/21/2021 14:35	WG1760459
PCB 1260	U		0.00909	0.0209	1	10/21/2021 14:35	WG1760459
(S) Decachlorobiphenyl	55.2			10.0-135		10/21/2021 14:35	WG1760459
(S) Tetrachloro-m-xylene	64.2			10.0-139		10/21/2021 14:35	WG1760459

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00664	0.0410	1	10/21/2021 20:34	WG1760416
Acenaphthylene	U		0.00578	0.0410	1	10/21/2021 20:34	WG1760416
Anthracene	U		0.00730	0.0410	1	10/21/2021 20:34	WG1760416
Benzo(a)anthracene	U		0.00723	0.0410	1	10/21/2021 20:34	WG1760416
Benzo(b)fluoranthene	U		0.00765	0.0410	1	10/21/2021 20:34	WG1760416
Benzo(k)fluoranthene	U		0.00729	0.0410	1	10/21/2021 20:34	WG1760416
Benzo(g,h,i)perylene	U		0.00750	0.0410	1	10/21/2021 20:34	WG1760416
Benzo(a)pyrene	U		0.00763	0.0410	1	10/21/2021 20:34	WG1760416
Bis(2-chloroethoxy)methane	U		0.0123	0.410	1	10/21/2021 20:34	WG1760416
Bis(2-chloroethyl)ether	U	C3	0.0136	0.410	1	10/21/2021 20:34	WG1760416
2,2-Oxybis(1-Chloropropane)	U		0.0177	0.410	1	10/21/2021 20:34	WG1760416
4-Bromophenyl-phenylether	U		0.0144	0.410	1	10/21/2021 20:34	WG1760416
2-Chloronaphthalene	U		0.00721	0.0410	1	10/21/2021 20:34	WG1760416
4-Chlorophenyl-phenylether	U		0.0143	0.410	1	10/21/2021 20:34	WG1760416
Chrysene	U		0.00815	0.0410	1	10/21/2021 20:34	WG1760416
Dibenz(a,h)anthracene	U		0.0114	0.0410	1	10/21/2021 20:34	WG1760416
3,3-Dichlorobenzidine	U		0.0152	0.410	1	10/21/2021 20:34	WG1760416
2,4-Dinitrotoluene	U		0.0118	0.410	1	10/21/2021 20:34	WG1760416
2,6-Dinitrotoluene	U		0.0134	0.410	1	10/21/2021 20:34	WG1760416
Fluoranthene	U		0.00740	0.0410	1	10/21/2021 20:34	WG1760416
Fluorene	U		0.00668	0.0410	1	10/21/2021 20:34	WG1760416
Hexachlorobenzene	U		0.0145	0.410	1	10/21/2021 20:34	WG1760416
Hexachloro-1,3-butadiene	U		0.0138	0.410	1	10/21/2021 20:34	WG1760416
Hexachlorocyclopentadiene	U		0.0216	0.410	1	10/21/2021 20:34	WG1760416
Hexachloroethane	U		0.0161	0.410	1	10/21/2021 20:34	WG1760416
Indeno(1,2,3-cd)pyrene	U		0.0116	0.0410	1	10/21/2021 20:34	WG1760416
Isophorone	U		0.0126	0.410	1	10/21/2021 20:34	WG1760416
Naphthalene	U		0.0103	0.0410	1	10/21/2021 20:34	WG1760416
Nitrobenzene	U		0.0143	0.410	1	10/21/2021 20:34	WG1760416
n-Nitrosodimethylamine	U		0.0609	0.410	1	10/21/2021 20:34	WG1760416
n-Nitrosodiphenylamine	U		0.0310	0.410	1	10/21/2021 20:34	WG1760416
n-Nitrosodi-n-propylamine	U	C3	0.0137	0.410	1	10/21/2021 20:34	WG1760416
Phenanthrene	U		0.00814	0.0410	1	10/21/2021 20:34	WG1760416
Pyridine	U		0.0271	0.410	1	10/21/2021 20:34	WG1760416
Benzylbutyl phthalate	U		0.0128	0.410	1	10/21/2021 20:34	WG1760416
Bis(2-ethylhexyl)phthalate	U		0.0520	0.410	1	10/21/2021 20:34	WG1760416
Di-n-butyl phthalate	U		0.0140	0.410	1	10/21/2021 20:34	WG1760416
Diethyl phthalate	U		0.0136	0.410	1	10/21/2021 20:34	WG1760416
Dimethyl phthalate	U		0.0870	0.410	1	10/21/2021 20:34	WG1760416
Di-n-octyl phthalate	U		0.0277	0.410	1	10/21/2021 20:34	WG1760416
Pyrene	U		0.00798	0.0410	1	10/21/2021 20:34	WG1760416
1,2,4-Trichlorobenzene	U		0.0128	0.410	1	10/21/2021 20:34	WG1760416
4-Chloro-3-methylphenol	U		0.0133	0.410	1	10/21/2021 20:34	WG1760416
2-Chlorophenol	U		0.0136	0.410	1	10/21/2021 20:34	WG1760416
2,4-Dichlorophenol	U		0.0119	0.410	1	10/21/2021 20:34	WG1760416
2,4-Dimethylphenol	U		0.0107	0.410	1	10/21/2021 20:34	WG1760416
4,6-Dinitro-2-methylphenol	U		0.0930	0.410	1	10/21/2021 20:34	WG1760416
2,4-Dinitrophenol	U		0.0960	0.410	1	10/21/2021 20:34	WG1760416
2-Methylphenol	U		0.0123	0.410	1	10/21/2021 20:34	WG1760416
3&4-Methyl Phenol	U		0.0128	0.410	1	10/21/2021 20:34	WG1760416
2-Nitrophenol	U		0.0147	0.410	1	10/21/2021 20:34	WG1760416
4-Nitrophenol	U		0.0128	0.410	1	10/21/2021 20:34	WG1760416
Pentachlorophenol	U		0.0110	0.410	1	10/21/2021 20:34	WG1760416
Phenol	U		0.0165	0.410	1	10/21/2021 20:34	WG1760416
2,4,6-Trichlorophenol	U		0.0132	0.410	1	10/21/2021 20:34	WG1760416
2,4,5-Trichlorophenol	U		0.0139	0.410	1	10/21/2021 20:34	WG1760416

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	59.2			12.0-120		10/21/2021 20:34	WG1760416
(S) Phenol-d5	50.2			10.0-120		10/21/2021 20:34	WG1760416
(S) Nitrobenzene-d5	45.5			10.0-122		10/21/2021 20:34	WG1760416
(S) 2-Fluorobiphenyl	60.2			15.0-120		10/21/2021 20:34	WG1760416
(S) 2,4,6-Tribromophenol	92.6			10.0-127		10/21/2021 20:34	WG1760416
(S) p-Terphenyl-d14	63.0			10.0-120		10/21/2021 20:34	WG1760416

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00283	0.00739	1	10/23/2021 14:20	WG1761256
Acenaphthene	U		0.00257	0.00739	1	10/23/2021 14:20	WG1761256
Acenaphthylene	U		0.00266	0.00739	1	10/23/2021 14:20	WG1761256
Benzo(a)anthracene	U		0.00213	0.00739	1	10/23/2021 14:20	WG1761256
Benzo(a)pyrene	U		0.00220	0.00739	1	10/23/2021 14:20	WG1761256
Benzo(b)fluoranthene	U		0.00188	0.00739	1	10/23/2021 14:20	WG1761256
Benzo(g,h,i)perylene	U		0.00218	0.00739	1	10/23/2021 14:20	WG1761256
Benzo(k)fluoranthene	U		0.00265	0.00739	1	10/23/2021 14:20	WG1761256
Chrysene	U		0.00286	0.00739	1	10/23/2021 14:20	WG1761256
Dibenz(a,h)anthracene	U		0.00212	0.00739	1	10/23/2021 14:20	WG1761256
Fluoranthene	U		0.00280	0.00739	1	10/23/2021 14:20	WG1761256
Fluorene	U		0.00253	0.00739	1	10/23/2021 14:20	WG1761256
Indeno(1,2,3-cd)pyrene	U		0.00223	0.00739	1	10/23/2021 14:20	WG1761256
Naphthalene	U		0.00503	0.0246	1	10/23/2021 14:20	WG1761256
Phenanthrene	U		0.00285	0.00739	1	10/23/2021 14:20	WG1761256
Pyrene	U		0.00246	0.00739	1	10/23/2021 14:20	WG1761256
1-Methylnaphthalene	U		0.00553	0.0246	1	10/23/2021 14:20	WG1761256
2-Methylnaphthalene	U		0.00526	0.0246	1	10/23/2021 14:20	WG1761256
2-Chloronaphthalene	U		0.00574	0.0246	1	10/23/2021 14:20	WG1761256
(S) Nitrobenzene-d5	65.6			14.0-149		10/23/2021 14:20	WG1761256
(S) 2-Fluorobiphenyl	71.0			34.0-125		10/23/2021 14:20	WG1761256
(S) p-Terphenyl-d14	80.7			23.0-120		10/23/2021 14:20	WG1761256

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	74.7		1	10/19/2021 15:41	WG1759066

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0241	0.0535	1	10/19/2021 12:11	WG1758992

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	U		0.222	4.01	5	10/26/2021 00:29	WG1761001
Arsenic	4.40		0.134	1.34	5	10/26/2021 00:29	WG1761001
Barium	107		0.203	3.34	5	10/26/2021 00:29	WG1761001
Cadmium	U		0.114	1.34	5	10/26/2021 00:29	WG1761001
Chromium	14.0		0.396	6.69	5	10/26/2021 00:29	WG1761001
Copper	17.3		0.177	6.69	5	10/26/2021 00:29	WG1761001
Lead	7.18		0.132	2.68	5	10/26/2021 00:29	WG1761001
Selenium	0.326	J	0.241	3.34	5	10/26/2021 00:29	WG1761001
Silver	U		0.116	0.669	5	10/26/2021 00:29	WG1761001
Zinc	49.3		0.990	33.4	5	10/26/2021 00:29	WG1761001

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	1.58	J	1.49	4.39	25	10/21/2021 20:09	WG1760785
(S) a,a,a-Trifluorotoluene(FID)	89.4			77.0-120		10/21/2021 20:09	WG1760785

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U		0.0640	0.0877	1	10/20/2021 18:09	WG1760359
Acrylonitrile	U		0.00633	0.0219	1	10/20/2021 18:09	WG1760359
Benzene	U		0.000819	0.00175	1	10/20/2021 18:09	WG1760359
Bromobenzene	U		0.00158	0.0219	1	10/20/2021 18:09	WG1760359
Bromodichloromethane	U		0.00127	0.00439	1	10/20/2021 18:09	WG1760359
Bromoform	U		0.00205	0.0439	1	10/20/2021 18:09	WG1760359
Bromomethane	U		0.00346	0.0219	1	10/20/2021 18:09	WG1760359
n-Butylbenzene	U		0.00921	0.0219	1	10/20/2021 18:09	WG1760359
sec-Butylbenzene	U		0.00505	0.0219	1	10/20/2021 18:09	WG1760359
tert-Butylbenzene	U		0.00342	0.00877	1	10/20/2021 18:09	WG1760359
Carbon tetrachloride	U		0.00158	0.00877	1	10/20/2021 18:09	WG1760359
Chlorobenzene	U		0.000368	0.00439	1	10/20/2021 18:09	WG1760359
Chlorodibromomethane	U		0.00107	0.00439	1	10/20/2021 18:09	WG1760359
Chloroethane	U		0.00298	0.00877	1	10/20/2021 18:09	WG1760359
Chloroform	U		0.00181	0.00439	1	10/20/2021 18:09	WG1760359
Chloromethane	U		0.00763	0.0219	1	10/20/2021 18:09	WG1760359
2-Chlorotoluene	U		0.00152	0.00439	1	10/20/2021 18:09	WG1760359
4-Chlorotoluene	U		0.000790	0.00877	1	10/20/2021 18:09	WG1760359
1,2-Dibromo-3-Chloropropane	U		0.00684	0.0439	1	10/20/2021 18:09	WG1760359
1,2-Dibromoethane	U		0.00114	0.00439	1	10/20/2021 18:09	WG1760359
Dibromomethane	U		0.00132	0.00877	1	10/20/2021 18:09	WG1760359
1,2-Dichlorobenzene	U		0.000746	0.00877	1	10/20/2021 18:09	WG1760359
1,3-Dichlorobenzene	U		0.00105	0.00877	1	10/20/2021 18:09	WG1760359
1,4-Dichlorobenzene	U		0.00123	0.00877	1	10/20/2021 18:09	WG1760359



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00283	0.00439	1	10/20/2021 18:09	WG1760359
1,1-Dichloroethane	U		0.000862	0.00439	1	10/20/2021 18:09	WG1760359
1,2-Dichloroethane	U		0.00114	0.00439	1	10/20/2021 18:09	WG1760359
1,1-Dichloroethene	U		0.00106	0.00439	1	10/20/2021 18:09	WG1760359
cis-1,2-Dichloroethene	U		0.00129	0.00439	1	10/20/2021 18:09	WG1760359
trans-1,2-Dichloroethene	U		0.00182	0.00877	1	10/20/2021 18:09	WG1760359
1,2-Dichloropropane	U		0.00249	0.00877	1	10/20/2021 18:09	WG1760359
1,1-Dichloropropene	U		0.00142	0.00439	1	10/20/2021 18:09	WG1760359
1,3-Dichloropropane	U		0.000879	0.00877	1	10/20/2021 18:09	WG1760359
cis-1,3-Dichloropropene	U		0.00133	0.00439	1	10/20/2021 18:09	WG1760359
trans-1,3-Dichloropropene	U		0.00200	0.00877	1	10/20/2021 18:09	WG1760359
2,2-Dichloropropane	U		0.00242	0.00439	1	10/20/2021 18:09	WG1760359
Di-isopropyl ether	U		0.000719	0.00175	1	10/20/2021 18:09	WG1760359
Ethylbenzene	U		0.00129	0.00439	1	10/20/2021 18:09	WG1760359
Hexachloro-1,3-butadiene	U	<u>C3</u>	0.0105	0.0439	1	10/20/2021 18:09	WG1760359
Isopropylbenzene	U		0.000746	0.00439	1	10/20/2021 18:09	WG1760359
p-Isopropyltoluene	U		0.00447	0.00877	1	10/20/2021 18:09	WG1760359
2-Butanone (MEK)	U		0.111	0.175	1	10/20/2021 18:09	WG1760359
Methylene Chloride	0.0184	<u>J</u>	0.0117	0.0439	1	10/20/2021 18:09	WG1760359
4-Methyl-2-pentanone (MIBK)	U		0.00400	0.0439	1	10/20/2021 18:09	WG1760359
Methyl tert-butyl ether	U		0.000614	0.00175	1	10/20/2021 18:09	WG1760359
Naphthalene	U		0.00856	0.0219	1	10/20/2021 18:09	WG1760359
n-Propylbenzene	U		0.00167	0.00877	1	10/20/2021 18:09	WG1760359
Styrene	U		0.000402	0.0219	1	10/20/2021 18:09	WG1760359
1,1,1,2-Tetrachloroethane	U		0.00166	0.00439	1	10/20/2021 18:09	WG1760359
1,1,2,2-Tetrachloroethane	U	<u>C3 J4</u>	0.00122	0.00439	1	10/20/2021 18:09	WG1760359
1,1,2-Trichlorotrifluoroethane	U		0.00132	0.00439	1	10/20/2021 18:09	WG1760359
Tetrachloroethene	U		0.00157	0.00439	1	10/20/2021 18:09	WG1760359
Toluene	U		0.00228	0.00877	1	10/20/2021 18:09	WG1760359
1,2,3-Trichlorobenzene	U		0.0129	0.0219	1	10/20/2021 18:09	WG1760359
1,2,4-Trichlorobenzene	U		0.00772	0.0219	1	10/20/2021 18:09	WG1760359
1,1,1-Trichloroethane	U		0.00162	0.00439	1	10/20/2021 18:09	WG1760359
1,1,2-Trichloroethane	U		0.00105	0.00439	1	10/20/2021 18:09	WG1760359
Trichloroethene	U	<u>J4</u>	0.00102	0.00175	1	10/20/2021 18:09	WG1760359
Trichlorofluoromethane	U		0.00145	0.00439	1	10/20/2021 18:09	WG1760359
1,2,3-Trichloropropane	U		0.00284	0.0219	1	10/20/2021 18:09	WG1760359
1,2,4-Trimethylbenzene	U		0.00277	0.00877	1	10/20/2021 18:09	WG1760359
1,2,3-Trimethylbenzene	U		0.00277	0.00877	1	10/20/2021 18:09	WG1760359
1,3,5-Trimethylbenzene	U		0.00351	0.00877	1	10/20/2021 18:09	WG1760359
Vinyl chloride	U		0.00204	0.00439	1	10/20/2021 18:09	WG1760359
Xylenes, Total	U		0.00154	0.0114	1	10/20/2021 18:09	WG1760359
(S) Toluene-d8	107			75.0-131		10/20/2021 18:09	WG1760359
(S) 4-Bromofluorobenzene	101			67.0-138		10/20/2021 18:09	WG1760359
(S) 1,2-Dichloroethane-d4	91.8			70.0-130		10/20/2021 18:09	WG1760359

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		1.78	5.35	1	10/22/2021 14:31	WG1761238
Residual Range Organics (RRO)	U		4.46	13.4	1	10/22/2021 14:31	WG1761238
(S) o-Terphenyl	65.0			18.0-148		10/22/2021 14:31	WG1761238

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00308	0.00803	1	10/23/2021 15:20	WG1761256
Acenaphthene	U		0.00280	0.00803	1	10/23/2021 15:20	WG1761256
Acenaphthylene	U		0.00289	0.00803	1	10/23/2021 15:20	WG1761256
Benzo(a)anthracene	U		0.00231	0.00803	1	10/23/2021 15:20	WG1761256
Benzo(a)pyrene	U		0.00239	0.00803	1	10/23/2021 15:20	WG1761256
Benzo(b)fluoranthene	U		0.00205	0.00803	1	10/23/2021 15:20	WG1761256
Benzo(g,h,i)perylene	U		0.00237	0.00803	1	10/23/2021 15:20	WG1761256
Benzo(k)fluoranthene	U		0.00288	0.00803	1	10/23/2021 15:20	WG1761256
Chrysene	U		0.00310	0.00803	1	10/23/2021 15:20	WG1761256
Dibenz(a,h)anthracene	U		0.00230	0.00803	1	10/23/2021 15:20	WG1761256
Fluoranthene	U		0.00304	0.00803	1	10/23/2021 15:20	WG1761256
Fluorene	U		0.00274	0.00803	1	10/23/2021 15:20	WG1761256
Indeno(1,2,3-cd)pyrene	U		0.00242	0.00803	1	10/23/2021 15:20	WG1761256
Naphthalene	U		0.00546	0.0268	1	10/23/2021 15:20	WG1761256
Phenanthrene	U		0.00309	0.00803	1	10/23/2021 15:20	WG1761256
Pyrene	U		0.00268	0.00803	1	10/23/2021 15:20	WG1761256
1-Methylnaphthalene	U		0.00601	0.0268	1	10/23/2021 15:20	WG1761256
2-Methylnaphthalene	U		0.00571	0.0268	1	10/23/2021 15:20	WG1761256
2-Chloronaphthalene	U		0.00624	0.0268	1	10/23/2021 15:20	WG1761256
(S) Nitrobenzene-d5	73.8			14.0-149		10/23/2021 15:20	WG1761256
(S) 2-Fluorobiphenyl	77.4			34.0-125		10/23/2021 15:20	WG1761256
(S) p-Terphenyl-d14	87.0			23.0-120		10/23/2021 15:20	WG1761256

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury,Dissolved	U		0.100	0.200	1	10/20/2021 18:35	WG1759555

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic,Dissolved	8.09		0.180	2.00	1	11/01/2021 10:04	WG1765493
Barium,Dissolved	8.43		0.381	2.00	1	11/01/2021 10:04	WG1765493
Cadmium,Dissolved	U		0.150	1.00	1	11/01/2021 10:04	WG1765493
Chromium,Dissolved	18.1		1.24	2.00	1	11/01/2021 10:04	WG1765493
Lead,Dissolved	U		0.849	2.00	1	11/01/2021 10:04	WG1765493
Selenium,Dissolved	1.92	J	0.300	2.00	1	11/01/2021 10:04	WG1765493
Silver,Dissolved	U		0.0700	2.00	1	11/01/2021 10:04	WG1765493

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	84.7	B J	31.6	100	1	10/19/2021 20:56	WG1759563
(S) a,a,a-Trifluorotoluene(FID)	93.6			78.0-120		10/19/2021 20:56	WG1759563

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	10/20/2021 23:15	WG1760657
Acrolein	U		2.54	50.0	1	10/20/2021 23:15	WG1760657
Acrylonitrile	U		0.671	10.0	1	10/20/2021 23:15	WG1760657
Benzene	U		0.0941	1.00	1	10/20/2021 23:15	WG1760657
Bromobenzene	U		0.118	1.00	1	10/20/2021 23:15	WG1760657
Bromodichloromethane	U		0.136	1.00	1	10/20/2021 23:15	WG1760657
Bromoform	U		0.129	1.00	1	10/20/2021 23:15	WG1760657
Bromomethane	U	C3 J3	0.605	5.00	1	10/20/2021 23:15	WG1760657
n-Butylbenzene	U		0.157	1.00	1	10/20/2021 23:15	WG1760657
sec-Butylbenzene	U		0.125	1.00	1	10/20/2021 23:15	WG1760657
tert-Butylbenzene	U		0.127	1.00	1	10/20/2021 23:15	WG1760657
Carbon tetrachloride	U		0.128	1.00	1	10/20/2021 23:15	WG1760657
Chlorobenzene	U		0.116	1.00	1	10/20/2021 23:15	WG1760657
Chlorodibromomethane	U		0.140	1.00	1	10/20/2021 23:15	WG1760657
Chloroethane	U		0.192	5.00	1	10/20/2021 23:15	WG1760657
Chloroform	0.883	J	0.111	5.00	1	10/20/2021 23:15	WG1760657
Chloromethane	U	C3	0.960	2.50	1	10/20/2021 23:15	WG1760657
2-Chlorotoluene	U		0.106	1.00	1	10/20/2021 23:15	WG1760657
4-Chlorotoluene	U		0.114	1.00	1	10/20/2021 23:15	WG1760657
1,2-Dibromo-3-Chloropropane	U	C3	0.276	5.00	1	10/20/2021 23:15	WG1760657
1,2-Dibromoethane	U		0.126	1.00	1	10/20/2021 23:15	WG1760657
Dibromomethane	U		0.122	1.00	1	10/20/2021 23:15	WG1760657
1,2-Dichlorobenzene	U		0.107	1.00	1	10/20/2021 23:15	WG1760657
1,3-Dichlorobenzene	U		0.110	1.00	1	10/20/2021 23:15	WG1760657
1,4-Dichlorobenzene	U		0.120	1.00	1	10/20/2021 23:15	WG1760657
Dichlorodifluoromethane	U		0.374	5.00	1	10/20/2021 23:15	WG1760657
1,1-Dichloroethane	U		0.100	1.00	1	10/20/2021 23:15	WG1760657
1,2-Dichloroethane	U		0.0819	1.00	1	10/20/2021 23:15	WG1760657
1,1-Dichloroethene	U		0.188	1.00	1	10/20/2021 23:15	WG1760657
cis-1,2-Dichloroethene	U		0.126	1.00	1	10/20/2021 23:15	WG1760657
trans-1,2-Dichloroethene	U		0.149	1.00	1	10/20/2021 23:15	WG1760657



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichloropropane	U		0.149	1.00	1	10/20/2021 23:15	WG1760657
1,1-Dichloropropene	U		0.142	1.00	1	10/20/2021 23:15	WG1760657
1,3-Dichloropropane	U		0.110	1.00	1	10/20/2021 23:15	WG1760657
cis-1,3-Dichloropropene	U		0.111	1.00	1	10/20/2021 23:15	WG1760657
trans-1,3-Dichloropropene	U		0.118	1.00	1	10/20/2021 23:15	WG1760657
2,2-Dichloropropane	U	J4	0.161	1.00	1	10/20/2021 23:15	WG1760657
Di-isopropyl ether	U		0.105	1.00	1	10/20/2021 23:15	WG1760657
Ethylbenzene	U		0.137	1.00	1	10/20/2021 23:15	WG1760657
Hexachloro-1,3-butadiene	U		0.337	1.00	1	10/20/2021 23:15	WG1760657
Isopropylbenzene	U		0.105	1.00	1	10/20/2021 23:15	WG1760657
p-Isopropyltoluene	U		0.120	1.00	1	10/20/2021 23:15	WG1760657
2-Butanone (MEK)	U		1.19	10.0	1	10/20/2021 23:15	WG1760657
Methylene Chloride	U		0.430	5.00	1	10/20/2021 23:15	WG1760657
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	10/20/2021 23:15	WG1760657
Methyl tert-butyl ether	U		0.101	1.00	1	10/20/2021 23:15	WG1760657
Naphthalene	U	C3 J3 J4	1.00	5.00	1	10/20/2021 23:15	WG1760657
n-Propylbenzene	U		0.0993	1.00	1	10/20/2021 23:15	WG1760657
Styrene	U		0.118	1.00	1	10/20/2021 23:15	WG1760657
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	10/20/2021 23:15	WG1760657
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	10/20/2021 23:15	WG1760657
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	10/20/2021 23:15	WG1760657
Tetrachloroethene	U		0.300	1.00	1	10/20/2021 23:15	WG1760657
Toluene	0.388	J	0.278	1.00	1	10/20/2021 23:15	WG1760657
1,2,3-Trichlorobenzene	U	C3 J3	0.230	1.00	1	10/20/2021 23:15	WG1760657
1,2,4-Trichlorobenzene	U	C3	0.481	1.00	1	10/20/2021 23:15	WG1760657
1,1,1-Trichloroethane	U		0.149	1.00	1	10/20/2021 23:15	WG1760657
1,1,2-Trichloroethane	U		0.158	1.00	1	10/20/2021 23:15	WG1760657
Trichloroethene	U		0.190	1.00	1	10/20/2021 23:15	WG1760657
Trichlorofluoromethane	U		0.160	5.00	1	10/20/2021 23:15	WG1760657
1,2,3-Trichloropropane	U		0.237	2.50	1	10/20/2021 23:15	WG1760657
1,2,4-Trimethylbenzene	U		0.322	1.00	1	10/20/2021 23:15	WG1760657
1,2,3-Trimethylbenzene	U		0.104	1.00	1	10/20/2021 23:15	WG1760657
1,3,5-Trimethylbenzene	U		0.104	1.00	1	10/20/2021 23:15	WG1760657
Vinyl chloride	U		0.234	1.00	1	10/20/2021 23:15	WG1760657
Xylenes, Total	U		0.174	3.00	1	10/20/2021 23:15	WG1760657
(S) Toluene-d8	105			80.0-120		10/20/2021 23:15	WG1760657
(S) 4-Bromofluorobenzene	94.9			77.0-126		10/20/2021 23:15	WG1760657
(S) 1,2-Dichloroethane-d4	115			70.0-130		10/20/2021 23:15	WG1760657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	275		33.3	100	1	10/22/2021 15:44	WG1761285
Residual Range Organics (RRO)	303		83.3	250	1	10/22/2021 15:44	WG1761285
(S) o-Terphenyl	88.0			31.0-160		10/22/2021 15:44	WG1761285

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U	T8	0.0190	0.0500	1	10/17/2021 14:24	WG1757875
Acenaphthene	0.105	T8	0.0190	0.0500	1	10/17/2021 14:24	WG1757875
Acenaphthylene	0.0283	J T8	0.0171	0.0500	1	10/17/2021 14:24	WG1757875
Benzo(a)anthracene	U	T8	0.0203	0.0500	1	10/17/2021 14:24	WG1757875
Benzo(a)pyrene	U	T8	0.0184	0.0500	1	10/17/2021 14:24	WG1757875
Benzo(b)fluoranthene	U	T8	0.0168	0.0500	1	10/17/2021 14:24	WG1757875

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U	<u>T8</u>	0.0184	0.0500	1	10/17/2021 14:24	WG1757875
Benzo(k)fluoranthene	U	<u>T8</u>	0.0202	0.0500	1	10/17/2021 14:24	WG1757875
Chrysene	U	<u>T8</u>	0.0179	0.0500	1	10/17/2021 14:24	WG1757875
Dibenz(a,h)anthracene	U	<u>T8</u>	0.0160	0.0500	1	10/17/2021 14:24	WG1757875
Fluoranthene	0.0616	<u>J T8</u>	0.0270	0.100	1	10/17/2021 14:24	WG1757875
Fluorene	0.0503	<u>T8</u>	0.0169	0.0500	1	10/17/2021 14:24	WG1757875
Indeno(1,2,3-cd)pyrene	U	<u>T8</u>	0.0158	0.0500	1	10/17/2021 14:24	WG1757875
Naphthalene	0.150	<u>J T8</u>	0.0917	0.250	1	10/17/2021 14:24	WG1757875
Phenanthrene	0.0453	<u>J T8</u>	0.0180	0.0500	1	10/17/2021 14:24	WG1757875
Pyrene	0.0423	<u>J T8</u>	0.0169	0.0500	1	10/17/2021 14:24	WG1757875
1-Methylnaphthalene	U	<u>T8</u>	0.0687	0.250	1	10/17/2021 14:24	WG1757875
2-Methylnaphthalene	U	<u>T8</u>	0.0674	0.250	1	10/17/2021 14:24	WG1757875
2-Chloronaphthalene	U	<u>T8</u>	0.0682	0.250	1	10/17/2021 14:24	WG1757875
(S) Nitrobenzene-d5	110			31.0-160		10/17/2021 14:24	WG1757875
(S) 2-Fluorobiphenyl	122			48.0-148		10/17/2021 14:24	WG1757875
(S) p-Terphenyl-d14	146			37.0-146		10/17/2021 14:24	WG1757875

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury,Dissolved	U		0.100	0.200	1	10/20/2021 18:41	WG1759555

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic,Dissolved	U		0.180	2.00	1	11/01/2021 10:07	WG1765493
Barium,Dissolved	5.10		0.381	2.00	1	11/01/2021 10:07	WG1765493
Cadmium,Dissolved	U		0.150	1.00	1	11/01/2021 10:07	WG1765493
Chromium,Dissolved	U		1.24	2.00	1	11/01/2021 10:07	WG1765493
Lead,Dissolved	U		0.849	2.00	1	11/01/2021 10:07	WG1765493
Selenium,Dissolved	0.651	J	0.300	2.00	1	11/01/2021 10:07	WG1765493
Silver,Dissolved	U		0.0700	2.00	1	11/01/2021 10:07	WG1765493

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	79.9	B J	31.6	100	1	10/19/2021 21:18	WG1759563
(S) a,a,a-Trifluorotoluene(FID)	93.2			78.0-120		10/19/2021 21:18	WG1759563

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	10/20/2021 23:37	WG1760657
Acrolein	U		2.54	50.0	1	10/20/2021 23:37	WG1760657
Acrylonitrile	U		0.671	10.0	1	10/20/2021 23:37	WG1760657
Benzene	U		0.0941	1.00	1	10/20/2021 23:37	WG1760657
Bromobenzene	U		0.118	1.00	1	10/20/2021 23:37	WG1760657
Bromodichloromethane	U		0.136	1.00	1	10/20/2021 23:37	WG1760657
Bromoform	U		0.129	1.00	1	10/20/2021 23:37	WG1760657
Bromomethane	U	C3 J3	0.605	5.00	1	10/20/2021 23:37	WG1760657
n-Butylbenzene	U		0.157	1.00	1	10/20/2021 23:37	WG1760657
sec-Butylbenzene	U		0.125	1.00	1	10/20/2021 23:37	WG1760657
tert-Butylbenzene	U		0.127	1.00	1	10/20/2021 23:37	WG1760657
Carbon tetrachloride	U		0.128	1.00	1	10/20/2021 23:37	WG1760657
Chlorobenzene	U		0.116	1.00	1	10/20/2021 23:37	WG1760657
Chlorodibromomethane	U		0.140	1.00	1	10/20/2021 23:37	WG1760657
Chloroethane	U		0.192	5.00	1	10/20/2021 23:37	WG1760657
Chloroform	U		0.111	5.00	1	10/20/2021 23:37	WG1760657
Chloromethane	U	C3	0.960	2.50	1	10/20/2021 23:37	WG1760657
2-Chlorotoluene	U		0.106	1.00	1	10/20/2021 23:37	WG1760657
4-Chlorotoluene	U		0.114	1.00	1	10/20/2021 23:37	WG1760657
1,2-Dibromo-3-Chloropropane	U	C3	0.276	5.00	1	10/20/2021 23:37	WG1760657
1,2-Dibromoethane	U		0.126	1.00	1	10/20/2021 23:37	WG1760657
Dibromomethane	U		0.122	1.00	1	10/20/2021 23:37	WG1760657
1,2-Dichlorobenzene	U		0.107	1.00	1	10/20/2021 23:37	WG1760657
1,3-Dichlorobenzene	U		0.110	1.00	1	10/20/2021 23:37	WG1760657
1,4-Dichlorobenzene	U		0.120	1.00	1	10/20/2021 23:37	WG1760657
Dichlorodifluoromethane	U		0.374	5.00	1	10/20/2021 23:37	WG1760657
1,1-Dichloroethane	U		0.100	1.00	1	10/20/2021 23:37	WG1760657
1,2-Dichloroethane	U		0.0819	1.00	1	10/20/2021 23:37	WG1760657
1,1-Dichloroethene	U		0.188	1.00	1	10/20/2021 23:37	WG1760657
cis-1,2-Dichloroethene	U		0.126	1.00	1	10/20/2021 23:37	WG1760657
trans-1,2-Dichloroethene	U		0.149	1.00	1	10/20/2021 23:37	WG1760657



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichloropropane	U		0.149	1.00	1	10/20/2021 23:37	WG1760657
1,1-Dichloropropene	U		0.142	1.00	1	10/20/2021 23:37	WG1760657
1,3-Dichloropropane	U		0.110	1.00	1	10/20/2021 23:37	WG1760657
cis-1,3-Dichloropropene	U		0.111	1.00	1	10/20/2021 23:37	WG1760657
trans-1,3-Dichloropropene	U		0.118	1.00	1	10/20/2021 23:37	WG1760657
2,2-Dichloropropane	U	J4	0.161	1.00	1	10/20/2021 23:37	WG1760657
Di-isopropyl ether	U		0.105	1.00	1	10/20/2021 23:37	WG1760657
Ethylbenzene	U		0.137	1.00	1	10/20/2021 23:37	WG1760657
Hexachloro-1,3-butadiene	U		0.337	1.00	1	10/20/2021 23:37	WG1760657
Isopropylbenzene	U		0.105	1.00	1	10/20/2021 23:37	WG1760657
p-Isopropyltoluene	U		0.120	1.00	1	10/20/2021 23:37	WG1760657
2-Butanone (MEK)	U		1.19	10.0	1	10/20/2021 23:37	WG1760657
Methylene Chloride	U		0.430	5.00	1	10/20/2021 23:37	WG1760657
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	10/20/2021 23:37	WG1760657
Methyl tert-butyl ether	U		0.101	1.00	1	10/20/2021 23:37	WG1760657
Naphthalene	U	C3 J3 J4	1.00	5.00	1	10/20/2021 23:37	WG1760657
n-Propylbenzene	U		0.0993	1.00	1	10/20/2021 23:37	WG1760657
Styrene	U		0.118	1.00	1	10/20/2021 23:37	WG1760657
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	10/20/2021 23:37	WG1760657
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	10/20/2021 23:37	WG1760657
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	10/20/2021 23:37	WG1760657
Tetrachloroethene	U		0.300	1.00	1	10/20/2021 23:37	WG1760657
Toluene	U		0.278	1.00	1	10/20/2021 23:37	WG1760657
1,2,3-Trichlorobenzene	U	C3 J3	0.230	1.00	1	10/20/2021 23:37	WG1760657
1,2,4-Trichlorobenzene	U	C3	0.481	1.00	1	10/20/2021 23:37	WG1760657
1,1,1-Trichloroethane	U		0.149	1.00	1	10/20/2021 23:37	WG1760657
1,1,2-Trichloroethane	U		0.158	1.00	1	10/20/2021 23:37	WG1760657
Trichloroethene	U		0.190	1.00	1	10/20/2021 23:37	WG1760657
Trichlorofluoromethane	U		0.160	5.00	1	10/20/2021 23:37	WG1760657
1,2,3-Trichloropropane	U		0.237	2.50	1	10/20/2021 23:37	WG1760657
1,2,4-Trimethylbenzene	U		0.322	1.00	1	10/20/2021 23:37	WG1760657
1,2,3-Trimethylbenzene	U		0.104	1.00	1	10/20/2021 23:37	WG1760657
1,3,5-Trimethylbenzene	U		0.104	1.00	1	10/20/2021 23:37	WG1760657
Vinyl chloride	U		0.234	1.00	1	10/20/2021 23:37	WG1760657
Xylenes, Total	U		0.174	3.00	1	10/20/2021 23:37	WG1760657
(S) Toluene-d8	104			80.0-120		10/20/2021 23:37	WG1760657
(S) 4-Bromofluorobenzene	96.4			77.0-126		10/20/2021 23:37	WG1760657
(S) 1,2-Dichloroethane-d4	118			70.0-130		10/20/2021 23:37	WG1760657



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	186		33.3	100	1	10/22/2021 16:12	WG1761285
Residual Range Organics (RRO)	266		83.3	250	1	10/22/2021 16:12	WG1761285
(S) o-Terphenyl	87.5			31.0-160		10/22/2021 16:12	WG1761285

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U	T8	0.0190	0.0500	1	10/17/2021 14:42	WG1757875
Acenaphthene	U	T8	0.0190	0.0500	1	10/17/2021 14:42	WG1757875
Acenaphthylene	U	T8	0.0171	0.0500	1	10/17/2021 14:42	WG1757875
Benzo(a)anthracene	U	T8	0.0203	0.0500	1	10/17/2021 14:42	WG1757875
Benzo(a)pyrene	U	T8	0.0184	0.0500	1	10/17/2021 14:42	WG1757875
Benzo(b)fluoranthene	U	T8	0.0168	0.0500	1	10/17/2021 14:42	WG1757875

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U	<u>T8</u>	0.0184	0.0500	1	10/17/2021 14:42	WG1757875
Benzo(k)fluoranthene	U	<u>T8</u>	0.0202	0.0500	1	10/17/2021 14:42	WG1757875
Chrysene	U	<u>T8</u>	0.0179	0.0500	1	10/17/2021 14:42	WG1757875
Dibenz(a,h)anthracene	U	<u>T8</u>	0.0160	0.0500	1	10/17/2021 14:42	WG1757875
Fluoranthene	U	<u>T8</u>	0.0270	0.100	1	10/17/2021 14:42	WG1757875
Fluorene	U	<u>T8</u>	0.0169	0.0500	1	10/17/2021 14:42	WG1757875
Indeno(1,2,3-cd)pyrene	U	<u>T8</u>	0.0158	0.0500	1	10/17/2021 14:42	WG1757875
Naphthalene	U	<u>T8</u>	0.0917	0.250	1	10/17/2021 14:42	WG1757875
Phenanthrene	U	<u>T8</u>	0.0180	0.0500	1	10/17/2021 14:42	WG1757875
Pyrene	0.0172	<u>J T8</u>	0.0169	0.0500	1	10/17/2021 14:42	WG1757875
1-Methylnaphthalene	U	<u>T8</u>	0.0687	0.250	1	10/17/2021 14:42	WG1757875
2-Methylnaphthalene	U	<u>T8</u>	0.0674	0.250	1	10/17/2021 14:42	WG1757875
2-Chloronaphthalene	U	<u>T8</u>	0.0682	0.250	1	10/17/2021 14:42	WG1757875
(S) Nitrobenzene-d5	100			31.0-160		10/17/2021 14:42	WG1757875
(S) 2-Fluorobiphenyl	122			48.0-148		10/17/2021 14:42	WG1757875
(S) p-Terphenyl-d14	151	<u>J1</u>		37.0-146		10/17/2021 14:42	WG1757875

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury,Dissolved	U		0.100	0.200	1	10/20/2021 18:43	WG1759555

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic,Dissolved	1.27	<u>J</u>	0.180	2.00	1	11/01/2021 10:10	WG1765493
Barium,Dissolved	26.4		0.381	2.00	1	11/01/2021 10:10	WG1765493
Cadmium,Dissolved	U		0.150	1.00	1	11/01/2021 10:10	WG1765493
Chromium,Dissolved	U		1.24	2.00	1	11/01/2021 10:10	WG1765493
Lead,Dissolved	2.05		0.849	2.00	1	11/01/2021 10:10	WG1765493
Selenium,Dissolved	U		0.300	2.00	1	11/01/2021 10:10	WG1765493
Silver,Dissolved	U		0.0700	2.00	1	11/01/2021 10:10	WG1765493

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	80.3	<u>B J</u>	31.6	100	1	10/19/2021 21:40	WG1759563
(S) a,a,a-Trifluorotoluene(FID)	93.3			78.0-120		10/19/2021 21:40	WG1759563

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	10/20/2021 23:58	WG1760657
Acrolein	U		2.54	50.0	1	10/20/2021 23:58	WG1760657
Acrylonitrile	U		0.671	10.0	1	10/20/2021 23:58	WG1760657
Benzene	U		0.0941	1.00	1	10/20/2021 23:58	WG1760657
Bromobenzene	U		0.118	1.00	1	10/20/2021 23:58	WG1760657
Bromodichloromethane	U		0.136	1.00	1	10/20/2021 23:58	WG1760657
Bromoform	U		0.129	1.00	1	10/20/2021 23:58	WG1760657
Bromomethane	U	<u>C3 J3</u>	0.605	5.00	1	10/20/2021 23:58	WG1760657
n-Butylbenzene	U		0.157	1.00	1	10/20/2021 23:58	WG1760657
sec-Butylbenzene	U		0.125	1.00	1	10/20/2021 23:58	WG1760657
tert-Butylbenzene	U		0.127	1.00	1	10/20/2021 23:58	WG1760657
Carbon tetrachloride	U		0.128	1.00	1	10/20/2021 23:58	WG1760657
Chlorobenzene	U		0.116	1.00	1	10/20/2021 23:58	WG1760657
Chlorodibromomethane	U		0.140	1.00	1	10/20/2021 23:58	WG1760657
Chloroethane	U		0.192	5.00	1	10/20/2021 23:58	WG1760657
Chloroform	2.16	<u>J</u>	0.111	5.00	1	10/20/2021 23:58	WG1760657
Chloromethane	U	<u>C3</u>	0.960	2.50	1	10/20/2021 23:58	WG1760657
2-Chlorotoluene	U		0.106	1.00	1	10/20/2021 23:58	WG1760657
4-Chlorotoluene	U		0.114	1.00	1	10/20/2021 23:58	WG1760657
1,2-Dibromo-3-Chloropropane	U	<u>C3</u>	0.276	5.00	1	10/20/2021 23:58	WG1760657
1,2-Dibromoethane	U		0.126	1.00	1	10/20/2021 23:58	WG1760657
Dibromomethane	U		0.122	1.00	1	10/20/2021 23:58	WG1760657
1,2-Dichlorobenzene	U		0.107	1.00	1	10/20/2021 23:58	WG1760657
1,3-Dichlorobenzene	U		0.110	1.00	1	10/20/2021 23:58	WG1760657
1,4-Dichlorobenzene	U		0.120	1.00	1	10/20/2021 23:58	WG1760657
Dichlorodifluoromethane	U		0.374	5.00	1	10/20/2021 23:58	WG1760657
1,1-Dichloroethane	U		0.100	1.00	1	10/20/2021 23:58	WG1760657
1,2-Dichloroethane	U		0.0819	1.00	1	10/20/2021 23:58	WG1760657
1,1-Dichloroethene	U		0.188	1.00	1	10/20/2021 23:58	WG1760657
cis-1,2-Dichloroethene	U		0.126	1.00	1	10/20/2021 23:58	WG1760657
trans-1,2-Dichloroethene	U		0.149	1.00	1	10/20/2021 23:58	WG1760657



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichloropropane	U		0.149	1.00	1	10/20/2021 23:58	WG1760657
1,1-Dichloropropene	U		0.142	1.00	1	10/20/2021 23:58	WG1760657
1,3-Dichloropropane	U		0.110	1.00	1	10/20/2021 23:58	WG1760657
cis-1,3-Dichloropropene	U		0.111	1.00	1	10/20/2021 23:58	WG1760657
trans-1,3-Dichloropropene	U		0.118	1.00	1	10/20/2021 23:58	WG1760657
2,2-Dichloropropane	U	J4	0.161	1.00	1	10/20/2021 23:58	WG1760657
Di-isopropyl ether	U		0.105	1.00	1	10/20/2021 23:58	WG1760657
Ethylbenzene	U		0.137	1.00	1	10/20/2021 23:58	WG1760657
Hexachloro-1,3-butadiene	U		0.337	1.00	1	10/20/2021 23:58	WG1760657
Isopropylbenzene	U		0.105	1.00	1	10/20/2021 23:58	WG1760657
p-Isopropyltoluene	U		0.120	1.00	1	10/20/2021 23:58	WG1760657
2-Butanone (MEK)	U		1.19	10.0	1	10/20/2021 23:58	WG1760657
Methylene Chloride	U		0.430	5.00	1	10/20/2021 23:58	WG1760657
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	10/20/2021 23:58	WG1760657
Methyl tert-butyl ether	U		0.101	1.00	1	10/20/2021 23:58	WG1760657
Naphthalene	U	C3 J3 J4	1.00	5.00	1	10/20/2021 23:58	WG1760657
n-Propylbenzene	U		0.0993	1.00	1	10/20/2021 23:58	WG1760657
Styrene	U		0.118	1.00	1	10/20/2021 23:58	WG1760657
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	10/20/2021 23:58	WG1760657
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	10/20/2021 23:58	WG1760657
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	10/20/2021 23:58	WG1760657
Tetrachloroethene	U		0.300	1.00	1	10/20/2021 23:58	WG1760657
Toluene	U		0.278	1.00	1	10/20/2021 23:58	WG1760657
1,2,3-Trichlorobenzene	U	C3 J3	0.230	1.00	1	10/20/2021 23:58	WG1760657
1,2,4-Trichlorobenzene	U	C3	0.481	1.00	1	10/20/2021 23:58	WG1760657
1,1,1-Trichloroethane	U		0.149	1.00	1	10/20/2021 23:58	WG1760657
1,1,2-Trichloroethane	U		0.158	1.00	1	10/20/2021 23:58	WG1760657
Trichloroethene	U		0.190	1.00	1	10/20/2021 23:58	WG1760657
Trichlorofluoromethane	U		0.160	5.00	1	10/20/2021 23:58	WG1760657
1,2,3-Trichloropropane	U		0.237	2.50	1	10/20/2021 23:58	WG1760657
1,2,4-Trimethylbenzene	U		0.322	1.00	1	10/20/2021 23:58	WG1760657
1,2,3-Trimethylbenzene	U		0.104	1.00	1	10/20/2021 23:58	WG1760657
1,3,5-Trimethylbenzene	U		0.104	1.00	1	10/20/2021 23:58	WG1760657
Vinyl chloride	U		0.234	1.00	1	10/20/2021 23:58	WG1760657
Xylenes, Total	U		0.174	3.00	1	10/20/2021 23:58	WG1760657
(S) Toluene-d8	101			80.0-120		10/20/2021 23:58	WG1760657
(S) 4-Bromofluorobenzene	98.3			77.0-126		10/20/2021 23:58	WG1760657
(S) 1,2-Dichloroethane-d4	118			70.0-130		10/20/2021 23:58	WG1760657

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	179		33.3	100	1	10/22/2021 16:40	WG1761285
Residual Range Organics (RRO)	291		83.3	250	1	10/22/2021 16:40	WG1761285
(S) o-Terphenyl	75.5			31.0-160		10/22/2021 16:40	WG1761285

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U	T8	0.0190	0.0500	1	10/17/2021 14:59	WG1757875
Acenaphthene	U	T8	0.0190	0.0500	1	10/17/2021 14:59	WG1757875
Acenaphthylene	U	T8	0.0171	0.0500	1	10/17/2021 14:59	WG1757875
Benzo(a)anthracene	U	T8	0.0203	0.0500	1	10/17/2021 14:59	WG1757875
Benzo(a)pyrene	U	T8	0.0184	0.0500	1	10/17/2021 14:59	WG1757875
Benzo(b)fluoranthene	U	T8	0.0168	0.0500	1	10/17/2021 14:59	WG1757875

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U	<u>T8</u>	0.0184	0.0500	1	10/17/2021 14:59	WG1757875
Benzo(k)fluoranthene	U	<u>T8</u>	0.0202	0.0500	1	10/17/2021 14:59	WG1757875
Chrysene	U	<u>T8</u>	0.0179	0.0500	1	10/17/2021 14:59	WG1757875
Dibenz(a,h)anthracene	U	<u>T8</u>	0.0160	0.0500	1	10/17/2021 14:59	WG1757875
Fluoranthene	U	<u>T8</u>	0.0270	0.100	1	10/17/2021 14:59	WG1757875
Fluorene	U	<u>T8</u>	0.0169	0.0500	1	10/17/2021 14:59	WG1757875
Indeno(1,2,3-cd)pyrene	U	<u>T8</u>	0.0158	0.0500	1	10/17/2021 14:59	WG1757875
Naphthalene	U	<u>T8</u>	0.0917	0.250	1	10/17/2021 14:59	WG1757875
Phenanthrene	0.0251	<u>J T8</u>	0.0180	0.0500	1	10/17/2021 14:59	WG1757875
Pyrene	0.0175	<u>J T8</u>	0.0169	0.0500	1	10/17/2021 14:59	WG1757875
1-Methylnaphthalene	U	<u>T8</u>	0.0687	0.250	1	10/17/2021 14:59	WG1757875
2-Methylnaphthalene	U	<u>T8</u>	0.0674	0.250	1	10/17/2021 14:59	WG1757875
2-Chloronaphthalene	U	<u>T8</u>	0.0682	0.250	1	10/17/2021 14:59	WG1757875
(S) Nitrobenzene-d5	70.5			31.0-160		10/17/2021 14:59	WG1757875
(S) 2-Fluorobiphenyl	83.7			48.0-148		10/17/2021 14:59	WG1757875
(S) p-Terphenyl-d14	53.2			37.0-146		10/17/2021 14:59	WG1757875

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3718704-1 10/19/21 17:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

L1418104-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1418104-01 10/19/21 17:10 • (DUP) R3718704-3 10/19/21 17:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	22.4	22.3	1	0.392		10

⁴Cn

⁵Sr

Laboratory Control Sample (LCS)

(LCS) R3718704-2 10/19/21 17:10

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3718693-1 10/19/21 15:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00200			

1 Cp

2 Tc

3 Ss

L1418105-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1418105-02 10/19/21 15:41 • (DUP) R3718693-3 10/19/21 15:41

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	92.1	91.9	1	0.137		10

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3718693-2 10/19/21 15:41

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3719136-6 10/20/21 18:47

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury,Dissolved	U		0.100	0.200

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3719136-1 10/20/21 17:45

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury,Dissolved	3.00	3.08	103	80.0-120	

4 Cn

5 Sr

6 Qc

L1417792-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1417792-11 10/20/21 17:54 • (MS) R3719136-2 10/20/21 17:56 • (MSD) R3719136-3 10/20/21 17:58

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury,Dissolved	3.00	0.102	3.28	3.19	106	103	1	75.0-125			2.73	20

7 Gl

8 Al

L1417895-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1417895-14 10/20/21 18:00 • (MS) R3719136-4 10/20/21 18:02 • (MSD) R3719136-5 10/20/21 18:04

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury,Dissolved	3.00	U	3.08	2.92	103	97.2	1	75.0-125			5.42	20

9 Sc

Method Blank (MB)

(MB) R3718330-1 10/19/21 10:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3718330-2 10/19/21 10:43

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	0.500	0.491	98.2	80.0-120	

L1417797-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1417797-06 10/19/21 10:51 • (MS) R3718330-3 10/19/21 10:53 • (MSD) R3718330-4 10/19/21 10:56

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.529	U	0.527	0.485	99.5	91.6	1	75.0-125			8.29	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3718334-1 10/19/21 11:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.0180	0.0400

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3718334-2 10/19/21 12:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	0.500	0.510	102	80.0-120	

4 Cn

5 Sr

6 Qc

L1418194-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1418194-03 10/19/21 13:33 • (MS) R3718334-5 10/19/21 13:35 • (MSD) R3718334-6 10/19/21 13:38

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.500	0.625	1.35	1.33	125	123	2	75.0-125			0.973	20

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3718646-1 10/19/21 15:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.0180	0.0400

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3718646-2 10/19/21 15:55

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	0.500	0.511	102	80.0-120	

4 Cn

5 Sr

L1418392-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1418392-01 10/19/21 15:58 • (MS) R3718646-3 10/19/21 16:00 • (MSD) R3718646-4 10/19/21 16:03

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.650	0.0302	0.665	0.584	97.6	85.1	1	75.0-125			13.0	20

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3721151-1 10/25/21 23:26

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.166	3.00
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Chromium	U		0.297	5.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3721151-2 10/25/21 23:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	107	107	80.0-120	
Arsenic	100	95.4	95.4	80.0-120	
Barium	100	93.1	93.1	80.0-120	
Cadmium	100	101	101	80.0-120	
Chromium	100	98.9	98.9	80.0-120	
Copper	100	91.7	91.7	80.0-120	
Lead	100	96.1	96.1	80.0-120	
Selenium	100	97.5	97.5	80.0-120	
Silver	20.0	19.7	98.3	80.0-120	
Zinc	100	98.7	98.7	80.0-120	

L1419082-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1419082-09 10/25/21 23:33 • (MS) R3721151-5 10/25/21 23:42 • (MSD) R3721151-6 10/25/21 23:46

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	123	3.09	110	118	86.4	93.2	5	75.0-125			7.35	20
Barium	123	121	245	307	100	150	5	75.0-125		J3 J5	22.4	20
Cadmium	123	0.112	124	132	101	107	5	75.0-125			5.85	20
Chromium	123	20.4	137	147	94.5	103	5	75.0-125			7.08	20
Copper	123	13.3	129	143	93.8	106	5	75.0-125			10.7	20
Lead	123	9.43	123	125	92.2	94.2	5	75.0-125			1.98	20

L1419082-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1419082-09 10/25/21 23:33 • (MS) R3721151-5 10/25/21 23:42 • (MSD) R3721151-6 10/25/21 23:46

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Selenium	123	0.467	117	124	94.4	100	5	75.0-125			5.98	20
Silver	24.6	U	23.8	25.0	96.5	101	5	75.0-125			4.98	20
Zinc	123	260	457	536	160	224	5	75.0-125	<u>J5</u>	<u>J5</u>	16.0	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3723741-1 11/01/21 09:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		0.180	2.00
Barium,Dissolved	U		0.381	2.00
Cadmium,Dissolved	U		0.150	1.00
Chromium,Dissolved	U		1.24	2.00
Lead,Dissolved	U		0.849	2.00
Selenium,Dissolved	U		0.300	2.00
Silver,Dissolved	U		0.0700	2.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3723741-2 11/01/21 09:19

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Arsenic,Dissolved	50.0	49.4	98.7	80.0-120	
Barium,Dissolved	50.0	48.2	96.4	80.0-120	
Cadmium,Dissolved	50.0	51.2	102	80.0-120	
Chromium,Dissolved	50.0	51.8	104	80.0-120	
Lead,Dissolved	50.0	53.0	106	80.0-120	
Selenium,Dissolved	50.0	52.6	105	80.0-120	
Silver,Dissolved	50.0	50.6	101	80.0-120	

L1418043-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1418043-21 11/01/21 09:22 • (MS) R3723741-4 11/01/21 09:29 • (MSD) R3723741-5 11/01/21 09:33

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Arsenic,Dissolved	50.0	0.220	48.1	47.8	95.7	95.1	1	75.0-125			0.544	20
Barium,Dissolved	50.0	52.6	103	97.8	100	90.4	1	75.0-125			4.84	20
Cadmium,Dissolved	50.0	U	50.9	51.3	102	103	1	75.0-125			0.835	20
Chromium,Dissolved	50.0	U	48.8	49.6	97.7	99.2	1	75.0-125			1.57	20
Lead,Dissolved	50.0	U	51.4	51.4	103	103	1	75.0-125			0.0223	20
Selenium,Dissolved	50.0	2.50	57.3	58.0	110	111	1	75.0-125			1.22	20
Silver,Dissolved	50.0	U	50.7	50.4	101	101	1	75.0-125			0.659	20

Method Blank (MB)

(MB) R3720484-2 10/19/21 16:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	74.5	↓	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	93.1			78.0-120

Laboratory Control Sample (LCS)

(LCS) R3720484-1 10/19/21 14:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	6280	114	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			103	78.0-120	

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3721319-2 10/20/21 22:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	95.9			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3721319-1 10/20/21 22:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.50	4.82	87.6	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			110	77.0-120	

L1416579-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416579-11 10/21/21 00:18 • (MS) R3721319-3 10/21/21 08:06 • (MSD) R3721319-4 10/21/21 08:28

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	125	1.34	92.8	92.8	73.2	73.2	25	10.0-149			0.000	27
(S) a,a,a-Trifluorotoluene(FID)					106	107		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3719952-2 10/21/21 11:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	95.0			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3719952-1 10/21/21 10:16

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.50	5.65	103	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			100	77.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3720901-2 10/20/21 11:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3720901-2 10/20/21 11:00

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	106			75.0-131
(S) 4-Bromofluorobenzene	101			67.0-138
(S) 1,2-Dichloroethane-d4	93.3			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3720901-1 10/20/21 10:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.627	100	10.0-160	
Acrylonitrile	0.625	0.603	96.5	45.0-153	
Benzene	0.125	0.120	96.0	70.0-123	
Bromobenzene	0.125	0.118	94.4	73.0-121	
Bromodichloromethane	0.125	0.129	103	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R3720901-1 10/20/21 10:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromoform	0.125	0.129	103	64.0-132	
Bromomethane	0.125	0.120	96.0	56.0-147	
n-Butylbenzene	0.125	0.115	92.0	68.0-135	
sec-Butylbenzene	0.125	0.120	96.0	74.0-130	
tert-Butylbenzene	0.125	0.120	96.0	75.0-127	
Carbon tetrachloride	0.125	0.121	96.8	66.0-128	
Chlorobenzene	0.125	0.116	92.8	76.0-128	
Chlorodibromomethane	0.125	0.122	97.6	74.0-127	
Chloroethane	0.125	0.131	105	61.0-134	
Chloroform	0.125	0.127	102	72.0-123	
Chloromethane	0.125	0.109	87.2	51.0-138	
2-Chlorotoluene	0.125	0.121	96.8	75.0-124	
4-Chlorotoluene	0.125	0.118	94.4	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.123	98.4	59.0-130	
1,2-Dibromoethane	0.125	0.132	106	74.0-128	
Dibromomethane	0.125	0.132	106	75.0-122	
1,2-Dichlorobenzene	0.125	0.127	102	76.0-124	
1,3-Dichlorobenzene	0.125	0.119	95.2	76.0-125	
1,4-Dichlorobenzene	0.125	0.118	94.4	77.0-121	
Dichlorodifluoromethane	0.125	0.122	97.6	43.0-156	
1,1-Dichloroethane	0.125	0.121	96.8	70.0-127	
1,2-Dichloroethane	0.125	0.133	106	65.0-131	
1,1-Dichloroethene	0.125	0.114	91.2	65.0-131	
cis-1,2-Dichloroethene	0.125	0.127	102	73.0-125	
trans-1,2-Dichloroethene	0.125	0.116	92.8	71.0-125	
1,2-Dichloropropane	0.125	0.123	98.4	74.0-125	
1,1-Dichloropropene	0.125	0.119	95.2	73.0-125	
1,3-Dichloropropane	0.125	0.126	101	80.0-125	
cis-1,3-Dichloropropene	0.125	0.133	106	76.0-127	
trans-1,3-Dichloropropene	0.125	0.126	101	73.0-127	
2,2-Dichloropropane	0.125	0.129	103	59.0-135	
Di-isopropyl ether	0.125	0.121	96.8	60.0-136	
Ethylbenzene	0.125	0.122	97.6	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.0980	78.4	57.0-150	
Isopropylbenzene	0.125	0.121	96.8	72.0-127	
p-Isopropyltoluene	0.125	0.123	98.4	72.0-133	
2-Butanone (MEK)	0.625	0.582	93.1	30.0-160	
Methylene Chloride	0.125	0.126	101	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.632	101	56.0-143	
Methyl tert-butyl ether	0.125	0.125	100	66.0-132	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3720901-1 10/20/21 10:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Naphthalene	0.125	0.106	84.8	59.0-130	
n-Propylbenzene	0.125	0.119	95.2	74.0-126	
Styrene	0.125	0.128	102	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.123	98.4	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.0840	67.2	68.0-128	J4
Tetrachloroethene	0.125	0.122	97.6	70.0-136	
Toluene	0.125	0.116	92.8	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.117	93.6	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.108	86.4	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.110	88.0	62.0-137	
1,1,1-Trichloroethane	0.125	0.118	94.4	69.0-126	
1,1,2-Trichloroethane	0.125	0.119	95.2	78.0-123	
Trichloroethene	0.125	0.164	131	76.0-126	J4
Trichlorofluoromethane	0.125	0.116	92.8	61.0-142	
1,2,3-Trichloropropane	0.125	0.124	99.2	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.117	93.6	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.117	93.6	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.115	92.0	73.0-127	
Vinyl chloride	0.125	0.118	94.4	63.0-134	
Xylenes, Total	0.375	0.366	97.6	72.0-127	
(S) Toluene-d8			104	75.0-131	
(S) 4-Bromofluorobenzene			106	67.0-138	
(S) 1,2-Dichloroethane-d4			101	70.0-130	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3719965-3 10/21/21 03:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	0.000900	U	0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3719965-3 10/21/21 03:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	105			75.0-131
(S) 4-Bromofluorobenzene	102			67.0-138
(S) 1,2-Dichloroethane-d4	107			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3719965-1 10/21/21 02:16 • (LCSD) R3719965-2 10/21/21 02:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	1.03	0.790	165	126	10.0-160	J4		26.4	31
Acrylonitrile	0.625	0.920	0.906	147	145	45.0-153			1.53	22
Benzene	0.125	0.120	0.112	96.0	89.6	70.0-123			6.90	20
Bromobenzene	0.125	0.112	0.107	89.6	85.6	73.0-121			4.57	20
Bromodichloromethane	0.125	0.128	0.124	102	99.2	73.0-121			3.17	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3719965-1 10/21/21 02:16 • (LCSD) R3719965-2 10/21/21 02:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromoform	0.125	0.126	0.120	101	96.0	64.0-132			4.88	20
Bromomethane	0.125	0.126	0.104	101	83.2	56.0-147			19.1	20
n-Butylbenzene	0.125	0.113	0.110	90.4	88.0	68.0-135			2.69	20
sec-Butylbenzene	0.125	0.110	0.105	88.0	84.0	74.0-130			4.65	20
tert-Butylbenzene	0.125	0.114	0.105	91.2	84.0	75.0-127			8.22	20
Carbon tetrachloride	0.125	0.120	0.110	96.0	88.0	66.0-128			8.70	20
Chlorobenzene	0.125	0.119	0.112	95.2	89.6	76.0-128			6.06	20
Chlorodibromomethane	0.125	0.119	0.114	95.2	91.2	74.0-127			4.29	20
Chloroethane	0.125	0.138	0.120	110	96.0	61.0-134			14.0	20
Chloroform	0.125	0.137	0.129	110	103	72.0-123			6.02	20
Chloromethane	0.125	0.125	0.119	100	95.2	51.0-138			4.92	20
2-Chlorotoluene	0.125	0.110	0.105	88.0	84.0	75.0-124			4.65	20
4-Chlorotoluene	0.125	0.117	0.109	93.6	87.2	75.0-124			7.08	20
1,2-Dibromo-3-Chloropropane	0.125	0.131	0.139	105	111	59.0-130			5.93	20
1,2-Dibromoethane	0.125	0.119	0.112	95.2	89.6	74.0-128			6.06	20
Dibromomethane	0.125	0.126	0.120	101	96.0	75.0-122			4.88	20
1,2-Dichlorobenzene	0.125	0.130	0.129	104	103	76.0-124			0.772	20
1,3-Dichlorobenzene	0.125	0.125	0.113	100	90.4	76.0-125			10.1	20
1,4-Dichlorobenzene	0.125	0.117	0.109	93.6	87.2	77.0-121			7.08	20
Dichlorodifluoromethane	0.125	0.127	0.113	102	90.4	43.0-156			11.7	20
1,1-Dichloroethane	0.125	0.122	0.116	97.6	92.8	70.0-127			5.04	20
1,2-Dichloroethane	0.125	0.138	0.134	110	107	65.0-131			2.94	20
1,1-Dichloroethene	0.125	0.128	0.115	102	92.0	65.0-131			10.7	20
cis-1,2-Dichloroethene	0.125	0.120	0.112	96.0	89.6	73.0-125			6.90	20
trans-1,2-Dichloroethene	0.125	0.117	0.107	93.6	85.6	71.0-125			8.93	20
1,2-Dichloropropane	0.125	0.128	0.121	102	96.8	74.0-125			5.62	20
1,1-Dichloropropene	0.125	0.121	0.114	96.8	91.2	73.0-125			5.96	20
1,3-Dichloropropane	0.125	0.122	0.116	97.6	92.8	80.0-125			5.04	20
cis-1,3-Dichloropropene	0.125	0.122	0.116	97.6	92.8	76.0-127			5.04	20
trans-1,3-Dichloropropene	0.125	0.115	0.113	92.0	90.4	73.0-127			1.75	20
2,2-Dichloropropane	0.125	0.120	0.110	96.0	88.0	59.0-135			8.70	20
Di-isopropyl ether	0.125	0.121	0.114	96.8	91.2	60.0-136			5.96	20
Ethylbenzene	0.125	0.114	0.105	91.2	84.0	74.0-126			8.22	20
Hexachloro-1,3-butadiene	0.125	0.108	0.108	86.4	86.4	57.0-150			0.000	20
Isopropylbenzene	0.125	0.120	0.111	96.0	88.8	72.0-127			7.79	20
p-Isopropyltoluene	0.125	0.107	0.100	85.6	80.0	72.0-133			6.76	20
2-Butanone (MEK)	0.625	0.754	0.726	121	116	30.0-160			3.78	24
Methylene Chloride	0.125	0.133	0.129	106	103	68.0-123			3.05	20
4-Methyl-2-pentanone (MIBK)	0.625	0.672	0.635	108	102	56.0-143			5.66	20
Methyl tert-butyl ether	0.125	0.138	0.130	110	104	66.0-132			5.97	20

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3719965-1 10/21/21 02:16 • (LCSD) R3719965-2 10/21/21 02:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Naphthalene	0.125	0.117	0.121	93.6	96.8	59.0-130			3.36	20
n-Propylbenzene	0.125	0.116	0.107	92.8	85.6	74.0-126			8.07	20
Styrene	0.125	0.114	0.105	91.2	84.0	72.0-127			8.22	20
1,1,1,2-Tetrachloroethane	0.125	0.116	0.114	92.8	91.2	74.0-129			1.74	20
1,1,2,2-Tetrachloroethane	0.125	0.115	0.108	92.0	86.4	68.0-128			6.28	20
Tetrachloroethene	0.125	0.122	0.110	97.6	88.0	70.0-136			10.3	20
Toluene	0.125	0.116	0.106	92.8	84.8	75.0-121			9.01	20
1,1,2-Trichlorotrifluoroethane	0.125	0.108	0.107	86.4	85.6	61.0-139			0.930	20
1,2,3-Trichlorobenzene	0.125	0.110	0.120	88.0	96.0	59.0-139			8.70	20
1,2,4-Trichlorobenzene	0.125	0.117	0.130	93.6	104	62.0-137			10.5	20
1,1,1-Trichloroethane	0.125	0.131	0.119	105	95.2	69.0-126			9.60	20
1,1,2-Trichloroethane	0.125	0.114	0.113	91.2	90.4	78.0-123			0.881	20
Trichloroethene	0.125	0.129	0.122	103	97.6	76.0-126			5.58	20
Trichlorofluoromethane	0.125	0.112	0.0936	89.6	74.9	61.0-142			17.9	20
1,2,3-Trichloropropane	0.125	0.118	0.120	94.4	96.0	67.0-129			1.68	20
1,2,3-Trimethylbenzene	0.125	0.115	0.108	92.0	86.4	74.0-124			6.28	20
1,2,4-Trimethylbenzene	0.125	0.117	0.109	93.6	87.2	70.0-126			7.08	20
1,3,5-Trimethylbenzene	0.125	0.110	0.103	88.0	82.4	73.0-127			6.57	20
Vinyl chloride	0.125	0.132	0.123	106	98.4	63.0-134			7.06	20
Xylenes, Total	0.375	0.350	0.333	93.3	88.8	72.0-127			4.98	20
<i>(S) Toluene-d8</i>				99.9	101	75.0-131				
<i>(S) 4-Bromofluorobenzene</i>				104	104	67.0-138				
<i>(S) 1,2-Dichloroethane-d4</i>				112	112	70.0-130				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R3719483-3 10/20/21 18:18

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3719483-3 10/20/21 18:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	0.224	U	0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,3-Trimethylbenzene	U		0.104	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	98.9			80.0-120
(S) 4-Bromofluorobenzene	94.4			77.0-126
(S) 1,2-Dichloroethane-d4	112			70.0-130

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3719483-1 10/20/21 17:14 • (LCSD) R3719483-2 10/20/21 17:36

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Acetone	25.0	25.8	29.1	103	116	19.0-160			12.0	27
Acrolein	25.0	33.3	37.6	133	150	10.0-160			12.1	26
Acrylonitrile	25.0	24.2	26.0	96.8	104	55.0-149			7.17	20
Benzene	5.00	4.97	5.08	99.4	102	70.0-123			2.19	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3719483-1 10/20/21 17:14 • (LCSD) R3719483-2 10/20/21 17:36

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromobenzene	5.00	5.03	5.62	101	112	73.0-121			11.1	20
Bromodichloromethane	5.00	5.26	5.39	105	108	75.0-120			2.44	20
Bromoform	5.00	4.10	4.48	82.0	89.6	68.0-132			8.86	20
Bromomethane	5.00	2.70	3.52	54.0	70.4	10.0-160		J3	26.4	25
n-Butylbenzene	5.00	4.80	4.69	96.0	93.8	73.0-125			2.32	20
sec-Butylbenzene	5.00	5.13	5.40	103	108	75.0-125			5.13	20
tert-Butylbenzene	5.00	4.75	5.04	95.0	101	76.0-124			5.92	20
Carbon tetrachloride	5.00	5.44	5.32	109	106	68.0-126			2.23	20
Chlorobenzene	5.00	4.77	4.89	95.4	97.8	80.0-121			2.48	20
Chlorodibromomethane	5.00	4.52	4.94	90.4	98.8	77.0-125			8.88	20
Chloroethane	5.00	5.55	5.93	111	119	47.0-150			6.62	20
Chloroform	5.00	5.20	5.46	104	109	73.0-120			4.88	20
Chloromethane	5.00	3.28	3.32	65.6	66.4	41.0-142			1.21	20
2-Chlorotoluene	5.00	5.15	5.40	103	108	76.0-123			4.74	20
4-Chlorotoluene	5.00	5.10	5.53	102	111	75.0-122			8.09	20
1,2-Dibromo-3-Chloropropane	5.00	3.68	4.17	73.6	83.4	58.0-134			12.5	20
1,2-Dibromoethane	5.00	4.55	5.14	91.0	103	80.0-122			12.2	20
Dibromomethane	5.00	5.04	5.30	101	106	80.0-120			5.03	20
1,2-Dichlorobenzene	5.00	4.80	5.24	96.0	105	79.0-121			8.76	20
1,3-Dichlorobenzene	5.00	4.80	5.11	96.0	102	79.0-120			6.26	20
1,4-Dichlorobenzene	5.00	4.99	5.11	99.8	102	79.0-120			2.38	20
Dichlorodifluoromethane	5.00	5.94	5.88	119	118	51.0-149			1.02	20
1,1-Dichloroethane	5.00	4.88	5.04	97.6	101	70.0-126			3.23	20
1,2-Dichloroethane	5.00	5.31	5.55	106	111	70.0-128			4.42	20
1,1-Dichloroethene	5.00	4.97	5.01	99.4	100	71.0-124			0.802	20
cis-1,2-Dichloroethene	5.00	5.02	5.46	100	109	73.0-120			8.40	20
trans-1,2-Dichloroethene	5.00	4.95	5.08	99.0	102	73.0-120			2.59	20
1,2-Dichloropropane	5.00	4.64	5.20	92.8	104	77.0-125			11.4	20
1,1-Dichloropropene	5.00	4.95	5.01	99.0	100	74.0-126			1.20	20
1,3-Dichloropropane	5.00	4.71	5.19	94.2	104	80.0-120			9.70	20
cis-1,3-Dichloropropene	5.00	5.19	5.43	104	109	80.0-123			4.52	20
trans-1,3-Dichloropropene	5.00	4.74	5.16	94.8	103	78.0-124			8.48	20
2,2-Dichloropropane	5.00	6.53	6.70	131	134	58.0-130	J4	J4	2.57	20
Di-isopropyl ether	5.00	4.80	5.05	96.0	101	58.0-138			5.08	20
Ethylbenzene	5.00	4.67	5.06	93.4	101	79.0-123			8.02	20
Hexachloro-1,3-butadiene	5.00	4.70	4.95	94.0	99.0	54.0-138			5.18	20
Isopropylbenzene	5.00	4.44	4.76	88.8	95.2	76.0-127			6.96	20
p-Isopropyltoluene	5.00	4.76	4.98	95.2	99.6	76.0-125			4.52	20
2-Butanone (MEK)	25.0	22.4	26.7	89.6	107	44.0-160			17.5	20
Methylene Chloride	5.00	5.59	6.00	112	120	67.0-120			7.08	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3719483-1 10/20/21 17:14 • (LCSD) R3719483-2 10/20/21 17:36

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	25.0	21.7	25.2	86.8	101	68.0-142			14.9	20
Methyl tert-butyl ether	5.00	5.14	5.29	103	106	68.0-125			2.88	20
Naphthalene	5.00	2.18	3.27	43.6	65.4	54.0-135	J4	J3	40.0	20
n-Propylbenzene	5.00	4.95	5.40	99.0	108	77.0-124			8.70	20
Styrene	5.00	4.32	4.56	86.4	91.2	73.0-130			5.41	20
1,1,1,2-Tetrachloroethane	5.00	4.55	4.87	91.0	97.4	75.0-125			6.79	20
1,1,2,2-Tetrachloroethane	5.00	5.73	6.48	115	130	65.0-130			12.3	20
Tetrachloroethene	5.00	4.73	5.02	94.6	100	72.0-132			5.95	20
Toluene	5.00	4.63	4.92	92.6	98.4	79.0-120			6.07	20
1,1,2-Trichlorotrifluoroethane	5.00	5.62	5.49	112	110	69.0-132			2.34	20
1,2,3-Trichlorobenzene	5.00	3.17	4.36	63.4	87.2	50.0-138		J3	31.6	20
1,2,4-Trichlorobenzene	5.00	3.45	4.15	69.0	83.0	57.0-137			18.4	20
1,1,1-Trichloroethane	5.00	5.39	5.70	108	114	73.0-124			5.59	20
1,1,2-Trichloroethane	5.00	4.59	5.04	91.8	101	80.0-120			9.35	20
Trichloroethene	5.00	4.85	5.33	97.0	107	78.0-124			9.43	20
Trichlorofluoromethane	5.00	6.26	6.63	125	133	59.0-147			5.74	20
1,2,3-Trichloropropane	5.00	4.95	5.51	99.0	110	73.0-130			10.7	20
1,2,3-Trimethylbenzene	5.00	4.78	5.15	95.6	103	77.0-120			7.45	20
1,2,4-Trimethylbenzene	5.00	5.02	5.18	100	104	76.0-121			3.14	20
1,3,5-Trimethylbenzene	5.00	5.07	5.29	101	106	76.0-122			4.25	20
Vinyl chloride	5.00	4.94	5.06	98.8	101	67.0-131			2.40	20
Xylenes, Total	15.0	13.6	14.5	90.7	96.7	79.0-123			6.41	20
(S) Toluene-d8				97.9	103	80.0-120				
(S) 4-Bromofluorobenzene				97.4	98.8	77.0-126				
(S) 1,2-Dichloroethane-d4				114	116	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3720300-1 10/22/21 11:39

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	1.45	↓	1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	68.5			18.0-148

Laboratory Control Sample (LCS)

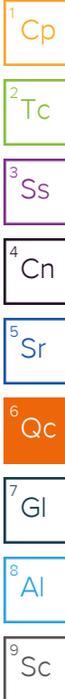
(LCS) R3720300-2 10/22/21 11:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	42.2	84.4	50.0-150	
<i>(S) o-Terphenyl</i>			71.0	18.0-148	

L1418104-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1418104-08 10/22/21 13:39 • (MS) R3720300-3 10/22/21 13:53 • (MSD) R3720300-4 10/22/21 14:06

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	62.6	7.25	47.0	52.1	63.6	72.1	1	50.0-150			10.2	20
<i>(S) o-Terphenyl</i>					53.9	61.4		18.0-148				



Method Blank (MB)

(MB) R3720586-1 10/22/21 10:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		33.3	100
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	88.5			31.0-160

Laboratory Control Sample (LCS)

(LCS) R3720586-2 10/22/21 10:32

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Diesel Range Organics (DRO)	1500	1220	81.3	50.0-150	
<i>(S) o-Terphenyl</i>			94.5	31.0-160	

L1417877-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1417877-01 10/22/21 11:28 • (MS) R3720586-3 10/22/21 11:57 • (MSD) R3720586-4 10/22/21 12:25

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Diesel Range Organics (DRO)	1500	42.9	1050	1050	67.1	67.1	1	50.0-150			0.000	20
<i>(S) o-Terphenyl</i>					92.0	83.5		31.0-160				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3719349-1 10/20/21 15:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
2,4-D	U		0.00702	0.0700
Dalapon	U		0.0113	0.0700
2,4-DB	U		0.0297	0.0700
Dicamba	U		0.0157	0.0700
Dichloroprop	U		0.0245	0.0700
Dinoseb	U		0.00697	0.0700
MCPA	U		0.443	6.50
MCPP	U		0.367	6.50
2,4,5-T	U		0.00852	0.0700
2,4,5-TP (Silvex)	U		0.0107	0.0700
(S) 2,4-Dichlorophenyl Acetic Acid	71.3			22.0-132

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3719349-2 10/20/21 15:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
2,4-D	0.167	0.119	71.3	40.0-120	
Dalapon	0.167	0.0869	52.0	15.0-120	
2,4-DB	0.167	0.140	83.8	25.0-143	
Dicamba	0.167	0.116	69.5	43.0-120	
Dichloroprop	0.167	0.117	70.1	32.0-129	
Dinoseb	0.167	0.100	59.9	10.0-120	
MCPA	16.7	9.66	57.8	31.0-121	Im
MCPP	16.7	7.13	42.7	28.0-133	Im
2,4,5-T	0.167	0.128	76.6	41.0-120	
2,4,5-TP (Silvex)	0.167	0.125	74.9	42.0-120	
(S) 2,4-Dichlorophenyl Acetic Acid			82.6	22.0-132	

L1417028-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1417028-02 10/20/21 20:38 • (MS) R3719349-3 10/20/21 20:53 • (MSD) R3719349-4 10/20/21 21:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
2,4-D	0.167	U	0.0844	0.0810	50.5	48.8	1	10.0-160	P	P	4.11	24
Dalapon	0.167	U	0.0892	0.0854	53.4	51.4	1	10.0-121			4.35	27
2,4-DB	0.167	U	0.256	0.244	153	147	1	10.0-160			4.80	22
Dicamba	0.167	U	0.110	0.104	65.9	62.7	1	10.0-154	P	P	5.61	21

L1417028-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1417028-02 10/20/21 20:38 • (MS) R3719349-3 10/20/21 20:53 • (MSD) R3719349-4 10/20/21 21:08

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Dichloroprop	0.167	U	0.196	0.211	117	127	1	10.0-158	P	P	7.37	20
Dinoseb	0.167	U	0.110	0.102	65.9	61.4	1	10.0-120			7.55	40
MCPA	16.7	U	10.3	10.6	61.7	63.9	1	10.0-160	EP	EP	2.87	40
MCPP	16.7	U	19.7	16.6	118	100	1	10.0-160	E	E	17.1	40
2,4,5-T	0.167	U	0.111	0.105	66.5	63.3	1	10.0-157			5.56	20
2,4,5-TP (Silvex)	0.167	U	0.118	0.111	70.7	66.9	1	10.0-156			6.11	20
(S) 2,4-Dichlorophenyl Acetic Acid					76.0	72.9		22.0-132				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3719640-1 10/21/21 09:53

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00376	0.0200
Alpha BHC	U		0.00368	0.0200
Beta BHC	U		0.00379	0.0200
Delta BHC	U		0.00346	0.0200
Gamma BHC	U		0.00344	0.0200
4,4-DDD	U		0.00370	0.0200
4,4-DDE	U		0.00366	0.0200
4,4-DDT	U		0.00627	0.0200
Dieldrin	U		0.00344	0.0200
Endosulfan I	U		0.00363	0.0200
Endosulfan II	U		0.00335	0.0200
Endosulfan sulfate	U		0.00364	0.0200
Endrin	U		0.00350	0.0200
Endrin aldehyde	U		0.00339	0.0200
Endrin ketone	U		0.00711	0.0200
Heptachlor	U		0.00428	0.0200
Heptachlor epoxide	U		0.00339	0.0200
Hexachlorobenzene	U		0.00346	0.0200
Methoxychlor	U		0.00484	0.0200
Chlordane	U		0.103	0.300
Toxaphene	U		0.124	0.400
(S) Decachlorobiphenyl	67.7			10.0-135
(S) Tetrachloro-m-xylene	48.8			10.0-139

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3719640-2 10/21/21 10:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0268	40.2	34.0-136	
Alpha BHC	0.0666	0.0295	44.3	34.0-139	
Beta BHC	0.0666	0.0287	43.1	34.0-133	
Delta BHC	0.0666	0.0281	42.2	34.0-135	
Gamma BHC	0.0666	0.0287	43.1	34.0-136	
4,4-DDD	0.0666	0.0287	43.1	33.0-141	
4,4-DDE	0.0666	0.0275	41.3	34.0-134	
4,4-DDT	0.0666	0.0261	39.2	30.0-143	
Dieldrin	0.0666	0.0296	44.4	35.0-137	
Endosulfan I	0.0666	0.0275	41.3	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R3719640-2 10/21/21 10:02

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Endosulfan II	0.0666	0.0273	41.0	35.0-132	
Endosulfan sulfate	0.0666	0.0250	37.5	35.0-132	
Endrin	0.0666	0.0305	45.8	34.0-137	
Endrin aldehyde	0.0666	0.0228	34.2	23.0-121	
Endrin ketone	0.0666	0.0272	40.8	35.0-144	
Heptachlor	0.0666	0.0278	41.7	36.0-141	
Heptachlor epoxide	0.0666	0.0280	42.0	36.0-134	
Hexachlorobenzene	0.0666	0.0234	35.1	33.0-129	
Methoxychlor	0.0666	0.0285	42.8	28.0-150	
<i>(S) Decachlorobiphenyl</i>			41.7	10.0-135	
<i>(S) Tetrachloro-m-xylene</i>			42.8	10.0-139	

L1416117-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416117-02 10/21/21 12:32 • (MS) R3719640-3 10/21/21 12:40 • (MSD) R3719640-4 10/21/21 12:49

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aldrin	0.0676	U	0.0236	0.0231	34.8	34.2	1	20.0-135			1.74	37
Alpha BHC	0.0676	U	0.0288	0.0276	42.6	40.8	1	27.0-140			4.32	35
Beta BHC	0.0676	U	0.0260	0.0270	38.4	39.9	1	23.0-141			3.83	37
Delta BHC	0.0676	U	0.0252	0.0257	37.2	38.0	1	21.0-138			2.00	35
Gamma BHC	0.0676	U	0.0263	0.0270	38.9	39.9	1	27.0-137			2.67	36
4,4-DDD	0.0676	U	0.0274	0.0284	40.5	42.0	1	15.0-152			3.64	39
4,4-DDE	0.0676	U	0.0256	0.0242	37.8	35.7	1	10.0-152			5.71	40
4,4-DDT	0.0676	U	0.0219	0.0217	32.4	32.1	1	10.0-151			0.930	40
Dieldrin	0.0676	U	0.0273	0.0257	40.4	38.0	1	17.0-145			6.13	37
Endosulfan I	0.0676	U	0.0254	0.0241	37.5	35.6	1	20.0-137			5.34	36
Endosulfan II	0.0676	U	0.0249	0.0236	36.8	34.8	1	15.0-141			5.45	37
Endosulfan sulfate	0.0676	U	0.0230	0.0253	34.1	37.4	1	15.0-143		P	9.24	38
Endrin	0.0676	U	0.0280	0.0279	41.4	41.3	1	19.0-143			0.363	37
Endrin aldehyde	0.0676	U	0.0218	0.0219	32.3	32.4	1	10.0-139			0.464	40
Endrin ketone	0.0676	U	0.0246	0.0233	36.3	34.5	1	17.0-149			5.08	38
Heptachlor	0.0676	U	0.0255	0.0255	37.7	37.7	1	22.0-138			0.000	37
Heptachlor epoxide	0.0676	U	0.0249	0.0249	36.8	36.8	1	22.0-138			0.000	36
Hexachlorobenzene	0.0676	U	0.0226	0.0222	33.5	32.9	1	25.0-126			1.81	35
Methoxychlor	0.0676	U	0.0272	0.0269	40.2	39.8	1	10.0-159			1.13	40
<i>(S) Decachlorobiphenyl</i>					55.0	37.2		10.0-135				
<i>(S) Tetrachloro-m-xylene</i>					53.3	41.0		10.0-139				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3719640-1 10/21/21 09:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
PCB 1016	U		0.0118	0.0340
PCB 1221	U		0.0118	0.0340
PCB 1232	U		0.0118	0.0340
PCB 1242	U		0.0118	0.0340
PCB 1248	U		0.00738	0.0170
PCB 1254	U		0.00738	0.0170
PCB 1260	U		0.00738	0.0170
(S) Decachlorobiphenyl	69.4			10.0-135
(S) Tetrachloro-m-xylene	52.6			10.0-139

Laboratory Control Sample (LCS)

(LCS) R3719640-5 10/21/21 10:11

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
PCB 1260	0.167	0.0705	42.2	37.0-145	
PCB 1016	0.167	0.0870	52.1	36.0-141	
(S) Decachlorobiphenyl			48.5	10.0-135	
(S) Tetrachloro-m-xylene			50.3	10.0-139	

L1416117-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1416117-02 10/21/21 12:32 • (MS) R3719640-6 10/21/21 12:58 • (MSD) R3719640-7 10/21/21 13:07

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
PCB 1260	0.170	U	0.0796	0.0521	46.9	30.7	1	10.0-160	P	J3	41.8	38
PCB 1016	0.170	U	0.108	0.0785	63.5	46.3	1	10.0-160	P		31.3	37
(S) Decachlorobiphenyl					52.3	43.7		10.0-135				
(S) Tetrachloro-m-xylene					63.1	53.5		10.0-139				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3720007-3 10/21/21 16:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00539	0.0333
Acenaphthylene	U		0.00469	0.0333
Anthracene	U		0.00593	0.0333
Benzo(a)anthracene	U		0.00587	0.0333
Benzo(b)fluoranthene	U		0.00621	0.0333
Benzo(k)fluoranthene	U		0.00592	0.0333
Benzo(g,h,i)perylene	U		0.00609	0.0333
Benzo(a)pyrene	U		0.00619	0.0333
Bis(2-chlorethoxy)methane	U		0.0100	0.333
Bis(2-chloroethyl)ether	U		0.0110	0.333
2,2-oxybis(1-chloropropane)	U		0.0144	0.333
4-Bromophenyl-phenylether	U		0.0117	0.333
2-Chloronaphthalene	U		0.00585	0.0333
4-Chlorophenyl-phenylether	U		0.0116	0.333
Chrysene	U		0.00662	0.0333
Dibenz(a,h)anthracene	U		0.00923	0.0333
3,3-Dichlorobenzidine	U		0.0123	0.333
2,4-Dinitrotoluene	U		0.00955	0.333
2,6-Dinitrotoluene	U		0.0109	0.333
Fluoranthene	U		0.00601	0.0333
Fluorene	U		0.00542	0.0333
Hexachlorobenzene	U		0.0118	0.333
Hexachloro-1,3-butadiene	U		0.0112	0.333
Hexachlorocyclopentadiene	U		0.0175	0.333
Hexachloroethane	U		0.0131	0.333
Indeno(1,2,3-cd)pyrene	U		0.00941	0.0333
Isophorone	U		0.0102	0.333
Naphthalene	U		0.00836	0.0333
Nitrobenzene	U		0.0116	0.333
n-Nitrosodimethylamine	U		0.0494	0.333
n-Nitrosodiphenylamine	U		0.0252	0.333
n-Nitrosodi-n-propylamine	U		0.0111	0.333
Phenanthrene	U		0.00661	0.0333
Benzylbutyl phthalate	U		0.0104	0.333
Bis(2-ethylhexyl)phthalate	U		0.0422	0.333
Di-n-butyl phthalate	U		0.0114	0.333
Diethyl phthalate	U		0.0110	0.333
Dimethyl phthalate	U		0.0706	0.333
Di-n-octyl phthalate	U		0.0225	0.333
Pyrene	U		0.00648	0.0333

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3720007-3 10/21/21 16:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyridine	U		0.0220	0.333
1,2,4-Trichlorobenzene	U		0.0104	0.333
4-Chloro-3-methylphenol	U		0.0108	0.333
2-Chlorophenol	U		0.0110	0.333
2-Methylphenol	U		0.0100	0.333
3&4-Methyl Phenol	U		0.0104	0.333
2,4-Dichlorophenol	U		0.00970	0.333
2,4-Dimethylphenol	U		0.00870	0.333
4,6-Dinitro-2-methylphenol	U		0.0755	0.333
2,4-Dinitrophenol	U		0.0779	0.333
2-Nitrophenol	U		0.0119	0.333
4-Nitrophenol	U		0.0104	0.333
Pentachlorophenol	U		0.00896	0.333
Phenol	U		0.0134	0.333
2,4,5-Trichlorophenol	U		0.0113	0.333
2,4,6-Trichlorophenol	U		0.0107	0.333
<i>(S) Nitrobenzene-d5</i>	59.2			10.0-122
<i>(S) 2-Fluorobiphenyl</i>	79.0			15.0-120
<i>(S) p-Terphenyl-d14</i>	88.3			10.0-120
<i>(S) Phenol-d5</i>	70.4			10.0-120
<i>(S) 2-Fluorophenol</i>	82.1			12.0-120
<i>(S) 2,4,6-Tribromophenol</i>	110			10.0-127

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3720007-1 10/21/21 16:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.666	0.458	68.8	38.0-120	
Acenaphthylene	0.666	0.469	70.4	40.0-120	
Anthracene	0.666	0.513	77.0	42.0-120	
Benzo(a)anthracene	0.666	0.509	76.4	44.0-120	
Benzo(b)fluoranthene	0.666	0.509	76.4	43.0-120	
Benzo(k)fluoranthene	0.666	0.524	78.7	44.0-120	
Benzo(g,h,i)perylene	0.666	0.523	78.5	43.0-120	
Benzo(a)pyrene	0.666	0.535	80.3	45.0-120	
Bis(2-chlorethoxy)methane	0.666	0.335	50.3	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.426	64.0	16.0-120	
2,2-Oxybis(1-Chloropropane)	0.666	0.417	62.6	23.0-120	

Laboratory Control Sample (LCS)

(LCS) R3720007-1 10/21/21 16:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
4-Bromophenyl-phenylether	0.666	0.563	84.5	40.0-120	
2-Chloronaphthalene	0.666	0.474	71.2	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.510	76.6	40.0-120	
Chrysene	0.666	0.503	75.5	43.0-120	
Dibenz(a,h)anthracene	0.666	0.510	76.6	44.0-120	
3,3-Dichlorobenzidine	1.33	1.04	78.2	28.0-120	
2,4-Dinitrotoluene	0.666	0.517	77.6	45.0-120	
2,6-Dinitrotoluene	0.666	0.515	77.3	42.0-120	
Fluoranthene	0.666	0.507	76.1	44.0-120	
Fluorene	0.666	0.485	72.8	41.0-120	
Hexachlorobenzene	0.666	0.589	88.4	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.439	65.9	15.0-120	
Hexachlorocyclopentadiene	0.666	0.438	65.8	15.0-120	
Hexachloroethane	0.666	0.436	65.5	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.507	76.1	45.0-120	
Isophorone	0.666	0.336	50.5	23.0-120	
Naphthalene	0.666	0.363	54.5	18.0-120	
Nitrobenzene	0.666	0.312	46.8	17.0-120	
n-Nitrosodimethylamine	0.666	0.359	53.9	10.0-125	
n-Nitrosodiphenylamine	0.666	0.487	73.1	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.378	56.8	26.0-120	
Phenanthrene	0.666	0.472	70.9	42.0-120	
Benzylbutyl phthalate	0.666	0.500	75.1	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.511	76.7	41.0-120	
Di-n-butyl phthalate	0.666	0.506	76.0	43.0-120	
Diethyl phthalate	0.666	0.501	75.2	43.0-120	
Dimethyl phthalate	0.666	0.513	77.0	43.0-120	
Di-n-octyl phthalate	0.666	0.489	73.4	40.0-120	
Pyrene	0.666	0.505	75.8	41.0-120	
Pyridine	0.666	0.287	43.1	10.0-120	
1,2,4-Trichlorobenzene	0.666	0.413	62.0	17.0-120	
4-Chloro-3-methylphenol	0.666	0.419	62.9	28.0-120	
2-Chlorophenol	0.666	0.499	74.9	28.0-120	
2-Methylphenol	0.666	0.481	72.2	35.0-120	
3&4-Methyl Phenol	0.666	0.530	79.6	42.0-120	
2,4-Dichlorophenol	0.666	0.425	63.8	25.0-120	
2,4-Dimethylphenol	0.666	0.394	59.2	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.550	82.6	16.0-120	
2,4-Dinitrophenol	0.666	0.427	64.1	10.0-120	
2-Nitrophenol	0.666	0.443	66.5	20.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3720007-1 10/21/21 16:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Nitrophenol	0.666	0.439	65.9	27.0-120	
Pentachlorophenol	0.666	0.587	88.1	29.0-120	
Phenol	0.666	0.402	60.4	28.0-120	
2,4,5-Trichlorophenol	0.666	0.513	77.0	38.0-120	
2,4,6-Trichlorophenol	0.666	0.488	73.3	37.0-120	
(S) Nitrobenzene-d5			48.0	10.0-122	
(S) 2-Fluorobiphenyl			74.5	15.0-120	
(S) p-Terphenyl-d14			76.6	10.0-120	
(S) Phenol-d5			66.2	10.0-120	
(S) 2-Fluorophenol			77.0	12.0-120	
(S) 2,4,6-Tribromophenol			112	10.0-127	

L1418104-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1418104-07 10/21/21 19:13 • (MS) R3720007-4 10/21/21 19:33 • (MSD) R3720007-5 10/21/21 19:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.906	U	0.473	0.480	52.3	52.6	1	18.0-120			1.44	32
Acenaphthylene	0.906	U	0.497	0.505	54.9	55.3	1	25.0-120			1.65	32
Anthracene	0.906	U	0.497	0.502	54.9	55.0	1	22.0-120			1.10	29
Benzo(a)anthracene	0.906	U	0.509	0.516	56.2	56.5	1	25.0-120			1.34	29
Benzo(b)fluoranthene	0.906	U	0.487	0.483	53.8	52.9	1	19.0-122			0.851	31
Benzo(k)fluoranthene	0.906	U	0.505	0.490	55.8	53.6	1	23.0-120			3.04	30
Benzo(g,h,i)perylene	0.906	U	0.494	0.495	54.6	54.2	1	10.0-120			0.278	33
Benzo(a)pyrene	0.906	U	0.505	0.505	55.8	55.3	1	24.0-120			0.000	30
Bis(2-chlorethoxy)methane	0.906	U	0.361	0.367	39.8	40.2	1	10.0-120			1.89	34
Bis(2-chloroethyl)ether	0.906	U	0.471	0.439	52.0	48.0	1	10.0-120			6.96	40
2,2-Oxybis(1-Chloropropane)	0.906	U	0.425	0.457	47.0	50.0	1	10.0-120			7.18	40
4-Bromophenyl-phenylether	0.906	U	0.590	0.604	65.2	66.1	1	27.0-120			2.30	30
2-Chloronaphthalene	0.906	U	0.490	0.506	54.1	55.4	1	20.0-120			3.31	32
4-Chlorophenyl-phenylether	0.906	U	0.535	0.560	59.1	61.3	1	24.0-120			4.52	29
Chrysene	0.906	U	0.502	0.489	55.5	53.5	1	21.0-120			2.78	29
Dibenz(a,h)anthracene	0.906	U	0.482	0.494	53.2	54.1	1	10.0-120			2.54	32
3,3-Dichlorobenzidine	1.82	U	0.914	0.778	50.3	42.5	1	10.0-120			16.1	34
2,4-Dinitrotoluene	0.906	U	0.501	0.541	55.3	59.2	1	30.0-120			7.66	31
2,6-Dinitrotoluene	0.906	U	0.520	0.548	57.4	59.9	1	25.0-120			5.15	31
Fluoranthene	0.906	0.0102	0.524	0.555	56.8	59.6	1	18.0-126			5.61	32
Fluorene	0.906	U	0.506	0.522	55.9	57.1	1	25.0-120			2.95	30
Hexachlorobenzene	0.906	U	0.626	0.634	69.1	69.4	1	27.0-120			1.31	28

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1418104-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1418104-07 10/21/21 19:13 • (MS) R3720007-4 10/21/21 19:33 • (MSD) R3720007-5 10/21/21 19:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	0.906	U	0.490	0.509	54.1	55.7	1	10.0-120			3.86	38
Hexachlorocyclopentadiene	0.906	U	U	U	0.000	0.000	1	10.0-120	J6	J6	0.000	40
Hexachloroethane	0.906	U	0.412	0.468	45.4	51.2	1	10.0-120			12.8	40
Indeno(1,2,3-cd)pyrene	0.906	U	0.479	0.501	52.9	54.8	1	10.0-120			4.49	32
Isophorone	0.906	U	0.356	0.359	39.4	39.3	1	13.0-120			0.769	34
Naphthalene	0.906	U	0.387	0.413	42.7	45.2	1	10.0-120			6.54	35
Nitrobenzene	0.906	U	0.318	0.343	35.1	37.5	1	10.0-120			7.50	36
n-Nitrosodimethylamine	0.906	U	0.332	0.350	36.6	38.3	1	10.0-127			5.25	40
n-Nitrosodiphenylamine	0.906	U	0.493	0.500	54.4	54.7	1	17.0-120			1.39	29
n-Nitrosodi-n-propylamine	0.906	U	0.378	0.392	41.8	42.9	1	10.0-120			3.57	37
Phenanthrene	0.906	U	0.490	0.500	54.1	54.7	1	17.0-120			1.95	31
Benzylbutyl phthalate	0.906	U	1.14	0.556	126	60.8	1	23.0-120	J5	J3	68.6	30
Bis(2-ethylhexyl)phthalate	0.906	U	0.574	0.668	63.4	73.0	1	17.0-126			15.1	30
Di-n-butyl phthalate	0.906	U	0.523	0.540	57.8	59.0	1	30.0-120			3.11	29
Diethyl phthalate	0.906	U	0.526	0.534	58.1	58.4	1	26.0-120			1.56	28
Dimethyl phthalate	0.906	U	0.527	0.537	58.2	58.7	1	25.0-120			1.81	29
Di-n-octyl phthalate	0.906	U	0.515	0.545	56.8	59.6	1	21.0-123			5.71	29
Pyrene	0.906	U	0.495	0.512	54.7	56.0	1	16.0-121			3.28	32
Pyridine	0.906	U	0.295	0.330	32.5	36.1	1	10.0-120			11.5	40
1,2,4-Trichlorobenzene	0.906	U	0.454	0.475	50.2	52.0	1	12.0-120			4.44	37
4-Chloro-3-methylphenol	0.906	U	0.425	0.479	47.0	52.4	1	15.0-120			11.9	30
2-Chlorophenol	0.906	U	0.520	0.533	57.4	58.3	1	15.0-120			2.35	37
2-Methylphenol	0.906	U	0.523	0.579	57.8	63.4	1	11.0-120			10.2	40
3&4-Methyl Phenol	0.906	U	0.435	0.577	48.0	63.1	1	12.0-123			28.0	38
2,4-Dichlorophenol	0.906	U	0.497	0.511	54.9	55.9	1	20.0-120			2.73	31
2,4-Dimethylphenol	0.906	U	0.446	0.462	49.2	50.6	1	10.0-120			3.64	33
4,6-Dinitro-2-methylphenol	0.906	U	0.504	0.457	55.6	50.0	1	10.0-120			9.74	39
2,4-Dinitrophenol	0.906	U	0.384	0.365	42.4	39.9	1	10.0-121			5.15	40
2-Nitrophenol	0.906	U	0.469	0.443	51.8	48.5	1	12.0-120			5.73	39
4-Nitrophenol	0.906	U	0.497	0.475	54.9	52.0	1	10.0-137			4.53	32
Pentachlorophenol	0.906	U	0.679	0.661	74.9	72.3	1	10.0-160			2.67	31
Phenol	0.906	U	0.304	0.427	33.6	46.7	1	12.0-120			33.5	38
2,4,5-Trichlorophenol	0.906	U	0.553	0.604	61.1	66.1	1	20.0-120			8.80	30
2,4,6-Trichlorophenol	0.906	U	0.505	0.533	55.8	58.3	1	19.0-120			5.31	32
(S) Nitrobenzene-d5					32.5	38.9		10.0-122				
(S) 2-Fluorobiphenyl					52.0	61.1		15.0-120				
(S) p-Terphenyl-d14					50.8	59.6		10.0-120				
(S) Phenol-d5					32.4	53.6		10.0-120				
(S) 2-Fluorophenol					52.9	61.4		12.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1418104-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1418104-07 10/21/21 19:13 • (MS) R3720007-4 10/21/21 19:33 • (MSD) R3720007-5 10/21/21 19:54

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 2,4,6-Tribromophenol					82.5	94.4		10.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3717622-2 10/17/21 08:32

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	107			31.0-160
(S) 2-Fluorobiphenyl	121			48.0-148
(S) p-Terphenyl-d14	154	J1		37.0-146

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3717622-1 10/17/21 08:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	2.00	2.23	111	67.0-150	
Acenaphthene	2.00	2.07	104	65.0-138	
Acenaphthylene	2.00	2.27	114	66.0-140	
Benzo(a)anthracene	2.00	2.19	109	61.0-140	
Benzo(a)pyrene	2.00	1.88	94.0	60.0-143	
Benzo(b)fluoranthene	2.00	2.00	100	58.0-141	
Benzo(g,h,i)perylene	2.00	1.80	90.0	52.0-153	
Benzo(k)fluoranthene	2.00	1.91	95.5	58.0-148	
Chrysene	2.00	2.12	106	64.0-144	
Dibenz(a,h)anthracene	2.00	1.94	97.0	52.0-155	
Fluoranthene	2.00	2.23	111	69.0-153	

Laboratory Control Sample (LCS)

(LCS) R3717622-1 10/17/21 08:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	2.00	2.25	112	64.0-136	
Indeno(1,2,3-cd)pyrene	2.00	1.87	93.5	54.0-153	
Naphthalene	2.00	2.12	106	61.0-137	
Phenanthrene	2.00	2.15	107	62.0-137	
Pyrene	2.00	2.01	100	60.0-142	
1-Methylnaphthalene	2.00	2.31	115	66.0-142	
2-Methylnaphthalene	2.00	2.21	111	62.0-136	
2-Chloronaphthalene	2.00	2.04	102	64.0-140	
(S) Nitrobenzene-d5			89.0	31.0-160	
(S) 2-Fluorobiphenyl			117	48.0-148	
(S) p-Terphenyl-d14			136	37.0-146	

L1417895-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1417895-01 10/17/21 11:12 • (MS) R3717622-3 10/17/21 11:30 • (MSD) R3717622-4 10/17/21 11:48

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	1.90	0.102	1.75	1.77	86.7	87.8	1	56.0-156			1.14	20
Acenaphthene	1.90	0.263	1.91	1.89	86.7	85.6	1	44.0-153			1.05	20
Acenaphthylene	1.90	U	1.97	2.04	104	107	1	53.0-150			3.49	20
Benzo(a)anthracene	1.90	0.0313	1.89	1.98	97.8	103	1	47.0-151			4.65	20
Benzo(a)pyrene	1.90	U	1.42	1.53	74.7	80.5	1	45.0-146			7.46	20
Benzo(b)fluoranthene	1.90	U	1.62	1.76	85.3	92.6	1	43.0-142			8.28	20
Benzo(g,h,i)perylene	1.90	U	1.64	1.84	86.3	96.8	1	40.0-147			11.5	20
Benzo(k)fluoranthene	1.90	U	1.64	1.78	86.3	93.7	1	43.0-148			8.19	21
Chrysene	1.90	U	1.89	1.98	99.5	104	1	50.0-148			4.65	20
Dibenz(a,h)anthracene	1.90	U	1.73	1.90	91.1	100	1	37.0-151			9.37	20
Fluoranthene	1.90	0.0912	2.24	2.18	113	110	1	56.0-157			2.71	20
Fluorene	1.90	U	2.08	2.07	109	109	1	48.0-148			0.482	20
Indeno(1,2,3-cd)pyrene	1.90	U	1.62	1.74	85.3	91.6	1	41.0-148			7.14	20
Naphthalene	1.90	U	1.91	1.85	101	97.4	1	10.0-160			3.19	20
Phenanthrene	1.90	U	2.03	2.05	107	108	1	47.0-147			0.980	20
Pyrene	1.90	0.406	1.81	1.99	73.9	83.4	1	51.0-148			9.47	20
1-Methylnaphthalene	1.90	U	2.08	2.02	109	106	1	21.0-160			2.93	20
2-Methylnaphthalene	1.90	U	1.96	1.89	103	99.5	1	31.0-160			3.64	20
2-Chloronaphthalene	1.90	U	1.83	1.81	96.3	95.3	1	52.0-148			1.10	20
(S) Nitrobenzene-d5					97.9	90.0		31.0-160				
(S) 2-Fluorobiphenyl					118	121		48.0-148				
(S) p-Terphenyl-d14					131	138		37.0-146				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3720248-2 10/22/21 08:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	66.9			14.0-149
(S) 2-Fluorobiphenyl	79.7			34.0-125
(S) p-Terphenyl-d14	97.2			23.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3720248-1 10/22/21 08:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0558	69.8	50.0-126	
Acenaphthene	0.0800	0.0568	71.0	50.0-120	
Acenaphthylene	0.0800	0.0608	76.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0556	69.5	45.0-120	
Benzo(a)pyrene	0.0800	0.0486	60.8	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0498	62.3	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0510	63.8	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0515	64.4	49.0-125	
Chrysene	0.0800	0.0563	70.4	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0543	67.9	47.0-125	
Fluoranthene	0.0800	0.0594	74.3	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3720248-1 10/22/21 08:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	0.0800	0.0578	72.3	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0507	63.4	46.0-125	
Naphthalene	0.0800	0.0583	72.9	50.0-120	
Phenanthrene	0.0800	0.0556	69.5	47.0-120	
Pyrene	0.0800	0.0544	68.0	43.0-123	
1-Methylnaphthalene	0.0800	0.0611	76.4	51.0-121	
2-Methylnaphthalene	0.0800	0.0556	69.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0552	69.0	50.0-120	
<i>(S) Nitrobenzene-d5</i>			71.2	14.0-149	
<i>(S) 2-Fluorobiphenyl</i>			83.1	34.0-125	
<i>(S) p-Terphenyl-d14</i>			97.2	23.0-120	

L1418104-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1418104-09 10/23/21 14:20 • (MS) R3720697-1 10/23/21 14:40 • (MSD) R3720697-2 10/23/21 15:00

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	0.0985	U	0.0618	0.0556	62.8	56.4	1	10.0-145			10.7	30
Acenaphthene	0.0985	U	0.0633	0.0583	64.3	59.1	1	14.0-127			8.31	27
Acenaphthylene	0.0985	U	0.0674	0.0613	68.4	62.3	1	21.0-124			9.38	25
Benzo(a)anthracene	0.0985	U	0.0593	0.0553	60.1	56.1	1	10.0-139			6.88	30
Benzo(a)pyrene	0.0985	U	0.0562	0.0530	57.0	53.8	1	10.0-141			5.87	31
Benzo(b)fluoranthene	0.0985	U	0.0599	0.0553	60.8	56.1	1	10.0-140			7.91	36
Benzo(g,h,i)perylene	0.0985	U	0.0548	0.0512	55.6	52.0	1	10.0-140			6.74	33
Benzo(k)fluoranthene	0.0985	U	0.0593	0.0557	60.1	56.5	1	10.0-137			6.22	31
Chrysene	0.0985	U	0.0600	0.0579	60.9	58.7	1	10.0-145			3.55	30
Dibenz(a,h)anthracene	0.0985	U	0.0565	0.0521	57.4	52.9	1	10.0-132			8.16	31
Fluoranthene	0.0985	U	0.0652	0.0602	66.1	61.1	1	10.0-153			7.86	33
Fluorene	0.0985	U	0.0649	0.0600	65.9	60.9	1	11.0-130			7.89	29
Indeno(1,2,3-cd)pyrene	0.0985	U	0.0538	0.0520	54.6	52.7	1	10.0-137			3.49	32
Naphthalene	0.0985	U	0.0644	0.0612	65.4	62.1	1	10.0-135			5.10	27
Phenanthrene	0.0985	U	0.0596	0.0558	60.5	56.6	1	10.0-144			6.62	31
Pyrene	0.0985	U	0.0593	0.0554	60.1	56.3	1	10.0-148			6.66	35
1-Methylnaphthalene	0.0985	U	0.0659	0.0611	66.9	62.0	1	10.0-142			7.57	28
2-Methylnaphthalene	0.0985	U	0.0601	0.0579	61.0	58.7	1	10.0-137			3.76	28
2-Chloronaphthalene	0.0985	U	0.0633	0.0584	64.3	59.3	1	29.0-120			8.10	24
<i>(S) Nitrobenzene-d5</i>					72.3	64.5		14.0-149				
<i>(S) 2-Fluorobiphenyl</i>					75.8	69.9		34.0-125				
<i>(S) p-Terphenyl-d14</i>					85.0	78.2		23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

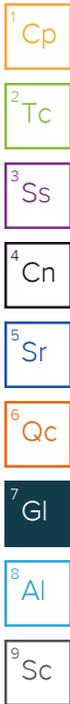
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.



GLOSSARY OF TERMS

Qualifier	Description
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P	RPD between the primary and confirmatory analysis exceeded 40%.
T8	Sample(s) received past/too close to holding time expiration.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Name/Address: **Shannon & Wilson - OR**
 3990 Collins Way, Ste. 100
 Lake Oswego, OR 97035

Billing Information:
 Accounts Payable / Pete Shingledecker
 3990 Collins Way, Ste. 100
 Lake Oswego, OR 97035

Report to: **Lauren Sherman**
 Email To: **lauren.sherman@shannwil.com**

Project Description: City/State Collected: **Portland, OR** Please Circle: PT MT CT ET

Phone: **503-210-4750** Client Project # **102636** Lab Project # **SHAWILOR-102636**

Collected by (print): **Lauren Sherman** Site/Facility ID # P.O. #

Collected by (signature): *[Signature]* **Rush?** (Lab MUST Be Notified)
 Same Day Five Day
 Next Day 5 Day (Rad Only)
 Two Day 10 Day (Rad Only)
 Three Day

Immediately Packed on Ice N Y

Date Results Needed No. of Cntrs

Analysis / Container / Preservative										Chain of Custody Page ___ of ___	
DX no silica 8ozClr-NoPres	Herbicides 8151 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	OCPs 8081 8ozClr-NoPres	PAHs 8270ESIM 8ozClr-NoPres	PCBs 8082 8ozClr-NoPres	RCRA8 Metals 6020 8ozClr-NoPres	SVOCs 8270D 8ozClr-NoPres	Sb,Cu,Zn 6020 8ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	Pace Analytical® 12065 Lebanon Rd Mount Juliet, TN 37122 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf	
										SDG # L1418104 G080	
										Acctnum: SHAWILOR Template: T197028 Prelogin: P879424 PM: 110 - Brian Ford PB:	
										Shipped Via: Remarks Sample # (lab only)	

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	DX no silica 8ozClr-NoPres	Herbicides 8151 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	OCPs 8081 8ozClr-NoPres	PAHs 8270ESIM 8ozClr-NoPres	PCBs 8082 8ozClr-NoPres	RCRA8 Metals 6020 8ozClr-NoPres	SVOCs 8270D 8ozClr-NoPres	Sb,Cu,Zn 6020 8ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	Remarks
B-15-COMP-SCBS	COMP	SS	0-215	10/9/21	1210	2	X		X		X		X		X	X	- 01
B-16-COMP-SCBS	COMP	SS	0-210		1240	2	X		X		X		X		X	X	- 02
B-17-COMP-SCBS	COMP	SS	0-195		1340	2	X		X		X		X		X	X	- 03
B-18-COMP-SCBS	COMP	SS	0-185		1410	2	X		X		X		X		X	X	- 04
B-19-COMP-SCBS	COMP	SS	0-95		1450	2	X		X		X		X		X	X	- 05
B-12A-SCBS	-	SS	0-130		1010	3	X	X	X	X	X	X	X	X	X	X	- 06
B-24-SC	-	SS	0-160		1050	3	X	X	X	X	X	X	X	X	X	X	- 07
B-25-SC	-	SS	0-165		1030	3	X	X	X	X	X	X	X	X	X	X	- 08
B-26-SC	-	SS	0-158	Y	1115	3	X	X	X	X	X	X	X	X	X	X	- 09
B-20-COMP-SCBS	-	SS	10-40	Y	1140	2	X		X		X		X		X	X	- 10

* Matrix: SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks: pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist
 COC Seal Present/Intact: Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 If Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 mR/hr: Y N

Samples returned via: UPS FedEx Courier Tracking # **5217 3314 5300**

Relinquished by: (Signature) *[Signature]* Date: **10/13/21** Time: **1200** Received by: (Signature) Trip Blank Received: Yes No
 Relinquished by: (Signature) Date: Time: Received by: (Signature) Temp: **12.2** °C Bottles Received: **4/6**
 Relinquished by: (Signature) Date: Time: Received for lab by: (Signature) Date: **10/14/21** Time: **0900** Hold: Condition: **NCF / OK**

Company/Address: **Shannon & Wilson - OR**
 3990 Collins Way, Ste. 100
 Lake Oswego, OR 97035

Billing Information:
 Accounts Payable / Pete Shingledecker
 3990 Collins Way, Ste. 100
 Lake Oswego, OR 97035

Chain of Custody Page ___ of ___

Pace Analytical®
 12065 Lebanon Rd Mount Juliet, TN 37122
 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

Report to: **Lauren Sherman**
 Email To: **lauren.sherman@shannon-wilson.com**

Project Description: City/State Collected: **Portland, OR** Please Circle: PT MT CT ET

Phone: **503-210-4750** Client Project # **102636** Lab Project # **SHAWILOR-102636**

Collected by (print): **Lauren Sherman** Site/Facility ID # P.O. #

Collected by (signature): *[Signature]* **Rush?** (Lab MUST Be Notified)
 ___ Same Day ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Two Day ___ 10 Day (Rad Only)
 ___ Three Day

Quote # Date Results Needed No. of Contrs

Immediately Packed on Ice N ___ Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Contrs	Diss RCRA8 6020 250mlHDPE-NoPres	NWTPHDX NOSGT 100ml Amb-HCl	NWTPHGX 40mlAmb HCl	PAHs 8270ESIM 40mlAmb-NoPres-WT	VOCs 8260D 40mlAmb-HCl							
B-16-DW		GW	0-210'	10/8/21	0950	10	X	X	X	X	X							- 11
B-17-DW		GW	0-195'	"	0900	11	X	X	X	X	X							- 12
B-18-DW		GW	0-185'	"	0920	11	X	X	X	X	X							- 13

* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other

Remarks: **Could only collect 5 40 mL Amber HCL bottles of B-16-DW!**

Samples returned via: UPS FedEx Courier

Tracking # **5217 3314 5300**

pH ___ Temp ___ Flow ___ Other ___

Sample Receipt Checklist
 COC Seal Present/Intact: Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 If Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature) *[Signature]* Date: **10/13/21** Time: **1200**

Received by: (Signature) Trip Blank Received: Yes/No Yes No
 ACL MeoH TBR

Relinquished by: (Signature) Date: Time: Received by: (Signature) Temp: **12.0** Bottles Received: **46**

Relinquished by: (Signature) Date: Time: Received for lab by: (Signature) Date: **10/14/21** Time: **0900** Hold: Condition: NCF

Shannon & Wilson - OR

Sample Delivery Group: L1426135

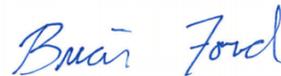
Samples Received: 11/03/2021

Project Number: 102636

Description: EQRB

Report To: Lauren Sherman
3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
B-15-DW L1426135-01	5
B-19-DW L1426135-02	8
Qc: Quality Control Summary	11
Mercury by Method 7470A	11
Metals (ICPMS) by Method 6020B	12
Volatile Organic Compounds (GC) by Method NWTPHGX	13
Volatile Organic Compounds (GC/MS) by Method 8260D	14
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	18
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	19
Gl: Glossary of Terms	21
Al: Accreditations & Locations	22
Sc: Sample Chain of Custody	23



SAMPLE SUMMARY

B-15-DW L1426135-01 GW

Collected by: Christine Maher
 Collected date/time: 10/28/21 11:00
 Received date/time: 11/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1771104	1	11/09/21 12:20	11/10/21 07:15	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1778372	1	11/23/21 03:11	11/26/21 16:41	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1768793	1	11/05/21 21:00	11/05/21 21:00	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1768956	1	11/05/21 00:14	11/05/21 00:14	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1770414	1	11/08/21 16:28	11/09/21 16:46	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1768952	1	11/04/21 16:29	11/04/21 23:39	LEA	Mt. Juliet, TN

1
Cp

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Tc

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Ss

4
Cn

B-19-DW L1426135-02 GW

Collected by: Christine Maher
 Collected date/time: 10/28/21 11:30
 Received date/time: 11/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1771104	1	11/09/21 12:20	11/10/21 07:17	BMF	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1778372	1	11/23/21 03:11	11/26/21 16:51	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1768793	1	11/05/21 21:24	11/05/21 21:24	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1768956	1	11/05/21 00:35	11/05/21 00:35	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1770414	1.11	11/08/21 16:28	11/09/21 17:12	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1768952	1	11/04/21 16:29	11/04/21 23:59	LEA	Mt. Juliet, TN

5
Sr

6
Qc

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Gl

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Al

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Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury,Dissolved	U		0.100	0.200	1	11/10/2021 07:15	WG1771104

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic,Dissolved	2.55		0.180	2.00	1	11/26/2021 16:41	WG1778372
Barium,Dissolved	50.8		0.381	2.00	1	11/26/2021 16:41	WG1778372
Cadmium,Dissolved	U		0.150	1.00	1	11/26/2021 16:41	WG1778372
Chromium,Dissolved	U		1.24	2.00	1	11/26/2021 16:41	WG1778372
Lead,Dissolved	U		0.849	2.00	1	11/26/2021 16:41	WG1778372
Selenium,Dissolved	0.350	J	0.300	2.00	1	11/26/2021 16:41	WG1778372
Silver,Dissolved	U		0.0700	2.00	1	11/26/2021 16:41	WG1778372

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	11/05/2021 21:00	WG1768793
(S) a,a,a-Trifluorotoluene(FID)	95.7			78.0-120		11/05/2021 21:00	WG1768793

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	11/05/2021 00:14	WG1768956
Acrolein	U		2.54	50.0	1	11/05/2021 00:14	WG1768956
Acrylonitrile	U		0.671	10.0	1	11/05/2021 00:14	WG1768956
Benzene	U		0.0941	1.00	1	11/05/2021 00:14	WG1768956
Bromobenzene	U		0.118	1.00	1	11/05/2021 00:14	WG1768956
Bromodichloromethane	U		0.136	1.00	1	11/05/2021 00:14	WG1768956
Bromoform	U		0.129	1.00	1	11/05/2021 00:14	WG1768956
Bromomethane	U		0.605	5.00	1	11/05/2021 00:14	WG1768956
n-Butylbenzene	U		0.157	1.00	1	11/05/2021 00:14	WG1768956
sec-Butylbenzene	U		0.125	1.00	1	11/05/2021 00:14	WG1768956
tert-Butylbenzene	U		0.127	1.00	1	11/05/2021 00:14	WG1768956
Carbon tetrachloride	U		0.128	1.00	1	11/05/2021 00:14	WG1768956
Chlorobenzene	U		0.116	1.00	1	11/05/2021 00:14	WG1768956
Chlorodibromomethane	U		0.140	1.00	1	11/05/2021 00:14	WG1768956
Chloroethane	U		0.192	5.00	1	11/05/2021 00:14	WG1768956
Chloroform	U	J4	0.111	5.00	1	11/05/2021 00:14	WG1768956
Chloromethane	U		0.960	2.50	1	11/05/2021 00:14	WG1768956
2-Chlorotoluene	U		0.106	1.00	1	11/05/2021 00:14	WG1768956
4-Chlorotoluene	U		0.114	1.00	1	11/05/2021 00:14	WG1768956
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	11/05/2021 00:14	WG1768956
1,2-Dibromoethane	U		0.126	1.00	1	11/05/2021 00:14	WG1768956
Dibromomethane	U		0.122	1.00	1	11/05/2021 00:14	WG1768956
1,2-Dichlorobenzene	U		0.107	1.00	1	11/05/2021 00:14	WG1768956
1,3-Dichlorobenzene	U		0.110	1.00	1	11/05/2021 00:14	WG1768956
1,4-Dichlorobenzene	U		0.120	1.00	1	11/05/2021 00:14	WG1768956
Dichlorodifluoromethane	U		0.374	5.00	1	11/05/2021 00:14	WG1768956
1,1-Dichloroethane	U		0.100	1.00	1	11/05/2021 00:14	WG1768956
1,2-Dichloroethane	U		0.0819	1.00	1	11/05/2021 00:14	WG1768956
1,1-Dichloroethene	U		0.188	1.00	1	11/05/2021 00:14	WG1768956
cis-1,2-Dichloroethene	U		0.126	1.00	1	11/05/2021 00:14	WG1768956
trans-1,2-Dichloroethene	U		0.149	1.00	1	11/05/2021 00:14	WG1768956

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichloropropane	U		0.149	1.00	1	11/05/2021 00:14	WG1768956
1,1-Dichloropropene	U		0.142	1.00	1	11/05/2021 00:14	WG1768956
1,3-Dichloropropane	U		0.110	1.00	1	11/05/2021 00:14	WG1768956
cis-1,3-Dichloropropene	U		0.111	1.00	1	11/05/2021 00:14	WG1768956
trans-1,3-Dichloropropene	U		0.118	1.00	1	11/05/2021 00:14	WG1768956
2,2-Dichloropropane	U		0.161	1.00	1	11/05/2021 00:14	WG1768956
Di-isopropyl ether	U		0.105	1.00	1	11/05/2021 00:14	WG1768956
Ethylbenzene	U		0.137	1.00	1	11/05/2021 00:14	WG1768956
Hexachloro-1,3-butadiene	U		0.337	1.00	1	11/05/2021 00:14	WG1768956
Isopropylbenzene	U		0.105	1.00	1	11/05/2021 00:14	WG1768956
p-Isopropyltoluene	U		0.120	1.00	1	11/05/2021 00:14	WG1768956
2-Butanone (MEK)	U		1.19	10.0	1	11/05/2021 00:14	WG1768956
Methylene Chloride	U	J4	0.430	5.00	1	11/05/2021 00:14	WG1768956
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	11/05/2021 00:14	WG1768956
Methyl tert-butyl ether	U		0.101	1.00	1	11/05/2021 00:14	WG1768956
Naphthalene	1.57	J	1.00	5.00	1	11/05/2021 00:14	WG1768956
n-Propylbenzene	U		0.0993	1.00	1	11/05/2021 00:14	WG1768956
Styrene	U		0.118	1.00	1	11/05/2021 00:14	WG1768956
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	11/05/2021 00:14	WG1768956
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	11/05/2021 00:14	WG1768956
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	11/05/2021 00:14	WG1768956
Tetrachloroethene	U		0.300	1.00	1	11/05/2021 00:14	WG1768956
Toluene	U		0.278	1.00	1	11/05/2021 00:14	WG1768956
1,2,3-Trichlorobenzene	U		0.230	1.00	1	11/05/2021 00:14	WG1768956
1,2,4-Trichlorobenzene	U		0.481	1.00	1	11/05/2021 00:14	WG1768956
1,1,1-Trichloroethane	U		0.149	1.00	1	11/05/2021 00:14	WG1768956
1,1,2-Trichloroethane	U		0.158	1.00	1	11/05/2021 00:14	WG1768956
Trichloroethene	U		0.190	1.00	1	11/05/2021 00:14	WG1768956
Trichlorofluoromethane	U		0.160	5.00	1	11/05/2021 00:14	WG1768956
1,2,3-Trichloropropane	U		0.237	2.50	1	11/05/2021 00:14	WG1768956
1,2,4-Trimethylbenzene	0.588	J	0.322	1.00	1	11/05/2021 00:14	WG1768956
1,2,3-Trimethylbenzene	U		0.104	1.00	1	11/05/2021 00:14	WG1768956
1,3,5-Trimethylbenzene	U		0.104	1.00	1	11/05/2021 00:14	WG1768956
Vinyl chloride	U		0.234	1.00	1	11/05/2021 00:14	WG1768956
Xylenes, Total	U		0.174	3.00	1	11/05/2021 00:14	WG1768956
(S) Toluene-d8	113			80.0-120		11/05/2021 00:14	WG1768956
(S) 4-Bromofluorobenzene	94.3			77.0-126		11/05/2021 00:14	WG1768956
(S) 1,2-Dichloroethane-d4	98.4			70.0-130		11/05/2021 00:14	WG1768956

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	331		33.3	100	1	11/09/2021 16:46	WG1770414
Residual Range Organics (RRO)	550		83.3	250	1	11/09/2021 16:46	WG1770414
(S) o-Terphenyl	93.2			31.0-160		11/09/2021 16:46	WG1770414

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	11/04/2021 23:39	WG1768952
Acenaphthene	U		0.0190	0.0500	1	11/04/2021 23:39	WG1768952
Acenaphthylene	U		0.0171	0.0500	1	11/04/2021 23:39	WG1768952
Benzo(a)anthracene	U		0.0203	0.0500	1	11/04/2021 23:39	WG1768952
Benzo(a)pyrene	U		0.0184	0.0500	1	11/04/2021 23:39	WG1768952
Benzo(b)fluoranthene	U		0.0168	0.0500	1	11/04/2021 23:39	WG1768952

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	11/04/2021 23:39	WG1768952
Benzo(k)fluoranthene	U		0.0202	0.0500	1	11/04/2021 23:39	WG1768952
Chrysene	U		0.0179	0.0500	1	11/04/2021 23:39	WG1768952
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	11/04/2021 23:39	WG1768952
Fluoranthene	U		0.0270	0.100	1	11/04/2021 23:39	WG1768952
Fluorene	U		0.0169	0.0500	1	11/04/2021 23:39	WG1768952
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	11/04/2021 23:39	WG1768952
Naphthalene	U		0.0917	0.250	1	11/04/2021 23:39	WG1768952
Phenanthrene	U		0.0180	0.0500	1	11/04/2021 23:39	WG1768952
Pyrene	U		0.0169	0.0500	1	11/04/2021 23:39	WG1768952
1-Methylnaphthalene	U		0.0687	0.250	1	11/04/2021 23:39	WG1768952
2-Methylnaphthalene	U		0.0674	0.250	1	11/04/2021 23:39	WG1768952
2-Chloronaphthalene	U		0.0682	0.250	1	11/04/2021 23:39	WG1768952
(S) Nitrobenzene-d5	23.7	J2		31.0-160		11/04/2021 23:39	WG1768952
(S) 2-Fluorobiphenyl	9.74	J2		48.0-148		11/04/2021 23:39	WG1768952
(S) p-Terphenyl-d14	9.32	J2		37.0-146		11/04/2021 23:39	WG1768952

Sample Narrative:

L1426135-01 WG1768952: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury,Dissolved	U		0.100	0.200	1	11/10/2021 07:17	WG1771104

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic,Dissolved	1.06	J	0.180	2.00	1	11/26/2021 16:51	WG1778372
Barium,Dissolved	17.4	B	0.381	2.00	1	11/26/2021 16:51	WG1778372
Cadmium,Dissolved	U		0.150	1.00	1	11/26/2021 16:51	WG1778372
Chromium,Dissolved	2.01		1.24	2.00	1	11/26/2021 16:51	WG1778372
Lead,Dissolved	1.10	J	0.849	2.00	1	11/26/2021 16:51	WG1778372
Selenium,Dissolved	U		0.300	2.00	1	11/26/2021 16:51	WG1778372
Silver,Dissolved	U		0.0700	2.00	1	11/26/2021 16:51	WG1778372

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	11/05/2021 21:24	WG1768793
(S) a,a,a-Trifluorotoluene(FID)	94.8			78.0-120		11/05/2021 21:24	WG1768793

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	11/05/2021 00:35	WG1768956
Acrolein	U		2.54	50.0	1	11/05/2021 00:35	WG1768956
Acrylonitrile	U		0.671	10.0	1	11/05/2021 00:35	WG1768956
Benzene	0.0949	J	0.0941	1.00	1	11/05/2021 00:35	WG1768956
Bromobenzene	U		0.118	1.00	1	11/05/2021 00:35	WG1768956
Bromodichloromethane	U		0.136	1.00	1	11/05/2021 00:35	WG1768956
Bromoform	U		0.129	1.00	1	11/05/2021 00:35	WG1768956
Bromomethane	U		0.605	5.00	1	11/05/2021 00:35	WG1768956
n-Butylbenzene	U		0.157	1.00	1	11/05/2021 00:35	WG1768956
sec-Butylbenzene	U		0.125	1.00	1	11/05/2021 00:35	WG1768956
tert-Butylbenzene	U		0.127	1.00	1	11/05/2021 00:35	WG1768956
Carbon tetrachloride	U		0.128	1.00	1	11/05/2021 00:35	WG1768956
Chlorobenzene	U		0.116	1.00	1	11/05/2021 00:35	WG1768956
Chlorodibromomethane	U		0.140	1.00	1	11/05/2021 00:35	WG1768956
Chloroethane	U		0.192	5.00	1	11/05/2021 00:35	WG1768956
Chloroform	0.753	J J4	0.111	5.00	1	11/05/2021 00:35	WG1768956
Chloromethane	U		0.960	2.50	1	11/05/2021 00:35	WG1768956
2-Chlorotoluene	U		0.106	1.00	1	11/05/2021 00:35	WG1768956
4-Chlorotoluene	U		0.114	1.00	1	11/05/2021 00:35	WG1768956
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	11/05/2021 00:35	WG1768956
1,2-Dibromoethane	U		0.126	1.00	1	11/05/2021 00:35	WG1768956
Dibromomethane	U		0.122	1.00	1	11/05/2021 00:35	WG1768956
1,2-Dichlorobenzene	U		0.107	1.00	1	11/05/2021 00:35	WG1768956
1,3-Dichlorobenzene	U		0.110	1.00	1	11/05/2021 00:35	WG1768956
1,4-Dichlorobenzene	U		0.120	1.00	1	11/05/2021 00:35	WG1768956
Dichlorodifluoromethane	U		0.374	5.00	1	11/05/2021 00:35	WG1768956
1,1-Dichloroethane	U		0.100	1.00	1	11/05/2021 00:35	WG1768956
1,2-Dichloroethane	U		0.0819	1.00	1	11/05/2021 00:35	WG1768956
1,1-Dichloroethene	U		0.188	1.00	1	11/05/2021 00:35	WG1768956
cis-1,2-Dichloroethene	U		0.126	1.00	1	11/05/2021 00:35	WG1768956
trans-1,2-Dichloroethene	U		0.149	1.00	1	11/05/2021 00:35	WG1768956



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichloropropane	U		0.149	1.00	1	11/05/2021 00:35	WG1768956
1,1-Dichloropropene	U		0.142	1.00	1	11/05/2021 00:35	WG1768956
1,3-Dichloropropane	U		0.110	1.00	1	11/05/2021 00:35	WG1768956
cis-1,3-Dichloropropene	U		0.111	1.00	1	11/05/2021 00:35	WG1768956
trans-1,3-Dichloropropene	U		0.118	1.00	1	11/05/2021 00:35	WG1768956
2,2-Dichloropropane	U		0.161	1.00	1	11/05/2021 00:35	WG1768956
Di-isopropyl ether	U		0.105	1.00	1	11/05/2021 00:35	WG1768956
Ethylbenzene	U		0.137	1.00	1	11/05/2021 00:35	WG1768956
Hexachloro-1,3-butadiene	U		0.337	1.00	1	11/05/2021 00:35	WG1768956
Isopropylbenzene	U		0.105	1.00	1	11/05/2021 00:35	WG1768956
p-Isopropyltoluene	U		0.120	1.00	1	11/05/2021 00:35	WG1768956
2-Butanone (MEK)	U		1.19	10.0	1	11/05/2021 00:35	WG1768956
Methylene Chloride	U	J4	0.430	5.00	1	11/05/2021 00:35	WG1768956
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	11/05/2021 00:35	WG1768956
Methyl tert-butyl ether	U		0.101	1.00	1	11/05/2021 00:35	WG1768956
Naphthalene	U		1.00	5.00	1	11/05/2021 00:35	WG1768956
n-Propylbenzene	U		0.0993	1.00	1	11/05/2021 00:35	WG1768956
Styrene	U		0.118	1.00	1	11/05/2021 00:35	WG1768956
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	11/05/2021 00:35	WG1768956
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	11/05/2021 00:35	WG1768956
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	11/05/2021 00:35	WG1768956
Tetrachloroethene	U		0.300	1.00	1	11/05/2021 00:35	WG1768956
Toluene	U		0.278	1.00	1	11/05/2021 00:35	WG1768956
1,2,3-Trichlorobenzene	U		0.230	1.00	1	11/05/2021 00:35	WG1768956
1,2,4-Trichlorobenzene	U		0.481	1.00	1	11/05/2021 00:35	WG1768956
1,1,1-Trichloroethane	U		0.149	1.00	1	11/05/2021 00:35	WG1768956
1,1,2-Trichloroethane	U		0.158	1.00	1	11/05/2021 00:35	WG1768956
Trichloroethene	U		0.190	1.00	1	11/05/2021 00:35	WG1768956
Trichlorofluoromethane	U		0.160	5.00	1	11/05/2021 00:35	WG1768956
1,2,3-Trichloropropane	U		0.237	2.50	1	11/05/2021 00:35	WG1768956
1,2,4-Trimethylbenzene	U		0.322	1.00	1	11/05/2021 00:35	WG1768956
1,2,3-Trimethylbenzene	U		0.104	1.00	1	11/05/2021 00:35	WG1768956
1,3,5-Trimethylbenzene	U		0.104	1.00	1	11/05/2021 00:35	WG1768956
Vinyl chloride	U		0.234	1.00	1	11/05/2021 00:35	WG1768956
Xylenes, Total	U		0.174	3.00	1	11/05/2021 00:35	WG1768956
(S) Toluene-d8	114			80.0-120		11/05/2021 00:35	WG1768956
(S) 4-Bromofluorobenzene	99.2			77.0-126		11/05/2021 00:35	WG1768956
(S) 1,2-Dichloroethane-d4	99.2			70.0-130		11/05/2021 00:35	WG1768956



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	205		37.0	111	1.11	11/09/2021 17:12	WG1770414
Residual Range Organics (RRO)	306		92.5	278	1.11	11/09/2021 17:12	WG1770414
(S) o-Terphenyl	63.5			31.0-160		11/09/2021 17:12	WG1770414

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	11/04/2021 23:59	WG1768952
Acenaphthene	U		0.0190	0.0500	1	11/04/2021 23:59	WG1768952
Acenaphthylene	U		0.0171	0.0500	1	11/04/2021 23:59	WG1768952
Benzo(a)anthracene	U		0.0203	0.0500	1	11/04/2021 23:59	WG1768952
Benzo(a)pyrene	U		0.0184	0.0500	1	11/04/2021 23:59	WG1768952
Benzo(b)fluoranthene	U		0.0168	0.0500	1	11/04/2021 23:59	WG1768952

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	11/04/2021 23:59	WG1768952
Benzo(k)fluoranthene	U		0.0202	0.0500	1	11/04/2021 23:59	WG1768952
Chrysene	U		0.0179	0.0500	1	11/04/2021 23:59	WG1768952
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	11/04/2021 23:59	WG1768952
Fluoranthene	U		0.0270	0.100	1	11/04/2021 23:59	WG1768952
Fluorene	U		0.0169	0.0500	1	11/04/2021 23:59	WG1768952
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	11/04/2021 23:59	WG1768952
Naphthalene	U		0.0917	0.250	1	11/04/2021 23:59	WG1768952
Phenanthrene	U		0.0180	0.0500	1	11/04/2021 23:59	WG1768952
Pyrene	U		0.0169	0.0500	1	11/04/2021 23:59	WG1768952
1-Methylnaphthalene	U		0.0687	0.250	1	11/04/2021 23:59	WG1768952
2-Methylnaphthalene	U		0.0674	0.250	1	11/04/2021 23:59	WG1768952
2-Chloronaphthalene	U		0.0682	0.250	1	11/04/2021 23:59	WG1768952
(S) Nitrobenzene-d5	39.2			31.0-160		11/04/2021 23:59	WG1768952
(S) 2-Fluorobiphenyl	25.6	J2		48.0-148		11/04/2021 23:59	WG1768952
(S) p-Terphenyl-d14	17.5	J2		37.0-146		11/04/2021 23:59	WG1768952

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Sample Narrative:

L1426135-02 WG1768952: Sample produced heavy emulsion during Extraction process, low surr/spike recoveries due to matrix

Method Blank (MB)

(MB) R3727712-1 11/10/21 06:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R3727712-2 11/10/21 06:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury,Dissolved	3.00	3.18	106	80.0-120	

L1425840-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1425840-01 11/10/21 06:51 • (MS) R3727712-3 11/10/21 06:53 • (MSD) R3727712-4 11/10/21 06:55

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury,Dissolved	3.00	U	3.08	2.96	103	98.8	1	75.0-125			3.80	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3734183-1 11/26/21 15:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		0.180	2.00
Barium,Dissolved	1.88	J	0.381	2.00
Cadmium,Dissolved	U		0.150	1.00
Chromium,Dissolved	U		1.24	2.00
Lead,Dissolved	U		0.849	2.00
Selenium,Dissolved	U		0.300	2.00
Silver,Dissolved	U		0.0700	2.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Laboratory Control Sample (LCS)

(LCS) R3734183-2 11/26/21 15:36

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Arsenic,Dissolved	50.0	50.2	100	80.0-120	
Barium,Dissolved	50.0	49.8	99.5	80.0-120	
Cadmium,Dissolved	50.0	55.9	112	80.0-120	
Chromium,Dissolved	50.0	53.4	107	80.0-120	
Lead,Dissolved	50.0	48.1	96.2	80.0-120	
Selenium,Dissolved	50.0	51.1	102	80.0-120	
Silver,Dissolved	50.0	52.1	104	80.0-120	

⁷Gl

⁸Al

⁹Sc

L1423198-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1423198-04 11/26/21 16:11 • (MS) R3734183-7 11/26/21 16:18 • (MSD) R3734183-8 11/26/21 16:21

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Arsenic,Dissolved	50.0	1.02	51.7	52.0	101	102	1	75.0-125			0.588	20
Barium,Dissolved	50.0	160	212	209	103	97.2	1	75.0-125			1.33	20
Cadmium,Dissolved	50.0	U	55.4	55.1	111	110	1	75.0-125			0.604	20
Chromium,Dissolved	50.0	U	52.8	53.0	106	106	1	75.0-125			0.422	20
Lead,Dissolved	50.0	U	53.4	48.9	107	97.7	1	75.0-125			8.84	20
Selenium,Dissolved	50.0	0.512	52.5	52.0	104	103	1	75.0-125			0.897	20
Silver,Dissolved	50.0	U	52.9	52.9	106	106	1	75.0-125			0.0366	20

Method Blank (MB)

(MB) R3727481-2 11/05/21 15:38

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	95.9			78.0-120

Laboratory Control Sample (LCS)

(LCS) R3727481-1 11/05/21 14:51

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	4750	86.4	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			100	78.0-120	

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3726576-3 11/04/21 19:32

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3726576-3 11/04/21 19:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
1,2,3-Trichlorobenzene	0.258	U	0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,3-Trimethylbenzene	U		0.104	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	116			80.0-120
(S) 4-Bromofluorobenzene	97.6			77.0-126
(S) 1,2-Dichloroethane-d4	94.8			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3726576-1 11/04/21 18:31 • (LCSD) R3726576-2 11/04/21 18:51

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Acetone	25.0	22.6	21.6	90.4	86.4	19.0-160			4.52	27
Acrolein	25.0	22.6	21.5	90.4	86.0	10.0-160			4.99	26
Acrylonitrile	25.0	24.2	24.0	96.8	96.0	55.0-149			0.830	20
Benzene	5.00	5.71	5.38	114	108	70.0-123			5.95	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3726576-1 11/04/21 18:31 • (LCSD) R3726576-2 11/04/21 18:51

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromobenzene	5.00	4.67	4.93	93.4	98.6	73.0-121			5.42	20
Bromodichloromethane	5.00	5.23	5.15	105	103	75.0-120			1.54	20
Bromoform	5.00	4.38	4.14	87.6	82.8	68.0-132			5.63	20
Bromomethane	5.00	7.24	7.00	145	140	10.0-160			3.37	25
n-Butylbenzene	5.00	5.02	4.83	100	96.6	73.0-125			3.86	20
sec-Butylbenzene	5.00	5.21	5.15	104	103	75.0-125			1.16	20
tert-Butylbenzene	5.00	5.17	4.87	103	97.4	76.0-124			5.98	20
Carbon tetrachloride	5.00	5.60	5.32	112	106	68.0-126			5.13	20
Chlorobenzene	5.00	5.44	5.11	109	102	80.0-121			6.26	20
Chlorodibromomethane	5.00	4.89	4.70	97.8	94.0	77.0-125			3.96	20
Chloroethane	5.00	6.38	5.77	128	115	47.0-150			10.0	20
Chloroform	5.00	6.11	5.69	122	114	73.0-120	J4		7.12	20
Chloromethane	5.00	4.93	5.02	98.6	100	41.0-142			1.81	20
2-Chlorotoluene	5.00	5.47	5.16	109	103	76.0-123			5.83	20
4-Chlorotoluene	5.00	5.37	5.17	107	103	75.0-122			3.80	20
1,2-Dibromo-3-Chloropropane	5.00	4.47	4.45	89.4	89.0	58.0-134			0.448	20
1,2-Dibromoethane	5.00	5.25	5.10	105	102	80.0-122			2.90	20
Dibromomethane	5.00	5.24	5.37	105	107	80.0-120			2.45	20
1,2-Dichlorobenzene	5.00	4.93	5.09	98.6	102	79.0-121			3.19	20
1,3-Dichlorobenzene	5.00	4.82	5.01	96.4	100	79.0-120			3.87	20
1,4-Dichlorobenzene	5.00	5.52	5.34	110	107	79.0-120			3.31	20
Dichlorodifluoromethane	5.00	5.53	5.59	111	112	51.0-149			1.08	20
1,1-Dichloroethane	5.00	5.52	5.39	110	108	70.0-126			2.38	20
1,2-Dichloroethane	5.00	5.38	5.22	108	104	70.0-128			3.02	20
1,1-Dichloroethene	5.00	5.84	5.62	117	112	71.0-124			3.84	20
cis-1,2-Dichloroethene	5.00	5.65	4.99	113	99.8	73.0-120			12.4	20
trans-1,2-Dichloroethene	5.00	5.85	5.38	117	108	73.0-120			8.37	20
1,2-Dichloropropane	5.00	5.93	6.09	119	122	77.0-125			2.66	20
1,1-Dichloropropene	5.00	5.70	5.19	114	104	74.0-126			9.37	20
1,3-Dichloropropane	5.00	5.13	5.38	103	108	80.0-120			4.76	20
cis-1,3-Dichloropropene	5.00	4.86	5.01	97.2	100	80.0-123			3.04	20
trans-1,3-Dichloropropene	5.00	4.83	4.98	96.6	99.6	78.0-124			3.06	20
2,2-Dichloropropane	5.00	4.96	4.92	99.2	98.4	58.0-130			0.810	20
Di-isopropyl ether	5.00	5.42	4.97	108	99.4	58.0-138			8.66	20
Ethylbenzene	5.00	5.31	5.09	106	102	79.0-123			4.23	20
Hexachloro-1,3-butadiene	5.00	4.77	4.92	95.4	98.4	54.0-138			3.10	20
Isopropylbenzene	5.00	5.04	4.84	101	96.8	76.0-127			4.05	20
p-Isopropyltoluene	5.00	4.98	4.66	99.6	93.2	76.0-125			6.64	20
2-Butanone (MEK)	25.0	20.5	21.0	82.0	84.0	44.0-160			2.41	20
Methylene Chloride	5.00	6.01	6.10	120	122	67.0-120		J4	1.49	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3726576-1 11/04/21 18:31 • (LCSD) R3726576-2 11/04/21 18:51

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	25.0	25.4	25.5	102	102	68.0-142			0.393	20
Methyl tert-butyl ether	5.00	5.15	5.11	103	102	68.0-125			0.780	20
Naphthalene	5.00	4.57	4.47	91.4	89.4	54.0-135			2.21	20
n-Propylbenzene	5.00	5.07	4.95	101	99.0	77.0-124			2.40	20
Styrene	5.00	4.78	4.74	95.6	94.8	73.0-130			0.840	20
1,1,1,2-Tetrachloroethane	5.00	4.88	4.99	97.6	99.8	75.0-125			2.23	20
1,1,2,2-Tetrachloroethane	5.00	4.96	5.17	99.2	103	65.0-130			4.15	20
Tetrachloroethene	5.00	5.60	5.37	112	107	72.0-132			4.19	20
Toluene	5.00	5.35	5.16	107	103	79.0-120			3.62	20
1,1,2-Trichlorotrifluoroethane	5.00	6.26	6.06	125	121	69.0-132			3.25	20
1,2,3-Trichlorobenzene	5.00	4.70	5.19	94.0	104	50.0-138			9.91	20
1,2,4-Trichlorobenzene	5.00	4.69	4.70	93.8	94.0	57.0-137			0.213	20
1,1,1-Trichloroethane	5.00	5.79	5.32	116	106	73.0-124			8.46	20
1,1,2-Trichloroethane	5.00	5.10	5.32	102	106	80.0-120			4.22	20
Trichloroethene	5.00	5.69	5.04	114	101	78.0-124			12.1	20
Trichlorofluoromethane	5.00	6.12	5.79	122	116	59.0-147			5.54	20
1,2,3-Trichloropropane	5.00	5.67	5.55	113	111	73.0-130			2.14	20
1,2,3-Trimethylbenzene	5.00	5.09	4.49	102	89.8	77.0-120			12.5	20
1,2,4-Trimethylbenzene	5.00	5.03	4.94	101	98.8	76.0-121			1.81	20
1,3,5-Trimethylbenzene	5.00	5.20	5.04	104	101	76.0-122			3.12	20
Vinyl chloride	5.00	6.56	6.27	131	125	67.0-131			4.52	20
Xylenes, Total	15.0	15.8	14.7	105	98.0	79.0-123			7.21	20
(S) Toluene-d8				106	103	80.0-120				
(S) 4-Bromofluorobenzene				91.0	94.4	77.0-126				
(S) 1,2-Dichloroethane-d4				97.2	99.4	70.0-130				

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R3727343-1 11/09/21 09:50

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Diesel Range Organics (DRO)	U		33.3	100
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	86.5			31.0-160

Laboratory Control Sample (LCS)

(LCS) R3727343-2 11/09/21 10:12

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Diesel Range Organics (DRO)	1500	1430	95.3	50.0-150	
(S) o-Terphenyl			103	31.0-160	

L1427067-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1427067-21 11/09/21 18:30 • (MS) R3727343-3 11/09/21 18:56 • (MSD) R3727343-4 11/09/21 19:22

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Diesel Range Organics (DRO)	1370	300	1470	1900	85.4	95.8	1	50.0-150		J3	25.5	20
(S) o-Terphenyl					101	109		31.0-160				

Sample Narrative:

OS: Dilution due to sample volume.

L1427067-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1427067-23 11/09/21 20:14 • (MS) R3727343-5 11/09/21 20:40 • (MSD) R3727343-6 11/09/21 21:06

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Diesel Range Organics (DRO)	1500	68.2	1530	1590	97.5	101	1	50.0-150			3.85	20
(S) o-Terphenyl					103	107		31.0-160				

Sample Narrative:

OS: Dilution due to sample volume.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3726154-3 11/04/21 20:58

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	90.0			31.0-160
(S) 2-Fluorobiphenyl	89.0			48.0-148
(S) p-Terphenyl-d14	111			37.0-146

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3726154-1 11/04/21 20:18 • (LCSD) R3726154-2 11/04/21 20:38

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	2.00	1.82	1.75	91.0	87.5	67.0-150			3.92	20
Acenaphthene	2.00	1.82	1.80	91.0	90.0	65.0-138			1.10	20
Acenaphthylene	2.00	1.91	1.88	95.5	94.0	66.0-140			1.58	20
Benzo(a)anthracene	2.00	1.73	1.67	86.5	83.5	61.0-140			3.53	20
Benzo(a)pyrene	2.00	1.61	1.64	80.5	82.0	60.0-143			1.85	20
Benzo(b)fluoranthene	2.00	1.68	1.62	84.0	81.0	58.0-141			3.64	20
Benzo(g,h,i)perylene	2.00	1.57	1.58	78.5	79.0	52.0-153			0.635	20
Benzo(k)fluoranthene	2.00	1.83	1.83	91.5	91.5	58.0-148			0.000	20
Chrysene	2.00	1.95	1.86	97.5	93.0	64.0-144			4.72	20
Dibenz(a,h)anthracene	2.00	1.55	1.50	77.5	75.0	52.0-155			3.28	20
Fluoranthene	2.00	1.69	1.65	84.5	82.5	69.0-153			2.40	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3726154-1 11/04/21 20:18 • (LCSD) R3726154-2 11/04/21 20:38

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	1.79	1.75	89.5	87.5	64.0-136			2.26	20
Indeno(1,2,3-cd)pyrene	2.00	1.41	1.43	70.5	71.5	54.0-153			1.41	20
Naphthalene	2.00	1.81	1.80	90.5	90.0	61.0-137			0.554	20
Phenanthrene	2.00	1.82	1.79	91.0	89.5	62.0-137			1.66	20
Pyrene	2.00	2.10	2.02	105	101	60.0-142			3.88	20
1-Methylnaphthalene	2.00	1.80	1.77	90.0	88.5	66.0-142			1.68	20
2-Methylnaphthalene	2.00	1.66	1.63	83.0	81.5	62.0-136			1.82	20
2-Chloronaphthalene	2.00	1.74	1.72	87.0	86.0	64.0-140			1.16	20
<i>(S) Nitrobenzene-d5</i>				94.5	90.5	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				96.0	91.0	48.0-148				
<i>(S) p-Terphenyl-d14</i>				112	103	37.0-146				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Address:
Shannon & Wilson - OR

3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Billing Information:
Accounts Payable
3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody
constitutes acknowledgment and acceptance of the
Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

Report to:
Lauren Sherman

Email To: Lauren.Sherman@shanwil.com

Project Description:
EQR3

City/State
Collected: **Portland, OR**

Please Circle:
PT MT CT ET

Phone: **503-210-4750**

Client Project #
102636

Lab Project #
SHAWILOR-102636

Collected by (print):
Christine Maher

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

Immediately Packed on Ice N Y

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Date Results Needed

No.
of
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts	Diss RCRA8 6020 250mlHDPE-NoPres	NWTPHDX 100ml Amb-HCI	NWTPHGX 40mlAmb HCl	PAHs 8270ESIM 40mlAmb-NoPres-WT	VOCs 8260D 40mlAmb-HCI									
B-15-DW	-	GW	-	10/28/21	1100	11	X	X	X	X	X									
B-19-DW	-	GW	-	10/28/21	1130	11	X	X	X	X	X									
		GW																		
		GW																		
		GW																		
		GW																		
		GW																		
		GW																		
		GW																		
		GW																		

SDG # **L1426135**

L-059

Acctnum: **SHAWILOR**
Template: **T197029**
Prelogin: **P882695**
PM: **110 - Brian Ford**
PB:
Shipped Via:
Remarks | Sample # (lab only)

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:
pH _____ Temp _____
Flow _____ Other _____
Samples returned via:
 UPS FedEx Courier
Tracking # **5217 3314 2046**

Sample Receipt Checklist
COC Seal Present/Intact: Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature) <i>[Signature]</i>	Date: 11/01/21	Time: 1530	Received by: (Signature) <i>[Signature]</i>	Trip Blank Received: Yes/No 0 HCL/MeOH TBR
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: Alabae 33to-33 Bottles Received: 22
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 11/3/21 Time: 0900 Hold: Condition: NCF / OK

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Shannon & Wilson - OR

Sample Delivery Group: L1426136
Samples Received: 11/03/2021
Project Number: 102636
Description: EQRB

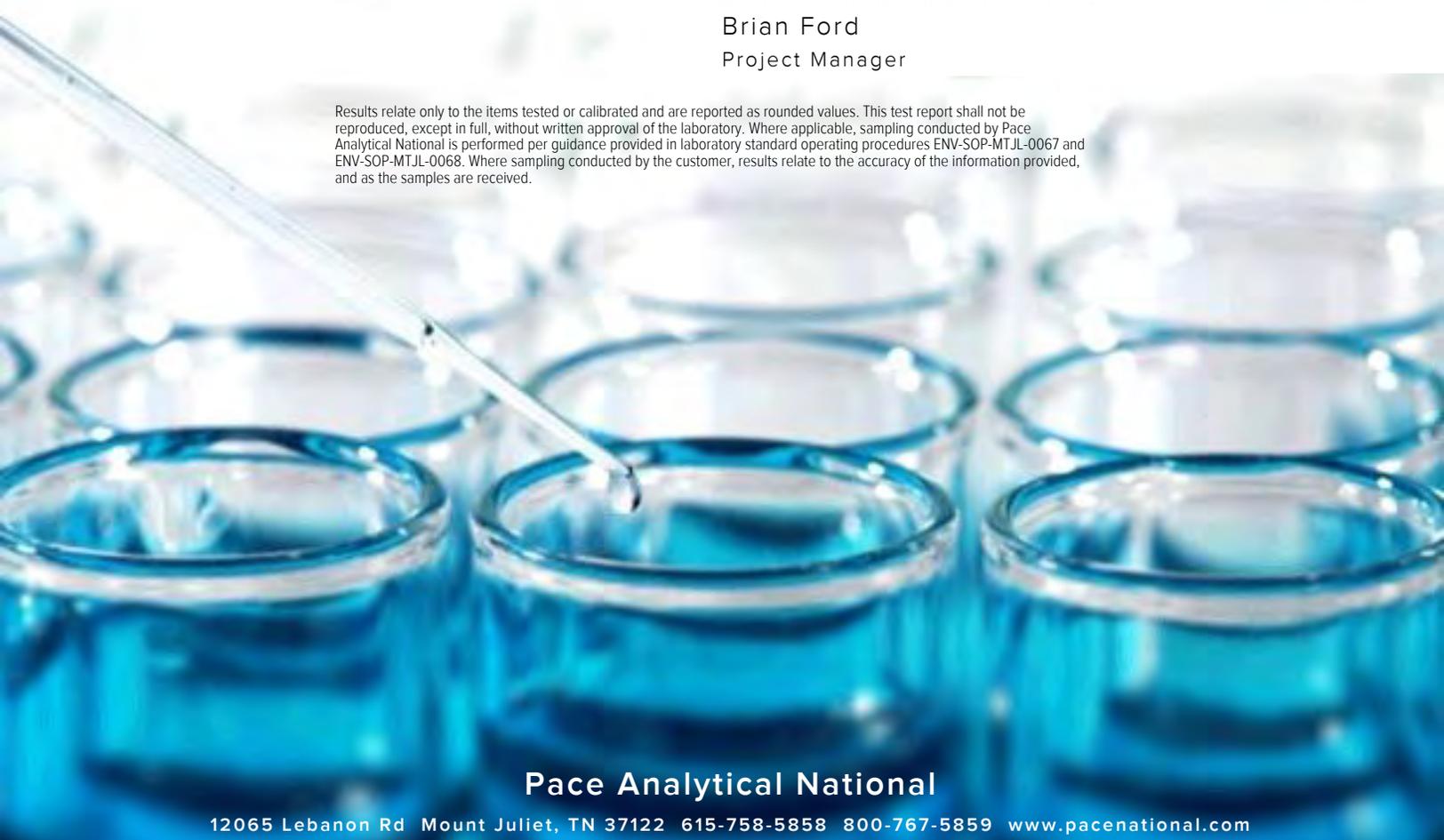
Report To: Lauren Sherman
3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
B-10-COMP-BA-B5 L1426136-01	5
B-32-COMP-SCBSDW L1426136-02	10
B-33-COMP-BA-SCBSDW L1426136-03	13
Qc: Quality Control Summary	16
Total Solids by Method 2540 G-2011	16
Mercury by Method 7471B	17
Metals (ICPMS) by Method 6020B	18
Volatile Organic Compounds (GC) by Method NWTPHGX	20
Volatile Organic Compounds (GC/MS) by Method 8260D	22
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	26
Chlorinated Acid Herbicides (GC) by Method 8151A	27
Pesticides (GC) by Method 8081B	29
Polychlorinated Biphenyls (GC) by Method 8082 A	31
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	32
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	38
Gl: Glossary of Terms	42
Al: Accreditations & Locations	44
Sc: Sample Chain of Custody	45



SAMPLE SUMMARY

B-10-COMP-BA-B5 L1426136-01 Solid

Collected by: Christine Maher
 Collected date/time: 10/28/21 09:00
 Received date/time: 11/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1768709	1	11/04/21 12:16	11/04/21 12:24	CMK	Mt. Juliet, TN
Mercury by Method 7471B	WG1770278	1	11/07/21 11:51	11/08/21 10:09	RDS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1772552	200	11/11/21 11:29	11/12/21 10:59	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1772552	5	11/11/21 11:29	11/12/21 04:23	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1772552	5	11/11/21 11:29	11/12/21 10:56	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1769050	25	11/04/21 11:29	11/05/21 03:12	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1770203	1	11/04/21 11:29	11/07/21 06:34	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1771408	1	11/11/21 04:54	11/11/21 10:50	JAS	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1771724	1	11/10/21 07:41	11/11/21 23:25	AO	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1769015	1	11/04/21 19:49	11/04/21 23:53	AMM	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1769015	1	11/04/21 19:49	11/04/21 23:53	AMM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1771397	1	11/10/21 16:58	11/11/21 13:35	JNJ	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1771413	1	11/10/21 07:41	11/10/21 20:06	LEA	Mt. Juliet, TN



B-32-COMP-SCBSDW L1426136-02 Solid

Collected by: Christine Maher
 Collected date/time: 10/28/21 09:30
 Received date/time: 11/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1768709	1	11/04/21 12:16	11/04/21 12:24	CMK	Mt. Juliet, TN
Mercury by Method 7471B	WG1770278	1	11/07/21 11:51	11/08/21 10:11	RDS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1772552	5	11/11/21 11:29	11/12/21 04:27	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1772552	5	11/11/21 11:29	11/12/21 11:02	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1769987	39.5	10/28/21 09:30	11/06/21 12:51	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1770203	1.58	10/28/21 09:30	11/07/21 06:53	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1771408	1	11/11/21 04:54	11/11/21 11:03	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1771413	1	11/10/21 07:41	11/10/21 20:26	LEA	Mt. Juliet, TN

B-33-COMP-BA-SCBSDW L1426136-03 Solid

Collected by: Christine Maher
 Collected date/time: 10/28/21 10:00
 Received date/time: 11/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1768709	1	11/04/21 12:16	11/04/21 12:24	CMK	Mt. Juliet, TN
Mercury by Method 7471B	WG1770278	1	11/07/21 11:51	11/08/21 10:14	RDS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1772552	100	11/11/21 11:29	11/12/21 11:09	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1772552	5	11/11/21 11:29	11/12/21 04:31	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1772552	5	11/11/21 11:29	11/12/21 11:05	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1769987	37.8	10/28/21 10:00	11/06/21 13:13	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1770203	1.51	10/28/21 10:00	11/07/21 07:12	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1771408	1	11/11/21 04:54	11/11/21 11:17	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1771415	1	11/10/21 07:39	11/10/21 13:47	LEA	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	46.1		1	11/04/2021 12:24	WG1768709

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0465	J	0.0390	0.0867	1	11/08/2021 10:09	WG1770278

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	0.435	J	0.360	6.50	5	11/12/2021 10:56	WG1772552
Arsenic	3.39		0.217	2.17	5	11/12/2021 04:23	WG1772552
Barium	35600		13.2	217	200	11/12/2021 10:59	WG1772552
Cadmium	U		0.185	2.17	5	11/12/2021 04:23	WG1772552
Chromium	24.2		0.642	10.8	5	11/12/2021 04:23	WG1772552
Copper	16.3		0.286	10.8	5	11/12/2021 04:23	WG1772552
Lead	6.96		0.215	4.33	5	11/12/2021 04:23	WG1772552
Selenium	0.633	J	0.390	5.42	5	11/12/2021 04:23	WG1772552
Silver	U		0.187	1.08	5	11/12/2021 04:23	WG1772552
Zinc	57.3		1.60	54.2	5	11/12/2021 04:23	WG1772552

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		2.83	8.35	25	11/05/2021 03:12	WG1769050
(S) a,a,a-Trifluorotoluene(FID)	96.3			77.0-120		11/05/2021 03:12	WG1769050

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.122	0.167	1	11/07/2021 06:34	WG1770203
Acrylonitrile	U		0.0121	0.0417	1	11/07/2021 06:34	WG1770203
Benzene	U		0.00156	0.00334	1	11/07/2021 06:34	WG1770203
Bromobenzene	U		0.00300	0.0417	1	11/07/2021 06:34	WG1770203
Bromodichloromethane	U	C3	0.00242	0.00835	1	11/07/2021 06:34	WG1770203
Bromoform	U	C3	0.00391	0.0835	1	11/07/2021 06:34	WG1770203
Bromomethane	U	C3	0.00658	0.0417	1	11/07/2021 06:34	WG1770203
n-Butylbenzene	U		0.0175	0.0417	1	11/07/2021 06:34	WG1770203
sec-Butylbenzene	U		0.00961	0.0417	1	11/07/2021 06:34	WG1770203
tert-Butylbenzene	U		0.00651	0.0167	1	11/07/2021 06:34	WG1770203
Carbon tetrachloride	U		0.00300	0.0167	1	11/07/2021 06:34	WG1770203
Chlorobenzene	U		0.000701	0.00835	1	11/07/2021 06:34	WG1770203
Chlorodibromomethane	U		0.00204	0.00835	1	11/07/2021 06:34	WG1770203
Chloroethane	U	C3	0.00567	0.0167	1	11/07/2021 06:34	WG1770203
Chloroform	U	C3	0.00344	0.00835	1	11/07/2021 06:34	WG1770203
Chloromethane	U		0.0145	0.0417	1	11/07/2021 06:34	WG1770203
2-Chlorotoluene	U		0.00289	0.00835	1	11/07/2021 06:34	WG1770203
4-Chlorotoluene	U		0.00150	0.0167	1	11/07/2021 06:34	WG1770203
1,2-Dibromo-3-Chloropropane	U		0.0130	0.0835	1	11/07/2021 06:34	WG1770203
1,2-Dibromoethane	U		0.00216	0.00835	1	11/07/2021 06:34	WG1770203
Dibromomethane	U		0.00250	0.0167	1	11/07/2021 06:34	WG1770203
1,2-Dichlorobenzene	U		0.00142	0.0167	1	11/07/2021 06:34	WG1770203
1,3-Dichlorobenzene	U		0.00200	0.0167	1	11/07/2021 06:34	WG1770203
1,4-Dichlorobenzene	U		0.00234	0.0167	1	11/07/2021 06:34	WG1770203



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U	<u>C3</u>	0.00537	0.00835	1	11/07/2021 06:34	WG1770203
1,1-Dichloroethane	U		0.00164	0.00835	1	11/07/2021 06:34	WG1770203
1,2-Dichloroethane	U		0.00217	0.00835	1	11/07/2021 06:34	WG1770203
1,1-Dichloroethene	U		0.00202	0.00835	1	11/07/2021 06:34	WG1770203
cis-1,2-Dichloroethene	U		0.00245	0.00835	1	11/07/2021 06:34	WG1770203
trans-1,2-Dichloroethene	U		0.00347	0.0167	1	11/07/2021 06:34	WG1770203
1,2-Dichloropropane	U		0.00474	0.0167	1	11/07/2021 06:34	WG1770203
1,1-Dichloropropene	U		0.00270	0.00835	1	11/07/2021 06:34	WG1770203
1,3-Dichloropropane	U		0.00167	0.0167	1	11/07/2021 06:34	WG1770203
cis-1,3-Dichloropropene	U	<u>C3</u>	0.00253	0.00835	1	11/07/2021 06:34	WG1770203
trans-1,3-Dichloropropene	U		0.00381	0.0167	1	11/07/2021 06:34	WG1770203
2,2-Dichloropropane	U		0.00461	0.00835	1	11/07/2021 06:34	WG1770203
Di-isopropyl ether	U		0.00137	0.00334	1	11/07/2021 06:34	WG1770203
Ethylbenzene	U		0.00246	0.00835	1	11/07/2021 06:34	WG1770203
Hexachloro-1,3-butadiene	U	<u>C3</u>	0.0200	0.0835	1	11/07/2021 06:34	WG1770203
Isopropylbenzene	U		0.00142	0.00835	1	11/07/2021 06:34	WG1770203
p-Isopropyltoluene	U		0.00851	0.0167	1	11/07/2021 06:34	WG1770203
2-Butanone (MEK)	U		0.212	0.334	1	11/07/2021 06:34	WG1770203
Methylene Chloride	U		0.0222	0.0835	1	11/07/2021 06:34	WG1770203
4-Methyl-2-pentanone (MIBK)	U		0.00761	0.0835	1	11/07/2021 06:34	WG1770203
Methyl tert-butyl ether	U		0.00117	0.00334	1	11/07/2021 06:34	WG1770203
Naphthalene	U	<u>C3</u>	0.0163	0.0417	1	11/07/2021 06:34	WG1770203
n-Propylbenzene	U		0.00317	0.0167	1	11/07/2021 06:34	WG1770203
Styrene	U		0.000764	0.0417	1	11/07/2021 06:34	WG1770203
1,1,1,2-Tetrachloroethane	U		0.00316	0.00835	1	11/07/2021 06:34	WG1770203
1,1,2,2-Tetrachloroethane	U		0.00232	0.00835	1	11/07/2021 06:34	WG1770203
1,1,2-Trichlorotrifluoroethane	U	<u>C3</u>	0.00252	0.00835	1	11/07/2021 06:34	WG1770203
Tetrachloroethene	U		0.00299	0.00835	1	11/07/2021 06:34	WG1770203
Toluene	0.00885	<u>U</u>	0.00434	0.0167	1	11/07/2021 06:34	WG1770203
1,2,3-Trichlorobenzene	U	<u>C4</u>	0.0245	0.0417	1	11/07/2021 06:34	WG1770203
1,2,4-Trichlorobenzene	U	<u>C3</u>	0.0147	0.0417	1	11/07/2021 06:34	WG1770203
1,1,1-Trichloroethane	U		0.00308	0.00835	1	11/07/2021 06:34	WG1770203
1,1,2-Trichloroethane	U		0.00199	0.00835	1	11/07/2021 06:34	WG1770203
Trichloroethene	U		0.00195	0.00334	1	11/07/2021 06:34	WG1770203
Trichlorofluoromethane	U	<u>C3</u>	0.00276	0.00835	1	11/07/2021 06:34	WG1770203
1,2,3-Trichloropropane	U		0.00541	0.0417	1	11/07/2021 06:34	WG1770203
1,2,4-Trimethylbenzene	U		0.00527	0.0167	1	11/07/2021 06:34	WG1770203
1,2,3-Trimethylbenzene	U		0.00527	0.0167	1	11/07/2021 06:34	WG1770203
1,3,5-Trimethylbenzene	U		0.00668	0.0167	1	11/07/2021 06:34	WG1770203
Vinyl chloride	U		0.00387	0.00835	1	11/07/2021 06:34	WG1770203
Xylenes, Total	U		0.00294	0.0217	1	11/07/2021 06:34	WG1770203
(S) Toluene-d8	111			75.0-131		11/07/2021 06:34	WG1770203
(S) 4-Bromofluorobenzene	94.6			67.0-138		11/07/2021 06:34	WG1770203
(S) 1,2-Dichloroethane-d4	87.4			70.0-130		11/07/2021 06:34	WG1770203

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		2.88	8.67	1	11/11/2021 10:50	WG1771408
Residual Range Organics (RRO)	U		7.22	21.7	1	11/11/2021 10:50	WG1771408
(S) o-Terphenyl	53.3			18.0-148		11/11/2021 10:50	WG1771408

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U	J4	0.0152	0.152	1	11/11/2021 23:25	WG1771724
Dalapon	U		0.0245	0.152	1	11/11/2021 23:25	WG1771724
2,4-DB	U		0.0644	0.152	1	11/11/2021 23:25	WG1771724
Dicamba	U		0.0340	0.152	1	11/11/2021 23:25	WG1771724
Dichloroprop	U		0.0531	0.152	1	11/11/2021 23:25	WG1771724
Dinoseb	U		0.0151	0.152	1	11/11/2021 23:25	WG1771724
MCPA	U		0.960	14.1	1	11/11/2021 23:25	WG1771724
MCPP	U		0.795	14.1	1	11/11/2021 23:25	WG1771724
2,4,5-T	U		0.0185	0.152	1	11/11/2021 23:25	WG1771724
2,4,5-TP (Silvex)	U		0.0232	0.152	1	11/11/2021 23:25	WG1771724
(S) 2,4-Dichlorophenyl Acetic Acid	55.5			22.0-132		11/11/2021 23:25	WG1771724

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00815	0.0433	1	11/04/2021 23:53	WG1769015
Alpha BHC	U		0.00798	0.0433	1	11/04/2021 23:53	WG1769015
Beta BHC	U		0.00821	0.0433	1	11/04/2021 23:53	WG1769015
Delta BHC	U		0.00750	0.0433	1	11/04/2021 23:53	WG1769015
Gamma BHC	U		0.00746	0.0433	1	11/04/2021 23:53	WG1769015
Chlordane	U		0.223	0.650	1	11/04/2021 23:53	WG1769015
4,4-DDD	U		0.00802	0.0433	1	11/04/2021 23:53	WG1769015
4,4-DDE	U		0.00793	0.0433	1	11/04/2021 23:53	WG1769015
4,4-DDT	U		0.0136	0.0433	1	11/04/2021 23:53	WG1769015
Dieldrin	U		0.00746	0.0433	1	11/04/2021 23:53	WG1769015
Endosulfan I	U		0.00787	0.0433	1	11/04/2021 23:53	WG1769015
Endosulfan II	U		0.00726	0.0433	1	11/04/2021 23:53	WG1769015
Endosulfan sulfate	U		0.00789	0.0433	1	11/04/2021 23:53	WG1769015
Endrin	U		0.00759	0.0433	1	11/04/2021 23:53	WG1769015
Endrin aldehyde	U		0.00735	0.0433	1	11/04/2021 23:53	WG1769015
Endrin ketone	U		0.0154	0.0433	1	11/04/2021 23:53	WG1769015
Heptachlor	U		0.00928	0.0433	1	11/04/2021 23:53	WG1769015
Heptachlor epoxide	U		0.00735	0.0433	1	11/04/2021 23:53	WG1769015
Hexachlorobenzene	U		0.00750	0.0433	1	11/04/2021 23:53	WG1769015
Methoxychlor	U		0.0105	0.0433	1	11/04/2021 23:53	WG1769015
Toxaphene	U		0.269	0.867	1	11/04/2021 23:53	WG1769015
(S) Decachlorobiphenyl	103			10.0-135		11/04/2021 23:53	WG1769015
(S) Tetrachloro-m-xylene	82.2			10.0-139		11/04/2021 23:53	WG1769015

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0256	0.0737	1	11/04/2021 23:53	WG1769015
PCB 1221	U		0.0256	0.0737	1	11/04/2021 23:53	WG1769015
PCB 1232	U		0.0256	0.0737	1	11/04/2021 23:53	WG1769015
PCB 1242	U		0.0256	0.0737	1	11/04/2021 23:53	WG1769015
PCB 1248	U		0.0160	0.0368	1	11/04/2021 23:53	WG1769015
PCB 1254	U		0.0160	0.0368	1	11/04/2021 23:53	WG1769015
PCB 1260	U		0.0160	0.0368	1	11/04/2021 23:53	WG1769015
(S) Decachlorobiphenyl	95.3			10.0-135		11/04/2021 23:53	WG1769015
(S) Tetrachloro-m-xylene	101			10.0-139		11/04/2021 23:53	WG1769015

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0117	0.0722	1	11/11/2021 13:35	WG1771397
Acenaphthylene	U		0.0102	0.0722	1	11/11/2021 13:35	WG1771397
Anthracene	U		0.0129	0.0722	1	11/11/2021 13:35	WG1771397
Benzo(a)anthracene	U		0.0127	0.0722	1	11/11/2021 13:35	WG1771397
Benzo(b)fluoranthene	U		0.0135	0.0722	1	11/11/2021 13:35	WG1771397
Benzo(k)fluoranthene	U		0.0128	0.0722	1	11/11/2021 13:35	WG1771397
Benzo(g,h,i)perylene	U		0.0132	0.0722	1	11/11/2021 13:35	WG1771397
Benzo(a)pyrene	U		0.0134	0.0722	1	11/11/2021 13:35	WG1771397
Bis(2-chloroethoxy)methane	U		0.0217	0.722	1	11/11/2021 13:35	WG1771397
Bis(2-chloroethyl)ether	U		0.0238	0.722	1	11/11/2021 13:35	WG1771397
2,2-Oxybis(1-Chloropropane)	U		0.0312	0.722	1	11/11/2021 13:35	WG1771397
4-Bromophenyl-phenylether	U		0.0254	0.722	1	11/11/2021 13:35	WG1771397
2-Chloronaphthalene	U		0.0127	0.0722	1	11/11/2021 13:35	WG1771397
4-Chlorophenyl-phenylether	U		0.0251	0.722	1	11/11/2021 13:35	WG1771397
Chrysene	U		0.0143	0.0722	1	11/11/2021 13:35	WG1771397
Dibenz(a,h)anthracene	U		0.0200	0.0722	1	11/11/2021 13:35	WG1771397
3,3-Dichlorobenzidine	U		0.0267	0.722	1	11/11/2021 13:35	WG1771397
2,4-Dinitrotoluene	U		0.0207	0.722	1	11/11/2021 13:35	WG1771397
2,6-Dinitrotoluene	U		0.0236	0.722	1	11/11/2021 13:35	WG1771397
Fluoranthene	U		0.0130	0.0722	1	11/11/2021 13:35	WG1771397
Fluorene	U		0.0117	0.0722	1	11/11/2021 13:35	WG1771397
Hexachlorobenzene	U		0.0256	0.722	1	11/11/2021 13:35	WG1771397
Hexachloro-1,3-butadiene	U		0.0243	0.722	1	11/11/2021 13:35	WG1771397
Hexachlorocyclopentadiene	U		0.0379	0.722	1	11/11/2021 13:35	WG1771397
Hexachloroethane	U		0.0284	0.722	1	11/11/2021 13:35	WG1771397
Indeno(1,2,3-cd)pyrene	U		0.0204	0.0722	1	11/11/2021 13:35	WG1771397
Isophorone	U		0.0221	0.722	1	11/11/2021 13:35	WG1771397
Naphthalene	U		0.0181	0.0722	1	11/11/2021 13:35	WG1771397
Nitrobenzene	U		0.0251	0.722	1	11/11/2021 13:35	WG1771397
n-Nitrosodimethylamine	U		0.107	0.722	1	11/11/2021 13:35	WG1771397
n-Nitrosodiphenylamine	U		0.0546	0.722	1	11/11/2021 13:35	WG1771397
n-Nitrosodi-n-propylamine	U		0.0241	0.722	1	11/11/2021 13:35	WG1771397
Phenanthrene	U		0.0143	0.0722	1	11/11/2021 13:35	WG1771397
Pyridine	U		0.0477	0.722	1	11/11/2021 13:35	WG1771397
Benzylbutyl phthalate	U		0.0225	0.722	1	11/11/2021 13:35	WG1771397
Bis(2-ethylhexyl)phthalate	U		0.0915	0.722	1	11/11/2021 13:35	WG1771397
Di-n-butyl phthalate	U		0.0247	0.722	1	11/11/2021 13:35	WG1771397
Diethyl phthalate	U		0.0238	0.722	1	11/11/2021 13:35	WG1771397
Dimethyl phthalate	U		0.153	0.722	1	11/11/2021 13:35	WG1771397
Di-n-octyl phthalate	U		0.0488	0.722	1	11/11/2021 13:35	WG1771397
Pyrene	U		0.0140	0.0722	1	11/11/2021 13:35	WG1771397
1,2,4-Trichlorobenzene	U		0.0225	0.722	1	11/11/2021 13:35	WG1771397
4-Chloro-3-methylphenol	U		0.0234	0.722	1	11/11/2021 13:35	WG1771397
2-Chlorophenol	U		0.0238	0.722	1	11/11/2021 13:35	WG1771397
2,4-Dichlorophenol	U		0.0210	0.722	1	11/11/2021 13:35	WG1771397
2,4-Dimethylphenol	U		0.0189	0.722	1	11/11/2021 13:35	WG1771397
4,6-Dinitro-2-methylphenol	U		0.164	0.722	1	11/11/2021 13:35	WG1771397
2,4-Dinitrophenol	U		0.169	0.722	1	11/11/2021 13:35	WG1771397
2-Methylphenol	U		0.0217	0.722	1	11/11/2021 13:35	WG1771397
3&4-Methyl Phenol	U		0.0225	0.722	1	11/11/2021 13:35	WG1771397
2-Nitrophenol	U		0.0258	0.722	1	11/11/2021 13:35	WG1771397
4-Nitrophenol	U		0.0225	0.722	1	11/11/2021 13:35	WG1771397
Pentachlorophenol	U		0.0194	0.722	1	11/11/2021 13:35	WG1771397
Phenol	U		0.0290	0.722	1	11/11/2021 13:35	WG1771397
2,4,6-Trichlorophenol	U		0.0232	0.722	1	11/11/2021 13:35	WG1771397
2,4,5-Trichlorophenol	U		0.0245	0.722	1	11/11/2021 13:35	WG1771397

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	35.4			12.0-120		11/11/2021 13:35	WG1771397
(S) Phenol-d5	35.6			10.0-120		11/11/2021 13:35	WG1771397
(S) Nitrobenzene-d5	30.2			10.0-122		11/11/2021 13:35	WG1771397
(S) 2-Fluorobiphenyl	34.2			15.0-120		11/11/2021 13:35	WG1771397
(S) 2,4,6-Tribromophenol	33.9			10.0-127		11/11/2021 13:35	WG1771397
(S) p-Terphenyl-d14	45.3			10.0-120		11/11/2021 13:35	WG1771397

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00498	0.0130	1	11/10/2021 20:06	WG1771413
Acenaphthene	U		0.00453	0.0130	1	11/10/2021 20:06	WG1771413
Acenaphthylene	U		0.00468	0.0130	1	11/10/2021 20:06	WG1771413
Benzo(a)anthracene	U		0.00375	0.0130	1	11/10/2021 20:06	WG1771413
Benzo(a)pyrene	U		0.00388	0.0130	1	11/10/2021 20:06	WG1771413
Benzo(b)fluoranthene	U		0.00332	0.0130	1	11/10/2021 20:06	WG1771413
Benzo(g,h,i)perylene	U		0.00384	0.0130	1	11/10/2021 20:06	WG1771413
Benzo(k)fluoranthene	U		0.00466	0.0130	1	11/10/2021 20:06	WG1771413
Chrysene	U		0.00503	0.0130	1	11/10/2021 20:06	WG1771413
Dibenz(a,h)anthracene	U		0.00373	0.0130	1	11/10/2021 20:06	WG1771413
Fluoranthene	U		0.00492	0.0130	1	11/10/2021 20:06	WG1771413
Fluorene	U		0.00444	0.0130	1	11/10/2021 20:06	WG1771413
Indeno(1,2,3-cd)pyrene	U		0.00392	0.0130	1	11/10/2021 20:06	WG1771413
Naphthalene	U		0.00884	0.0433	1	11/10/2021 20:06	WG1771413
Phenanthrene	U		0.00501	0.0130	1	11/10/2021 20:06	WG1771413
Pyrene	U		0.00433	0.0130	1	11/10/2021 20:06	WG1771413
1-Methylnaphthalene	U		0.00973	0.0433	1	11/10/2021 20:06	WG1771413
2-Methylnaphthalene	U		0.00925	0.0433	1	11/10/2021 20:06	WG1771413
2-Chloronaphthalene	U		0.0101	0.0433	1	11/10/2021 20:06	WG1771413
(S) Nitrobenzene-d5	78.9			14.0-149		11/10/2021 20:06	WG1771413
(S) 2-Fluorobiphenyl	80.3			34.0-125		11/10/2021 20:06	WG1771413
(S) p-Terphenyl-d14	98.6			23.0-120		11/10/2021 20:06	WG1771413

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	16.2		1	11/04/2021 12:24	WG1768709

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.111	0.246	1	11/08/2021 10:11	WG1770278

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	U		1.02	18.5	5	11/12/2021 11:02	WG1772552
Arsenic	5.45	J	0.616	6.16	5	11/12/2021 04:27	WG1772552
Barium	319		0.936	15.4	5	11/12/2021 04:27	WG1772552
Cadmium	U		0.526	6.16	5	11/12/2021 04:27	WG1772552
Chromium	30.2	J	1.82	30.8	5	11/12/2021 04:27	WG1772552
Copper	36.7		0.813	30.8	5	11/12/2021 04:27	WG1772552
Lead	13.2		0.610	12.3	5	11/12/2021 04:27	WG1772552
Selenium	1.46	J	1.11	15.4	5	11/12/2021 04:27	WG1772552
Silver	U		0.533	3.08	5	11/12/2021 04:27	WG1772552
Zinc	111	J	4.56	154	5	11/12/2021 04:27	WG1772552

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		12.6	37.2	39.5	11/06/2021 12:51	WG1769987
(S) a,a,a-Trifluorotoluene(FID)	117			77.0-120		11/06/2021 12:51	WG1769987

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U		0.543	0.743	1.58	11/07/2021 06:53	WG1770203
Acrylonitrile	U		0.0536	0.186	1.58	11/07/2021 06:53	WG1770203
Benzene	U		0.00694	0.0149	1.58	11/07/2021 06:53	WG1770203
Bromobenzene	U		0.0134	0.186	1.58	11/07/2021 06:53	WG1770203
Bromodichloromethane	U	C3	0.0108	0.0372	1.58	11/07/2021 06:53	WG1770203
Bromoform	U	C3	0.0174	0.372	1.58	11/07/2021 06:53	WG1770203
Bromomethane	U	C3	0.0293	0.186	1.58	11/07/2021 06:53	WG1770203
n-Butylbenzene	U		0.0780	0.186	1.58	11/07/2021 06:53	WG1770203
sec-Butylbenzene	U		0.0428	0.186	1.58	11/07/2021 06:53	WG1770203
tert-Butylbenzene	U		0.0290	0.0743	1.58	11/07/2021 06:53	WG1770203
Carbon tetrachloride	U		0.0134	0.0743	1.58	11/07/2021 06:53	WG1770203
Chlorobenzene	U		0.00312	0.0372	1.58	11/07/2021 06:53	WG1770203
Chlorodibromomethane	U		0.00910	0.0372	1.58	11/07/2021 06:53	WG1770203
Chloroethane	U	C3	0.0253	0.0743	1.58	11/07/2021 06:53	WG1770203
Chloroform	U	C3	0.0153	0.0372	1.58	11/07/2021 06:53	WG1770203
Chloromethane	U		0.0647	0.186	1.58	11/07/2021 06:53	WG1770203
2-Chlorotoluene	U		0.0129	0.0372	1.58	11/07/2021 06:53	WG1770203
4-Chlorotoluene	U		0.00669	0.0743	1.58	11/07/2021 06:53	WG1770203
1,2-Dibromo-3-Chloropropane	U		0.0580	0.372	1.58	11/07/2021 06:53	WG1770203
1,2-Dibromoethane	U		0.00960	0.0372	1.58	11/07/2021 06:53	WG1770203
Dibromomethane	U		0.0112	0.0743	1.58	11/07/2021 06:53	WG1770203
1,2-Dichlorobenzene	U		0.00632	0.0743	1.58	11/07/2021 06:53	WG1770203
1,3-Dichlorobenzene	U		0.00892	0.0743	1.58	11/07/2021 06:53	WG1770203
1,4-Dichlorobenzene	U		0.0104	0.0743	1.58	11/07/2021 06:53	WG1770203



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U	<u>C3</u>	0.0239	0.0372	1.58	11/07/2021 06:53	WG1770203
1,1-Dichloroethane	U		0.00730	0.0372	1.58	11/07/2021 06:53	WG1770203
1,2-Dichloroethane	U		0.00969	0.0372	1.58	11/07/2021 06:53	WG1770203
1,1-Dichloroethene	U		0.00901	0.0372	1.58	11/07/2021 06:53	WG1770203
cis-1,2-Dichloroethene	U		0.0109	0.0372	1.58	11/07/2021 06:53	WG1770203
trans-1,2-Dichloroethene	U		0.0154	0.0743	1.58	11/07/2021 06:53	WG1770203
1,2-Dichloropropane	U		0.0211	0.0743	1.58	11/07/2021 06:53	WG1770203
1,1-Dichloropropene	U		0.0120	0.0372	1.58	11/07/2021 06:53	WG1770203
1,3-Dichloropropane	U		0.00745	0.0743	1.58	11/07/2021 06:53	WG1770203
cis-1,3-Dichloropropene	U	<u>C3</u>	0.0113	0.0372	1.58	11/07/2021 06:53	WG1770203
trans-1,3-Dichloropropene	U		0.0169	0.0743	1.58	11/07/2021 06:53	WG1770203
2,2-Dichloropropane	U		0.0205	0.0372	1.58	11/07/2021 06:53	WG1770203
Di-isopropyl ether	U		0.00610	0.0149	1.58	11/07/2021 06:53	WG1770203
Ethylbenzene	U		0.0109	0.0372	1.58	11/07/2021 06:53	WG1770203
Hexachloro-1,3-butadiene	U	<u>C3</u>	0.0892	0.372	1.58	11/07/2021 06:53	WG1770203
Isopropylbenzene	U		0.00632	0.0372	1.58	11/07/2021 06:53	WG1770203
p-Isopropyltoluene	0.0457	<u>J</u>	0.0379	0.0743	1.58	11/07/2021 06:53	WG1770203
2-Butanone (MEK)	U		0.941	1.49	1.58	11/07/2021 06:53	WG1770203
Methylene Chloride	U		0.0988	0.372	1.58	11/07/2021 06:53	WG1770203
4-Methyl-2-pentanone (MIBK)	U		0.0339	0.372	1.58	11/07/2021 06:53	WG1770203
Methyl tert-butyl ether	U		0.00520	0.0149	1.58	11/07/2021 06:53	WG1770203
Naphthalene	U	<u>C3</u>	0.0726	0.186	1.58	11/07/2021 06:53	WG1770203
n-Propylbenzene	U		0.0141	0.0743	1.58	11/07/2021 06:53	WG1770203
Styrene	U		0.00341	0.186	1.58	11/07/2021 06:53	WG1770203
1,1,1,2-Tetrachloroethane	U		0.0141	0.0372	1.58	11/07/2021 06:53	WG1770203
1,1,2,2-Tetrachloroethane	U		0.0104	0.0372	1.58	11/07/2021 06:53	WG1770203
1,1,2-Trichlorotrifluoroethane	U	<u>C3</u>	0.0112	0.0372	1.58	11/07/2021 06:53	WG1770203
Tetrachloroethene	U		0.0134	0.0372	1.58	11/07/2021 06:53	WG1770203
Toluene	0.318		0.0193	0.0743	1.58	11/07/2021 06:53	WG1770203
1,2,3-Trichlorobenzene	U	<u>C4</u>	0.109	0.186	1.58	11/07/2021 06:53	WG1770203
1,2,4-Trichlorobenzene	U	<u>C3</u>	0.0654	0.186	1.58	11/07/2021 06:53	WG1770203
1,1,1-Trichloroethane	U		0.0137	0.0372	1.58	11/07/2021 06:53	WG1770203
1,1,2-Trichloroethane	U		0.00887	0.0372	1.58	11/07/2021 06:53	WG1770203
Trichloroethene	U		0.00869	0.0149	1.58	11/07/2021 06:53	WG1770203
Trichlorofluoromethane	U	<u>C3</u>	0.0123	0.0372	1.58	11/07/2021 06:53	WG1770203
1,2,3-Trichloropropane	U		0.0241	0.186	1.58	11/07/2021 06:53	WG1770203
1,2,4-Trimethylbenzene	U		0.0235	0.0743	1.58	11/07/2021 06:53	WG1770203
1,2,3-Trimethylbenzene	U		0.0235	0.0743	1.58	11/07/2021 06:53	WG1770203
1,3,5-Trimethylbenzene	U		0.0297	0.0743	1.58	11/07/2021 06:53	WG1770203
Vinyl chloride	U		0.0172	0.0372	1.58	11/07/2021 06:53	WG1770203
Xylenes, Total	U		0.0131	0.0969	1.58	11/07/2021 06:53	WG1770203
(S) Toluene-d8	110			75.0-131		11/07/2021 06:53	WG1770203
(S) 4-Bromofluorobenzene	92.4			67.0-138		11/07/2021 06:53	WG1770203
(S) 1,2-Dichloroethane-d4	92.4			70.0-130		11/07/2021 06:53	WG1770203

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		8.19	24.6	1	11/11/2021 11:03	WG1771408
Residual Range Organics (RRO)	U		20.5	61.6	1	11/11/2021 11:03	WG1771408
(S) o-Terphenyl	55.2			18.0-148		11/11/2021 11:03	WG1771408

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.0142	0.0369	1	11/10/2021 20:26	WG1771413
Acenaphthene	U		0.0129	0.0369	1	11/10/2021 20:26	WG1771413
Acenaphthylene	U		0.0133	0.0369	1	11/10/2021 20:26	WG1771413
Benzo(a)anthracene	U		0.0107	0.0369	1	11/10/2021 20:26	WG1771413
Benzo(a)pyrene	U		0.0110	0.0369	1	11/10/2021 20:26	WG1771413
Benzo(b)fluoranthene	U		0.00942	0.0369	1	11/10/2021 20:26	WG1771413
Benzo(g,h,i)perylene	U		0.0109	0.0369	1	11/10/2021 20:26	WG1771413
Benzo(k)fluoranthene	U		0.0132	0.0369	1	11/10/2021 20:26	WG1771413
Chrysene	U		0.0143	0.0369	1	11/10/2021 20:26	WG1771413
Dibenz(a,h)anthracene	U		0.0106	0.0369	1	11/10/2021 20:26	WG1771413
Fluoranthene	U		0.0140	0.0369	1	11/10/2021 20:26	WG1771413
Fluorene	U		0.0126	0.0369	1	11/10/2021 20:26	WG1771413
Indeno(1,2,3-cd)pyrene	U		0.0111	0.0369	1	11/10/2021 20:26	WG1771413
Naphthalene	U		0.0251	0.123	1	11/10/2021 20:26	WG1771413
Phenanthrene	U		0.0142	0.0369	1	11/10/2021 20:26	WG1771413
Pyrene	U		0.0123	0.0369	1	11/10/2021 20:26	WG1771413
1-Methylnaphthalene	U		0.0276	0.123	1	11/10/2021 20:26	WG1771413
2-Methylnaphthalene	U		0.0263	0.123	1	11/10/2021 20:26	WG1771413
2-Chloronaphthalene	U		0.0287	0.123	1	11/10/2021 20:26	WG1771413
(S) Nitrobenzene-d5	82.7			14.0-149		11/10/2021 20:26	WG1771413
(S) 2-Fluorobiphenyl	83.2			34.0-125		11/10/2021 20:26	WG1771413
(S) p-Terphenyl-d14	104			23.0-120		11/10/2021 20:26	WG1771413

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	67.7		1	11/04/2021 12:24	WG1768709

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0296	J	0.0266	0.0591	1	11/08/2021 10:14	WG1770278

Metals (ICPMS) by Method 6020B

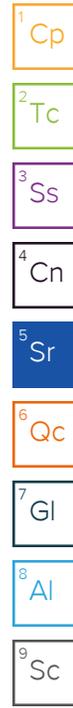
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.245	4.43	5	11/12/2021 11:05	WG1772552
Arsenic	2.17		0.148	1.48	5	11/12/2021 04:31	WG1772552
Barium	12900		4.49	73.9	100	11/12/2021 11:09	WG1772552
Cadmium	U		0.126	1.48	5	11/12/2021 04:31	WG1772552
Chromium	11.9		0.437	7.39	5	11/12/2021 04:31	WG1772552
Copper	15.4		0.195	7.39	5	11/12/2021 04:31	WG1772552
Lead	4.68		0.146	2.96	5	11/12/2021 04:31	WG1772552
Selenium	0.475	J	0.266	3.69	5	11/12/2021 04:31	WG1772552
Silver	U		0.128	0.739	5	11/12/2021 04:31	WG1772552
Zinc	41.5		1.09	36.9	5	11/12/2021 04:31	WG1772552

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		2.30	6.79	37.8	11/06/2021 13:13	WG1769987
(S) a,a,a-Trifluorotoluene(FID)	117			77.0-120		11/06/2021 13:13	WG1769987

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0989	0.136	1.51	11/07/2021 07:12	WG1770203
Acrylonitrile	U		0.00978	0.0339	1.51	11/07/2021 07:12	WG1770203
Benzene	U		0.00127	0.00271	1.51	11/07/2021 07:12	WG1770203
Bromobenzene	U		0.00244	0.0339	1.51	11/07/2021 07:12	WG1770203
Bromodichloromethane	U	C3	0.00196	0.00679	1.51	11/07/2021 07:12	WG1770203
Bromoform	U	C3	0.00318	0.0679	1.51	11/07/2021 07:12	WG1770203
Bromomethane	U	C3	0.00533	0.0339	1.51	11/07/2021 07:12	WG1770203
n-Butylbenzene	U		0.0142	0.0339	1.51	11/07/2021 07:12	WG1770203
sec-Butylbenzene	U		0.00781	0.0339	1.51	11/07/2021 07:12	WG1770203
tert-Butylbenzene	U		0.00528	0.0136	1.51	11/07/2021 07:12	WG1770203
Carbon tetrachloride	U		0.00244	0.0136	1.51	11/07/2021 07:12	WG1770203
Chlorobenzene	U		0.000569	0.00679	1.51	11/07/2021 07:12	WG1770203
Chlorodibromomethane	U		0.00166	0.00679	1.51	11/07/2021 07:12	WG1770203
Chloroethane	U	C3	0.00461	0.0136	1.51	11/07/2021 07:12	WG1770203
Chloroform	U	C3	0.00280	0.00679	1.51	11/07/2021 07:12	WG1770203
Chloromethane	U		0.0118	0.0339	1.51	11/07/2021 07:12	WG1770203
2-Chlorotoluene	U		0.00235	0.00679	1.51	11/07/2021 07:12	WG1770203
4-Chlorotoluene	U		0.00122	0.0136	1.51	11/07/2021 07:12	WG1770203
1,2-Dibromo-3-Chloropropane	U		0.0106	0.0679	1.51	11/07/2021 07:12	WG1770203
1,2-Dibromoethane	U		0.00176	0.00679	1.51	11/07/2021 07:12	WG1770203
Dibromomethane	U		0.00203	0.0136	1.51	11/07/2021 07:12	WG1770203
1,2-Dichlorobenzene	U		0.00115	0.0136	1.51	11/07/2021 07:12	WG1770203
1,3-Dichlorobenzene	U		0.00163	0.0136	1.51	11/07/2021 07:12	WG1770203
1,4-Dichlorobenzene	U		0.00190	0.0136	1.51	11/07/2021 07:12	WG1770203



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U	C3	0.00436	0.00679	1.51	11/07/2021 07:12	WG1770203
1,1-Dichloroethane	U		0.00133	0.00679	1.51	11/07/2021 07:12	WG1770203
1,2-Dichloroethane	U		0.00176	0.00679	1.51	11/07/2021 07:12	WG1770203
1,1-Dichloroethene	U		0.00164	0.00679	1.51	11/07/2021 07:12	WG1770203
cis-1,2-Dichloroethene	U		0.00199	0.00679	1.51	11/07/2021 07:12	WG1770203
trans-1,2-Dichloroethene	U		0.00282	0.0136	1.51	11/07/2021 07:12	WG1770203
1,2-Dichloropropane	U		0.00384	0.0136	1.51	11/07/2021 07:12	WG1770203
1,1-Dichloropropene	U		0.00219	0.00679	1.51	11/07/2021 07:12	WG1770203
1,3-Dichloropropane	U		0.00136	0.0136	1.51	11/07/2021 07:12	WG1770203
cis-1,3-Dichloropropene	U	C3	0.00205	0.00679	1.51	11/07/2021 07:12	WG1770203
trans-1,3-Dichloropropene	U		0.00309	0.0136	1.51	11/07/2021 07:12	WG1770203
2,2-Dichloropropane	U		0.00373	0.00679	1.51	11/07/2021 07:12	WG1770203
Di-isopropyl ether	U		0.00111	0.00271	1.51	11/07/2021 07:12	WG1770203
Ethylbenzene	U		0.00199	0.00679	1.51	11/07/2021 07:12	WG1770203
Hexachloro-1,3-butadiene	U	C3	0.0163	0.0679	1.51	11/07/2021 07:12	WG1770203
Isopropylbenzene	U		0.00115	0.00679	1.51	11/07/2021 07:12	WG1770203
p-Isopropyltoluene	U		0.00691	0.0136	1.51	11/07/2021 07:12	WG1770203
2-Butanone (MEK)	U		0.172	0.271	1.51	11/07/2021 07:12	WG1770203
Methylene Chloride	U		0.0180	0.0679	1.51	11/07/2021 07:12	WG1770203
4-Methyl-2-pentanone (MIBK)	U		0.00618	0.0679	1.51	11/07/2021 07:12	WG1770203
Methyl tert-butyl ether	U		0.000950	0.00271	1.51	11/07/2021 07:12	WG1770203
Naphthalene	U	C3	0.0132	0.0339	1.51	11/07/2021 07:12	WG1770203
n-Propylbenzene	U		0.00257	0.0136	1.51	11/07/2021 07:12	WG1770203
Styrene	0.000679	J	0.000621	0.0339	1.51	11/07/2021 07:12	WG1770203
1,1,1,2-Tetrachloroethane	U		0.00257	0.00679	1.51	11/07/2021 07:12	WG1770203
1,1,2,2-Tetrachloroethane	U		0.00188	0.00679	1.51	11/07/2021 07:12	WG1770203
1,1,2-Trichlorotrifluoroethane	U	C3	0.00205	0.00679	1.51	11/07/2021 07:12	WG1770203
Tetrachloroethene	U		0.00242	0.00679	1.51	11/07/2021 07:12	WG1770203
Toluene	0.0155		0.00352	0.0136	1.51	11/07/2021 07:12	WG1770203
1,2,3-Trichlorobenzene	U	C4	0.0199	0.0339	1.51	11/07/2021 07:12	WG1770203
1,2,4-Trichlorobenzene	U	C3	0.0119	0.0339	1.51	11/07/2021 07:12	WG1770203
1,1,1-Trichloroethane	U		0.00250	0.00679	1.51	11/07/2021 07:12	WG1770203
1,1,2-Trichloroethane	U		0.00162	0.00679	1.51	11/07/2021 07:12	WG1770203
Trichloroethene	U		0.00158	0.00271	1.51	11/07/2021 07:12	WG1770203
Trichlorofluoromethane	U	C3	0.00224	0.00679	1.51	11/07/2021 07:12	WG1770203
1,2,3-Trichloropropane	U		0.00440	0.0339	1.51	11/07/2021 07:12	WG1770203
1,2,4-Trimethylbenzene	0.00481	J	0.00429	0.0136	1.51	11/07/2021 07:12	WG1770203
1,2,3-Trimethylbenzene	0.00434	J	0.00429	0.0136	1.51	11/07/2021 07:12	WG1770203
1,3,5-Trimethylbenzene	U		0.00542	0.0136	1.51	11/07/2021 07:12	WG1770203
Vinyl chloride	U		0.00314	0.00679	1.51	11/07/2021 07:12	WG1770203
Xylenes, Total	0.00528	J	0.00239	0.0176	1.51	11/07/2021 07:12	WG1770203
(S) Toluene-d8	109			75.0-131		11/07/2021 07:12	WG1770203
(S) 4-Bromofluorobenzene	92.2			67.0-138		11/07/2021 07:12	WG1770203
(S) 1,2-Dichloroethane-d4	86.6			70.0-130		11/07/2021 07:12	WG1770203

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		1.97	5.91	1	11/11/2021 11:17	WG1771408
Residual Range Organics (RRO)	U		4.92	14.8	1	11/11/2021 11:17	WG1771408
(S) o-Terphenyl	67.1			18.0-148		11/11/2021 11:17	WG1771408

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00340	0.00887	1	11/10/2021 13:47	WG1771415
Acenaphthene	U		0.00309	0.00887	1	11/10/2021 13:47	WG1771415
Acenaphthylene	U		0.00319	0.00887	1	11/10/2021 13:47	WG1771415
Benzo(a)anthracene	U		0.00256	0.00887	1	11/10/2021 13:47	WG1771415
Benzo(a)pyrene	U		0.00265	0.00887	1	11/10/2021 13:47	WG1771415
Benzo(b)fluoranthene	U		0.00226	0.00887	1	11/10/2021 13:47	WG1771415
Benzo(g,h,i)perylene	U		0.00262	0.00887	1	11/10/2021 13:47	WG1771415
Benzo(k)fluoranthene	U		0.00318	0.00887	1	11/10/2021 13:47	WG1771415
Chrysene	U		0.00343	0.00887	1	11/10/2021 13:47	WG1771415
Dibenz(a,h)anthracene	U		0.00254	0.00887	1	11/10/2021 13:47	WG1771415
Fluoranthene	U		0.00335	0.00887	1	11/10/2021 13:47	WG1771415
Fluorene	U		0.00303	0.00887	1	11/10/2021 13:47	WG1771415
Indeno(1,2,3-cd)pyrene	U		0.00267	0.00887	1	11/10/2021 13:47	WG1771415
Naphthalene	U		0.00603	0.0296	1	11/10/2021 13:47	WG1771415
Phenanthrene	U		0.00341	0.00887	1	11/10/2021 13:47	WG1771415
Pyrene	U		0.00296	0.00887	1	11/10/2021 13:47	WG1771415
1-Methylnaphthalene	U		0.00664	0.0296	1	11/10/2021 13:47	WG1771415
2-Methylnaphthalene	U		0.00631	0.0296	1	11/10/2021 13:47	WG1771415
2-Chloronaphthalene	U		0.00689	0.0296	1	11/10/2021 13:47	WG1771415
(S) Nitrobenzene-d5	77.1			14.0-149		11/10/2021 13:47	WG1771415
(S) 2-Fluorobiphenyl	84.1			34.0-125		11/10/2021 13:47	WG1771415
(S) p-Terphenyl-d14	87.3			23.0-120		11/10/2021 13:47	WG1771415

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3725956-1 11/04/21 12:24

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

L1426112-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1426112-01 11/04/21 12:24 • (DUP) R3725956-3 11/04/21 12:24

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	96.6	97.0	1	0.365		10

⁴Cn

⁵Sr

⁶Qc

Laboratory Control Sample (LCS)

(LCS) R3725956-2 11/04/21 12:24

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3726743-4 11/08/21 10:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.0180	0.0400

Method Blank (MB)

(MB) R3726733-5 11/08/21 10:35

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.0180	0.0400

Laboratory Control Sample (LCS)

(LCS) R3726743-1 11/08/21 09:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	0.500	0.485	97.0	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3726733-2 11/08/21 09:17

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	0.500	0.485	97.0	80.0-120	

L1426361-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1426361-01 11/08/21 09:25 • (MS) R3726743-2 11/08/21 09:28 • (MSD) R3726743-3 11/08/21 09:30

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.527	U	0.434	0.464	82.4	88.1	1	75.0-125			6.74	20

L1426361-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1426361-01 11/08/21 09:25 • (MS) R3726733-3 11/08/21 09:28 • (MSD) R3726733-4 11/08/21 09:30

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.527	U	0.434	0.464	82.4	88.1	1	75.0-125			6.74	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3728639-1 11/12/21 02:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.166	3.00
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Chromium	U		0.297	5.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3728639-2 11/12/21 02:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	102	102	80.0-120	
Arsenic	100	91.5	91.5	80.0-120	
Barium	100	88.2	88.2	80.0-120	
Cadmium	100	96.9	96.9	80.0-120	
Chromium	100	95.3	95.3	80.0-120	
Copper	100	85.7	85.7	80.0-120	
Lead	100	89.2	89.2	80.0-120	
Selenium	100	103	103	80.0-120	
Silver	20.0	18.8	94.2	80.0-120	
Zinc	100	95.0	95.0	80.0-120	

L1427487-64 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1427487-64 11/12/21 04:02 • (MS) R3728639-5 11/12/21 04:12 • (MSD) R3728639-6 11/12/21 04:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	110	2.24	91.0	93.1	80.4	82.3	5	75.0-125			2.27	20
Barium	110	72.7	183	163	100	81.4	5	75.0-125			12.0	20
Cadmium	110	0.128	103	102	92.9	92.6	5	75.0-125			0.392	20
Chromium	110	8.07	103	101	85.9	84.0	5	75.0-125			2.08	20
Copper	110	22.4	116	117	84.8	85.7	5	75.0-125			0.928	20
Lead	110	14.3	116	110	92.2	86.3	5	75.0-125			5.71	20

L1427487-64 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1427487-64 11/12/21 04:02 • (MS) R3728639-5 11/12/21 04:12 • (MSD) R3728639-6 11/12/21 04:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Selenium	110	0.511	104	104	93.5	94.2	5	75.0-125			0.791	20
Silver	22.1	U	19.5	19.3	88.5	87.7	5	75.0-125			0.896	20
Zinc	110	57.5	165	160	97.8	93.3	5	75.0-125			3.08	20

L1427487-64 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1427487-64 11/12/21 10:40 • (MS) R3728754-3 11/12/21 10:49 • (MSD) R3728754-4 11/12/21 10:52

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	110	0.375	71.1	78.9	64.1	71.2	5	75.0-125	<u>J6</u>	<u>J6</u>	10.4	20

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3725937-3 11/05/21 01:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	96.9			77.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3725937-1 11/05/21 00:06 • (LCSD) R3725937-2 11/05/21 00:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	5.04	5.14	91.6	93.5	71.0-124			1.96	20
(S) a,a,a-Trifluorotoluene(FID)				104	103	77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3727796-2 11/06/21 12:17

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.0339	0.100
(S) a,a,a-Trifluorotoluene(FID)	114			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3727796-1 11/06/21 11:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.50	5.85	106	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			100	77.0-120	

L1426136-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1426136-03 11/06/21 13:13 • (MS) R3727796-3 11/06/21 20:03 • (MSD) R3727796-4 11/06/21 20:25

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	373	U	244	228	65.4	61.1	37.8	50.0-150			6.84	27
(S) a,a,a-Trifluorotoluene(FID)					90.6	92.7		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3727992-2 11/07/21 04:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3727992-2 11/07/21 04:59

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	0.0690	U	0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	109			75.0-131
(S) 4-Bromofluorobenzene	92.3			67.0-138
(S) 1,2-Dichloroethane-d4	92.0			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3727992-1 11/07/21 04:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.604	96.6	10.0-160	
Acrylonitrile	0.625	0.638	102	45.0-153	
Benzene	0.125	0.104	83.2	70.0-123	
Bromobenzene	0.125	0.121	96.8	73.0-121	
Bromodichloromethane	0.125	0.0982	78.6	73.0-121	

Laboratory Control Sample (LCS)

(LCS) R3727992-1 11/07/21 04:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromoform	0.125	0.0900	72.0	64.0-132	
Bromomethane	0.125	0.0805	64.4	56.0-147	
n-Butylbenzene	0.125	0.104	83.2	68.0-135	
sec-Butylbenzene	0.125	0.114	91.2	74.0-130	
tert-Butylbenzene	0.125	0.110	88.0	75.0-127	
Carbon tetrachloride	0.125	0.103	82.4	66.0-128	
Chlorobenzene	0.125	0.109	87.2	76.0-128	
Chlorodibromomethane	0.125	0.101	80.8	74.0-127	
Chloroethane	0.125	0.0903	72.2	61.0-134	
Chloroform	0.125	0.0985	78.8	72.0-123	
Chloromethane	0.125	0.106	84.8	51.0-138	
2-Chlorotoluene	0.125	0.119	95.2	75.0-124	
4-Chlorotoluene	0.125	0.116	92.8	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.100	80.0	59.0-130	
1,2-Dibromoethane	0.125	0.108	86.4	74.0-128	
Dibromomethane	0.125	0.102	81.6	75.0-122	
1,2-Dichlorobenzene	0.125	0.115	92.0	76.0-124	
1,3-Dichlorobenzene	0.125	0.113	90.4	76.0-125	
1,4-Dichlorobenzene	0.125	0.112	89.6	77.0-121	
Dichlorodifluoromethane	0.125	0.0996	79.7	43.0-156	
1,1-Dichloroethane	0.125	0.113	90.4	70.0-127	
1,2-Dichloroethane	0.125	0.103	82.4	65.0-131	
1,1-Dichloroethene	0.125	0.108	86.4	65.0-131	
cis-1,2-Dichloroethene	0.125	0.101	80.8	73.0-125	
trans-1,2-Dichloroethene	0.125	0.106	84.8	71.0-125	
1,2-Dichloropropane	0.125	0.112	89.6	74.0-125	
1,1-Dichloropropene	0.125	0.0996	79.7	73.0-125	
1,3-Dichloropropane	0.125	0.112	89.6	80.0-125	
cis-1,3-Dichloropropene	0.125	0.0979	78.3	76.0-127	
trans-1,3-Dichloropropene	0.125	0.105	84.0	73.0-127	
2,2-Dichloropropane	0.125	0.133	106	59.0-135	
Di-isopropyl ether	0.125	0.114	91.2	60.0-136	
Ethylbenzene	0.125	0.112	89.6	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.0931	74.5	57.0-150	
Isopropylbenzene	0.125	0.111	88.8	72.0-127	
p-Isopropyltoluene	0.125	0.108	86.4	72.0-133	
2-Butanone (MEK)	0.625	0.567	90.7	30.0-160	
Methylene Chloride	0.125	0.105	84.0	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.589	94.2	56.0-143	
Methyl tert-butyl ether	0.125	0.119	95.2	66.0-132	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3727992-1 11/07/21 04:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Naphthalene	0.125	0.0959	76.7	59.0-130	
n-Propylbenzene	0.125	0.117	93.6	74.0-126	
Styrene	0.125	0.109	87.2	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.109	87.2	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.126	101	68.0-128	
Tetrachloroethene	0.125	0.100	80.0	70.0-136	
Toluene	0.125	0.111	88.8	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.0985	78.8	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.0846	67.7	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.0950	76.0	62.0-137	
1,1,1-Trichloroethane	0.125	0.106	84.8	69.0-126	
1,1,2-Trichloroethane	0.125	0.119	95.2	78.0-123	
Trichloroethene	0.125	0.103	82.4	76.0-126	
Trichlorofluoromethane	0.125	0.0893	71.4	61.0-142	
1,2,3-Trichloropropane	0.125	0.125	100	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.115	92.0	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.118	94.4	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.119	95.2	73.0-127	
Vinyl chloride	0.125	0.105	84.0	63.0-134	
Xylenes, Total	0.375	0.338	90.1	72.0-127	
<i>(S) Toluene-d8</i>			105	75.0-131	
<i>(S) 4-Bromofluorobenzene</i>			94.9	67.0-138	
<i>(S) 1,2-Dichloroethane-d4</i>			100	70.0-130	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R3729095-1 11/11/21 09:55

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	81.4			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3729095-2 11/11/21 10:09

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	45.2	90.4	50.0-150	
<i>(S) o-Terphenyl</i>			98.0	18.0-148	

L1425770-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1425770-01 11/11/21 13:33 • (MS) R3729095-3 11/11/21 13:47 • (MSD) R3729095-4 11/11/21 14:00

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	58.4	U	44.1	41.2	75.5	70.2	1	50.0-150			6.88	20
<i>(S) o-Terphenyl</i>					67.2	62.5		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3728828-1 11/11/21 13:00

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
2,4-D	U		0.00702	0.0700
Dalapon	U		0.0113	0.0700
2,4-DB	U		0.0297	0.0700
Dicamba	U		0.0157	0.0700
Dichloroprop	U		0.0245	0.0700
Dinoseb	U		0.00697	0.0700
MCPA	U		0.443	6.50
MCPP	U		0.367	6.50
2,4,5-T	U		0.00852	0.0700
2,4,5-TP (Silvex)	U		0.0107	0.0700
(S) 2,4-Dichlorophenyl Acetic Acid	61.7			22.0-132

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3728828-2 11/11/21 13:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
2,4-D	0.167	0.202	121	40.0-120	J4 P
Dalapon	0.167	0.116	69.5	15.0-120	P
2,4-DB	0.167	0.111	66.5	25.0-143	
Dicamba	0.167	0.119	71.3	43.0-120	
Dichloroprop	0.167	0.100	59.9	32.0-129	
Dinoseb	0.167	0.0887	53.1	10.0-120	
MCPA	16.7	9.54	57.1	31.0-121	E P
MCPP	16.7	10.2	61.1	28.0-133	E P
2,4,5-T	0.167	0.121	72.5	41.0-120	
2,4,5-TP (Silvex)	0.167	0.106	63.5	42.0-120	
(S) 2,4-Dichlorophenyl Acetic Acid			62.9	22.0-132	

L1426357-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1426357-05 11/11/21 18:45 • (MS) R3728828-3 11/11/21 19:00 • (MSD) R3728828-4 11/11/21 19:16

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
2,4-D	0.181	U	0.125	0.114	68.9	62.9	1	10.0-160			9.09	24
Dalapon	0.181	U	0.169	0.166	93.4	91.6	1	10.0-121	P	P	1.94	27
2,4-DB	0.181	U	0.145	0.147	80.2	81.4	1	10.0-160			1.48	22

L1426357-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1426357-05 11/11/21 18:45 • (MS) R3728828-3 11/11/21 19:00 • (MSD) R3728828-4 11/11/21 19:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Dicamba	0.181	U	0.130	0.135	71.9	74.9	1	10.0-154			4.08	21
Dichloroprop	0.181	U	0.110	0.117	61.1	64.7	1	10.0-158			5.71	20
Dinoseb	0.181	U	0.101	0.0907	55.6	50.1	1	10.0-120			10.4	40
MCPA	18.1	U	19.3	12.7	107	70.1	1	10.0-160	<u>E P</u>	<u>E J3 P</u>	41.4	40
MCPP	18.1	U	13.3	7.31	73.7	40.4	1	10.0-160	<u>E P</u>	<u>E J3 P</u>	58.3	40
2,4,5-T	0.181	U	0.126	0.129	69.5	71.3	1	10.0-157			2.55	20
2,4,5-TP (Silvex)	0.181	U	0.114	0.117	62.9	64.7	1	10.0-156			2.82	20
<i>(S) 2,4-Dichlorophenyl Acetic Acid</i>					62.3	70.7		22.0-132				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3725890-1 11/04/21 22:18

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00376	0.0200
Alpha BHC	U		0.00368	0.0200
Beta BHC	U		0.00379	0.0200
Delta BHC	U		0.00346	0.0200
Gamma BHC	U		0.00344	0.0200
4,4-DDD	U		0.00370	0.0200
4,4-DDE	U		0.00366	0.0200
4,4-DDT	U		0.00627	0.0200
Dieldrin	U		0.00344	0.0200
Endosulfan I	U		0.00363	0.0200
Endosulfan II	U		0.00335	0.0200
Endosulfan sulfate	U		0.00364	0.0200
Endrin	U		0.00350	0.0200
Endrin aldehyde	U		0.00339	0.0200
Endrin ketone	U		0.00711	0.0200
Heptachlor	U		0.00428	0.0200
Heptachlor epoxide	U		0.00339	0.0200
Hexachlorobenzene	U		0.00346	0.0200
Methoxychlor	U		0.00484	0.0200
Chlordane	U		0.103	0.300
Toxaphene	U		0.124	0.400
(S) Decachlorobiphenyl	58.7			10.0-135
(S) Tetrachloro-m-xylene	56.5			10.0-139

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3725890-2 11/04/21 22:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0393	59.0	34.0-136	
Alpha BHC	0.0666	0.0409	61.4	34.0-139	
Beta BHC	0.0666	0.0406	61.0	34.0-133	
Delta BHC	0.0666	0.0366	55.0	34.0-135	
Gamma BHC	0.0666	0.0402	60.4	34.0-136	
4,4-DDD	0.0666	0.0443	66.5	33.0-141	
4,4-DDE	0.0666	0.0391	58.7	34.0-134	
4,4-DDT	0.0666	0.0564	84.7	30.0-143	P
Dieldrin	0.0666	0.0397	59.6	35.0-137	
Endosulfan I	0.0666	0.0429	64.4	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R3725890-2 11/04/21 22:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Endosulfan II	0.0666	0.0430	64.6	35.0-132	
Endosulfan sulfate	0.0666	0.0442	66.4	35.0-132	
Endrin	0.0666	0.0496	74.5	34.0-137	
Endrin aldehyde	0.0666	0.0388	58.3	23.0-121	
Endrin ketone	0.0666	0.0482	72.4	35.0-144	
Heptachlor	0.0666	0.0525	78.8	36.0-141	
Heptachlor epoxide	0.0666	0.0469	70.4	36.0-134	
Hexachlorobenzene	0.0666	0.0382	57.4	33.0-129	
Methoxychlor	0.0666	0.0592	88.9	28.0-150	P
<i>(S) Decachlorobiphenyl</i>			51.2	10.0-135	
<i>(S) Tetrachloro-m-xylene</i>			45.0	10.0-139	

L1424901-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1424901-10 11/04/21 22:46 • (MS) R3725890-3 11/04/21 22:56 • (MSD) R3725890-4 11/04/21 23:05

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aldrin	0.0666	U	0.0303	0.0304	45.5	45.6	1	20.0-135			0.329	37
Alpha BHC	0.0666	U	0.0307	0.0310	46.1	46.5	1	27.0-140			0.972	35
Beta BHC	0.0666	U	0.0311	0.0310	46.7	46.5	1	23.0-141			0.322	37
Delta BHC	0.0666	U	0.0276	0.0277	41.4	41.6	1	21.0-138			0.362	35
Gamma BHC	0.0666	U	0.0306	0.0306	45.9	45.9	1	27.0-137			0.000	36
4,4-DDD	0.0666	U	0.0371	0.0359	55.7	53.9	1	15.0-152			3.29	39
4,4-DDE	0.0666	U	0.0404	0.0371	60.7	55.7	1	10.0-152			8.52	40
4,4-DDT	0.0666	U	0.0469	0.0454	70.4	68.2	1	10.0-151		P	3.25	40
Dieldrin	0.0666	U	0.0333	0.0326	50.0	48.9	1	17.0-145			2.12	37
Endosulfan I	0.0666	U	0.0336	0.0346	50.5	52.0	1	20.0-137			2.93	36
Endosulfan II	0.0666	U	0.0368	0.0354	55.3	53.2	1	15.0-141			3.88	37
Endosulfan sulfate	0.0666	U	0.0362	0.0359	54.4	53.9	1	15.0-143			0.832	38
Endrin	0.0666	U	0.0406	0.0402	61.0	60.4	1	19.0-143			0.990	37
Endrin aldehyde	0.0666	U	0.0387	0.0367	58.1	55.1	1	10.0-139			5.31	40
Endrin ketone	0.0666	U	0.0391	0.0395	58.7	59.3	1	17.0-149			1.02	38
Heptachlor	0.0666	U	0.0403	0.0404	60.5	60.7	1	22.0-138			0.248	37
Heptachlor epoxide	0.0666	U	0.0371	0.0372	55.7	55.9	1	22.0-138			0.269	36
Hexachlorobenzene	0.0666	U	0.0295	0.0294	44.3	44.1	1	25.0-126			0.340	35
Methoxychlor	0.0666	U	0.0535	0.0529	80.3	79.4	1	10.0-159	P	P	1.13	40
<i>(S) Decachlorobiphenyl</i>					46.1	34.5		10.0-135				
<i>(S) Tetrachloro-m-xylene</i>					38.7	28.5		10.0-139				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3725890-1 11/04/21 22:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
PCB 1016	U		0.0118	0.0340
PCB 1221	U		0.0118	0.0340
PCB 1232	U		0.0118	0.0340
PCB 1242	U		0.0118	0.0340
PCB 1248	U		0.00738	0.0170
PCB 1254	U		0.00738	0.0170
PCB 1260	U		0.00738	0.0170
(S) Decachlorobiphenyl	61.6			10.0-135
(S) Tetrachloro-m-xylene	69.7			10.0-139

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3725890-5 11/04/21 22:37

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
PCB 1260	0.167	0.0912	54.6	37.0-145	
PCB 1016	0.167	0.0970	58.1	36.0-141	
(S) Decachlorobiphenyl			40.5	10.0-135	
(S) Tetrachloro-m-xylene			46.5	10.0-139	

L1424901-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1424901-10 11/04/21 22:46 • (MS) R3725890-6 11/04/21 23:15 • (MSD) R3725890-7 11/04/21 23:24

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
PCB 1260	0.167	U	0.0520	0.0815	31.1	48.8	1	10.0-160		J3	44.2	38
PCB 1016	0.167	U	0.0808	0.0691	48.4	41.4	1	10.0-160	P		15.6	37
(S) Decachlorobiphenyl					18.9	26.0		10.0-135				
(S) Tetrachloro-m-xylene					21.2	29.3		10.0-139				

Method Blank (MB)

(MB) R3728685-2 11/11/21 11:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00539	0.0333
Acenaphthylene	U		0.00469	0.0333
Anthracene	U		0.00593	0.0333
Benzo(a)anthracene	U		0.00587	0.0333
Benzo(b)fluoranthene	U		0.00621	0.0333
Benzo(k)fluoranthene	U		0.00592	0.0333
Benzo(g,h,i)perylene	U		0.00609	0.0333
Benzo(a)pyrene	U		0.00619	0.0333
Bis(2-chlorethoxy)methane	U		0.0100	0.333
Bis(2-chloroethyl)ether	U		0.0110	0.333
2,2-oxybis(1-chloropropane)	U		0.0144	0.333
4-Bromophenyl-phenylether	U		0.0117	0.333
2-Chloronaphthalene	U		0.00585	0.0333
4-Chlorophenyl-phenylether	U		0.0116	0.333
Chrysene	U		0.00662	0.0333
Dibenz(a,h)anthracene	U		0.00923	0.0333
3,3-Dichlorobenzidine	U		0.0123	0.333
2,4-Dinitrotoluene	U		0.00955	0.333
2,6-Dinitrotoluene	U		0.0109	0.333
Fluoranthene	U		0.00601	0.0333
Fluorene	U		0.00542	0.0333
Hexachlorobenzene	U		0.0118	0.333
Hexachloro-1,3-butadiene	U		0.0112	0.333
Hexachlorocyclopentadiene	U		0.0175	0.333
Hexachloroethane	U		0.0131	0.333
Indeno(1,2,3-cd)pyrene	U		0.00941	0.0333
Isophorone	U		0.0102	0.333
Naphthalene	U		0.00836	0.0333
Nitrobenzene	U		0.0116	0.333
n-Nitrosodimethylamine	U		0.0494	0.333
n-Nitrosodiphenylamine	U		0.0252	0.333
n-Nitrosodi-n-propylamine	U		0.0111	0.333
Phenanthrene	U		0.00661	0.0333
Benzylbutyl phthalate	U		0.0104	0.333
Bis(2-ethylhexyl)phthalate	U		0.0422	0.333
Di-n-butyl phthalate	U		0.0114	0.333
Diethyl phthalate	U		0.0110	0.333
Dimethyl phthalate	U		0.0706	0.333
Di-n-octyl phthalate	U		0.0225	0.333
Pyrene	U		0.00648	0.0333

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3728685-2 11/11/21 11:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyridine	U		0.0220	0.333
1,2,4-Trichlorobenzene	U		0.0104	0.333
4-Chloro-3-methylphenol	U		0.0108	0.333
2-Chlorophenol	U		0.0110	0.333
2-Methylphenol	U		0.0100	0.333
3&4-Methyl Phenol	U		0.0104	0.333
2,4-Dichlorophenol	U		0.00970	0.333
2,4-Dimethylphenol	U		0.00870	0.333
4,6-Dinitro-2-methylphenol	U		0.0755	0.333
2,4-Dinitrophenol	U		0.0779	0.333
2-Nitrophenol	U		0.0119	0.333
4-Nitrophenol	U		0.0104	0.333
Pentachlorophenol	U		0.00896	0.333
Phenol	U		0.0134	0.333
2,4,5-Trichlorophenol	U		0.0113	0.333
2,4,6-Trichlorophenol	U		0.0107	0.333
(S) Nitrobenzene-d5	71.2			10.0-122
(S) 2-Fluorobiphenyl	75.4			15.0-120
(S) p-Terphenyl-d14	73.3			10.0-120
(S) Phenol-d5	75.1			10.0-120
(S) 2-Fluorophenol	75.1			12.0-120
(S) 2,4,6-Tribromophenol	67.9			10.0-127

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3728685-1 11/11/21 11:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.666	0.467	70.1	38.0-120	
Acenaphthylene	0.666	0.481	72.2	40.0-120	
Anthracene	0.666	0.481	72.2	42.0-120	
Benzo(a)anthracene	0.666	0.551	82.7	44.0-120	
Benzo(b)fluoranthene	0.666	0.526	79.0	43.0-120	
Benzo(k)fluoranthene	0.666	0.508	76.3	44.0-120	
Benzo(g,h,i)perylene	0.666	0.512	76.9	43.0-120	
Benzo(a)pyrene	0.666	0.529	79.4	45.0-120	
Bis(2-chlorethoxy)methane	0.666	0.417	62.6	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.556	83.5	16.0-120	
2,2-Oxybis(1-Chloropropane)	0.666	0.429	64.4	23.0-120	

Laboratory Control Sample (LCS)

(LCS) R3728685-1 11/11/21 11:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
4-Bromophenyl-phenylether	0.666	0.490	73.6	40.0-120	
2-Chloronaphthalene	0.666	0.472	70.9	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.504	75.7	40.0-120	
Chrysene	0.666	0.503	75.5	43.0-120	
Dibenz(a,h)anthracene	0.666	0.521	78.2	44.0-120	
3,3-Dichlorobenzidine	1.33	0.971	73.0	28.0-120	
2,4-Dinitrotoluene	0.666	0.550	82.6	45.0-120	
2,6-Dinitrotoluene	0.666	0.497	74.6	42.0-120	
Fluoranthene	0.666	0.521	78.2	44.0-120	
Fluorene	0.666	0.495	74.3	41.0-120	
Hexachlorobenzene	0.666	0.462	69.4	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.390	58.6	15.0-120	
Hexachlorocyclopentadiene	0.666	0.475	71.3	15.0-120	
Hexachloroethane	0.666	0.444	66.7	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.546	82.0	45.0-120	
Isophorone	0.666	0.433	65.0	23.0-120	
Naphthalene	0.666	0.359	53.9	18.0-120	
Nitrobenzene	0.666	0.447	67.1	17.0-120	
n-Nitrosodimethylamine	0.666	0.510	76.6	10.0-125	
n-Nitrosodiphenylamine	0.666	0.473	71.0	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.519	77.9	26.0-120	
Phenanthrene	0.666	0.478	71.8	42.0-120	
Benzylbutyl phthalate	0.666	0.545	81.8	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.526	79.0	41.0-120	
Di-n-butyl phthalate	0.666	0.511	76.7	43.0-120	
Diethyl phthalate	0.666	0.523	78.5	43.0-120	
Dimethyl phthalate	0.666	0.484	72.7	43.0-120	
Di-n-octyl phthalate	0.666	0.493	74.0	40.0-120	
Pyrene	0.666	0.502	75.4	41.0-120	
Pyridine	0.666	0.338	50.8	10.0-120	
1,2,4-Trichlorobenzene	0.666	0.388	58.3	17.0-120	
4-Chloro-3-methylphenol	0.666	0.456	68.5	28.0-120	
2-Chlorophenol	0.666	0.474	71.2	28.0-120	
2-Methylphenol	0.666	0.480	72.1	35.0-120	
3&4-Methyl Phenol	0.666	0.566	85.0	42.0-120	
2,4-Dichlorophenol	0.666	0.421	63.2	25.0-120	
2,4-Dimethylphenol	0.666	0.426	64.0	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.498	74.8	16.0-120	
2,4-Dinitrophenol	0.666	0.400	60.1	10.0-120	
2-Nitrophenol	0.666	0.432	64.9	20.0-120	

1
Cp

2
Tc

3
Ss

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Cn

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Sr

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Qc

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Gl

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Al

9
Sc

Laboratory Control Sample (LCS)

(LCS) R3728685-1 11/11/21 11:28

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
4-Nitrophenol	0.666	0.530	79.6	27.0-120	
Pentachlorophenol	0.666	0.501	75.2	29.0-120	
Phenol	0.666	0.488	73.3	28.0-120	
2,4,5-Trichlorophenol	0.666	0.562	84.4	38.0-120	
2,4,6-Trichlorophenol	0.666	0.545	81.8	37.0-120	
<i>(S) Nitrobenzene-d5</i>			60.4	10.0-122	
<i>(S) 2-Fluorobiphenyl</i>			75.4	15.0-120	
<i>(S) p-Terphenyl-d14</i>			71.5	10.0-120	
<i>(S) Phenol-d5</i>			77.5	10.0-120	
<i>(S) 2-Fluorophenol</i>			77.2	12.0-120	
<i>(S) 2,4,6-Tribromophenol</i>			81.1	10.0-127	

L1425287-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1425287-01 11/11/21 18:10 • (MS) R3728685-3 11/11/21 18:31 • (MSD) R3728685-4 11/11/21 18:52

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Acenaphthene	0.810	U	0.414	0.423	51.1	52.3	1	18.0-120			2.35	32
Acenaphthylene	0.810	U	0.442	0.450	54.6	55.6	1	25.0-120			1.93	32
Anthracene	0.810	U	0.484	0.528	59.7	65.2	1	22.0-120			8.76	29
Benzo(a)anthracene	0.810	U	0.550	0.623	67.9	76.9	1	25.0-120			12.4	29
Benzo(b)fluoranthene	0.810	U	0.505	0.577	62.3	71.3	1	19.0-122			13.4	31
Benzo(k)fluoranthene	0.810	U	0.485	0.532	59.9	65.7	1	23.0-120			9.20	30
Benzo(g,h,i)perylene	0.810	U	0.503	0.569	62.2	70.2	1	10.0-120			12.2	33
Benzo(a)pyrene	0.810	U	0.522	0.578	64.4	71.4	1	24.0-120			10.3	30
Bis(2-chloroethoxy)methane	0.810	U	0.386	0.396	47.7	48.9	1	10.0-120			2.52	34
Bis(2-chloroethyl)ether	0.810	U	0.457	0.471	56.4	58.2	1	10.0-120			3.18	40
2,2-Oxybis(1-Chloropropane)	0.810	U	0.337	0.370	41.6	45.7	1	10.0-120			9.39	40
4-Bromophenyl-phenylether	0.810	U	0.464	0.517	57.3	63.8	1	27.0-120			10.8	30
2-Chloronaphthalene	0.810	U	0.407	0.422	50.3	52.1	1	20.0-120			3.56	32
4-Chlorophenyl-phenylether	0.810	U	0.464	0.487	57.3	60.2	1	24.0-120			4.92	29
Chrysene	0.810	U	0.500	0.559	61.7	69.0	1	21.0-120			11.2	29
Dibenz(a,h)anthracene	0.810	U	0.505	0.570	62.3	70.4	1	10.0-120			12.1	32
3,3-Dichlorobenzidine	1.62	U	1.12	1.22	68.8	75.0	1	10.0-120			8.64	34
2,4-Dinitrotoluene	0.810	U	0.556	0.610	68.7	75.4	1	30.0-120			9.28	31
2,6-Dinitrotoluene	0.810	U	0.470	0.497	58.1	61.4	1	25.0-120			5.60	31
Fluoranthene	0.810	U	0.535	0.602	66.1	74.3	1	18.0-126			11.7	32
Fluorene	0.810	U	0.466	0.490	57.6	60.5	1	25.0-120			4.89	30
Hexachlorobenzene	0.810	U	0.444	0.492	54.9	60.8	1	27.0-120			10.2	28



L1425287-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1425287-01 11/11/21 18:10 • (MS) R3728685-3 11/11/21 18:31 • (MSD) R3728685-4 11/11/21 18:52

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	0.810	U	0.340	0.354	41.9	43.8	1	10.0-120			4.26	38
Hexachlorocyclopentadiene	0.810	U	0.210	0.238	26.0	29.3	1	10.0-120			12.1	40
Hexachloroethane	0.810	U	0.338	0.362	41.8	44.7	1	10.0-120			6.68	40
Indeno(1,2,3-cd)pyrene	0.810	U	0.551	0.609	68.1	75.2	1	10.0-120			9.97	32
Isophorone	0.810	U	0.405	0.426	50.0	52.6	1	13.0-120			5.04	34
Naphthalene	0.810	U	0.314	0.326	38.8	40.3	1	10.0-120			3.85	35
Pyridine	0.810	U	0.354	0.374	43.8	46.2	1	10.0-120			5.41	40
Nitrobenzene	0.810	U	0.395	0.421	48.8	52.0	1	10.0-120			6.33	36
n-Nitrosodimethylamine	0.810	U	0.430	0.418	53.0	51.7	1	10.0-127			2.61	40
n-Nitrosodiphenylamine	0.810	U	0.475	0.510	58.7	62.9	1	17.0-120			7.00	29
n-Nitrosodi-n-propylamine	0.810	U	0.437	0.466	54.0	57.6	1	10.0-120			6.54	37
Phenanthrene	0.810	U	0.470	0.507	58.1	62.6	1	17.0-120			7.56	31
Benzylbutyl phthalate	0.810	U	0.607	0.650	74.9	80.2	1	23.0-120			6.86	30
Bis(2-ethylhexyl)phthalate	0.810	U	0.553	0.628	68.2	77.5	1	17.0-126			12.7	30
Di-n-butyl phthalate	0.810	U	0.529	0.597	65.3	73.7	1	30.0-120			12.0	29
Diethyl phthalate	0.810	0.0143	0.528	0.562	63.4	67.7	1	26.0-120			6.32	28
Dimethyl phthalate	0.810	U	0.470	0.482	58.1	59.6	1	25.0-120			2.58	29
Di-n-octyl phthalate	0.810	U	0.554	0.633	68.4	78.1	1	21.0-123			13.3	29
Pyrene	0.810	U	0.508	0.571	62.8	70.5	1	16.0-121			11.6	32
1,2,4-Trichlorobenzene	0.810	U	0.324	0.343	40.0	42.4	1	12.0-120			5.90	37
4-Chloro-3-methylphenol	0.810	U	0.452	0.482	55.8	59.6	1	15.0-120			6.59	30
2-Chlorophenol	0.810	U	0.405	0.428	50.0	52.9	1	15.0-120			5.61	37
2-Methylphenol	0.810	U	0.432	0.458	53.3	56.5	1	11.0-120			5.81	40
3&4-Methyl Phenol	0.810	U	0.505	0.526	62.3	64.9	1	12.0-123			4.06	38
2,4-Dichlorophenol	0.810	U	0.407	0.417	50.3	51.5	1	20.0-120			2.39	31
2,4-Dimethylphenol	0.810	U	0.416	0.422	51.4	52.1	1	10.0-120			1.47	33
4,6-Dinitro-2-methylphenol	0.810	U	0.518	0.594	64.0	73.4	1	10.0-120			13.7	39
2,4-Dinitrophenol	0.810	U	0.497	0.553	61.4	68.2	1	10.0-121			10.6	40
2-Nitrophenol	0.810	U	0.418	0.433	51.7	53.5	1	12.0-120			3.47	39
4-Nitrophenol	0.810	U	0.615	0.649	76.0	80.1	1	10.0-137			5.26	32
Pentachlorophenol	0.810	U	0.505	0.544	62.3	67.2	1	10.0-160			7.51	31
Phenol	0.810	U	0.431	0.447	53.2	55.2	1	12.0-120			3.65	38
2,4,5-Trichlorophenol	0.810	U	0.553	0.594	68.2	73.4	1	20.0-120			7.30	30
2,4,6-Trichlorophenol	0.810	U	0.514	0.533	63.5	65.8	1	19.0-120			3.53	32
(S) Nitrobenzene-d5					44.7	45.9		10.0-122				
(S) 2-Fluorobiphenyl					52.9	55.0		15.0-120				
(S) p-Terphenyl-d14					58.1	65.0		10.0-120				
(S) Phenol-d5					56.2	59.1		10.0-120				
(S) 2-Fluorophenol					54.4	58.1		12.0-120				



L1425287-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1425287-01 11/11/21 18:10 • (MS) R3728685-3 11/11/21 18:31 • (MSD) R3728685-4 11/11/21 18:52

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 2,4,6-Tribromophenol					66.9	75.4		10.0-127				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3727920-2 11/10/21 13:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	89.2			14.0-149
(S) 2-Fluorobiphenyl	85.5			34.0-125
(S) p-Terphenyl-d14	102			23.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3727920-1 11/10/21 12:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0663	82.9	50.0-126	
Acenaphthene	0.0800	0.0672	84.0	50.0-120	
Acenaphthylene	0.0800	0.0704	88.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0639	79.9	45.0-120	
Benzo(a)pyrene	0.0800	0.0518	64.8	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0661	82.6	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0640	80.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0666	83.3	49.0-125	
Chrysene	0.0800	0.0654	81.8	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0642	80.3	47.0-125	
Fluoranthene	0.0800	0.0660	82.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3727920-1 11/10/21 12:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	0.0800	0.0667	83.4	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0633	79.1	46.0-125	
Naphthalene	0.0800	0.0660	82.5	50.0-120	
Phenanthrene	0.0800	0.0651	81.4	47.0-120	
Pyrene	0.0800	0.0640	80.0	43.0-123	
1-Methylnaphthalene	0.0800	0.0662	82.8	51.0-121	
2-Methylnaphthalene	0.0800	0.0639	79.9	50.0-120	
2-Chloronaphthalene	0.0800	0.0646	80.7	50.0-120	
<i>(S) Nitrobenzene-d5</i>			83.6	14.0-149	
<i>(S) 2-Fluorobiphenyl</i>			81.9	34.0-125	
<i>(S) p-Terphenyl-d14</i>			95.2	23.0-120	

L1424908-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1424908-03 11/10/21 17:48 • (MS) R3727920-3 11/10/21 18:08 • (MSD) R3727920-4 11/10/21 18:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	0.0784	U	0.0629	0.0617	80.2	78.3	1	10.0-145			1.93	30
Acenaphthene	0.0784	U	0.0660	0.0641	84.2	81.3	1	14.0-127			2.92	27
Acenaphthylene	0.0784		0.0685	0.0666	87.4	84.5	1	21.0-124			2.81	25
Benzo(a)anthracene	0.0784	U	0.0627	0.0590	80.0	74.9	1	10.0-139			6.08	30
Benzo(a)pyrene	0.0784	U	0.0660	0.0615	84.2	78.0	1	10.0-141			7.06	31
Benzo(b)fluoranthene	0.0784	U	0.0662	0.0632	84.4	80.2	1	10.0-140			4.64	36
Benzo(g,h,i)perylene	0.0784		0.0686	0.0634	82.6	75.6	1	10.0-140			7.88	33
Benzo(k)fluoranthene	0.0784	U	0.0671	0.0619	85.6	78.6	1	10.0-137			8.06	31
Chrysene	0.0784	U	0.0657	0.0622	83.8	78.9	1	10.0-145			5.47	30
Dibenz(a,h)anthracene	0.0784		0.0638	0.0601	81.4	76.3	1	10.0-132			5.97	31
Fluoranthene	0.0784	U	0.0660	0.0630	84.2	79.9	1	10.0-153			4.65	33
Fluorene	0.0784	U	0.0664	0.0629	84.7	79.8	1	11.0-130			5.41	29
Indeno(1,2,3-cd)pyrene	0.0784		0.0651	0.0600	83.0	76.1	1	10.0-137			8.15	32
Naphthalene	0.0784	0.00777	0.0773	0.0672	88.7	75.4	1	10.0-135			14.0	27
Phenanthrene	0.0784		0.0651	0.0616	83.0	78.2	1	10.0-144			5.52	31
Pyrene	0.0784	U	0.0661	0.0621	84.3	78.8	1	10.0-148			6.24	35
1-Methylnaphthalene	0.0784		0.0788	0.0686	91.8	78.4	1	10.0-142			13.8	28
2-Methylnaphthalene	0.0784		0.0825	0.0662	91.5	70.3	1	10.0-137			21.9	28
2-Chloronaphthalene	0.0784		0.0635	0.0596	81.0	75.6	1	29.0-120			6.34	24
<i>(S) Nitrobenzene-d5</i>					81.6	78.3		14.0-149				
<i>(S) 2-Fluorobiphenyl</i>					81.0	79.7		34.0-125				
<i>(S) p-Terphenyl-d14</i>					95.7	94.0		23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3727940-2 11/10/21 12:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	61.2			14.0-149
(S) 2-Fluorobiphenyl	67.6			34.0-125
(S) p-Terphenyl-d14	86.1			23.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3727940-1 11/10/21 12:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0595	74.4	50.0-126	
Acenaphthene	0.0800	0.0603	75.4	50.0-120	
Acenaphthylene	0.0800	0.0639	79.9	50.0-120	
Benzo(a)anthracene	0.0800	0.0610	76.3	45.0-120	
Benzo(a)pyrene	0.0800	0.0484	60.5	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0593	74.1	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0583	72.9	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0563	70.4	49.0-125	
Chrysene	0.0800	0.0590	73.8	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0587	73.4	47.0-125	
Fluoranthene	0.0800	0.0630	78.8	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3727940-1 11/10/21 12:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0601	75.1	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0605	75.6	46.0-125	
Naphthalene	0.0800	0.0545	68.1	50.0-120	
Phenanthrene	0.0800	0.0570	71.3	47.0-120	
Pyrene	0.0800	0.0633	79.1	43.0-123	
1-Methylnaphthalene	0.0800	0.0621	77.6	51.0-121	
2-Methylnaphthalene	0.0800	0.0596	74.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0586	73.3	50.0-120	
(S) Nitrobenzene-d5			67.7	14.0-149	
(S) 2-Fluorobiphenyl			75.4	34.0-125	
(S) p-Terphenyl-d14			92.9	23.0-120	

L1426880-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1426880-13 11/10/21 17:39 • (MS) R3727940-3 11/10/21 17:57 • (MSD) R3727940-4 11/10/21 18:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0808	0.975	1.94	0.652	1190	0.000	1	10.0-145	<u>V</u>	<u>J3 V</u>	99.3	30
Acenaphthene	0.0808	0.209	0.535	0.242	404	41.0	1	14.0-127	<u>J5</u>	<u>J3</u>	75.5	27
Acenaphthylene	0.0808	0.0434	0.138	0.0794	118	45.0	1	21.0-124		<u>J3</u>	54.2	25
Benzo(a)anthracene	0.0808	3.79	4.51	2.28	888	0.000	1	10.0-139	<u>E V</u>	<u>J3 V</u>	65.9	30
Benzo(a)pyrene	0.0808	2.34	2.51	1.36	216	0.000	1	10.0-141	<u>V</u>	<u>J3 V</u>	59.3	31
Benzo(b)fluoranthene	0.0808	3.08	3.32	1.78	305	0.000	1	10.0-140	<u>V</u>	<u>J3 V</u>	60.2	36
Benzo(g,h,i)perylene	0.0808	1.46	1.50	0.813	50.8	0.000	1	10.0-140		<u>J3 V</u>	59.2	33
Benzo(k)fluoranthene	0.0808	1.21	1.27	0.694	76.1	0.000	1	10.0-137		<u>J3 V</u>	58.7	31
Chrysene	0.0808	3.71	4.34	2.11	774	0.000	1	10.0-145	<u>E V</u>	<u>J3 V</u>	69.0	30
Dibenz(a,h)anthracene	0.0808	0.441	0.500	0.258	73.6	0.000	1	10.0-132		<u>J3 V</u>	63.8	31
Fluoranthene	0.0808	5.71	6.51	3.64	990	0.000	1	10.0-153	<u>E V</u>	<u>J3 V</u>	56.6	33
Fluorene	0.0808	0.217	0.660	0.237	548	24.4	1	11.0-130	<u>J5</u>	<u>J3</u>	94.4	29
Indeno(1,2,3-cd)pyrene	0.0808	1.72	1.83	0.967	127	0.000	1	10.0-137		<u>J3 V</u>	61.5	32
Naphthalene	0.0808	0.0997	0.279	0.137	222	47.2	1	10.0-135	<u>J5</u>	<u>J3</u>	68.0	27
Phenanthrene	0.0808	3.26	5.30	1.98	2530	0.000	1	10.0-144	<u>E V</u>	<u>J3 V</u>	91.3	31
Pyrene	0.0808	5.00	5.60	3.01	736	0.000	1	10.0-148	<u>E V</u>	<u>J3 V</u>	60.0	35
1-Methylnaphthalene	0.0808	0.0777	0.173	0.0960	118	22.8	1	10.0-142		<u>J3</u>	57.4	28
2-Methylnaphthalene	0.0808	0.129	0.223	0.130	115	1.28	1	10.0-137		<u>J3 J6</u>	52.3	28
2-Chloronaphthalene	0.0808	U	0.0876	0.0400	108	50.0	1	29.0-120		<u>J3</u>	74.6	24
(S) Nitrobenzene-d5					57.4	49.4		14.0-149				
(S) 2-Fluorobiphenyl					60.0	51.3		34.0-125				
(S) p-Terphenyl-d14					82.1	69.6		23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

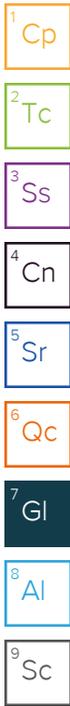
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.



GLOSSARY OF TERMS

Qualifier	Description
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P	RPD between the primary and confirmatory analysis exceeded 40%.
V	The sample concentration is too high to evaluate accurate spike recoveries.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Shannon & Wilson - OR

Sample Delivery Group: L1431805

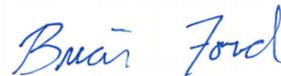
Samples Received: 11/03/2021

Project Number: 102636

Description: EQRB

Report To: Lauren Sherman
3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1	
Tc: Table of Contents	2	
Ss: Sample Summary	3	
Cn: Case Narrative	4	
Sr: Sample Results	5	
B-10-COMP-BA-B5 L1431805-01	5	
B-33-COMP-BA-SCBSDW L1431805-02	6	
Qc: Quality Control Summary	7	
Metals (ICP) by Method 6010D	7	
Gl: Glossary of Terms	8	
Al: Accreditations & Locations	9	
Sc: Sample Chain of Custody	10	
		

SAMPLE SUMMARY

B-10-COMP-BA-B5 L1431805-01 Waste

Collected by: Christine Maher
 Collected date/time: 10/28/21 09:00
 Received date/time: 11/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1787929	1	12/11/21 17:56	12/11/21 17:56	CJW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1788191	1	12/13/21 05:31	12/14/21 21:14	CCE	Mt. Juliet, TN

B-33-COMP-BA-SCBSDW L1431805-02 Waste

Collected by: Christine Maher
 Collected date/time: 10/28/21 10:00
 Received date/time: 11/03/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1787929	1	12/11/21 17:56	12/11/21 17:56	CJW	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1788191	1	12/13/21 05:31	12/14/21 21:17	CCE	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		12/11/2021 5:56:56 PM	WG1787929
Fluid	1		12/11/2021 5:56:56 PM	WG1787929
Initial pH	9.64		12/11/2021 5:56:56 PM	WG1787929
Final pH	5.15		12/11/2021 5:56:56 PM	WG1787929

Metals (ICP) by Method 6010D

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Barium	2.22		0.100	100	1	12/14/2021 21:14	WG1788191

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		12/11/2021 5:56:56 PM	WG1787929
Fluid	1		12/11/2021 5:56:56 PM	WG1787929
Initial pH	7.68		12/11/2021 5:56:56 PM	WG1787929
Final pH	5.12		12/11/2021 5:56:56 PM	WG1787929

Metals (ICP) by Method 6010D

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Barium	1.24		0.100	100	1	12/14/2021 21:17	WG1788191

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3740761-1 12/14/21 20:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Barium	U		0.0333	0.100

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3740761-2 12/14/21 20:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	10.0	9.63	96.3	80.0-120	

4 Cn

5 Sr

L1421435-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1421435-02 12/14/21 20:35 • (MS) R3740761-4 12/14/21 20:40 • (MSD) R3740761-5 12/14/21 20:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	10.0	1.61	10.9	11.1	93.3	94.7	1	75.0-125			1.24	20

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.



Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

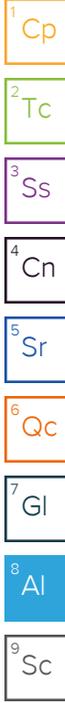
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

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Company/Address:
Shannon & Wilson - OR
 3990 Collins Way, Ste. 100
 Lake Oswego, OR 97035

Billing Information:
 Accounts Payable
 3990 Collins Way, Ste. 100
 Lake Oswego, OR 97035

Report to:
Lauren Sherman

Email To: **Lauren.Sherman@shanwil.com**

Project Description:
EGRB

City/State Collected: **Portland, OR**

Please Circle:
 PT MT CT ET

Phone: **503-210-4750**

Client Project #
102636

Lab Project #
SHAWILOR-102636

Collected by (print):
Christine Maher

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
 ___ Same Day ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Two Day ___ 10 Day (Rad Only)
 ___ Three Day

Quote #

Immediately Packed on Ice N ___ Y

Date Results Needed

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
B-10-COMP-Ba-BS	COMP	SS	1Dw	10/29/21	0900	2
B-32-COMP-SCBSDW	COMP	SS	1Dw	10/28/21	0930	2
B-33-COMP-Ba-SCBSDW	COMP	SS	1Dw	10/28/21	1000	2
		SS				
		SS				
		SS				
		SS				
		SS				
		SS				

Analysis / Container / Preservative									
DX no silica 8ozClr-NoPres	Herbicides 8151 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	OCPs 8081 8ozClr-NoPres	PAHs 8270ESIM 8ozClr-NoPres	PCBs 8082 8ozClr-NoPres	RCRAB Metals 6020 8ozClr-NoPres	SVOCs 8270D 8ozClr-NoPres	Sb,Cu,Zn 6020 8ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr
X	X	X	X	X	X	X	X	X	X
X		X		X		X		X	X
X		X		X		X		X	X

Chain of Custody Page ___ of ___

 32065 Lebanon Rd Mount Juliet, TN 37122
 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: <https://info.pacelab.com/pub/ps-standard-terms.pdf>

SDG # **L1426136**
L-060
L1431805
 Acctnum: **SHAWILOR**
 Template: **T197028**
 Prelogin: **P882696**
 PM: **110 - Brian Ford**
 PB:
 Shipped Via:

11/16/21

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:
 pH _____ Temp _____
 Flow _____ Other _____
 Samples returned via:
 ___ UPS ___ FedEx Courier
 Tracking # **5217 3314 201100**

Sample Receipt Checklist
 COC Seal Present/Intact: Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 If Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 mP/hr: Y N

Relinquished by: (Signature)

Date: **11/01/21** Time: **1530**

Received by: (Signature)

Trip Blank Received: Yes / No
 HCL / MeOH
 TBR

Relinquished by: (Signature)

Date: Time:

Received by: (Signature)

Temp **10°C** Bottles Received: **3310=33**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date: Time:

Received for lab by: (Signature)

Date: **11/3/21** Time: **0900**

Hold: Condition: **NCF / OK**

L1426136 SHAWILOR re-log

R5

Please re-log as R5 due 11/23 for TCLP BAICP.

L1426136-01 B-10-COMP-BA-B5

L1426136-03 B-33-COMP-BA-SCBSDW

Time estimate: oh

Time spent: oh

Members



Brian Ford

Shannon & Wilson - OR

Sample Delivery Group: L1432588

Samples Received: 11/17/2021

Project Number: 102636

Description: EQRB

Report To: Lauren Sherman
3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Entire Report Reviewed By:



Brian Ford
Project Manager

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Pace Analytical National

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TABLE OF CONTENTS

Cp: Cover Page	1	¹Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	²Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³Ss
B-06-DW L1432588-01	5	
Qc: Quality Control Summary	8	⁴Cn
Mercury by Method 7470A	8	⁵Sr
Metals (ICPMS) by Method 6020B	9	
Volatile Organic Compounds (GC) by Method NWTPHGX	10	⁶Qc
Volatile Organic Compounds (GC/MS) by Method 8260D	11	
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	15	⁷Gl
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	16	⁸Al
Gl: Glossary of Terms	18	
Al: Accreditations & Locations	19	⁹Sc
Sc: Sample Chain of Custody	20	

SAMPLE SUMMARY

B-06-DW L1432588-01 GW

Collected by: Lauren Sherman
 Collected date/time: 11/10/21 12:00
 Received date/time: 11/17/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1778241	1	11/24/21 10:10	11/26/21 12:11	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1784536	1	12/06/21 07:05	12/07/21 14:33	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1777463	1	11/20/21 10:48	11/20/21 10:48	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1778969	1	11/23/21 13:46	11/23/21 13:46	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1777875	1	11/21/21 08:22	11/26/21 18:40	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1776700	1	11/19/21 16:42	11/20/21 14:02	SHG	Mt. Juliet, TN

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury,Dissolved	U		0.100	0.200	1	11/26/2021 12:11	WG1778241

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic,Dissolved	U		0.180	2.00	1	12/07/2021 14:33	WG1784536
Barium,Dissolved	3.72		0.381	2.00	1	12/07/2021 14:33	WG1784536
Cadmium,Dissolved	U		0.150	1.00	1	12/07/2021 14:33	WG1784536
Chromium,Dissolved	1.79	J	1.24	2.00	1	12/07/2021 14:33	WG1784536
Lead,Dissolved	U		0.849	2.00	1	12/07/2021 14:33	WG1784536
Selenium,Dissolved	U		0.300	2.00	1	12/07/2021 14:33	WG1784536
Silver,Dissolved	U		0.0700	2.00	1	12/07/2021 14:33	WG1784536

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	33.3	B_J	31.6	100	1	11/20/2021 10:48	WG1777463
(S) a,a,a-Trifluorotoluene(FID)	92.3			78.0-120		11/20/2021 10:48	WG1777463

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	C3	11.3	50.0	1	11/23/2021 13:46	WG1778969
Acrolein	U	C3	2.54	50.0	1	11/23/2021 13:46	WG1778969
Acrylonitrile	U		0.671	10.0	1	11/23/2021 13:46	WG1778969
Benzene	U		0.0941	1.00	1	11/23/2021 13:46	WG1778969
Bromobenzene	U		0.118	1.00	1	11/23/2021 13:46	WG1778969
Bromodichloromethane	U		0.136	1.00	1	11/23/2021 13:46	WG1778969
Bromoform	U		0.129	1.00	1	11/23/2021 13:46	WG1778969
Bromomethane	U		0.605	5.00	1	11/23/2021 13:46	WG1778969
n-Butylbenzene	U		0.157	1.00	1	11/23/2021 13:46	WG1778969
sec-Butylbenzene	U		0.125	1.00	1	11/23/2021 13:46	WG1778969
tert-Butylbenzene	U		0.127	1.00	1	11/23/2021 13:46	WG1778969
Carbon tetrachloride	U		0.128	1.00	1	11/23/2021 13:46	WG1778969
Chlorobenzene	U		0.116	1.00	1	11/23/2021 13:46	WG1778969
Chlorodibromomethane	U		0.140	1.00	1	11/23/2021 13:46	WG1778969
Chloroethane	U		0.192	5.00	1	11/23/2021 13:46	WG1778969
Chloroform	U		0.111	5.00	1	11/23/2021 13:46	WG1778969
Chloromethane	U		0.960	2.50	1	11/23/2021 13:46	WG1778969
2-Chlorotoluene	U		0.106	1.00	1	11/23/2021 13:46	WG1778969
4-Chlorotoluene	U		0.114	1.00	1	11/23/2021 13:46	WG1778969
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	11/23/2021 13:46	WG1778969
1,2-Dibromoethane	U		0.126	1.00	1	11/23/2021 13:46	WG1778969
Dibromomethane	U		0.122	1.00	1	11/23/2021 13:46	WG1778969
1,2-Dichlorobenzene	U		0.107	1.00	1	11/23/2021 13:46	WG1778969
1,3-Dichlorobenzene	U		0.110	1.00	1	11/23/2021 13:46	WG1778969
1,4-Dichlorobenzene	U		0.120	1.00	1	11/23/2021 13:46	WG1778969
Dichlorodifluoromethane	U		0.374	5.00	1	11/23/2021 13:46	WG1778969
1,1-Dichloroethane	U		0.100	1.00	1	11/23/2021 13:46	WG1778969
1,2-Dichloroethane	U		0.0819	1.00	1	11/23/2021 13:46	WG1778969
1,1-Dichloroethene	U		0.188	1.00	1	11/23/2021 13:46	WG1778969
cis-1,2-Dichloroethene	U		0.126	1.00	1	11/23/2021 13:46	WG1778969
trans-1,2-Dichloroethene	U		0.149	1.00	1	11/23/2021 13:46	WG1778969



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichloropropane	U		0.149	1.00	1	11/23/2021 13:46	WG1778969
1,1-Dichloropropene	U		0.142	1.00	1	11/23/2021 13:46	WG1778969
1,3-Dichloropropane	U		0.110	1.00	1	11/23/2021 13:46	WG1778969
cis-1,3-Dichloropropene	U		0.111	1.00	1	11/23/2021 13:46	WG1778969
trans-1,3-Dichloropropene	U		0.118	1.00	1	11/23/2021 13:46	WG1778969
2,2-Dichloropropane	U		0.161	1.00	1	11/23/2021 13:46	WG1778969
Di-isopropyl ether	U		0.105	1.00	1	11/23/2021 13:46	WG1778969
Ethylbenzene	U		0.137	1.00	1	11/23/2021 13:46	WG1778969
Hexachloro-1,3-butadiene	U		0.337	1.00	1	11/23/2021 13:46	WG1778969
Isopropylbenzene	U		0.105	1.00	1	11/23/2021 13:46	WG1778969
p-Isopropyltoluene	U		0.120	1.00	1	11/23/2021 13:46	WG1778969
2-Butanone (MEK)	U		1.19	10.0	1	11/23/2021 13:46	WG1778969
Methylene Chloride	U		0.430	5.00	1	11/23/2021 13:46	WG1778969
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	11/23/2021 13:46	WG1778969
Methyl tert-butyl ether	U		0.101	1.00	1	11/23/2021 13:46	WG1778969
Naphthalene	U	<u>J4</u>	1.00	5.00	1	11/23/2021 13:46	WG1778969
n-Propylbenzene	U		0.0993	1.00	1	11/23/2021 13:46	WG1778969
Styrene	U		0.118	1.00	1	11/23/2021 13:46	WG1778969
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	11/23/2021 13:46	WG1778969
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	11/23/2021 13:46	WG1778969
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	11/23/2021 13:46	WG1778969
Tetrachloroethene	U		0.300	1.00	1	11/23/2021 13:46	WG1778969
Toluene	U		0.278	1.00	1	11/23/2021 13:46	WG1778969
1,2,3-Trichlorobenzene	U	<u>J4</u>	0.230	1.00	1	11/23/2021 13:46	WG1778969
1,2,4-Trichlorobenzene	U		0.481	1.00	1	11/23/2021 13:46	WG1778969
1,1,1-Trichloroethane	U		0.149	1.00	1	11/23/2021 13:46	WG1778969
1,1,2-Trichloroethane	U		0.158	1.00	1	11/23/2021 13:46	WG1778969
Trichloroethene	U		0.190	1.00	1	11/23/2021 13:46	WG1778969
Trichlorofluoromethane	U		0.160	5.00	1	11/23/2021 13:46	WG1778969
1,2,3-Trichloropropane	U		0.237	2.50	1	11/23/2021 13:46	WG1778969
1,2,4-Trimethylbenzene	U		0.322	1.00	1	11/23/2021 13:46	WG1778969
1,2,3-Trimethylbenzene	U		0.104	1.00	1	11/23/2021 13:46	WG1778969
1,3,5-Trimethylbenzene	U		0.104	1.00	1	11/23/2021 13:46	WG1778969
Vinyl chloride	U		0.234	1.00	1	11/23/2021 13:46	WG1778969
Xylenes, Total	U		0.174	3.00	1	11/23/2021 13:46	WG1778969
(S) Toluene-d8	111			80.0-120		11/23/2021 13:46	WG1778969
(S) 4-Bromofluorobenzene	87.5			77.0-126		11/23/2021 13:46	WG1778969
(S) 1,2-Dichloroethane-d4	106			70.0-130		11/23/2021 13:46	WG1778969

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	161	<u>B</u>	33.3	100	1	11/26/2021 18:40	WG1777875
Residual Range Organics (RRO)	226	<u>J</u>	83.3	250	1	11/26/2021 18:40	WG1777875
(S) o-Terphenyl	109			31.0-160		11/26/2021 18:40	WG1777875

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U	<u>T8</u>	0.0190	0.0500	1	11/20/2021 14:02	WG1776700
Acenaphthene	U	<u>T8</u>	0.0190	0.0500	1	11/20/2021 14:02	WG1776700
Acenaphthylene	0.0256	<u>J T8</u>	0.0171	0.0500	1	11/20/2021 14:02	WG1776700
Benzo(a)anthracene	U	<u>T8</u>	0.0203	0.0500	1	11/20/2021 14:02	WG1776700
Benzo(a)pyrene	U	<u>T8</u>	0.0184	0.0500	1	11/20/2021 14:02	WG1776700
Benzo(b)fluoranthene	U	<u>T8</u>	0.0168	0.0500	1	11/20/2021 14:02	WG1776700

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U	<u>T8</u>	0.0184	0.0500	1	11/20/2021 14:02	WG1776700
Benzo(k)fluoranthene	U	<u>T8</u>	0.0202	0.0500	1	11/20/2021 14:02	WG1776700
Chrysene	U	<u>T8</u>	0.0179	0.0500	1	11/20/2021 14:02	WG1776700
Dibenz(a,h)anthracene	U	<u>T8</u>	0.0160	0.0500	1	11/20/2021 14:02	WG1776700
Fluoranthene	U	<u>T8</u>	0.0270	0.100	1	11/20/2021 14:02	WG1776700
Fluorene	U	<u>T8</u>	0.0169	0.0500	1	11/20/2021 14:02	WG1776700
Indeno(1,2,3-cd)pyrene	U	<u>T8</u>	0.0158	0.0500	1	11/20/2021 14:02	WG1776700
Naphthalene	U	<u>T8</u>	0.0917	0.250	1	11/20/2021 14:02	WG1776700
Phenanthrene	U	<u>T8</u>	0.0180	0.0500	1	11/20/2021 14:02	WG1776700
Pyrene	U	<u>T8</u>	0.0169	0.0500	1	11/20/2021 14:02	WG1776700
1-Methylnaphthalene	U	<u>T8</u>	0.0687	0.250	1	11/20/2021 14:02	WG1776700
2-Methylnaphthalene	U	<u>T8</u>	0.0674	0.250	1	11/20/2021 14:02	WG1776700
2-Chloronaphthalene	U	<u>T8</u>	0.0682	0.250	1	11/20/2021 14:02	WG1776700
(S) Nitrobenzene-d5	108			31.0-160		11/20/2021 14:02	WG1776700
(S) 2-Fluorobiphenyl	114			48.0-148		11/20/2021 14:02	WG1776700
(S) p-Terphenyl-d14	117			37.0-146		11/20/2021 14:02	WG1776700

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3734123-1 11/26/21 11:25

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R3734123-2 11/26/21 11:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury,Dissolved	3.00	3.06	102	80.0-120	

L1432215-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1432215-06 11/26/21 11:35 • (MS) R3734123-3 11/26/21 11:37 • (MSD) R3734123-4 11/26/21 11:39

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury,Dissolved	3.00	U	3.17	3.41	106	114	1	75.0-125			7.40	20

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3738013-6 12/07/21 12:51

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		0.180	2.00
Barium,Dissolved	U		0.381	2.00
Cadmium,Dissolved	U		0.150	1.00
Chromium,Dissolved	U		1.24	2.00
Lead,Dissolved	U		0.849	2.00
Selenium,Dissolved	U		0.300	2.00
Silver,Dissolved	U		0.0700	2.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

Laboratory Control Sample (LCS)

(LCS) R3738013-7 12/07/21 12:54

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Arsenic,Dissolved	50.0	46.1	92.2	80.0-120	
Barium,Dissolved	50.0	43.3	86.7	80.0-120	
Cadmium,Dissolved	50.0	50.5	101	80.0-120	
Chromium,Dissolved	50.0	48.6	97.1	80.0-120	
Lead,Dissolved	50.0	44.9	89.7	80.0-120	
Selenium,Dissolved	50.0	49.0	98.0	80.0-120	
Silver,Dissolved	50.0	48.8	97.6	80.0-120	

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1430359-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1430359-01 12/07/21 12:58 • (MS) R3738013-9 12/07/21 13:04 • (MSD) R3738013-10 12/07/21 13:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Arsenic,Dissolved	50.0	1.14	46.5	46.0	90.7	89.8	1	75.0-125			0.928	20
Barium,Dissolved	50.0	5.09	51.0	49.3	91.8	88.3	1	75.0-125			3.43	20
Cadmium,Dissolved	50.0	U	51.1	50.4	102	101	1	75.0-125			1.19	20
Chromium,Dissolved	50.0	U	47.1	46.6	94.3	93.2	1	75.0-125			1.12	20
Lead,Dissolved	50.0	U	45.6	45.0	91.1	90.0	1	75.0-125			1.26	20
Selenium,Dissolved	50.0	U	48.4	48.1	96.7	96.2	1	75.0-125			0.584	20
Silver,Dissolved	50.0	U	50.3	47.8	101	95.5	1	75.0-125			5.22	20

Method Blank (MB)

(MB) R3733483-2 11/20/21 03:53

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	53.3	↓	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	91.8			78.0-120

Laboratory Control Sample (LCS)

(LCS) R3733483-1 11/20/21 03:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5070	92.2	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			99.0	78.0-120	

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3733313-3 11/23/21 08:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3733313-3 11/23/21 08:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	1.56	U	1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,3-Trimethylbenzene	U		0.104	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	107			80.0-120
(S) 4-Bromofluorobenzene	93.2			77.0-126
(S) 1,2-Dichloroethane-d4	110			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3733313-1 11/23/21 07:39 • (LCSD) R3733313-2 11/23/21 07:58

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Acetone	25.0	18.1	19.3	72.4	77.2	19.0-160			6.42	27
Acrolein	25.0	6.61	7.25	26.4	29.0	10.0-160			9.24	26
Acrylonitrile	25.0	28.3	27.3	113	109	55.0-149			3.60	20
Benzene	5.00	5.18	5.01	104	100	70.0-123			3.34	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3733313-1 11/23/21 07:39 • (LCSD) R3733313-2 11/23/21 07:58

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromobenzene	5.00	4.80	5.07	96.0	101	73.0-121			5.47	20
Bromodichloromethane	5.00	5.16	4.91	103	98.2	75.0-120			4.97	20
Bromoform	5.00	4.69	4.87	93.8	97.4	68.0-132			3.77	20
Bromomethane	5.00	4.56	4.33	91.2	86.6	10.0-160			5.17	25
n-Butylbenzene	5.00	4.95	5.53	99.0	111	73.0-125			11.1	20
sec-Butylbenzene	5.00	4.70	5.38	94.0	108	75.0-125			13.5	20
tert-Butylbenzene	5.00	4.58	5.48	91.6	110	76.0-124			17.9	20
Carbon tetrachloride	5.00	5.67	5.30	113	106	68.0-126			6.75	20
Chlorobenzene	5.00	4.52	4.74	90.4	94.8	80.0-121			4.75	20
Chlorodibromomethane	5.00	4.70	4.79	94.0	95.8	77.0-125			1.90	20
Chloroethane	5.00	4.45	4.34	89.0	86.8	47.0-150			2.50	20
Chloroform	5.00	5.36	5.34	107	107	73.0-120			0.374	20
Chloromethane	5.00	4.45	4.39	89.0	87.8	41.0-142			1.36	20
2-Chlorotoluene	5.00	4.72	5.27	94.4	105	76.0-123			11.0	20
4-Chlorotoluene	5.00	4.66	5.48	93.2	110	75.0-122			16.2	20
1,2-Dibromo-3-Chloropropane	5.00	4.78	5.16	95.6	103	58.0-134			7.65	20
1,2-Dibromoethane	5.00	4.59	4.53	91.8	90.6	80.0-122			1.32	20
Dibromomethane	5.00	4.96	5.08	99.2	102	80.0-120			2.39	20
1,2-Dichlorobenzene	5.00	4.93	5.37	98.6	107	79.0-121			8.54	20
1,3-Dichlorobenzene	5.00	4.51	4.80	90.2	96.0	79.0-120			6.23	20
1,4-Dichlorobenzene	5.00	4.19	4.99	83.8	99.8	79.0-120			17.4	20
Dichlorodifluoromethane	5.00	5.58	5.61	112	112	51.0-149			0.536	20
1,1-Dichloroethane	5.00	5.03	4.87	101	97.4	70.0-126			3.23	20
1,2-Dichloroethane	5.00	5.15	5.09	103	102	70.0-128			1.17	20
1,1-Dichloroethene	5.00	5.11	4.86	102	97.2	71.0-124			5.02	20
cis-1,2-Dichloroethene	5.00	5.15	5.31	103	106	73.0-120			3.06	20
trans-1,2-Dichloroethene	5.00	5.21	4.98	104	99.6	73.0-120			4.51	20
1,2-Dichloropropane	5.00	4.95	4.82	99.0	96.4	77.0-125			2.66	20
1,1-Dichloropropene	5.00	5.38	5.27	108	105	74.0-126			2.07	20
1,3-Dichloropropane	5.00	5.20	5.65	104	113	80.0-120			8.29	20
cis-1,3-Dichloropropene	5.00	4.89	4.60	97.8	92.0	80.0-123			6.11	20
trans-1,3-Dichloropropene	5.00	4.45	4.72	89.0	94.4	78.0-124			5.89	20
2,2-Dichloropropane	5.00	4.78	4.45	95.6	89.0	58.0-130			7.15	20
Di-isopropyl ether	5.00	5.27	5.27	105	105	58.0-138			0.000	20
Ethylbenzene	5.00	4.65	4.88	93.0	97.6	79.0-123			4.83	20
Hexachloro-1,3-butadiene	5.00	6.33	6.63	127	133	54.0-138			4.63	20
Isopropylbenzene	5.00	5.04	4.99	101	99.8	76.0-127			0.997	20
p-Isopropyltoluene	5.00	4.59	5.06	91.8	101	76.0-125			9.74	20
2-Butanone (MEK)	25.0	24.7	22.8	98.8	91.2	44.0-160			8.00	20
Methylene Chloride	5.00	4.82	4.97	96.4	99.4	67.0-120			3.06	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3733313-1 11/23/21 07:39 • (LCSD) R3733313-2 11/23/21 07:58

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	25.0	26.6	27.9	106	112	68.0-142			4.77	20
Methyl tert-butyl ether	5.00	4.92	5.17	98.4	103	68.0-125			4.96	20
Naphthalene	5.00	12.0	10.0	240	200	54.0-135	J4	J4	18.2	20
n-Propylbenzene	5.00	4.82	5.41	96.4	108	77.0-124			11.5	20
Styrene	5.00	4.45	4.45	89.0	89.0	73.0-130			0.000	20
1,1,1,2-Tetrachloroethane	5.00	5.02	5.28	100	106	75.0-125			5.05	20
1,1,2,2-Tetrachloroethane	5.00	4.89	5.38	97.8	108	65.0-130			9.54	20
Tetrachloroethene	5.00	5.27	5.37	105	107	72.0-132			1.88	20
Toluene	5.00	4.94	5.16	98.8	103	79.0-120			4.36	20
1,1,2-Trichlorotrifluoroethane	5.00	4.72	4.73	94.4	94.6	69.0-132			0.212	20
1,2,3-Trichlorobenzene	5.00	6.54	7.89	131	158	50.0-138		J4	18.7	20
1,2,4-Trichlorobenzene	5.00	5.76	6.02	115	120	57.0-137			4.41	20
1,1,1-Trichloroethane	5.00	5.96	5.74	119	115	73.0-124			3.76	20
1,1,2-Trichloroethane	5.00	5.07	5.57	101	111	80.0-120			9.40	20
Trichloroethene	5.00	5.31	5.01	106	100	78.0-124			5.81	20
Trichlorofluoromethane	5.00	5.40	5.18	108	104	59.0-147			4.16	20
1,2,3-Trichloropropane	5.00	4.92	5.48	98.4	110	73.0-130			10.8	20
1,2,3-Trimethylbenzene	5.00	4.72	5.30	94.4	106	77.0-120			11.6	20
1,2,4-Trimethylbenzene	5.00	4.81	5.26	96.2	105	76.0-121			8.94	20
1,3,5-Trimethylbenzene	5.00	4.86	5.28	97.2	106	76.0-122			8.28	20
Vinyl chloride	5.00	4.29	4.22	85.8	84.4	67.0-131			1.65	20
Xylenes, Total	15.0	14.0	14.2	93.3	94.7	79.0-123			1.42	20
(S) Toluene-d8				101	107	80.0-120				
(S) 4-Bromofluorobenzene				97.9	91.9	77.0-126				
(S) 1,2-Dichloroethane-d4				109	106	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3732986-1 11/23/21 11:54

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	48.2	↓	33.3	100
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	86.0			31.0-160

Laboratory Control Sample (LCS)

(LCS) R3732986-2 11/23/21 12:14

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Diesel Range Organics (DRO)	1500	1330	88.7	50.0-150	
<i>(S) o-Terphenyl</i>			79.0	31.0-160	

L1431787-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1431787-01 11/23/21 20:08 • (MS) R3732986-3 11/23/21 20:28 • (MSD) R3732986-4 11/23/21 20:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Diesel Range Organics (DRO)	1500	548	1860	1950	87.5	93.5	1	50.0-150			4.72	20
<i>(S) o-Terphenyl</i>					81.0	79.0		31.0-160				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3732249-3 11/20/21 10:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	108			31.0-160
(S) 2-Fluorobiphenyl	114			48.0-148
(S) p-Terphenyl-d14	121			37.0-146

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3732249-1 11/20/21 09:23 • (LCSD) R3732249-2 11/20/21 09:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	2.00	2.18	2.13	109	106	67.0-150			2.32	20
Acenaphthene	2.00	2.15	2.09	108	105	65.0-138			2.83	20
Acenaphthylene	2.00	2.07	2.00	103	100	66.0-140			3.44	20
Benzo(a)anthracene	2.00	2.28	2.21	114	111	61.0-140			3.12	20
Benzo(a)pyrene	2.00	1.99	1.91	99.5	95.5	60.0-143			4.10	20
Benzo(b)fluoranthene	2.00	1.98	1.92	99.0	96.0	58.0-141			3.08	20
Benzo(g,h,i)perylene	2.00	1.99	1.90	99.5	95.0	52.0-153			4.63	20
Benzo(k)fluoranthene	2.00	1.92	1.86	96.0	93.0	58.0-148			3.17	20
Chrysene	2.00	2.25	2.14	112	107	64.0-144			5.01	20
Dibenz(a,h)anthracene	2.00	2.03	1.96	102	98.0	52.0-155			3.51	20
Fluoranthene	2.00	2.34	2.27	117	114	69.0-153			3.04	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3732249-1 11/20/21 09:23 • (LCSD) R3732249-2 11/20/21 09:43

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	2.35	2.32	117	116	64.0-136			1.28	20
Indeno(1,2,3-cd)pyrene	2.00	2.11	1.99	105	99.5	54.0-153			5.85	20
Naphthalene	2.00	2.10	2.08	105	104	61.0-137			0.957	20
Phenanthrene	2.00	2.19	2.13	109	106	62.0-137			2.78	20
Pyrene	2.00	2.12	2.05	106	102	60.0-142			3.36	20
1-Methylnaphthalene	2.00	2.15	2.13	108	106	66.0-142			0.935	20
2-Methylnaphthalene	2.00	2.05	2.02	102	101	62.0-136			1.47	20
2-Chloronaphthalene	2.00	2.36	2.28	118	114	64.0-140			3.45	20
<i>(S) Nitrobenzene-d5</i>				108	106	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				114	112	48.0-148				
<i>(S) p-Terphenyl-d14</i>				119	114	37.0-146				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

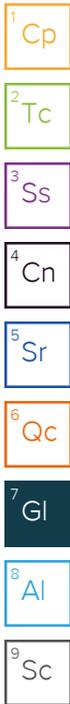
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	Sample(s) received past/too close to holding time expiration.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Shannon & Wilson - OR

Sample Delivery Group: L1432590
Samples Received: 11/17/2021
Project Number: 102636
Description: EQRB

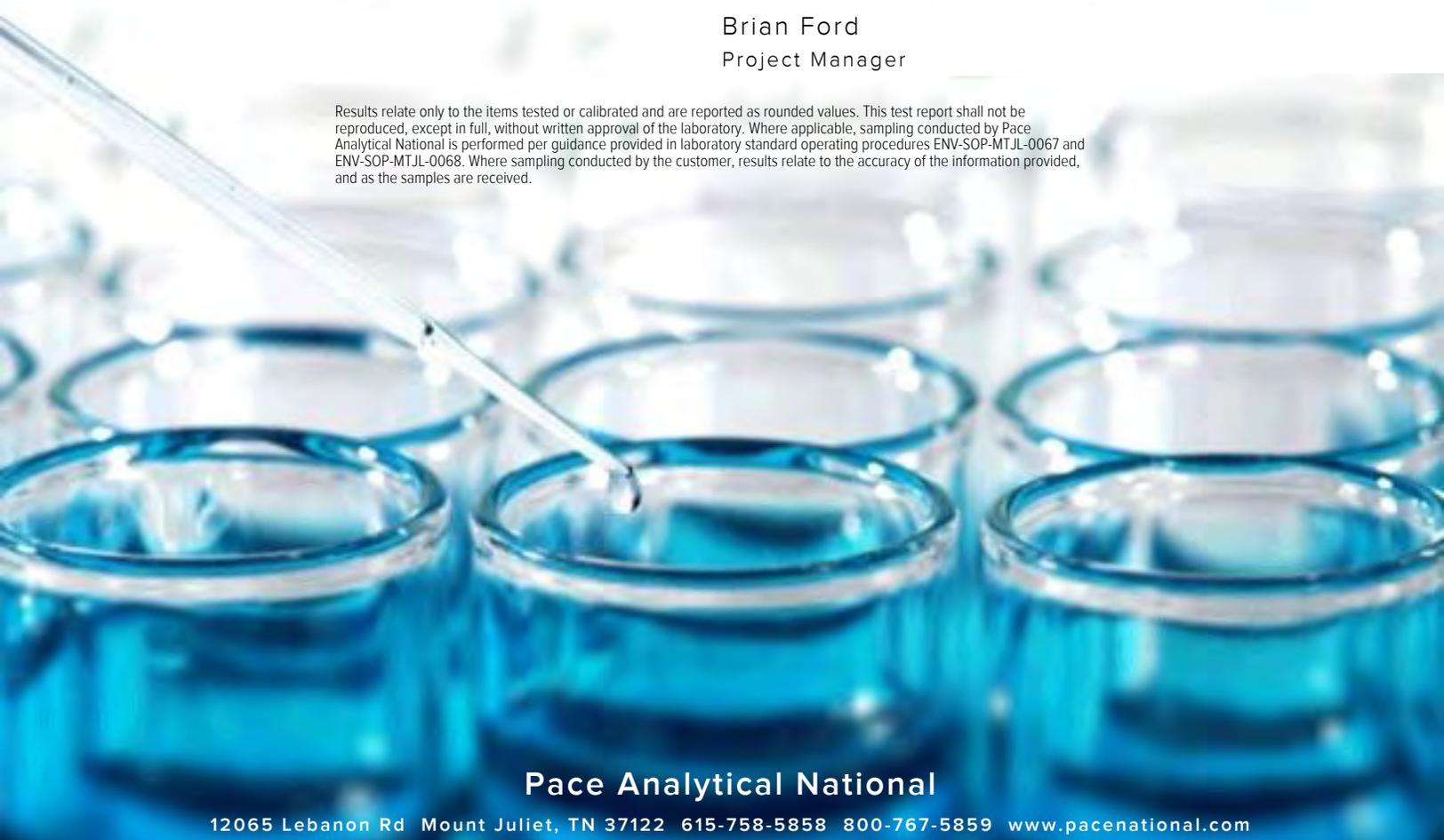
Report To: Lauren Sherman
3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
B-04-COMP-BS L1432590-01	5
B-06-COMP-SCBS L1432590-02	8
B-07-COMP-SCBS L1432590-03	11
B-08-COMP-SCBS L1432590-04	14
Qc: Quality Control Summary	17
Total Solids by Method 2540 G-2011	17
Mercury by Method 7471B	18
Metals (ICPMS) by Method 6020B	19
Volatile Organic Compounds (GC) by Method NWTPHGX	21
Volatile Organic Compounds (GC/MS) by Method 8260D	23
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	33
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	34
Gl: Glossary of Terms	36
Al: Accreditations & Locations	38
Sc: Sample Chain of Custody	39

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

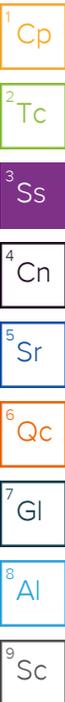
⁹ Sc

SAMPLE SUMMARY

B-04-COMP-BS L1432590-01 Solid

Collected by Lauren Sherman Collected date/time 11/10/21 13:00 Received date/time 11/17/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1776740	1	11/20/21 09:56	11/20/21 10:17	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1777192	1	11/23/21 08:57	11/24/21 12:51	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1779981	5	11/30/21 18:54	12/01/21 23:24	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1779850	33.5	11/10/21 13:00	11/24/21 16:02	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1778377	1.34	11/10/21 13:00	11/22/21 15:06	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1778214	15	11/23/21 09:47	11/24/21 07:56	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1778237	15	11/22/21 18:07	11/23/21 03:56	AGW	Mt. Juliet, TN



B-06-COMP-SCBS L1432590-02 Solid

Collected by Lauren Sherman Collected date/time 11/10/21 12:30 Received date/time 11/17/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1776740	1	11/20/21 09:56	11/20/21 10:17	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1777192	1	11/23/21 08:57	11/24/21 12:53	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1779981	5	11/30/21 18:54	12/01/21 23:27	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1777714	27.5	11/10/21 12:30	11/21/21 00:39	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1777738	1.1	11/10/21 12:30	11/20/21 15:43	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1778214	14.7	11/23/21 09:47	11/24/21 08:09	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1778237	14.9	11/22/21 18:07	11/23/21 04:16	AGW	Mt. Juliet, TN

B-07-COMP-SCBS L1432590-03 Solid

Collected by Lauren Sherman Collected date/time 11/10/21 13:30 Received date/time 11/17/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1776740	1	11/20/21 09:56	11/20/21 10:17	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1777192	1	11/23/21 08:57	11/24/21 12:55	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1779981	5	11/30/21 18:54	12/01/21 23:41	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1777714	33	11/10/21 13:30	11/21/21 01:01	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1777738	1.32	11/10/21 13:30	11/20/21 16:02	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1778214	14.4	11/23/21 09:47	11/24/21 08:23	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1778237	14.3	11/22/21 18:07	11/23/21 04:36	AGW	Mt. Juliet, TN

B-08-COMP-SCBS L1432590-04 Solid

Collected by Lauren Sherman Collected date/time 11/10/21 14:00 Received date/time 11/17/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1776740	1	11/20/21 09:56	11/20/21 10:17	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1777192	1	11/23/21 08:57	11/24/21 12:57	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1779981	5	11/30/21 18:54	12/01/21 23:34	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1777714	54.8	11/10/21 14:00	11/21/21 01:23	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1777738	2.19	11/10/21 14:00	11/20/21 16:21	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1778214	1	11/23/21 09:47	11/24/21 08:36	CAG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1778237	1	11/22/21 18:07	11/23/21 04:55	AGW	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	16.0		1	11/20/2021 10:17	WG1776740

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.112	0.250	1	11/24/2021 12:51	WG1777192

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	U		1.04	18.7	5	12/01/2021 23:24	WG1779981
Arsenic	3.83	J	0.625	6.25	5	12/01/2021 23:24	WG1779981
Barium	110		0.950	15.6	5	12/01/2021 23:24	WG1779981
Cadmium	U		0.534	6.25	5	12/01/2021 23:24	WG1779981
Chromium	19.9	J	1.85	31.2	5	12/01/2021 23:24	WG1779981
Copper	15.0	J	0.825	31.2	5	12/01/2021 23:24	WG1779981
Lead	10.8	J	0.619	12.5	5	12/01/2021 23:24	WG1779981
Selenium	1.14	B J	1.12	15.6	5	12/01/2021 23:24	WG1779981
Silver	U		0.540	3.12	5	12/01/2021 23:24	WG1779981
Zinc	47.9	J	4.62	156	5	12/01/2021 23:24	WG1779981

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		11.6	34.0	33.5	11/24/2021 16:02	WG1779850
(S) a,a,a-Trifluorotoluene(FID)	93.8			77.0-120		11/24/2021 16:02	WG1779850

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U	C3	0.497	0.681	1.34	11/22/2021 15:06	WG1778377
Acrylonitrile	U		0.0492	0.171	1.34	11/22/2021 15:06	WG1778377
Benzene	U		0.00636	0.0136	1.34	11/22/2021 15:06	WG1778377
Bromobenzene	U		0.0123	0.171	1.34	11/22/2021 15:06	WG1778377
Bromodichloromethane	U		0.00988	0.0340	1.34	11/22/2021 15:06	WG1778377
Bromoform	U	C3	0.0160	0.340	1.34	11/22/2021 15:06	WG1778377
Bromomethane	U		0.0268	0.171	1.34	11/22/2021 15:06	WG1778377
n-Butylbenzene	U		0.0716	0.171	1.34	11/22/2021 15:06	WG1778377
sec-Butylbenzene	U		0.0392	0.171	1.34	11/22/2021 15:06	WG1778377
tert-Butylbenzene	U		0.0265	0.0681	1.34	11/22/2021 15:06	WG1778377
Carbon tetrachloride	U		0.0122	0.0681	1.34	11/22/2021 15:06	WG1778377
Chlorobenzene	U		0.00286	0.0340	1.34	11/22/2021 15:06	WG1778377
Chlorodibromomethane	U		0.00833	0.0340	1.34	11/22/2021 15:06	WG1778377
Chloroethane	U		0.0232	0.0681	1.34	11/22/2021 15:06	WG1778377
Chloroform	U		0.0140	0.0340	1.34	11/22/2021 15:06	WG1778377
Chloromethane	U		0.0593	0.171	1.34	11/22/2021 15:06	WG1778377
2-Chlorotoluene	U		0.0118	0.0340	1.34	11/22/2021 15:06	WG1778377
4-Chlorotoluene	U		0.00613	0.0681	1.34	11/22/2021 15:06	WG1778377
1,2-Dibromo-3-Chloropropane	U		0.0532	0.340	1.34	11/22/2021 15:06	WG1778377
1,2-Dibromoethane	U		0.00882	0.0340	1.34	11/22/2021 15:06	WG1778377
Dibromomethane	U		0.0103	0.0681	1.34	11/22/2021 15:06	WG1778377
1,2-Dichlorobenzene	U		0.00579	0.0681	1.34	11/22/2021 15:06	WG1778377
1,3-Dichlorobenzene	U		0.00817	0.0681	1.34	11/22/2021 15:06	WG1778377
1,4-Dichlorobenzene	U		0.00953	0.0681	1.34	11/22/2021 15:06	WG1778377



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U	<u>J3</u>	0.0220	0.0340	1.34	11/22/2021 15:06	WG1778377
1,1-Dichloroethane	U		0.00669	0.0340	1.34	11/22/2021 15:06	WG1778377
1,2-Dichloroethane	U		0.00884	0.0340	1.34	11/22/2021 15:06	WG1778377
1,1-Dichloroethene	U		0.00825	0.0340	1.34	11/22/2021 15:06	WG1778377
cis-1,2-Dichloroethene	U		0.0100	0.0340	1.34	11/22/2021 15:06	WG1778377
trans-1,2-Dichloroethene	U		0.0141	0.0681	1.34	11/22/2021 15:06	WG1778377
1,2-Dichloropropane	U		0.0193	0.0681	1.34	11/22/2021 15:06	WG1778377
1,1-Dichloropropene	U		0.0110	0.0340	1.34	11/22/2021 15:06	WG1778377
1,3-Dichloropropane	U		0.00682	0.0681	1.34	11/22/2021 15:06	WG1778377
cis-1,3-Dichloropropene	U		0.0103	0.0340	1.34	11/22/2021 15:06	WG1778377
trans-1,3-Dichloropropene	U		0.0156	0.0681	1.34	11/22/2021 15:06	WG1778377
2,2-Dichloropropane	U		0.0188	0.0340	1.34	11/22/2021 15:06	WG1778377
Di-isopropyl ether	U		0.00558	0.0136	1.34	11/22/2021 15:06	WG1778377
Ethylbenzene	U		0.0100	0.0340	1.34	11/22/2021 15:06	WG1778377
Hexachloro-1,3-butadiene	U		0.0817	0.340	1.34	11/22/2021 15:06	WG1778377
Isopropylbenzene	U		0.00579	0.0340	1.34	11/22/2021 15:06	WG1778377
p-Isopropyltoluene	U		0.0348	0.0681	1.34	11/22/2021 15:06	WG1778377
2-Butanone (MEK)	U	<u>J3</u>	0.865	1.36	1.34	11/22/2021 15:06	WG1778377
Methylene Chloride	U		0.0905	0.340	1.34	11/22/2021 15:06	WG1778377
4-Methyl-2-pentanone (MIBK)	U		0.0311	0.340	1.34	11/22/2021 15:06	WG1778377
Methyl tert-butyl ether	U		0.00477	0.0136	1.34	11/22/2021 15:06	WG1778377
Naphthalene	U		0.0665	0.171	1.34	11/22/2021 15:06	WG1778377
n-Propylbenzene	U		0.0129	0.0681	1.34	11/22/2021 15:06	WG1778377
Styrene	U		0.00312	0.171	1.34	11/22/2021 15:06	WG1778377
1,1,1,2-Tetrachloroethane	U		0.0129	0.0340	1.34	11/22/2021 15:06	WG1778377
1,1,2,2-Tetrachloroethane	U		0.00946	0.0340	1.34	11/22/2021 15:06	WG1778377
1,1,2-Trichlorotrifluoroethane	U		0.0103	0.0340	1.34	11/22/2021 15:06	WG1778377
Tetrachloroethene	U		0.0122	0.0340	1.34	11/22/2021 15:06	WG1778377
Toluene	0.0552	<u>J</u>	0.0177	0.0681	1.34	11/22/2021 15:06	WG1778377
1,2,3-Trichlorobenzene	U	<u>C4 J3</u>	0.0998	0.171	1.34	11/22/2021 15:06	WG1778377
1,2,4-Trichlorobenzene	U	<u>C4</u>	0.0600	0.171	1.34	11/22/2021 15:06	WG1778377
1,1,1-Trichloroethane	U		0.0126	0.0340	1.34	11/22/2021 15:06	WG1778377
1,1,2-Trichloroethane	U		0.00813	0.0340	1.34	11/22/2021 15:06	WG1778377
Trichloroethene	U		0.00796	0.0136	1.34	11/22/2021 15:06	WG1778377
Trichlorofluoromethane	U		0.0113	0.0340	1.34	11/22/2021 15:06	WG1778377
1,2,3-Trichloropropane	U		0.0221	0.171	1.34	11/22/2021 15:06	WG1778377
1,2,4-Trimethylbenzene	U		0.0215	0.0681	1.34	11/22/2021 15:06	WG1778377
1,2,3-Trimethylbenzene	U		0.0215	0.0681	1.34	11/22/2021 15:06	WG1778377
1,3,5-Trimethylbenzene	U		0.0272	0.0681	1.34	11/22/2021 15:06	WG1778377
Vinyl chloride	U		0.0158	0.0340	1.34	11/22/2021 15:06	WG1778377
Xylenes, Total	U		0.0120	0.0885	1.34	11/22/2021 15:06	WG1778377
(S) Toluene-d8	113			75.0-131		11/22/2021 15:06	WG1778377
(S) 4-Bromofluorobenzene	96.8			67.0-138		11/22/2021 15:06	WG1778377
(S) 1,2-Dichloroethane-d4	92.6			70.0-130		11/22/2021 15:06	WG1778377

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		125	375	15	11/24/2021 07:56	WG1778214
Residual Range Organics (RRO)	U		312	937	15	11/24/2021 07:56	WG1778214
(S) o-Terphenyl	74.6			18.0-148		11/24/2021 07:56	WG1778214

Sample Narrative:

L1432590-01 WG1778214: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.216	0.562	15	11/23/2021 03:56	WG1778237
Acenaphthene	U		0.196	0.562	15	11/23/2021 03:56	WG1778237
Acenaphthylene	U		0.202	0.562	15	11/23/2021 03:56	WG1778237
Benzo(a)anthracene	U		0.162	0.562	15	11/23/2021 03:56	WG1778237
Benzo(a)pyrene	U		0.167	0.562	15	11/23/2021 03:56	WG1778237
Benzo(b)fluoranthene	U		0.144	0.562	15	11/23/2021 03:56	WG1778237
Benzo(g,h,i)perylene	U		0.166	0.562	15	11/23/2021 03:56	WG1778237
Benzo(k)fluoranthene	U		0.202	0.562	15	11/23/2021 03:56	WG1778237
Chrysene	U		0.217	0.562	15	11/23/2021 03:56	WG1778237
Dibenz(a,h)anthracene	U		0.161	0.562	15	11/23/2021 03:56	WG1778237
Fluoranthene	U		0.213	0.562	15	11/23/2021 03:56	WG1778237
Fluorene	U		0.192	0.562	15	11/23/2021 03:56	WG1778237
Indeno(1,2,3-cd)pyrene	U		0.170	0.562	15	11/23/2021 03:56	WG1778237
Naphthalene	U		0.382	1.87	15	11/23/2021 03:56	WG1778237
Phenanthrene	U		0.217	0.562	15	11/23/2021 03:56	WG1778237
Pyrene	U		0.187	0.562	15	11/23/2021 03:56	WG1778237
1-Methylnaphthalene	U		0.421	1.87	15	11/23/2021 03:56	WG1778237
2-Methylnaphthalene	U		0.401	1.87	15	11/23/2021 03:56	WG1778237
2-Chloronaphthalene	U		0.437	1.87	15	11/23/2021 03:56	WG1778237
(S) Nitrobenzene-d5	84.0			14.0-149		11/23/2021 03:56	WG1778237
(S) 2-Fluorobiphenyl	92.8			34.0-125		11/23/2021 03:56	WG1778237
(S) p-Terphenyl-d14	134	J1		23.0-120		11/23/2021 03:56	WG1778237

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	34.0		1	11/20/2021 10:17	WG1776740

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0529	0.118	1	11/24/2021 12:53	WG1777192

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.488	8.82	5	12/01/2021 23:27	WG1779981
Arsenic	2.55	J	0.294	2.94	5	12/01/2021 23:27	WG1779981
Barium	95.7		0.447	7.35	5	12/01/2021 23:27	WG1779981
Cadmium	U		0.251	2.94	5	12/01/2021 23:27	WG1779981
Chromium	12.1	J	0.871	14.7	5	12/01/2021 23:27	WG1779981
Copper	13.8	J	0.388	14.7	5	12/01/2021 23:27	WG1779981
Lead	6.85		0.291	5.88	5	12/01/2021 23:27	WG1779981
Selenium	U		0.529	7.35	5	12/01/2021 23:27	WG1779981
Silver	U		0.254	1.47	5	12/01/2021 23:27	WG1779981
Zinc	40.9	J	2.18	73.5	5	12/01/2021 23:27	WG1779981

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		4.38	12.9	27.5	11/21/2021 00:39	WG1777714
(S) a,a,a-Trifluorotoluene(FID)	94.3			77.0-120		11/21/2021 00:39	WG1777714

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	C3	0.188	0.258	1.1	11/20/2021 15:43	WG1777738
Acrylonitrile	U		0.0187	0.0648	1.1	11/20/2021 15:43	WG1777738
Benzene	U		0.00241	0.00517	1.1	11/20/2021 15:43	WG1777738
Bromobenzene	U		0.00465	0.0648	1.1	11/20/2021 15:43	WG1777738
Bromodichloromethane	U		0.00374	0.0129	1.1	11/20/2021 15:43	WG1777738
Bromoform	U		0.00606	0.129	1.1	11/20/2021 15:43	WG1777738
Bromomethane	U		0.0102	0.0648	1.1	11/20/2021 15:43	WG1777738
n-Butylbenzene	U		0.0272	0.0648	1.1	11/20/2021 15:43	WG1777738
sec-Butylbenzene	U		0.0149	0.0648	1.1	11/20/2021 15:43	WG1777738
tert-Butylbenzene	U		0.0101	0.0258	1.1	11/20/2021 15:43	WG1777738
Carbon tetrachloride	U		0.00464	0.0258	1.1	11/20/2021 15:43	WG1777738
Chlorobenzene	U		0.00109	0.0129	1.1	11/20/2021 15:43	WG1777738
Chlorodibromomethane	U		0.00316	0.0129	1.1	11/20/2021 15:43	WG1777738
Chloroethane	U		0.00878	0.0258	1.1	11/20/2021 15:43	WG1777738
Chloroform	U		0.00531	0.0129	1.1	11/20/2021 15:43	WG1777738
Chloromethane	U		0.0225	0.0648	1.1	11/20/2021 15:43	WG1777738
2-Chlorotoluene	U		0.00447	0.0129	1.1	11/20/2021 15:43	WG1777738
4-Chlorotoluene	U		0.00233	0.0258	1.1	11/20/2021 15:43	WG1777738
1,2-Dibromo-3-Chloropropane	U		0.0202	0.129	1.1	11/20/2021 15:43	WG1777738
1,2-Dibromoethane	U		0.00335	0.0129	1.1	11/20/2021 15:43	WG1777738
Dibromomethane	U		0.00388	0.0258	1.1	11/20/2021 15:43	WG1777738
1,2-Dichlorobenzene	U		0.00220	0.0258	1.1	11/20/2021 15:43	WG1777738
1,3-Dichlorobenzene	U		0.00310	0.0258	1.1	11/20/2021 15:43	WG1777738
1,4-Dichlorobenzene	U		0.00362	0.0258	1.1	11/20/2021 15:43	WG1777738



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00832	0.0129	1.1	11/20/2021 15:43	WG177738
1,1-Dichloroethane	U		0.00254	0.0129	1.1	11/20/2021 15:43	WG177738
1,2-Dichloroethane	U		0.00335	0.0129	1.1	11/20/2021 15:43	WG177738
1,1-Dichloroethene	U		0.00313	0.0129	1.1	11/20/2021 15:43	WG177738
cis-1,2-Dichloroethene	U		0.00379	0.0129	1.1	11/20/2021 15:43	WG177738
trans-1,2-Dichloroethene	U		0.00536	0.0258	1.1	11/20/2021 15:43	WG177738
1,2-Dichloropropane	U		0.00733	0.0258	1.1	11/20/2021 15:43	WG177738
1,1-Dichloropropene	U		0.00418	0.0129	1.1	11/20/2021 15:43	WG177738
1,3-Dichloropropane	U		0.00259	0.0258	1.1	11/20/2021 15:43	WG177738
cis-1,3-Dichloropropene	U		0.00391	0.0129	1.1	11/20/2021 15:43	WG177738
trans-1,3-Dichloropropene	U		0.00587	0.0258	1.1	11/20/2021 15:43	WG177738
2,2-Dichloropropane	U		0.00714	0.0129	1.1	11/20/2021 15:43	WG177738
Di-isopropyl ether	U		0.00212	0.00517	1.1	11/20/2021 15:43	WG177738
Ethylbenzene	U		0.00381	0.0129	1.1	11/20/2021 15:43	WG177738
Hexachloro-1,3-butadiene	U	J4	0.0310	0.129	1.1	11/20/2021 15:43	WG177738
Isopropylbenzene	U		0.00220	0.0129	1.1	11/20/2021 15:43	WG177738
p-Isopropyltoluene	U		0.0132	0.0258	1.1	11/20/2021 15:43	WG177738
2-Butanone (MEK)	U		0.328	0.517	1.1	11/20/2021 15:43	WG177738
Methylene Chloride	U		0.0343	0.129	1.1	11/20/2021 15:43	WG177738
4-Methyl-2-pentanone (MIBK)	U		0.0118	0.129	1.1	11/20/2021 15:43	WG177738
Methyl tert-butyl ether	U		0.00181	0.00517	1.1	11/20/2021 15:43	WG177738
Naphthalene	U		0.0252	0.0648	1.1	11/20/2021 15:43	WG177738
n-Propylbenzene	U		0.00493	0.0258	1.1	11/20/2021 15:43	WG177738
Styrene	U		0.00118	0.0648	1.1	11/20/2021 15:43	WG177738
1,1,1,2-Tetrachloroethane	U		0.00489	0.0129	1.1	11/20/2021 15:43	WG177738
1,1,2,2-Tetrachloroethane	U		0.00359	0.0129	1.1	11/20/2021 15:43	WG177738
1,1,2-Trichlorotrifluoroethane	U		0.00389	0.0129	1.1	11/20/2021 15:43	WG177738
Tetrachloroethene	U		0.00463	0.0129	1.1	11/20/2021 15:43	WG177738
Toluene	0.0234	J	0.00672	0.0258	1.1	11/20/2021 15:43	WG177738
1,2,3-Trichlorobenzene	U		0.0379	0.0648	1.1	11/20/2021 15:43	WG177738
1,2,4-Trichlorobenzene	U		0.0227	0.0648	1.1	11/20/2021 15:43	WG177738
1,1,1-Trichloroethane	U		0.00479	0.0129	1.1	11/20/2021 15:43	WG177738
1,1,2-Trichloroethane	U		0.00309	0.0129	1.1	11/20/2021 15:43	WG177738
Trichloroethene	U		0.00302	0.00517	1.1	11/20/2021 15:43	WG177738
Trichlorofluoromethane	U		0.00428	0.0129	1.1	11/20/2021 15:43	WG177738
1,2,3-Trichloropropane	U		0.00836	0.0648	1.1	11/20/2021 15:43	WG177738
1,2,4-Trimethylbenzene	U		0.00817	0.0258	1.1	11/20/2021 15:43	WG177738
1,2,3-Trimethylbenzene	U		0.00817	0.0258	1.1	11/20/2021 15:43	WG177738
1,3,5-Trimethylbenzene	U		0.0103	0.0258	1.1	11/20/2021 15:43	WG177738
Vinyl chloride	U		0.00601	0.0129	1.1	11/20/2021 15:43	WG177738
Xylenes, Total	U		0.00455	0.0336	1.1	11/20/2021 15:43	WG177738
(S) Toluene-d8	106			75.0-131		11/20/2021 15:43	WG177738
(S) 4-Bromofluorobenzene	100			67.0-138		11/20/2021 15:43	WG177738
(S) 1,2-Dichloroethane-d4	99.7			70.0-130		11/20/2021 15:43	WG177738

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		57.6	173	14.7	11/24/2021 08:09	WG1778214
Residual Range Organics (RRO)	U		144	432	14.7	11/24/2021 08:09	WG1778214
(S) o-Terphenyl	74.3			18.0-148		11/24/2021 08:09	WG1778214

Sample Narrative:

L1432590-02 WG1778214: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.101	0.263	14.9	11/23/2021 04:16	WG1778237
Acenaphthene	U		0.0915	0.263	14.9	11/23/2021 04:16	WG1778237
Acenaphthylene	U		0.0947	0.263	14.9	11/23/2021 04:16	WG1778237
Benzo(a)anthracene	U		0.0759	0.263	14.9	11/23/2021 04:16	WG1778237
Benzo(a)pyrene	U		0.0785	0.263	14.9	11/23/2021 04:16	WG1778237
Benzo(b)fluoranthene	U		0.0671	0.263	14.9	11/23/2021 04:16	WG1778237
Benzo(g,h,i)perylene	U		0.0776	0.263	14.9	11/23/2021 04:16	WG1778237
Benzo(k)fluoranthene	U		0.0941	0.263	14.9	11/23/2021 04:16	WG1778237
Chrysene	U		0.102	0.263	14.9	11/23/2021 04:16	WG1778237
Dibenz(a,h)anthracene	U		0.0753	0.263	14.9	11/23/2021 04:16	WG1778237
Fluoranthene	U		0.0994	0.263	14.9	11/23/2021 04:16	WG1778237
Fluorene	U		0.0897	0.263	14.9	11/23/2021 04:16	WG1778237
Indeno(1,2,3-cd)pyrene	U		0.0794	0.263	14.9	11/23/2021 04:16	WG1778237
Naphthalene	U		0.179	0.876	14.9	11/23/2021 04:16	WG1778237
Phenanthrene	U		0.101	0.263	14.9	11/23/2021 04:16	WG1778237
Pyrene	U		0.0876	0.263	14.9	11/23/2021 04:16	WG1778237
1-Methylnaphthalene	U		0.197	0.876	14.9	11/23/2021 04:16	WG1778237
2-Methylnaphthalene	U		0.187	0.876	14.9	11/23/2021 04:16	WG1778237
2-Chloronaphthalene	U		0.204	0.876	14.9	11/23/2021 04:16	WG1778237
(S) Nitrobenzene-d5	83.9			14.0-149		11/23/2021 04:16	WG1778237
(S) 2-Fluorobiphenyl	92.7			34.0-125		11/23/2021 04:16	WG1778237
(S) p-Terphenyl-d14	136	J1		23.0-120		11/23/2021 04:16	WG1778237

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	27.7		1	11/20/2021 10:17	WG1776740

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0649	0.144	1	11/24/2021 12:55	WG1777192

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U		0.598	10.8	5	12/01/2021 23:41	WG1779981
Arsenic	3.34	J	0.361	3.61	5	12/01/2021 23:41	WG1779981
Barium	128		0.548	9.01	5	12/01/2021 23:41	WG1779981
Cadmium	U		0.308	3.61	5	12/01/2021 23:41	WG1779981
Chromium	28.5		1.07	18.0	5	12/01/2021 23:41	WG1779981
Copper	21.1		0.476	18.0	5	12/01/2021 23:41	WG1779981
Lead	8.37		0.357	7.21	5	12/01/2021 23:41	WG1779981
Selenium	U		0.649	9.01	5	12/01/2021 23:41	WG1779981
Silver	U		0.312	1.80	5	12/01/2021 23:41	WG1779981
Zinc	51.3	J	2.67	90.1	5	12/01/2021 23:41	WG1779981

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	U		6.25	18.4	33	11/21/2021 01:01	WG1777714
(S) a,a,a-Trifluorotoluene(FID)	94.4			77.0-120		11/21/2021 01:01	WG1777714

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	C3	0.269	0.368	1.32	11/20/2021 16:02	WG1777738
Acrylonitrile	U		0.0266	0.0921	1.32	11/20/2021 16:02	WG1777738
Benzene	U		0.00344	0.00737	1.32	11/20/2021 16:02	WG1777738
Bromobenzene	U		0.00664	0.0921	1.32	11/20/2021 16:02	WG1777738
Bromodichloromethane	U		0.00534	0.0184	1.32	11/20/2021 16:02	WG1777738
Bromoform	U		0.00859	0.184	1.32	11/20/2021 16:02	WG1777738
Bromomethane	U		0.0145	0.0921	1.32	11/20/2021 16:02	WG1777738
n-Butylbenzene	U		0.0387	0.0921	1.32	11/20/2021 16:02	WG1777738
sec-Butylbenzene	U		0.0212	0.0921	1.32	11/20/2021 16:02	WG1777738
tert-Butylbenzene	U		0.0143	0.0368	1.32	11/20/2021 16:02	WG1777738
Carbon tetrachloride	U		0.00664	0.0368	1.32	11/20/2021 16:02	WG1777738
Chlorobenzene	U		0.00155	0.0184	1.32	11/20/2021 16:02	WG1777738
Chlorodibromomethane	U		0.00451	0.0184	1.32	11/20/2021 16:02	WG1777738
Chloroethane	U		0.0125	0.0368	1.32	11/20/2021 16:02	WG1777738
Chloroform	U		0.00759	0.0184	1.32	11/20/2021 16:02	WG1777738
Chloromethane	U		0.0320	0.0921	1.32	11/20/2021 16:02	WG1777738
2-Chlorotoluene	U		0.00636	0.0184	1.32	11/20/2021 16:02	WG1777738
4-Chlorotoluene	U		0.00331	0.0368	1.32	11/20/2021 16:02	WG1777738
1,2-Dibromo-3-Chloropropane	U		0.0287	0.184	1.32	11/20/2021 16:02	WG1777738
1,2-Dibromoethane	U		0.00477	0.0184	1.32	11/20/2021 16:02	WG1777738
Dibromomethane	U		0.00552	0.0368	1.32	11/20/2021 16:02	WG1777738
1,2-Dichlorobenzene	U		0.00313	0.0368	1.32	11/20/2021 16:02	WG1777738
1,3-Dichlorobenzene	U		0.00442	0.0368	1.32	11/20/2021 16:02	WG1777738
1,4-Dichlorobenzene	U		0.00516	0.0368	1.32	11/20/2021 16:02	WG1777738



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.0119	0.0184	1.32	11/20/2021 16:02	WG177738
1,1-Dichloroethane	U		0.00362	0.0184	1.32	11/20/2021 16:02	WG177738
1,2-Dichloroethane	U		0.00478	0.0184	1.32	11/20/2021 16:02	WG177738
1,1-Dichloroethene	U		0.00446	0.0184	1.32	11/20/2021 16:02	WG177738
cis-1,2-Dichloroethene	U		0.00541	0.0184	1.32	11/20/2021 16:02	WG177738
trans-1,2-Dichloroethene	U		0.00764	0.0368	1.32	11/20/2021 16:02	WG177738
1,2-Dichloropropane	U		0.0104	0.0368	1.32	11/20/2021 16:02	WG177738
1,1-Dichloropropene	U		0.00597	0.0184	1.32	11/20/2021 16:02	WG177738
1,3-Dichloropropane	U		0.00369	0.0368	1.32	11/20/2021 16:02	WG177738
cis-1,3-Dichloropropene	U		0.00557	0.0184	1.32	11/20/2021 16:02	WG177738
trans-1,3-Dichloropropene	U		0.00837	0.0368	1.32	11/20/2021 16:02	WG177738
2,2-Dichloropropane	U		0.0102	0.0184	1.32	11/20/2021 16:02	WG177738
Di-isopropyl ether	U		0.00302	0.00737	1.32	11/20/2021 16:02	WG177738
Ethylbenzene	U		0.00543	0.0184	1.32	11/20/2021 16:02	WG177738
Hexachloro-1,3-butadiene	U	J4	0.0442	0.184	1.32	11/20/2021 16:02	WG177738
Isopropylbenzene	U		0.00313	0.0184	1.32	11/20/2021 16:02	WG177738
p-Isopropyltoluene	U		0.0188	0.0368	1.32	11/20/2021 16:02	WG177738
2-Butanone (MEK)	U		0.468	0.737	1.32	11/20/2021 16:02	WG177738
Methylene Chloride	U		0.0489	0.184	1.32	11/20/2021 16:02	WG177738
4-Methyl-2-pentanone (MIBK)	U		0.0168	0.184	1.32	11/20/2021 16:02	WG177738
Methyl tert-butyl ether	U		0.00258	0.00737	1.32	11/20/2021 16:02	WG177738
Naphthalene	U		0.0359	0.0921	1.32	11/20/2021 16:02	WG177738
n-Propylbenzene	U		0.00698	0.0368	1.32	11/20/2021 16:02	WG177738
Styrene	U		0.00169	0.0921	1.32	11/20/2021 16:02	WG177738
1,1,1,2-Tetrachloroethane	U		0.00698	0.0184	1.32	11/20/2021 16:02	WG177738
1,1,2,2-Tetrachloroethane	U		0.00512	0.0184	1.32	11/20/2021 16:02	WG177738
1,1,2-Trichlorotrifluoroethane	U		0.00555	0.0184	1.32	11/20/2021 16:02	WG177738
Tetrachloroethene	U		0.00658	0.0184	1.32	11/20/2021 16:02	WG177738
Toluene	0.0379		0.00960	0.0368	1.32	11/20/2021 16:02	WG177738
1,2,3-Trichlorobenzene	U		0.0540	0.0921	1.32	11/20/2021 16:02	WG177738
1,2,4-Trichlorobenzene	U		0.0324	0.0921	1.32	11/20/2021 16:02	WG177738
1,1,1-Trichloroethane	U		0.00681	0.0184	1.32	11/20/2021 16:02	WG177738
1,1,2-Trichloroethane	U		0.00440	0.0184	1.32	11/20/2021 16:02	WG177738
Trichloroethene	U		0.00430	0.00737	1.32	11/20/2021 16:02	WG177738
Trichlorofluoromethane	U		0.00608	0.0184	1.32	11/20/2021 16:02	WG177738
1,2,3-Trichloropropane	U		0.0119	0.0921	1.32	11/20/2021 16:02	WG177738
1,2,4-Trimethylbenzene	U		0.0117	0.0368	1.32	11/20/2021 16:02	WG177738
1,2,3-Trimethylbenzene	U		0.0117	0.0368	1.32	11/20/2021 16:02	WG177738
1,3,5-Trimethylbenzene	U		0.0147	0.0368	1.32	11/20/2021 16:02	WG177738
Vinyl chloride	U		0.00854	0.0184	1.32	11/20/2021 16:02	WG177738
Xylenes, Total	U		0.00647	0.0479	1.32	11/20/2021 16:02	WG177738
(S) Toluene-d8	111			75.0-131		11/20/2021 16:02	WG177738
(S) 4-Bromofluorobenzene	97.2			67.0-138		11/20/2021 16:02	WG177738
(S) 1,2-Dichloroethane-d4	99.0			70.0-130		11/20/2021 16:02	WG177738

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		69.2	208	14.4	11/24/2021 08:23	WG1778214
Residual Range Organics (RRO)	U		173	519	14.4	11/24/2021 08:23	WG1778214
(S) o-Terphenyl	73.0			18.0-148		11/24/2021 08:23	WG1778214

Sample Narrative:

L1432590-03 WG1778214: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.119	0.309	14.3	11/23/2021 04:36	WG1778237
Acenaphthene	U		0.108	0.309	14.3	11/23/2021 04:36	WG1778237
Acenaphthylene	U		0.111	0.309	14.3	11/23/2021 04:36	WG1778237
Benzo(a)anthracene	U		0.0891	0.309	14.3	11/23/2021 04:36	WG1778237
Benzo(a)pyrene	U		0.0923	0.309	14.3	11/23/2021 04:36	WG1778237
Benzo(b)fluoranthene	U		0.0790	0.309	14.3	11/23/2021 04:36	WG1778237
Benzo(g,h,i)perylene	U		0.0912	0.309	14.3	11/23/2021 04:36	WG1778237
Benzo(k)fluoranthene	U		0.111	0.309	14.3	11/23/2021 04:36	WG1778237
Chrysene	U		0.120	0.309	14.3	11/23/2021 04:36	WG1778237
Dibenz(a,h)anthracene	U		0.0887	0.309	14.3	11/23/2021 04:36	WG1778237
Fluoranthene	U		0.117	0.309	14.3	11/23/2021 04:36	WG1778237
Fluorene	U		0.106	0.309	14.3	11/23/2021 04:36	WG1778237
Indeno(1,2,3-cd)pyrene	U		0.0934	0.309	14.3	11/23/2021 04:36	WG1778237
Naphthalene	U		0.210	1.03	14.3	11/23/2021 04:36	WG1778237
Phenanthrene	U		0.119	0.309	14.3	11/23/2021 04:36	WG1778237
Pyrene	U		0.103	0.309	14.3	11/23/2021 04:36	WG1778237
1-Methylnaphthalene	U		0.231	1.03	14.3	11/23/2021 04:36	WG1778237
2-Methylnaphthalene	U		0.220	1.03	14.3	11/23/2021 04:36	WG1778237
2-Chloronaphthalene	U		0.240	1.03	14.3	11/23/2021 04:36	WG1778237
(S) Nitrobenzene-d5	85.7			14.0-149		11/23/2021 04:36	WG1778237
(S) 2-Fluorobiphenyl	95.8			34.0-125		11/23/2021 04:36	WG1778237
(S) p-Terphenyl-d14	135	J1		23.0-120		11/23/2021 04:36	WG1778237

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	42.6		1	11/20/2021 10:17	WG1776740

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0422	0.0939	1	11/24/2021 12:57	WG1777192

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	U		0.390	7.04	5	12/01/2021 23:34	WG1779981
Arsenic	2.33	J	0.235	2.35	5	12/01/2021 23:34	WG1779981
Barium	125		0.357	5.87	5	12/01/2021 23:34	WG1779981
Cadmium	U		0.201	2.35	5	12/01/2021 23:34	WG1779981
Chromium	19.5		0.695	11.7	5	12/01/2021 23:34	WG1779981
Copper	20.5		0.310	11.7	5	12/01/2021 23:34	WG1779981
Lead	9.80		0.232	4.69	5	12/01/2021 23:34	WG1779981
Selenium	U		0.422	5.87	5	12/01/2021 23:34	WG1779981
Silver	U		0.203	1.17	5	12/01/2021 23:34	WG1779981
Zinc	70.1		1.74	58.7	5	12/01/2021 23:34	WG1779981

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		5.51	16.2	54.8	11/21/2021 01:23	WG1777714
(S) a,a,a-Trifluorotoluene(FID)	94.0			77.0-120		11/21/2021 01:23	WG1777714

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U	C3	0.237	0.326	2.19	11/20/2021 16:21	WG1777738
Acrylonitrile	U		0.0234	0.0811	2.19	11/20/2021 16:21	WG1777738
Benzene	0.00551	J	0.00302	0.00648	2.19	11/20/2021 16:21	WG1777738
Bromobenzene	U		0.00583	0.0811	2.19	11/20/2021 16:21	WG1777738
Bromodichloromethane	U		0.00471	0.0162	2.19	11/20/2021 16:21	WG1777738
Bromoform	U		0.00758	0.162	2.19	11/20/2021 16:21	WG1777738
Bromomethane	U		0.0128	0.0811	2.19	11/20/2021 16:21	WG1777738
n-Butylbenzene	U		0.0340	0.0811	2.19	11/20/2021 16:21	WG1777738
sec-Butylbenzene	U		0.0187	0.0811	2.19	11/20/2021 16:21	WG1777738
tert-Butylbenzene	U		0.0126	0.0326	2.19	11/20/2021 16:21	WG1777738
Carbon tetrachloride	U		0.00583	0.0326	2.19	11/20/2021 16:21	WG1777738
Chlorobenzene	U		0.00136	0.0162	2.19	11/20/2021 16:21	WG1777738
Chlorodibromomethane	U		0.00397	0.0162	2.19	11/20/2021 16:21	WG1777738
Chloroethane	U		0.0110	0.0326	2.19	11/20/2021 16:21	WG1777738
Chloroform	U		0.00669	0.0162	2.19	11/20/2021 16:21	WG1777738
Chloromethane	U		0.0282	0.0811	2.19	11/20/2021 16:21	WG1777738
2-Chlorotoluene	U		0.00560	0.0162	2.19	11/20/2021 16:21	WG1777738
4-Chlorotoluene	U		0.00292	0.0326	2.19	11/20/2021 16:21	WG1777738
1,2-Dibromo-3-Chloropropane	U		0.0253	0.162	2.19	11/20/2021 16:21	WG1777738
1,2-Dibromoethane	U		0.00420	0.0162	2.19	11/20/2021 16:21	WG1777738
Dibromomethane	U		0.00486	0.0326	2.19	11/20/2021 16:21	WG1777738
1,2-Dichlorobenzene	U		0.00276	0.0326	2.19	11/20/2021 16:21	WG1777738
1,3-Dichlorobenzene	U		0.00388	0.0326	2.19	11/20/2021 16:21	WG1777738
1,4-Dichlorobenzene	U		0.00453	0.0326	2.19	11/20/2021 16:21	WG1777738



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.0105	0.0162	2.19	11/20/2021 16:21	WG177738
1,1-Dichloroethane	U		0.00320	0.0162	2.19	11/20/2021 16:21	WG177738
1,2-Dichloroethane	U		0.00420	0.0162	2.19	11/20/2021 16:21	WG177738
1,1-Dichloroethene	U		0.00394	0.0162	2.19	11/20/2021 16:21	WG177738
cis-1,2-Dichloroethene	U		0.00477	0.0162	2.19	11/20/2021 16:21	WG177738
trans-1,2-Dichloroethene	U		0.00675	0.0326	2.19	11/20/2021 16:21	WG177738
1,2-Dichloropropane	U		0.00921	0.0326	2.19	11/20/2021 16:21	WG177738
1,1-Dichloropropene	U		0.00524	0.0162	2.19	11/20/2021 16:21	WG177738
1,3-Dichloropropane	U		0.00326	0.0326	2.19	11/20/2021 16:21	WG177738
cis-1,3-Dichloropropene	U		0.00491	0.0162	2.19	11/20/2021 16:21	WG177738
trans-1,3-Dichloropropene	U		0.00740	0.0326	2.19	11/20/2021 16:21	WG177738
2,2-Dichloropropane	U		0.00894	0.0162	2.19	11/20/2021 16:21	WG177738
Di-isopropyl ether	U		0.00266	0.00648	2.19	11/20/2021 16:21	WG177738
Ethylbenzene	U		0.00477	0.0162	2.19	11/20/2021 16:21	WG177738
Hexachloro-1,3-butadiene	U	J4	0.0388	0.162	2.19	11/20/2021 16:21	WG177738
Isopropylbenzene	U		0.00276	0.0162	2.19	11/20/2021 16:21	WG177738
p-Isopropyltoluene	U		0.0165	0.0326	2.19	11/20/2021 16:21	WG177738
2-Butanone (MEK)	U		0.412	0.648	2.19	11/20/2021 16:21	WG177738
Methylene Chloride	U		0.0429	0.162	2.19	11/20/2021 16:21	WG177738
4-Methyl-2-pentanone (MIBK)	U		0.0148	0.162	2.19	11/20/2021 16:21	WG177738
Methyl tert-butyl ether	U		0.00227	0.00648	2.19	11/20/2021 16:21	WG177738
Naphthalene	U		0.0317	0.0811	2.19	11/20/2021 16:21	WG177738
n-Propylbenzene	U		0.00616	0.0326	2.19	11/20/2021 16:21	WG177738
Styrene	U		0.00149	0.0811	2.19	11/20/2021 16:21	WG177738
1,1,1,2-Tetrachloroethane	U		0.00616	0.0162	2.19	11/20/2021 16:21	WG177738
1,1,2,2-Tetrachloroethane	U		0.00450	0.0162	2.19	11/20/2021 16:21	WG177738
1,1,2-Trichlorotrifluoroethane	U		0.00488	0.0162	2.19	11/20/2021 16:21	WG177738
Tetrachloroethene	U		0.00580	0.0162	2.19	11/20/2021 16:21	WG177738
Toluene	0.0610		0.00844	0.0326	2.19	11/20/2021 16:21	WG177738
1,2,3-Trichlorobenzene	U		0.0477	0.0811	2.19	11/20/2021 16:21	WG177738
1,2,4-Trichlorobenzene	U		0.0285	0.0811	2.19	11/20/2021 16:21	WG177738
1,1,1-Trichloroethane	U		0.00598	0.0162	2.19	11/20/2021 16:21	WG177738
1,1,2-Trichloroethane	U		0.00388	0.0162	2.19	11/20/2021 16:21	WG177738
Trichloroethene	U		0.00379	0.00648	2.19	11/20/2021 16:21	WG177738
Trichlorofluoromethane	U		0.00536	0.0162	2.19	11/20/2021 16:21	WG177738
1,2,3-Trichloropropane	U		0.0105	0.0811	2.19	11/20/2021 16:21	WG177738
1,2,4-Trimethylbenzene	U		0.0102	0.0326	2.19	11/20/2021 16:21	WG177738
1,2,3-Trimethylbenzene	U		0.0102	0.0326	2.19	11/20/2021 16:21	WG177738
1,3,5-Trimethylbenzene	U		0.0130	0.0326	2.19	11/20/2021 16:21	WG177738
Vinyl chloride	U		0.00752	0.0162	2.19	11/20/2021 16:21	WG177738
Xylenes, Total	0.0112	J	0.00571	0.0420	2.19	11/20/2021 16:21	WG177738
(S) Toluene-d8	109			75.0-131		11/20/2021 16:21	WG177738
(S) 4-Bromofluorobenzene	92.3			67.0-138		11/20/2021 16:21	WG177738
(S) 1,2-Dichloroethane-d4	95.1			70.0-130		11/20/2021 16:21	WG177738

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		3.12	9.39	1	11/24/2021 08:36	WG1778214
Residual Range Organics (RRO)	U		7.81	23.5	1	11/24/2021 08:36	WG1778214
(S) o-Terphenyl	64.2			18.0-148		11/24/2021 08:36	WG1778214

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00845	<u>J</u>	0.00540	0.0141	1	11/23/2021 04:55	WG1778237
Acenaphthene	U		0.00490	0.0141	1	11/23/2021 04:55	WG1778237
Acenaphthylene	0.00645	<u>J</u>	0.00507	0.0141	1	11/23/2021 04:55	WG1778237
Benzo(a)anthracene	0.0225		0.00406	0.0141	1	11/23/2021 04:55	WG1778237
Benzo(a)pyrene	0.0231		0.00420	0.0141	1	11/23/2021 04:55	WG1778237
Benzo(b)fluoranthene	0.0237		0.00359	0.0141	1	11/23/2021 04:55	WG1778237
Benzo(g,h,i)perylene	0.0153		0.00415	0.0141	1	11/23/2021 04:55	WG1778237
Benzo(k)fluoranthene	0.0110	<u>J</u>	0.00505	0.0141	1	11/23/2021 04:55	WG1778237
Chrysene	0.0244		0.00544	0.0141	1	11/23/2021 04:55	WG1778237
Dibenz(a,h)anthracene	U		0.00404	0.0141	1	11/23/2021 04:55	WG1778237
Fluoranthene	0.0453		0.00533	0.0141	1	11/23/2021 04:55	WG1778237
Fluorene	0.00655	<u>J</u>	0.00481	0.0141	1	11/23/2021 04:55	WG1778237
Indeno(1,2,3-cd)pyrene	0.0146		0.00425	0.0141	1	11/23/2021 04:55	WG1778237
Naphthalene	U		0.00957	0.0469	1	11/23/2021 04:55	WG1778237
Phenanthrene	0.0364		0.00542	0.0141	1	11/23/2021 04:55	WG1778237
Pyrene	0.0474		0.00469	0.0141	1	11/23/2021 04:55	WG1778237
1-Methylnaphthalene	U		0.0105	0.0469	1	11/23/2021 04:55	WG1778237
2-Methylnaphthalene	U		0.0100	0.0469	1	11/23/2021 04:55	WG1778237
2-Chloronaphthalene	U		0.0109	0.0469	1	11/23/2021 04:55	WG1778237
(S) Nitrobenzene-d5	89.2			14.0-149		11/23/2021 04:55	WG1778237
(S) 2-Fluorobiphenyl	94.9			34.0-125		11/23/2021 04:55	WG1778237
(S) p-Terphenyl-d14	121	<u>J1</u>		23.0-120		11/23/2021 04:55	WG1778237

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3732199-1 11/20/21 10:17

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00200			

1 Cp

2 Tc

3 Ss

L1432658-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1432658-07 11/20/21 10:17 • (DUP) R3732199-3 11/20/21 10:17

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Total Solids	90.5	89.6	1	0.978		10

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3732199-2 11/20/21 10:17

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3733520-1 11/24/21 12:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.0180	0.0400

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3733520-2 11/24/21 12:39

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	0.500	0.545	109	80.0-120	

4 Cn

5 Sr

L1432696-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1432696-01 11/24/21 12:41 • (MS) R3733520-3 11/24/21 12:47 • (MSD) R3733520-4 11/24/21 12:49

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.555	0.0267	0.601	0.577	103	99.2	1	75.0-125			4.05	20

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3736063-7 12/01/21 21:43

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
Antimony	U		0.166	3.00
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Chromium	U		0.297	5.00
Copper	U		0.133	5.00
Lead	U		0.0990	2.00
Selenium	1.83	J	0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3736063-8 12/01/21 21:46

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
Antimony	100	99.9	99.9	80.0-120	
Arsenic	100	86.1	86.1	80.0-120	
Barium	100	83.9	83.9	80.0-120	
Cadmium	100	90.0	90.0	80.0-120	
Chromium	100	87.4	87.4	80.0-120	
Copper	100	85.5	85.5	80.0-120	
Lead	100	87.0	87.0	80.0-120	
Selenium	100	96.0	96.0	80.0-120	
Silver	20.0	18.1	90.3	80.0-120	
Zinc	100	88.1	88.1	80.0-120	

L1432380-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1432380-03 12/01/21 21:50 • (MS) R3736063-11 12/01/21 22:00 • (MSD) R3736063-12 12/01/21 22:03

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Antimony	100	0.288	39.6	37.8	39.3	37.5	5	75.0-125	J6	J6	4.68	20
Arsenic	100	2.87	90.4	89.3	87.5	86.5	5	75.0-125			1.19	20
Barium	100	205	334	319	129	114	5	75.0-125	J5		4.46	20
Cadmium	100	0.259	94.0	93.1	93.8	92.9	5	75.0-125			0.978	20
Chromium	100	29.4	124	117	94.3	88.0	5	75.0-125			5.25	20
Copper	100	11.8	98.8	98.1	87.0	86.3	5	75.0-125			0.712	20
Lead	100	10.4	102	98.1	91.6	87.7	5	75.0-125			3.88	20

L1432380-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1432380-03 12/01/21 21:50 • (MS) R3736063-11 12/01/21 22:00 • (MSD) R3736063-12 12/01/21 22:03

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Selenium	100	0.543	97.0	99.6	96.5	99.0	5	75.0-125			2.55	20
Silver	20.0	U	18.2	18.5	91.0	92.4	5	75.0-125			1.51	20
Zinc	100	47.6	139	130	91.1	82.9	5	75.0-125			6.12	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R3733507-2 11/20/21 22:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	93.7			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3733507-1 11/20/21 22:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHG C6 - C12	5.50	6.10	111	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			116	77.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3733676-2 11/24/21 13:28

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	1.18	↓	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	95.9			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3733676-1 11/24/21 11:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPHG C6 - C12	5.50	5.35	97.3	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			115	77.0-120	

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3732987-3 11/20/21 11:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	0.000775	U	0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3732987-3 11/20/21 11:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	0.0711	U	0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	109			75.0-131
(S) 4-Bromofluorobenzene	95.1			67.0-138
(S) 1,2-Dichloroethane-d4	93.7			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3732987-1 11/20/21 10:20 • (LCSD) R3732987-2 11/20/21 10:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.461	0.490	73.8	78.4	10.0-160			6.10	31
Acrylonitrile	0.625	0.628	0.640	100	102	45.0-153			1.89	22
Benzene	0.125	0.126	0.117	101	93.6	70.0-123			7.41	20
Bromobenzene	0.125	0.127	0.125	102	100	73.0-121			1.59	20
Bromodichloromethane	0.125	0.123	0.114	98.4	91.2	73.0-121			7.59	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3732987-1 11/20/21 10:20 • (LCSD) R3732987-2 11/20/21 10:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromoform	0.125	0.108	0.108	86.4	86.4	64.0-132			0.000	20
Bromomethane	0.125	0.110	0.105	88.0	84.0	56.0-147			4.65	20
n-Butylbenzene	0.125	0.140	0.132	112	106	68.0-135			5.88	20
sec-Butylbenzene	0.125	0.136	0.128	109	102	74.0-130			6.06	20
tert-Butylbenzene	0.125	0.138	0.130	110	104	75.0-127			5.97	20
Carbon tetrachloride	0.125	0.140	0.129	112	103	66.0-128			8.18	20
Chlorobenzene	0.125	0.114	0.110	91.2	88.0	76.0-128			3.57	20
Chlorodibromomethane	0.125	0.113	0.111	90.4	88.8	74.0-127			1.79	20
Chloroethane	0.125	0.103	0.0936	82.4	74.9	61.0-134			9.56	20
Chloroform	0.125	0.133	0.124	106	99.2	72.0-123			7.00	20
Chloromethane	0.125	0.103	0.0949	82.4	75.9	51.0-138			8.19	20
2-Chlorotoluene	0.125	0.123	0.114	98.4	91.2	75.0-124			7.59	20
4-Chlorotoluene	0.125	0.130	0.122	104	97.6	75.0-124			6.35	20
1,2-Dibromo-3-Chloropropane	0.125	0.122	0.105	97.6	84.0	59.0-130			15.0	20
1,2-Dibromoethane	0.125	0.113	0.109	90.4	87.2	74.0-128			3.60	20
Dibromomethane	0.125	0.122	0.117	97.6	93.6	75.0-122			4.18	20
1,2-Dichlorobenzene	0.125	0.125	0.123	100	98.4	76.0-124			1.61	20
1,3-Dichlorobenzene	0.125	0.118	0.119	94.4	95.2	76.0-125			0.844	20
1,4-Dichlorobenzene	0.125	0.117	0.114	93.6	91.2	77.0-121			2.60	20
Dichlorodifluoromethane	0.125	0.143	0.131	114	105	43.0-156			8.76	20
1,1-Dichloroethane	0.125	0.122	0.115	97.6	92.0	70.0-127			5.91	20
1,2-Dichloroethane	0.125	0.126	0.122	101	97.6	65.0-131			3.23	20
1,1-Dichloroethene	0.125	0.123	0.115	98.4	92.0	65.0-131			6.72	20
cis-1,2-Dichloroethene	0.125	0.130	0.122	104	97.6	73.0-125			6.35	20
trans-1,2-Dichloroethene	0.125	0.126	0.120	101	96.0	71.0-125			4.88	20
1,2-Dichloropropane	0.125	0.118	0.111	94.4	88.8	74.0-125			6.11	20
1,1-Dichloropropene	0.125	0.131	0.123	105	98.4	73.0-125			6.30	20
1,3-Dichloropropane	0.125	0.129	0.124	103	99.2	80.0-125			3.95	20
cis-1,3-Dichloropropene	0.125	0.123	0.115	98.4	92.0	76.0-127			6.72	20
trans-1,3-Dichloropropene	0.125	0.118	0.119	94.4	95.2	73.0-127			0.844	20
2,2-Dichloropropane	0.125	0.142	0.123	114	98.4	59.0-135			14.3	20
Di-isopropyl ether	0.125	0.129	0.121	103	96.8	60.0-136			6.40	20
Ethylbenzene	0.125	0.113	0.112	90.4	89.6	74.0-126			0.889	20
Hexachloro-1,3-butadiene	0.125	0.195	0.170	156	136	57.0-150	J4		13.7	20
Isopropylbenzene	0.125	0.122	0.116	97.6	92.8	72.0-127			5.04	20
p-Isopropyltoluene	0.125	0.130	0.124	104	99.2	72.0-133			4.72	20
2-Butanone (MEK)	0.625	0.588	0.537	94.1	85.9	30.0-160			9.07	24
Methylene Chloride	0.125	0.121	0.121	96.8	96.8	68.0-123			0.000	20
4-Methyl-2-pentanone (MIBK)	0.625	0.634	0.627	101	100	56.0-143			1.11	20
Methyl tert-butyl ether	0.125	0.121	0.116	96.8	92.8	66.0-132			4.22	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3732987-1 11/20/21 10:20 • (LCSD) R3732987-2 11/20/21 10:39

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.125	0.115	0.112	92.0	89.6	59.0-130			2.64	20
n-Propylbenzene	0.125	0.134	0.126	107	101	74.0-126			6.15	20
Styrene	0.125	0.105	0.0999	84.0	79.9	72.0-127			4.98	20
1,1,1,2-Tetrachloroethane	0.125	0.126	0.117	101	93.6	74.0-129			7.41	20
1,1,2,2-Tetrachloroethane	0.125	0.135	0.129	108	103	68.0-128			4.55	20
Tetrachloroethene	0.125	0.134	0.124	107	99.2	70.0-136			7.75	20
Toluene	0.125	0.120	0.116	96.0	92.8	75.0-121			3.39	20
1,1,2-Trichlorotrifluoroethane	0.125	0.131	0.119	105	95.2	61.0-139			9.60	20
1,2,3-Trichlorobenzene	0.125	0.170	0.156	136	125	59.0-139			8.59	20
1,2,4-Trichlorobenzene	0.125	0.146	0.137	117	110	62.0-137			6.36	20
1,1,1-Trichloroethane	0.125	0.148	0.131	118	105	69.0-126			12.2	20
1,1,2-Trichloroethane	0.125	0.128	0.126	102	101	78.0-123			1.57	20
Trichloroethene	0.125	0.124	0.112	99.2	89.6	76.0-126			10.2	20
Trichlorofluoromethane	0.125	0.132	0.124	106	99.2	61.0-142			6.25	20
1,2,3-Trichloropropane	0.125	0.136	0.130	109	104	67.0-129			4.51	20
1,2,3-Trimethylbenzene	0.125	0.124	0.123	99.2	98.4	74.0-124			0.810	20
1,2,4-Trimethylbenzene	0.125	0.128	0.123	102	98.4	70.0-126			3.98	20
1,3,5-Trimethylbenzene	0.125	0.132	0.126	106	101	73.0-127			4.65	20
Vinyl chloride	0.125	0.100	0.0938	80.0	75.0	63.0-134			6.40	20
Xylenes, Total	0.375	0.345	0.323	92.0	86.1	72.0-127			6.59	20
(S) Toluene-d8				104	106	75.0-131				
(S) 4-Bromofluorobenzene				92.0	92.8	67.0-138				
(S) 1,2-Dichloroethane-d4				104	104	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3733526-2 11/22/21 06:18

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3733526-2 11/22/21 06:18

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	0.0677	U	0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	117			75.0-131
(S) 4-Bromofluorobenzene	93.8			67.0-138
(S) 1,2-Dichloroethane-d4	91.9			70.0-130

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3733526-1 11/22/21 05:02 • (LCSD) R3733526-3 11/22/21 16:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.437	0.484	69.9	77.4	10.0-160			10.2	31
Acrylonitrile	0.625	0.580	0.552	92.8	88.3	45.0-153			4.95	22
Benzene	0.125	0.111	0.113	88.8	90.4	70.0-123			1.79	20
Bromobenzene	0.125	0.129	0.125	103	100	73.0-121			3.15	20
Bromodichloromethane	0.125	0.110	0.112	88.0	89.6	73.0-121			1.80	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3733526-1 11/22/21 05:02 • (LCSD) R3733526-3 11/22/21 16:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.125	0.101	0.100	80.8	80.0	64.0-132			0.995	20
Bromomethane	0.125	0.113	0.110	90.4	88.0	56.0-147			2.69	20
n-Butylbenzene	0.125	0.112	0.109	89.6	87.2	68.0-135			2.71	20
sec-Butylbenzene	0.125	0.129	0.118	103	94.4	74.0-130			8.91	20
tert-Butylbenzene	0.125	0.122	0.115	97.6	92.0	75.0-127			5.91	20
Carbon tetrachloride	0.125	0.125	0.115	100	92.0	66.0-128			8.33	20
Chlorobenzene	0.125	0.107	0.104	85.6	83.2	76.0-128			2.84	20
Chlorodibromomethane	0.125	0.122	0.119	97.6	95.2	74.0-127			2.49	20
Chloroethane	0.125	0.114	0.109	91.2	87.2	61.0-134			4.48	20
Chloroform	0.125	0.112	0.105	89.6	84.0	72.0-123			6.45	20
Chloromethane	0.125	0.111	0.102	88.8	81.6	51.0-138			8.45	20
2-Chlorotoluene	0.125	0.118	0.122	94.4	97.6	75.0-124			3.33	20
4-Chlorotoluene	0.125	0.125	0.123	100	98.4	75.0-124			1.61	20
1,2-Dibromo-3-Chloropropane	0.125	0.119	0.106	95.2	84.8	59.0-130			11.6	20
1,2-Dibromoethane	0.125	0.119	0.119	95.2	95.2	74.0-128			0.000	20
Dibromomethane	0.125	0.118	0.111	94.4	88.8	75.0-122			6.11	20
1,2-Dichlorobenzene	0.125	0.108	0.104	86.4	83.2	76.0-124			3.77	20
1,3-Dichlorobenzene	0.125	0.113	0.110	90.4	88.0	76.0-125			2.69	20
1,4-Dichlorobenzene	0.125	0.113	0.115	90.4	92.0	77.0-121			1.75	20
Dichlorodifluoromethane	0.125	0.134	0.109	107	87.2	43.0-156		J3	20.6	20
1,1-Dichloroethane	0.125	0.114	0.111	91.2	88.8	70.0-127			2.67	20
1,2-Dichloroethane	0.125	0.113	0.105	90.4	84.0	65.0-131			7.34	20
1,1-Dichloroethene	0.125	0.118	0.0998	94.4	79.8	65.0-131			16.7	20
cis-1,2-Dichloroethene	0.125	0.104	0.0972	83.2	77.8	73.0-125			6.76	20
trans-1,2-Dichloroethene	0.125	0.109	0.105	87.2	84.0	71.0-125			3.74	20
1,2-Dichloropropane	0.125	0.118	0.122	94.4	97.6	74.0-125			3.33	20
1,1-Dichloropropene	0.125	0.121	0.114	96.8	91.2	73.0-125			5.96	20
1,3-Dichloropropane	0.125	0.119	0.119	95.2	95.2	80.0-125			0.000	20
cis-1,3-Dichloropropene	0.125	0.119	0.117	95.2	93.6	76.0-127			1.69	20
trans-1,3-Dichloropropene	0.125	0.122	0.120	97.6	96.0	73.0-127			1.65	20
2,2-Dichloropropane	0.125	0.113	0.109	90.4	87.2	59.0-135			3.60	20
Di-isopropyl ether	0.125	0.115	0.115	92.0	92.0	60.0-136			0.000	20
Ethylbenzene	0.125	0.109	0.104	87.2	83.2	74.0-126			4.69	20
Hexachloro-1,3-butadiene	0.125	0.128	0.110	102	88.0	57.0-150			15.1	20
Isopropylbenzene	0.125	0.107	0.104	85.6	83.2	72.0-127			2.84	20
p-Isopropyltoluene	0.125	0.118	0.109	94.4	87.2	72.0-133			7.93	20
2-Butanone (MEK)	0.625	0.539	0.733	86.2	117	30.0-160		J3	30.5	24
Methylene Chloride	0.125	0.107	0.105	85.6	84.0	68.0-123			1.89	20
4-Methyl-2-pentanone (MIBK)	0.625	0.636	0.672	102	108	56.0-143			5.50	20
Methyl tert-butyl ether	0.125	0.115	0.118	92.0	94.4	66.0-132			2.58	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

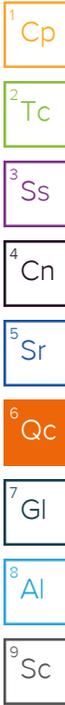
8 Al

9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3733526-1 11/22/21 05:02 • (LCSD) R3733526-3 11/22/21 16:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.125	0.137	0.122	110	97.6	59.0-130			11.6	20
n-Propylbenzene	0.125	0.120	0.117	96.0	93.6	74.0-126			2.53	20
Styrene	0.125	0.109	0.106	87.2	84.8	72.0-127			2.79	20
1,1,1,2-Tetrachloroethane	0.125	0.115	0.116	92.0	92.8	74.0-129			0.866	20
1,1,2,2-Tetrachloroethane	0.125	0.121	0.117	96.8	93.6	68.0-128			3.36	20
Tetrachloroethene	0.125	0.111	0.109	88.8	87.2	70.0-136			1.82	20
Toluene	0.125	0.112	0.115	89.6	92.0	75.0-121			2.64	20
1,1,2-Trichlorotrifluoroethane	0.125	0.123	0.106	98.4	84.8	61.0-139			14.8	20
1,2,3-Trichlorobenzene	0.125	0.132	0.0978	106	78.2	59.0-139		J3	29.8	20
1,2,4-Trichlorobenzene	0.125	0.111	0.104	88.8	83.2	62.0-137			6.51	20
1,1,1-Trichloroethane	0.125	0.113	0.108	90.4	86.4	69.0-126			4.52	20
1,1,2-Trichloroethane	0.125	0.117	0.119	93.6	95.2	78.0-123			1.69	20
Trichloroethene	0.125	0.116	0.114	92.8	91.2	76.0-126			1.74	20
Trichlorofluoromethane	0.125	0.121	0.107	96.8	85.6	61.0-142			12.3	20
1,2,3-Trichloropropane	0.125	0.124	0.121	99.2	96.8	67.0-129			2.45	20
1,2,3-Trimethylbenzene	0.125	0.116	0.110	92.8	88.0	74.0-124			5.31	20
1,2,4-Trimethylbenzene	0.125	0.116	0.111	92.8	88.8	70.0-126			4.41	20
1,3,5-Trimethylbenzene	0.125	0.116	0.115	92.8	92.0	73.0-127			0.866	20
Vinyl chloride	0.125	0.125	0.106	100	84.8	63.0-134			16.5	20
Xylenes, Total	0.375	0.317	0.303	84.5	80.8	72.0-127			4.52	20
(S) Toluene-d8				108	112	75.0-131				
(S) 4-Bromofluorobenzene				96.9	95.1	67.0-138				
(S) 1,2-Dichloroethane-d4				110	113	70.0-130				



L1432788-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1432788-01 11/22/21 20:00 • (MS) R3733526-4 11/22/21 22:50 • (MSD) R3733526-5 11/22/21 23:09

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.600	U	0.289	0.257	48.2	42.8	1	10.0-160			11.7	40
Acrylonitrile	0.600	U	0.369	0.204	61.5	34.0	1	10.0-160		J3	57.6	40
Benzene	0.120	0.0181	0.0955	0.105	79.6	87.5	1	10.0-149			9.48	37
Bromobenzene	0.120	U	0.0890	0.0942	74.2	78.5	1	10.0-156			5.68	38
Bromodichloromethane	0.120	U	0.0791	0.0799	65.9	66.6	1	10.0-143			1.01	37
Bromoform	0.120	U	0.0935	0.0962	77.9	80.2	1	10.0-146			2.85	36
Bromomethane	0.120	U	0.0804	0.0953	67.0	79.4	1	10.0-149			17.0	38
n-Butylbenzene	0.120	U	0.0958	0.104	79.8	86.7	1	10.0-160			8.21	40
sec-Butylbenzene	0.120	U	0.0880	0.0980	73.3	81.7	1	10.0-159			10.8	39
tert-Butylbenzene	0.120	U	0.0751	0.0858	62.6	71.5	1	10.0-156			13.3	39

L1432788-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1432788-01 11/22/21 20:00 • (MS) R3733526-4 11/22/21 22:50 • (MSD) R3733526-5 11/22/21 23:09

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.120	U	0.0712	0.0787	59.3	65.6	1	10.0-145			10.0	37
Chlorobenzene	0.120	U	0.0849	0.0925	70.8	77.1	1	10.0-152			8.57	39
Chlorodibromomethane	0.120	U	0.101	0.102	84.2	85.0	1	10.0-146			0.985	37
Chloroethane	0.120	U	0.0558	0.0774	46.5	64.5	1	10.0-146			32.4	40
Chloroform	0.120	U	0.0700	0.0699	58.3	58.3	1	10.0-146			0.143	37
Chloromethane	0.120	U	0.0729	0.0762	60.8	63.5	1	10.0-159			4.43	37
2-Chlorotoluene	0.120	U	0.0804	0.0896	67.0	74.7	1	10.0-159			10.8	38
4-Chlorotoluene	0.120	U	0.0846	0.0900	70.5	75.0	1	10.0-155			6.19	39
1,2-Dibromo-3-Chloropropane	0.120	U	0.107	0.0936	89.2	78.0	1	10.0-151			13.4	39
1,2-Dibromoethane	0.120	U	0.111	0.110	92.5	91.7	1	10.0-148			0.905	34
Dibromomethane	0.120	U	0.0821	0.0885	68.4	73.8	1	10.0-147			7.50	35
1,2-Dichlorobenzene	0.120	U	0.0951	0.0957	79.3	79.8	1	10.0-155			0.629	37
1,3-Dichlorobenzene	0.120	U	0.0883	0.0945	73.6	78.8	1	10.0-153			6.78	38
1,4-Dichlorobenzene	0.120	U	0.0898	0.0919	74.8	76.6	1	10.0-151			2.31	38
Dichlorodifluoromethane	0.120	U	0.0853	0.0930	71.1	77.5	1	10.0-160			8.64	35
1,1-Dichloroethane	0.120	U	0.0707	0.0719	58.9	59.9	1	10.0-147			1.68	37
1,2-Dichloroethane	0.120	U	0.0746	0.0734	62.2	61.2	1	10.0-148			1.62	35
1,1-Dichloroethene	0.120	U	0.0740	0.0830	61.7	69.2	1	10.0-155			11.5	37
cis-1,2-Dichloroethene	0.120	U	0.0633	0.0683	52.7	56.9	1	10.0-149			7.60	37
trans-1,2-Dichloroethene	0.120	U	0.0647	0.0782	53.9	65.2	1	10.0-150			18.9	37
1,2-Dichloropropane	0.120	U	0.0962	0.0949	80.2	79.1	1	10.0-148			1.36	37
1,1-Dichloropropene	0.120	U	0.0803	0.0861	66.9	71.8	1	10.0-153			6.97	35
1,3-Dichloropropane	0.120	U	0.110	0.106	91.7	88.3	1	10.0-154			3.70	35
cis-1,3-Dichloropropene	0.120	U	0.0962	0.0965	80.2	80.4	1	10.0-151			0.311	37
trans-1,3-Dichloropropene	0.120	U	0.108	0.106	90.0	88.3	1	10.0-148			1.87	37
2,2-Dichloropropane	0.120	U	0.0421	0.0478	35.1	39.8	1	10.0-138			12.7	36
Di-isopropyl ether	0.120	U	0.0792	0.0767	66.0	63.9	1	10.0-147			3.21	36
Ethylbenzene	0.120	0.0267	0.105	0.112	87.5	93.3	1	10.0-160			6.45	38
Hexachloro-1,3-butadiene	0.120	U	0.111	0.118	92.5	98.3	1	10.0-160			6.11	40
Isopropylbenzene	0.120	U	0.0845	0.0954	70.4	79.5	1	10.0-155			12.1	38
p-Isopropyltoluene	0.120	U	0.101	0.111	84.2	92.5	1	10.0-160			9.43	40
2-Butanone (MEK)	0.600	U	0.395	0.352	65.8	58.7	1	10.0-160			11.5	40
Methylene Chloride	0.120	U	0.0943	0.0991	78.6	82.6	1	10.0-141			4.96	37
4-Methyl-2-pentanone (MIBK)	0.600	U	0.510	0.502	85.0	83.7	1	10.0-160			1.58	35
Methyl tert-butyl ether	0.120	U	0.0776	0.0780	64.7	65.0	1	11.0-147			0.514	35
Naphthalene	0.120	U	0.152	0.156	127	130	1	10.0-160			2.60	36
n-Propylbenzene	0.120	U	0.0876	0.0974	73.0	81.2	1	10.0-158			10.6	38
Styrene	0.120	U	0.0899	0.0971	74.9	80.9	1	10.0-160			7.70	40
1,1,1,2-Tetrachloroethane	0.120	U	0.0849	0.0900	70.8	75.0	1	10.0-149			5.83	39
1,1,2,2-Tetrachloroethane	0.120	U	0.0669	0.0659	55.8	54.9	1	10.0-160			1.51	35

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1432788-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1432788-01 11/22/21 20:00 • (MS) R3733526-4 11/22/21 22:50 • (MSD) R3733526-5 11/22/21 23:09

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Tetrachloroethene	0.120	U	0.0782	0.0877	65.2	73.1	1	10.0-156			11.5	39
Toluene	0.120	0.0849	0.170	0.176	142	147	1	10.0-156			3.47	38
1,1,2-Trichlorotrifluoroethane	0.120	U	0.0798	0.0881	66.5	73.4	1	10.0-160			9.89	36
1,2,3-Trichlorobenzene	0.120	U	0.135	0.152	113	127	1	10.0-160			11.8	40
1,2,4-Trichlorobenzene	0.120	U	0.112	0.120	93.3	100	1	10.0-160			6.90	40
1,1,1-Trichloroethane	0.120	U	0.0684	0.0582	57.0	48.5	1	10.0-144			16.1	35
1,1,2-Trichloroethane	0.120	U	0.117	0.120	97.5	100	1	10.0-160			2.53	35
Trichloroethene	0.120	U	0.105	0.120	87.5	100	1	10.0-156			13.3	38
Trichlorofluoromethane	0.120	U	0.0515	0.0704	42.9	58.7	1	10.0-160			31.0	40
1,2,3-Trichloropropane	0.120	U	0.0924	0.0878	77.0	73.2	1	10.0-156			5.11	35
1,2,3-Trimethylbenzene	0.120	0.0876	0.187	0.189	156	158	1	10.0-160			1.06	36
1,2,4-Trimethylbenzene	0.120	0.110	0.195	0.206	163	172	1	10.0-160	J5	J5	5.49	36
1,3,5-Trimethylbenzene	0.120	U	0.115	0.122	95.8	102	1	10.0-160			5.91	38
Vinyl chloride	0.120	U	0.0776	0.0826	64.7	68.8	1	10.0-160			6.24	37
Xylenes, Total	0.360	0.195	0.423	0.455	63.3	72.2	1	10.0-160			7.29	38
(S) Toluene-d8					114	113		75.0-131				
(S) 4-Bromofluorobenzene					106	106		67.0-138				
(S) 1,2-Dichloroethane-d4					81.9	87.6		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3733242-1 11/23/21 18:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	78.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3733242-2 11/23/21 18:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	41.5	83.0	50.0-150	
<i>(S) o-Terphenyl</i>			101	18.0-148	

L1431306-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1431306-01 11/23/21 20:29 • (MS) R3733242-3 11/23/21 20:43 • (MSD) R3733242-4 11/23/21 20:56

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	61.0	7.93	49.5	45.5	68.1	60.6	1	50.0-150			8.36	20
<i>(S) o-Terphenyl</i>					84.3	76.6		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3733025-2 11/23/21 00:39

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	88.7			14.0-149
(S) 2-Fluorobiphenyl	92.1			34.0-125
(S) p-Terphenyl-d14	121	J1		23.0-120

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3733025-1 11/23/21 00:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0746	93.3	50.0-126	
Acenaphthene	0.0800	0.0767	95.9	50.0-120	
Acenaphthylene	0.0800	0.0802	100	50.0-120	
Benzo(a)anthracene	0.0800	0.0695	86.9	45.0-120	
Benzo(a)pyrene	0.0800	0.0637	79.6	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0700	87.5	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0710	88.8	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0739	92.4	49.0-125	
Chrysene	0.0800	0.0747	93.4	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0686	85.8	47.0-125	
Fluoranthene	0.0800	0.0762	95.3	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3733025-1 11/23/21 00:19

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0776	97.0	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0698	87.3	46.0-125	
Naphthalene	0.0800	0.0733	91.6	50.0-120	
Phenanthrene	0.0800	0.0741	92.6	47.0-120	
Pyrene	0.0800	0.0756	94.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0744	93.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0715	89.4	50.0-120	
2-Chloronaphthalene	0.0800	0.0740	92.5	50.0-120	
(S) Nitrobenzene-d5			97.2	14.0-149	
(S) 2-Fluorobiphenyl			101	34.0-125	
(S) p-Terphenyl-d14			121	23.0-120	J1

L1430918-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1430918-01 11/23/21 00:59 • (MS) R3733025-3 11/23/21 01:18 • (MSD) R3733025-4 11/23/21 01:38

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0764	0.00269	0.0853	0.0883	93.3	92.4	1	10.0-145			3.47	30
Acenaphthene	0.0764	U	0.0875	0.0888	98.8	95.8	1	14.0-127			1.45	27
Acenaphthylene	0.0764	U	0.0898	0.0910	101	98.1	1	21.0-124			1.28	25
Benzo(a)anthracene	0.0764	0.0330	0.0953	0.113	70.3	86.0	1	10.0-139			16.8	30
Benzo(a)pyrene	0.0764	0.0393	0.102	0.122	71.3	88.9	1	10.0-141			17.2	31
Benzo(b)fluoranthene	0.0764	0.0659	0.119	0.147	60.3	87.6	1	10.0-140			20.9	36
Benzo(g,h,i)perylene	0.0764	0.0343	0.104	0.119	78.7	91.8	1	10.0-140			13.8	33
Benzo(k)fluoranthene	0.0764	0.0248	0.101	0.117	86.0	99.5	1	10.0-137			14.8	31
Chrysene	0.0764	0.0387	0.110	0.129	80.2	97.0	1	10.0-145			15.8	30
Dibenz(a,h)anthracene	0.0764	0.00612	0.0884	0.0858	93.0	85.9	1	10.0-132			3.06	31
Fluoranthene	0.0764	0.0906	0.133	0.170	48.2	86.0	1	10.0-153			24.4	33
Fluorene	0.0764	U	0.0858	0.0877	96.9	94.6	1	11.0-130			2.27	29
Indeno(1,2,3-cd)pyrene	0.0764	0.0372	0.100	0.121	71.3	89.9	1	10.0-137			18.3	32
Naphthalene	0.0764	U	0.0839	0.0843	94.8	90.9	1	10.0-135			0.414	27
Phenanthrene	0.0764	0.0226	0.0952	0.108	81.9	92.3	1	10.0-144			12.8	31
Pyrene	0.0764	0.0700	0.122	0.148	58.4	84.5	1	10.0-148			19.7	35
1-Methylnaphthalene	0.0764	U	0.0854	0.0858	96.5	92.5	1	10.0-142			0.406	28
2-Methylnaphthalene	0.0764	U	0.0804	0.0809	90.8	87.3	1	10.0-137			0.575	28
2-Chloronaphthalene	0.0764	U	0.0816	0.0821	92.1	88.5	1	29.0-120			0.567	24
(S) Nitrobenzene-d5					94.7	89.6		14.0-149				
(S) 2-Fluorobiphenyl					99.9	96.9		34.0-125				
(S) p-Terphenyl-d14					121	115		23.0-120	J1			

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

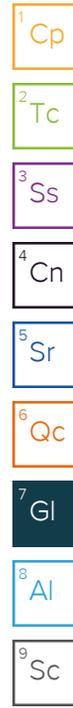
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.



GLOSSARY OF TERMS

Qualifier	Description	
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.	¹ Cp
		² Tc
		³ Ss
		⁴ Cn
		⁵ Sr
		⁶ Qc
		⁷ Gl
		⁸ Al
		⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Address:

Shannon & Wilson - OR

3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Billing Information:

Accounts Payable
3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page ___ of ___



12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody
constitutes acknowledgment and acceptance of the
Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

Report to:
Lauren Sherman

Email To: Lauren.Sherman@shanwil.com

Project Description:

EQRB

City/State
Collected:

Portland, OR

Please Circle:
PT MT CT ET

Phone: 503-210-4750

Client Project #
102636

Lab Project #
SHAWILOR-102636

Collected by (print):
Lauren Sherman

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]

Rush? (Lab MUST Be Notified)

___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

No.
of
Cntrs

Immediately Packed on Ice N ___ Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DX no silica 8ozClr-NoPres	Herbicides 8151 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	OCPs 8081 8ozClr-NoPres	PAHs 8270ESIM 8ozClr-NoPres	PCBs 8082 8ozClr-NoPres	RCRA8 Metals 6020 8ozClr-NoPres	SVOCs 8270D 8ozClr-NoPres	Sb,Cu,Zn 6020 8ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
B-04-COMP-BS	COMP	SS	IDW	11/10/21	1300	2	X		X	X	X	X	X	X	X	X		-01
B-06-COMP-SCBS	"	SS	"	"	1230	2	X	X	X	X	X	X	X	X	X	X		-02
B-07-COMP-SCBS	"	SS	"	"	1330	2	X	X	X	X	X	X	X	X	X	X		-03
B-08-COMP-SCBS	"	SS	"	"	1400	2	X	X	X	X	X	X	X	X	X	X		-04
		SS																
		SS																
		SS																
		SS																
		SS																

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:
___ UPS ___ FedEx ___ Courier

Tracking # 5217 3314 2057

pH ___ Temp ___
Flow ___ Other ___

Sample Receipt Checklist

COC Seal Present/Intact: Y N

COC Signed/Accurate: Y N

Bottles arrive intact: Y N

Correct bottles used: Y N

Sufficient volume sent: Y N

If Applicable

VOA Zero Headpace: Y N

Preservation Correct/Checked: Y N

RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature) <i>[Signature]</i>	Date: 11/16/21	Time: 1615	Received by: (Signature) <i>[Signature]</i>	Trip Blank Received: Yes/No HCL MeOH TBR	Bottles Received: 8	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: <i>MBA</i> °C 3.4°C		
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) <i>[Signature]</i>	Date: 11/17/21	Time: 0900	Hold: Condition: NCF / OK

Shannon & Wilson - OR

Sample Delivery Group: L1439773

Samples Received: 12/08/2021

Project Number: 102636

Description: EQRB

Report To: Lauren Sherman
3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

TABLE OF CONTENTS

Cp: Cover Page	1	
Tc: Table of Contents	2	
Ss: Sample Summary	3	
Cn: Case Narrative	6	
Sr: Sample Results	7	
EQRB-UNK-BS L1439773-01	7	
B-14-SCBS L1439773-02	12	
B-21-BA-SCBS L1439773-03	17	
B-21-BA-SCBS L1439773-04	20	
B-22-SC L1439773-05	21	
B-23-SC L1439773-06	24	
B-28-SC L1439773-07	27	
B-30-SC L1439773-08	32	
B-31-SC L1439773-09	37	
Qc: Quality Control Summary	42	
Total Solids by Method 2540 G-2011	42	
Mercury by Method 7471B	44	
Metals (ICP) by Method 6010D	45	
Metals (ICPMS) by Method 6020B	46	
Volatile Organic Compounds (GC) by Method NWTPHGX	50	
Volatile Organic Compounds (GC/MS) by Method 8260D	52	
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	58	
Chlorinated Acid Herbicides (GC) by Method 8151A	59	
Pesticides (GC) by Method 8081B	61	
Polychlorinated Biphenyls (GC) by Method 8082 A	63	
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	64	
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	70	
Gl: Glossary of Terms	72	
Al: Accreditations & Locations	74	
Sc: Sample Chain of Custody	75	

SAMPLE SUMMARY

EQRB-UNK-BS L1439773-01 Solid

Collected by Lauren Sherman Collected date/time 12/01/21 12:00 Received date/time 12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1786786	1	12/10/21 13:07	12/10/21 13:36	MAS	Mt. Juliet, TN
Mercury by Method 7471B	WG1786865	1	12/14/21 09:21	12/15/21 10:24	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1796071	5	12/29/21 11:32	12/29/21 19:35	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1796071	5	12/29/21 11:32	12/30/21 01:12	LAT	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1787827	25	12/10/21 19:51	12/11/21 19:03	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1787906	1	12/10/21 19:51	12/11/21 17:42	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1787621	1	12/12/21 09:13	12/12/21 21:11	JN	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1788627	1	12/14/21 08:11	12/15/21 17:09	JMB	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1786830	1	12/10/21 22:00	12/11/21 22:18	AMM	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1788512	1	12/13/21 15:52	12/14/21 03:05	HMH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1788088	1	12/13/21 09:35	12/13/21 18:27	AMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1787327	1	12/10/21 11:41	12/10/21 16:17	AMG	Mt. Juliet, TN



B-14-SCBS L1439773-02 Solid

Collected by Lauren Sherman Collected date/time 12/01/21 13:00 Received date/time 12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1786786	1	12/10/21 13:07	12/10/21 13:36	MAS	Mt. Juliet, TN
Mercury by Method 7471B	WG1786865	1	12/14/21 09:21	12/15/21 10:26	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 19:53	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 21:55	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1787827	25	12/10/21 19:51	12/11/21 19:25	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1787906	1	12/10/21 19:51	12/11/21 18:01	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1787621	1	12/12/21 09:13	12/12/21 21:24	JN	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1788627	1	12/14/21 08:11	12/15/21 17:23	JMB	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1786830	1	12/10/21 22:00	12/11/21 19:23	AMM	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1788512	1	12/13/21 15:52	12/14/21 03:13	HMH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1788088	1	12/13/21 09:35	12/13/21 21:37	AMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1787327	1	12/10/21 11:41	12/10/21 16:37	AMG	Mt. Juliet, TN

B-21-BA-SCBS L1439773-03 Solid

Collected by Lauren Sherman Collected date/time 12/01/21 15:00 Received date/time 12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1786786	1	12/10/21 13:07	12/10/21 13:36	MAS	Mt. Juliet, TN
Mercury by Method 7471B	WG1786865	1	12/14/21 09:21	12/15/21 10:29	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	2000	01/04/22 07:47	01/10/22 23:08	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 19:56	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 21:59	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1787827	25	12/10/21 19:51	12/11/21 19:47	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1787906	1	12/10/21 19:51	12/11/21 18:20	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1787621	1	12/12/21 09:13	12/12/21 18:23	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1787327	1	12/10/21 11:41	12/10/21 16:57	AMG	Mt. Juliet, TN

B-21-BA-SCBS L1439773-04 Waste

Collected by Lauren Sherman Collected date/time 12/01/21 15:00 Received date/time 12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1794817	1	12/26/21 12:12	12/26/21 12:12	APH	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1795222	1	12/27/21 14:34	12/28/21 21:02	CCE	Mt. Juliet, TN

SAMPLE SUMMARY

B-22-SC L1439773-05 Solid

Collected by Lauren Sherman Collected date/time 12/01/21 13:15 Received date/time 12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1786786	1	12/10/21 13:07	12/10/21 13:36	MAS	Mt. Juliet, TN
Mercury by Method 7471B	WG1786865	1	12/14/21 09:21	12/15/21 10:31	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 20:46	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 22:02	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1787827	25	12/10/21 19:51	12/11/21 20:09	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1787906	1	12/10/21 19:51	12/11/21 18:38	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1787621	1	12/12/21 09:13	12/12/21 18:36	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1787327	1	12/10/21 11:41	12/10/21 17:16	AMG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

B-23-SC L1439773-06 Solid

Collected by Lauren Sherman Collected date/time 12/01/21 13:30 Received date/time 12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1786786	1	12/10/21 13:07	12/10/21 13:36	MAS	Mt. Juliet, TN
Mercury by Method 7471B	WG1786865	1	12/14/21 09:21	12/15/21 10:34	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 20:03	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 22:16	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1787827	25	12/10/21 19:51	12/11/21 20:31	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1787906	1	12/10/21 19:51	12/11/21 18:58	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1787621	1	12/12/21 09:13	12/13/21 11:42	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1787327	1	12/10/21 11:41	12/10/21 22:12	AMG	Mt. Juliet, TN

6 Qc

7 Gl

8 Al

9 Sc

B-28-SC L1439773-07 Solid

Collected by Lauren Sherman Collected date/time 12/01/21 13:45 Received date/time 12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1786786	1	12/10/21 13:07	12/10/21 13:36	MAS	Mt. Juliet, TN
Mercury by Method 7471B	WG1786865	1	12/14/21 09:21	12/15/21 10:36	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 20:06	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 22:19	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1787808	25	12/10/21 19:51	12/11/21 20:10	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1787906	1	12/10/21 19:51	12/11/21 19:16	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1787621	1	12/12/21 09:13	12/12/21 18:49	JN	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1788627	1	12/14/21 08:11	12/15/21 17:38	JMB	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1786830	1	12/10/21 22:00	12/11/21 19:50	AMM	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1788512	1	12/13/21 15:52	12/14/21 03:22	HMH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1788088	1	12/13/21 09:35	12/13/21 18:06	AMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1787327	1	12/10/21 11:41	12/10/21 17:36	AMG	Mt. Juliet, TN

B-30-SC L1439773-08 Solid

Collected by Lauren Sherman Collected date/time 12/01/21 14:05 Received date/time 12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1786788	1	12/10/21 14:08	12/10/21 14:30	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1786865	1	12/14/21 09:21	12/15/21 09:42	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 20:22	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 22:22	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1787808	25	12/10/21 19:51	12/11/21 20:34	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1787906	1	12/10/21 19:51	12/11/21 19:35	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1787621	1	12/12/21 09:13	12/12/21 20:06	JN	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1788627	1	12/14/21 08:11	12/15/21 17:53	JMB	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1786830	1	12/10/21 22:00	12/11/21 22:27	AMM	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1788512	1	12/13/21 15:52	12/14/21 03:31	HMH	Mt. Juliet, TN

SAMPLE SUMMARY

B-30-SC L1439773-08 Solid

Collected by
Lauren Sherman

Collected date/time
12/01/21 14:05

Received date/time
12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1788088	1	12/13/21 09:35	12/13/21 19:30	AMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1787327	1	12/10/21 11:41	12/10/21 17:56	AMG	Mt. Juliet, TN

B-31-SC L1439773-09 Solid

Collected by
Lauren Sherman

Collected date/time
12/01/21 14:25

Received date/time
12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1786788	1	12/10/21 14:08	12/10/21 14:30	KDW	Mt. Juliet, TN
Mercury by Method 7471B	WG1786865	1	12/14/21 09:21	12/15/21 10:39	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 20:25	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1793089	5	01/04/22 07:47	01/10/22 22:26	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1787808	25	12/10/21 19:51	12/11/21 20:57	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1787906	1	12/10/21 19:51	12/11/21 19:55	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1787621	1	12/12/21 09:13	12/12/21 19:53	JN	Mt. Juliet, TN
Chlorinated Acid Herbicides (GC) by Method 8151A	WG1788627	1	12/14/21 08:11	12/15/21 18:07	JMB	Mt. Juliet, TN
Pesticides (GC) by Method 8081B	WG1786830	1	12/10/21 22:00	12/11/21 22:36	AMM	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1788512	1	12/13/21 15:52	12/14/21 03:40	HMH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E	WG1788088	1	12/13/21 09:35	12/13/21 17:45	AMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1787327	1	12/10/21 11:41	12/10/21 18:15	AMG	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	45.8		1	12/10/2021 13:36	WG1786786

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0393	0.0874	1	12/15/2021 10:24	WG1786865

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	1.19	J	0.363	6.55	5	12/29/2021 19:35	WG1796071
Arsenic	5.43		0.218	2.18	5	12/29/2021 19:35	WG1796071
Barium	182		0.332	5.46	5	12/30/2021 01:12	WG1796071
Cadmium	0.295	J	0.187	2.18	5	12/29/2021 19:35	WG1796071
Chromium	16.2		0.647	10.9	5	12/29/2021 19:35	WG1796071
Copper	25.0		0.288	10.9	5	12/29/2021 19:35	WG1796071
Lead	10.2		0.216	4.37	5	12/29/2021 19:35	WG1796071
Selenium	1.04	J	0.393	5.46	5	12/30/2021 01:12	WG1796071
Silver	U		0.189	1.09	5	12/29/2021 19:35	WG1796071
Zinc	57.7		1.62	54.6	5	12/29/2021 19:35	WG1796071

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		2.86	8.44	25	12/11/2021 19:03	WG1787827
(S) a,a,a-Trifluorotoluene(FID)	94.2			77.0-120		12/11/2021 19:03	WG1787827

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U	J4	0.123	0.169	1	12/11/2021 17:42	WG1787906
Acrylonitrile	U		0.0122	0.0422	1	12/11/2021 17:42	WG1787906
Benzene	0.00304	B J	0.00158	0.00337	1	12/11/2021 17:42	WG1787906
Bromobenzene	U		0.00304	0.0422	1	12/11/2021 17:42	WG1787906
Bromodichloromethane	U		0.00245	0.00844	1	12/11/2021 17:42	WG1787906
Bromoform	U		0.00395	0.0844	1	12/11/2021 17:42	WG1787906
Bromomethane	U		0.00665	0.0422	1	12/11/2021 17:42	WG1787906
n-Butylbenzene	U		0.0177	0.0422	1	12/11/2021 17:42	WG1787906
sec-Butylbenzene	U		0.00972	0.0422	1	12/11/2021 17:42	WG1787906
tert-Butylbenzene	U		0.00658	0.0169	1	12/11/2021 17:42	WG1787906
Carbon tetrachloride	U		0.00303	0.0169	1	12/11/2021 17:42	WG1787906
Chlorobenzene	U		0.000709	0.00844	1	12/11/2021 17:42	WG1787906
Chlorodibromomethane	U		0.00207	0.00844	1	12/11/2021 17:42	WG1787906
Chloroethane	U		0.00574	0.0169	1	12/11/2021 17:42	WG1787906
Chloroform	U		0.00348	0.00844	1	12/11/2021 17:42	WG1787906
Chloromethane	U		0.0147	0.0422	1	12/11/2021 17:42	WG1787906
2-Chlorotoluene	U		0.00292	0.00844	1	12/11/2021 17:42	WG1787906
4-Chlorotoluene	U		0.00152	0.0169	1	12/11/2021 17:42	WG1787906
1,2-Dibromo-3-Chloropropane	U		0.0132	0.0844	1	12/11/2021 17:42	WG1787906
1,2-Dibromoethane	U		0.00219	0.00844	1	12/11/2021 17:42	WG1787906
Dibromomethane	U		0.00253	0.0169	1	12/11/2021 17:42	WG1787906
1,2-Dichlorobenzene	U		0.00143	0.0169	1	12/11/2021 17:42	WG1787906
1,3-Dichlorobenzene	U		0.00202	0.0169	1	12/11/2021 17:42	WG1787906
1,4-Dichlorobenzene	U		0.00236	0.0169	1	12/11/2021 17:42	WG1787906

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00543	0.00844	1	12/11/2021 17:42	WG1787906
1,1-Dichloroethane	U		0.00166	0.00844	1	12/11/2021 17:42	WG1787906
1,2-Dichloroethane	U		0.00219	0.00844	1	12/11/2021 17:42	WG1787906
1,1-Dichloroethene	U		0.00205	0.00844	1	12/11/2021 17:42	WG1787906
cis-1,2-Dichloroethene	U		0.00248	0.00844	1	12/11/2021 17:42	WG1787906
trans-1,2-Dichloroethene	U		0.00351	0.0169	1	12/11/2021 17:42	WG1787906
1,2-Dichloropropane	U		0.00479	0.0169	1	12/11/2021 17:42	WG1787906
1,1-Dichloropropene	U		0.00273	0.00844	1	12/11/2021 17:42	WG1787906
1,3-Dichloropropane	U		0.00169	0.0169	1	12/11/2021 17:42	WG1787906
cis-1,3-Dichloropropene	U		0.00255	0.00844	1	12/11/2021 17:42	WG1787906
trans-1,3-Dichloropropene	U		0.00385	0.0169	1	12/11/2021 17:42	WG1787906
2,2-Dichloropropane	U		0.00466	0.00844	1	12/11/2021 17:42	WG1787906
Di-isopropyl ether	U		0.00138	0.00337	1	12/11/2021 17:42	WG1787906
Ethylbenzene	U		0.00249	0.00844	1	12/11/2021 17:42	WG1787906
Hexachloro-1,3-butadiene	U		0.0202	0.0844	1	12/11/2021 17:42	WG1787906
Isopropylbenzene	U		0.00143	0.00844	1	12/11/2021 17:42	WG1787906
p-Isopropyltoluene	U		0.00861	0.0169	1	12/11/2021 17:42	WG1787906
2-Butanone (MEK)	U		0.214	0.337	1	12/11/2021 17:42	WG1787906
Methylene Chloride	U		0.0224	0.0844	1	12/11/2021 17:42	WG1787906
4-Methyl-2-pentanone (MIBK)	U		0.00769	0.0844	1	12/11/2021 17:42	WG1787906
Methyl tert-butyl ether	U		0.00118	0.00337	1	12/11/2021 17:42	WG1787906
Naphthalene	U		0.0165	0.0422	1	12/11/2021 17:42	WG1787906
n-Propylbenzene	U		0.00321	0.0169	1	12/11/2021 17:42	WG1787906
Styrene	U		0.000773	0.0422	1	12/11/2021 17:42	WG1787906
1,1,1,2-Tetrachloroethane	U		0.00320	0.00844	1	12/11/2021 17:42	WG1787906
1,1,2,2-Tetrachloroethane	U		0.00235	0.00844	1	12/11/2021 17:42	WG1787906
1,1,2-Trichlorotrifluoroethane	U	C3 J3 J4	0.00254	0.00844	1	12/11/2021 17:42	WG1787906
Tetrachloroethene	U		0.00302	0.00844	1	12/11/2021 17:42	WG1787906
Toluene	U		0.00439	0.0169	1	12/11/2021 17:42	WG1787906
1,2,3-Trichlorobenzene	U	C4	0.0247	0.0422	1	12/11/2021 17:42	WG1787906
1,2,4-Trichlorobenzene	U		0.0148	0.0422	1	12/11/2021 17:42	WG1787906
1,1,1-Trichloroethane	U		0.00311	0.00844	1	12/11/2021 17:42	WG1787906
1,1,2-Trichloroethane	U		0.00201	0.00844	1	12/11/2021 17:42	WG1787906
Trichloroethene	U		0.00197	0.00337	1	12/11/2021 17:42	WG1787906
Trichlorofluoromethane	U	C3	0.00279	0.00844	1	12/11/2021 17:42	WG1787906
1,2,3-Trichloropropane	U		0.00547	0.0422	1	12/11/2021 17:42	WG1787906
1,2,4-Trimethylbenzene	U		0.00533	0.0169	1	12/11/2021 17:42	WG1787906
1,2,3-Trimethylbenzene	U		0.00533	0.0169	1	12/11/2021 17:42	WG1787906
1,3,5-Trimethylbenzene	U		0.00675	0.0169	1	12/11/2021 17:42	WG1787906
Vinyl chloride	U		0.00391	0.00844	1	12/11/2021 17:42	WG1787906
Xylenes, Total	U		0.00297	0.0219	1	12/11/2021 17:42	WG1787906
(S) Toluene-d8	107			75.0-131		12/11/2021 17:42	WG1787906
(S) 4-Bromofluorobenzene	102			67.0-138		12/11/2021 17:42	WG1787906
(S) 1,2-Dichloroethane-d4	104			70.0-130		12/11/2021 17:42	WG1787906



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		2.91	8.74	1	12/12/2021 21:11	WG1787621
Residual Range Organics (RRO)	U		7.27	21.8	1	12/12/2021 21:11	WG1787621
(S) o-Terphenyl	58.7			18.0-148		12/12/2021 21:11	WG1787621

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.0153	0.153	1	12/15/2021 17:09	WG1788627
Dalapon	U		0.0247	0.153	1	12/15/2021 17:09	WG1788627
2,4-DB	U		0.0649	0.153	1	12/15/2021 17:09	WG1788627
Dicamba	U		0.0343	0.153	1	12/15/2021 17:09	WG1788627
Dichloroprop	U		0.0535	0.153	1	12/15/2021 17:09	WG1788627
Dinoseb	U		0.0152	0.153	1	12/15/2021 17:09	WG1788627
MCPA	U		0.968	14.2	1	12/15/2021 17:09	WG1788627
MCPP	U		0.802	14.2	1	12/15/2021 17:09	WG1788627
2,4,5-T	U		0.0186	0.153	1	12/15/2021 17:09	WG1788627
2,4,5-TP (Silvex)	U		0.0234	0.153	1	12/15/2021 17:09	WG1788627
(S) 2,4-Dichlorophenyl Acetic Acid	62.4			22.0-132		12/15/2021 17:09	WG1788627

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00821	0.0437	1	12/11/2021 22:18	WG1786830
Alpha BHC	U		0.00804	0.0437	1	12/11/2021 22:18	WG1786830
Beta BHC	U		0.00828	0.0437	1	12/11/2021 22:18	WG1786830
Delta BHC	U		0.00756	0.0437	1	12/11/2021 22:18	WG1786830
Gamma BHC	U		0.00751	0.0437	1	12/11/2021 22:18	WG1786830
Chlordane	U		0.225	0.655	1	12/11/2021 22:18	WG1786830
4,4-DDD	U		0.00808	0.0437	1	12/11/2021 22:18	WG1786830
4,4-DDE	U		0.00799	0.0437	1	12/11/2021 22:18	WG1786830
4,4-DDT	U		0.0137	0.0437	1	12/11/2021 22:18	WG1786830
Dieldrin	U		0.00751	0.0437	1	12/11/2021 22:18	WG1786830
Endosulfan I	U		0.00793	0.0437	1	12/11/2021 22:18	WG1786830
Endosulfan II	U		0.00732	0.0437	1	12/11/2021 22:18	WG1786830
Endosulfan sulfate	U		0.00795	0.0437	1	12/11/2021 22:18	WG1786830
Endrin	U		0.00765	0.0437	1	12/11/2021 22:18	WG1786830
Endrin aldehyde	U		0.00741	0.0437	1	12/11/2021 22:18	WG1786830
Endrin ketone	U		0.0155	0.0437	1	12/11/2021 22:18	WG1786830
Heptachlor	U		0.00935	0.0437	1	12/11/2021 22:18	WG1786830
Heptachlor epoxide	U		0.00741	0.0437	1	12/11/2021 22:18	WG1786830
Hexachlorobenzene	U		0.00756	0.0437	1	12/11/2021 22:18	WG1786830
Methoxychlor	U		0.0106	0.0437	1	12/11/2021 22:18	WG1786830
Toxaphene	U		0.271	0.874	1	12/11/2021 22:18	WG1786830
(S) Decachlorobiphenyl	74.1			10.0-135		12/11/2021 22:18	WG1786830
(S) Tetrachloro-m-xylene	78.9			10.0-139		12/11/2021 22:18	WG1786830

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0258	0.0743	1	12/14/2021 03:05	WG1788512
PCB 1221	U		0.0258	0.0743	1	12/14/2021 03:05	WG1788512
PCB 1232	U		0.0258	0.0743	1	12/14/2021 03:05	WG1788512
PCB 1242	U		0.0258	0.0743	1	12/14/2021 03:05	WG1788512
PCB 1248	U		0.0161	0.0371	1	12/14/2021 03:05	WG1788512
PCB 1254	U		0.0161	0.0371	1	12/14/2021 03:05	WG1788512
PCB 1260	U		0.0161	0.0371	1	12/14/2021 03:05	WG1788512
(S) Decachlorobiphenyl	54.0			10.0-135		12/14/2021 03:05	WG1788512
(S) Tetrachloro-m-xylene	66.7			10.0-139		12/14/2021 03:05	WG1788512

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0118	0.0727	1	12/13/2021 18:27	WG1788088
Acenaphthylene	U		0.0102	0.0727	1	12/13/2021 18:27	WG1788088
Anthracene	U		0.0130	0.0727	1	12/13/2021 18:27	WG1788088
Benzo(a)anthracene	U		0.0128	0.0727	1	12/13/2021 18:27	WG1788088
Benzo(b)fluoranthene	U		0.0136	0.0727	1	12/13/2021 18:27	WG1788088
Benzo(k)fluoranthene	U		0.0129	0.0727	1	12/13/2021 18:27	WG1788088
Benzo(g,h,i)perylene	U		0.0133	0.0727	1	12/13/2021 18:27	WG1788088
Benzo(a)pyrene	U		0.0135	0.0727	1	12/13/2021 18:27	WG1788088
Bis(2-chloroethoxy)methane	U		0.0218	0.727	1	12/13/2021 18:27	WG1788088
Bis(2-chloroethyl)ether	U	C3	0.0240	0.727	1	12/13/2021 18:27	WG1788088
2,2-Oxybis(1-Chloropropane)	U		0.0315	0.727	1	12/13/2021 18:27	WG1788088
4-Bromophenyl-phenylether	U		0.0256	0.727	1	12/13/2021 18:27	WG1788088
2-Chloronaphthalene	U		0.0128	0.0727	1	12/13/2021 18:27	WG1788088
4-Chlorophenyl-phenylether	U		0.0253	0.727	1	12/13/2021 18:27	WG1788088
Chrysene	U		0.0145	0.0727	1	12/13/2021 18:27	WG1788088
Dibenz(a,h)anthracene	U		0.0202	0.0727	1	12/13/2021 18:27	WG1788088
3,3-Dichlorobenzidine	U		0.0269	0.727	1	12/13/2021 18:27	WG1788088
2,4-Dinitrotoluene	U		0.0209	0.727	1	12/13/2021 18:27	WG1788088
2,6-Dinitrotoluene	U		0.0238	0.727	1	12/13/2021 18:27	WG1788088
Fluoranthene	U		0.0131	0.0727	1	12/13/2021 18:27	WG1788088
Fluorene	U		0.0118	0.0727	1	12/13/2021 18:27	WG1788088
Hexachlorobenzene	U		0.0258	0.727	1	12/13/2021 18:27	WG1788088
Hexachloro-1,3-butadiene	U		0.0245	0.727	1	12/13/2021 18:27	WG1788088
Hexachlorocyclopentadiene	U		0.0382	0.727	1	12/13/2021 18:27	WG1788088
Hexachloroethane	U		0.0286	0.727	1	12/13/2021 18:27	WG1788088
Indeno(1,2,3-cd)pyrene	U		0.0206	0.0727	1	12/13/2021 18:27	WG1788088
Isophorone	U		0.0223	0.727	1	12/13/2021 18:27	WG1788088
Naphthalene	U		0.0183	0.0727	1	12/13/2021 18:27	WG1788088
Nitrobenzene	U		0.0253	0.727	1	12/13/2021 18:27	WG1788088
n-Nitrosodimethylamine	U		0.108	0.727	1	12/13/2021 18:27	WG1788088
n-Nitrosodiphenylamine	U		0.0550	0.727	1	12/13/2021 18:27	WG1788088
n-Nitrosodi-n-propylamine	U		0.0242	0.727	1	12/13/2021 18:27	WG1788088
Phenanthrene	U		0.0144	0.0727	1	12/13/2021 18:27	WG1788088
Pyridine	U		0.0481	0.727	1	12/13/2021 18:27	WG1788088
Benzylbutyl phthalate	U		0.0227	0.727	1	12/13/2021 18:27	WG1788088
Bis(2-ethylhexyl)phthalate	U		0.0922	0.727	1	12/13/2021 18:27	WG1788088
Di-n-butyl phthalate	U		0.0249	0.727	1	12/13/2021 18:27	WG1788088
Diethyl phthalate	U		0.0240	0.727	1	12/13/2021 18:27	WG1788088
Dimethyl phthalate	U		0.154	0.727	1	12/13/2021 18:27	WG1788088
Di-n-octyl phthalate	U		0.0491	0.727	1	12/13/2021 18:27	WG1788088
Pyrene	U		0.0142	0.0727	1	12/13/2021 18:27	WG1788088
1,2,4-Trichlorobenzene	U		0.0227	0.727	1	12/13/2021 18:27	WG1788088
4-Chloro-3-methylphenol	U		0.0236	0.727	1	12/13/2021 18:27	WG1788088
2-Chlorophenol	U		0.0240	0.727	1	12/13/2021 18:27	WG1788088
2,4-Dichlorophenol	U		0.0212	0.727	1	12/13/2021 18:27	WG1788088
2,4-Dimethylphenol	U		0.0190	0.727	1	12/13/2021 18:27	WG1788088
4,6-Dinitro-2-methylphenol	U		0.165	0.727	1	12/13/2021 18:27	WG1788088
2,4-Dinitrophenol	U		0.170	0.727	1	12/13/2021 18:27	WG1788088
2-Methylphenol	U		0.0218	0.727	1	12/13/2021 18:27	WG1788088
3&4-Methyl Phenol	0.0251	J	0.0227	0.727	1	12/13/2021 18:27	WG1788088
2-Nitrophenol	U		0.0260	0.727	1	12/13/2021 18:27	WG1788088
4-Nitrophenol	U		0.0227	0.727	1	12/13/2021 18:27	WG1788088
Pentachlorophenol	U		0.0196	0.727	1	12/13/2021 18:27	WG1788088
Phenol	U		0.0293	0.727	1	12/13/2021 18:27	WG1788088
2,4,6-Trichlorophenol	U		0.0234	0.727	1	12/13/2021 18:27	WG1788088
2,4,5-Trichlorophenol	U		0.0247	0.727	1	12/13/2021 18:27	WG1788088

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	56.1			12.0-120		12/13/2021 18:27	WG1788088
(S) Phenol-d5	52.9			10.0-120		12/13/2021 18:27	WG1788088
(S) Nitrobenzene-d5	43.1			10.0-122		12/13/2021 18:27	WG1788088
(S) 2-Fluorobiphenyl	51.4			15.0-120		12/13/2021 18:27	WG1788088
(S) 2,4,6-Tribromophenol	64.7			10.0-127		12/13/2021 18:27	WG1788088
(S) p-Terphenyl-d14	62.4			10.0-120		12/13/2021 18:27	WG1788088

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00502	0.0131	1	12/10/2021 16:17	WG1787327
Acenaphthene	U		0.00457	0.0131	1	12/10/2021 16:17	WG1787327
Acenaphthylene	U		0.00472	0.0131	1	12/10/2021 16:17	WG1787327
Benzo(a)anthracene	U		0.00378	0.0131	1	12/10/2021 16:17	WG1787327
Benzo(a)pyrene	U		0.00391	0.0131	1	12/10/2021 16:17	WG1787327
Benzo(b)fluoranthene	U		0.00334	0.0131	1	12/10/2021 16:17	WG1787327
Benzo(g,h,i)perylene	U		0.00387	0.0131	1	12/10/2021 16:17	WG1787327
Benzo(k)fluoranthene	U		0.00470	0.0131	1	12/10/2021 16:17	WG1787327
Chrysene	U		0.00507	0.0131	1	12/10/2021 16:17	WG1787327
Dibenz(a,h)anthracene	U		0.00376	0.0131	1	12/10/2021 16:17	WG1787327
Fluoranthene	U		0.00496	0.0131	1	12/10/2021 16:17	WG1787327
Fluorene	U		0.00448	0.0131	1	12/10/2021 16:17	WG1787327
Indeno(1,2,3-cd)pyrene	U		0.00395	0.0131	1	12/10/2021 16:17	WG1787327
Naphthalene	U		0.00891	0.0437	1	12/10/2021 16:17	WG1787327
Phenanthrene	U		0.00505	0.0131	1	12/10/2021 16:17	WG1787327
Pyrene	U		0.00437	0.0131	1	12/10/2021 16:17	WG1787327
1-Methylnaphthalene	U		0.00981	0.0437	1	12/10/2021 16:17	WG1787327
2-Methylnaphthalene	U		0.00933	0.0437	1	12/10/2021 16:17	WG1787327
2-Chloronaphthalene	U		0.0102	0.0437	1	12/10/2021 16:17	WG1787327
(S) Nitrobenzene-d5	84.1			14.0-149		12/10/2021 16:17	WG1787327
(S) 2-Fluorobiphenyl	71.9			34.0-125		12/10/2021 16:17	WG1787327
(S) p-Terphenyl-d14	83.5			23.0-120		12/10/2021 16:17	WG1787327

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	60.4		1	12/10/2021 13:36	WG1786786

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0298	0.0662	1	12/15/2021 10:26	WG1786865

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	U	J4	0.275	4.97	5	01/10/2022 19:53	WG1793089
Arsenic	2.62		0.166	1.66	5	01/10/2022 19:53	WG1793089
Barium	98.5		0.252	4.14	5	01/10/2022 19:53	WG1793089
Cadmium	U		0.142	1.66	5	01/10/2022 19:53	WG1793089
Chromium	36.3		0.490	8.28	5	01/10/2022 19:53	WG1793089
Copper	35.9		0.218	8.28	5	01/10/2022 19:53	WG1793089
Lead	6.21		0.164	3.31	5	01/10/2022 19:53	WG1793089
Selenium	U		0.298	4.14	5	01/10/2022 21:55	WG1793089
Silver	3.84		0.143	0.828	5	01/10/2022 19:53	WG1793089
Zinc	71.0		1.22	41.4	5	01/10/2022 19:53	WG1793089

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	13.0		1.96	5.78	25	12/11/2021 19:25	WG1787827
(S) a,a,a-Trifluorotoluene(FID)	93.0			77.0-120		12/11/2021 19:25	WG1787827

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U	J4	0.0844	0.116	1	12/11/2021 18:01	WG1787906
Acrylonitrile	U		0.00835	0.0289	1	12/11/2021 18:01	WG1787906
Benzene	0.00156	B J	0.00108	0.00231	1	12/11/2021 18:01	WG1787906
Bromobenzene	U		0.00208	0.0289	1	12/11/2021 18:01	WG1787906
Bromodichloromethane	U		0.00168	0.00578	1	12/11/2021 18:01	WG1787906
Bromoform	U		0.00271	0.0578	1	12/11/2021 18:01	WG1787906
Bromomethane	U		0.00456	0.0289	1	12/11/2021 18:01	WG1787906
n-Butylbenzene	U		0.0121	0.0289	1	12/11/2021 18:01	WG1787906
sec-Butylbenzene	U		0.00666	0.0289	1	12/11/2021 18:01	WG1787906
tert-Butylbenzene	U		0.00451	0.0116	1	12/11/2021 18:01	WG1787906
Carbon tetrachloride	U		0.00208	0.0116	1	12/11/2021 18:01	WG1787906
Chlorobenzene	U		0.000486	0.00578	1	12/11/2021 18:01	WG1787906
Chlorodibromomethane	U		0.00142	0.00578	1	12/11/2021 18:01	WG1787906
Chloroethane	U		0.00393	0.0116	1	12/11/2021 18:01	WG1787906
Chloroform	U		0.00238	0.00578	1	12/11/2021 18:01	WG1787906
Chloromethane	U		0.0101	0.0289	1	12/11/2021 18:01	WG1787906
2-Chlorotoluene	U		0.00200	0.00578	1	12/11/2021 18:01	WG1787906
4-Chlorotoluene	U		0.00104	0.0116	1	12/11/2021 18:01	WG1787906
1,2-Dibromo-3-Chloropropane	U		0.00902	0.0578	1	12/11/2021 18:01	WG1787906
1,2-Dibromoethane	U		0.00150	0.00578	1	12/11/2021 18:01	WG1787906
Dibromomethane	U		0.00173	0.0116	1	12/11/2021 18:01	WG1787906
1,2-Dichlorobenzene	U		0.000983	0.0116	1	12/11/2021 18:01	WG1787906
1,3-Dichlorobenzene	U		0.00139	0.0116	1	12/11/2021 18:01	WG1787906
1,4-Dichlorobenzene	U		0.00162	0.0116	1	12/11/2021 18:01	WG1787906



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00372	0.00578	1	12/11/2021 18:01	WG1787906
1,1-Dichloroethane	U		0.00114	0.00578	1	12/11/2021 18:01	WG1787906
1,2-Dichloroethane	U		0.00150	0.00578	1	12/11/2021 18:01	WG1787906
1,1-Dichloroethene	U		0.00140	0.00578	1	12/11/2021 18:01	WG1787906
cis-1,2-Dichloroethene	U		0.00170	0.00578	1	12/11/2021 18:01	WG1787906
trans-1,2-Dichloroethene	U		0.00241	0.0116	1	12/11/2021 18:01	WG1787906
1,2-Dichloropropane	U		0.00328	0.0116	1	12/11/2021 18:01	WG1787906
1,1-Dichloropropene	U		0.00187	0.00578	1	12/11/2021 18:01	WG1787906
1,3-Dichloropropane	U		0.00116	0.0116	1	12/11/2021 18:01	WG1787906
cis-1,3-Dichloropropene	U		0.00175	0.00578	1	12/11/2021 18:01	WG1787906
trans-1,3-Dichloropropene	U		0.00264	0.0116	1	12/11/2021 18:01	WG1787906
2,2-Dichloropropane	U		0.00319	0.00578	1	12/11/2021 18:01	WG1787906
Di-isopropyl ether	U		0.000948	0.00231	1	12/11/2021 18:01	WG1787906
Ethylbenzene	U		0.00170	0.00578	1	12/11/2021 18:01	WG1787906
Hexachloro-1,3-butadiene	U		0.0139	0.0578	1	12/11/2021 18:01	WG1787906
Isopropylbenzene	U		0.000983	0.00578	1	12/11/2021 18:01	WG1787906
p-Isopropyltoluene	U		0.00590	0.0116	1	12/11/2021 18:01	WG1787906
2-Butanone (MEK)	U		0.147	0.231	1	12/11/2021 18:01	WG1787906
Methylene Chloride	U		0.0154	0.0578	1	12/11/2021 18:01	WG1787906
4-Methyl-2-pentanone (MIBK)	U		0.00527	0.0578	1	12/11/2021 18:01	WG1787906
Methyl tert-butyl ether	U		0.000810	0.00231	1	12/11/2021 18:01	WG1787906
Naphthalene	U		0.0113	0.0289	1	12/11/2021 18:01	WG1787906
n-Propylbenzene	U		0.00220	0.0116	1	12/11/2021 18:01	WG1787906
Styrene	U		0.000530	0.0289	1	12/11/2021 18:01	WG1787906
1,1,1,2-Tetrachloroethane	U		0.00219	0.00578	1	12/11/2021 18:01	WG1787906
1,1,2,2-Tetrachloroethane	U		0.00161	0.00578	1	12/11/2021 18:01	WG1787906
1,1,2-Trichlorotrifluoroethane	U	C3 J3 J4	0.00174	0.00578	1	12/11/2021 18:01	WG1787906
Tetrachloroethene	U		0.00207	0.00578	1	12/11/2021 18:01	WG1787906
Toluene	U		0.00301	0.0116	1	12/11/2021 18:01	WG1787906
1,2,3-Trichlorobenzene	U	C4	0.0170	0.0289	1	12/11/2021 18:01	WG1787906
1,2,4-Trichlorobenzene	U		0.0102	0.0289	1	12/11/2021 18:01	WG1787906
1,1,1-Trichloroethane	U		0.00213	0.00578	1	12/11/2021 18:01	WG1787906
1,1,2-Trichloroethane	U		0.00138	0.00578	1	12/11/2021 18:01	WG1787906
Trichloroethene	U		0.00135	0.00231	1	12/11/2021 18:01	WG1787906
Trichlorofluoromethane	U	C3	0.00191	0.00578	1	12/11/2021 18:01	WG1787906
1,2,3-Trichloropropane	U		0.00375	0.0289	1	12/11/2021 18:01	WG1787906
1,2,4-Trimethylbenzene	U		0.00365	0.0116	1	12/11/2021 18:01	WG1787906
1,2,3-Trimethylbenzene	U		0.00365	0.0116	1	12/11/2021 18:01	WG1787906
1,3,5-Trimethylbenzene	U		0.00463	0.0116	1	12/11/2021 18:01	WG1787906
Vinyl chloride	U		0.00268	0.00578	1	12/11/2021 18:01	WG1787906
Xylenes, Total	0.00243	J	0.00204	0.0150	1	12/11/2021 18:01	WG1787906
(S) Toluene-d8	107			75.0-131		12/11/2021 18:01	WG1787906
(S) 4-Bromofluorobenzene	99.2			67.0-138		12/11/2021 18:01	WG1787906
(S) 1,2-Dichloroethane-d4	101			70.0-130		12/11/2021 18:01	WG1787906

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

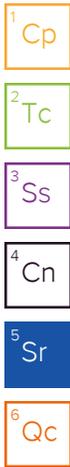
9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	281		2.20	6.62	1	12/12/2021 21:24	WG1787621
Residual Range Organics (RRO)	53.0		5.51	16.6	1	12/12/2021 21:24	WG1787621
(S) o-Terphenyl	60.4			18.0-148		12/12/2021 21:24	WG1787621

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.0116	0.116	1	12/15/2021 17:23	WG1788627
Dalapon	U		0.0187	0.116	1	12/15/2021 17:23	WG1788627
2,4-DB	U		0.0492	0.116	1	12/15/2021 17:23	WG1788627
Dicamba	U		0.0260	0.116	1	12/15/2021 17:23	WG1788627
Dichloroprop	U		0.0406	0.116	1	12/15/2021 17:23	WG1788627
Dinoseb	U		0.0115	0.116	1	12/15/2021 17:23	WG1788627
MCPA	U		0.733	10.8	1	12/15/2021 17:23	WG1788627
MCPP	U		0.607	10.8	1	12/15/2021 17:23	WG1788627
2,4,5-T	U		0.0141	0.116	1	12/15/2021 17:23	WG1788627
2,4,5-TP (Silvex)	U		0.0177	0.116	1	12/15/2021 17:23	WG1788627
(S) 2,4-Dichlorophenyl Acetic Acid	68.7			22.0-132		12/15/2021 17:23	WG1788627



Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00622	0.0331	1	12/11/2021 19:23	WG1786830
Alpha BHC	U		0.00609	0.0331	1	12/11/2021 19:23	WG1786830
Beta BHC	U		0.00627	0.0331	1	12/11/2021 19:23	WG1786830
Delta BHC	U		0.00573	0.0331	1	12/11/2021 19:23	WG1786830
Gamma BHC	U		0.00569	0.0331	1	12/11/2021 19:23	WG1786830
Chlordane	U		0.170	0.497	1	12/11/2021 19:23	WG1786830
4,4-DDD	U		0.00612	0.0331	1	12/11/2021 19:23	WG1786830
4,4-DDE	U		0.00606	0.0331	1	12/11/2021 19:23	WG1786830
4,4-DDT	U		0.0104	0.0331	1	12/11/2021 19:23	WG1786830
Dieldrin	U		0.00569	0.0331	1	12/11/2021 19:23	WG1786830
Endosulfan I	U		0.00601	0.0331	1	12/11/2021 19:23	WG1786830
Endosulfan II	U		0.00554	0.0331	1	12/11/2021 19:23	WG1786830
Endosulfan sulfate	U		0.00602	0.0331	1	12/11/2021 19:23	WG1786830
Endrin	U		0.00579	0.0331	1	12/11/2021 19:23	WG1786830
Endrin aldehyde	U		0.00561	0.0331	1	12/11/2021 19:23	WG1786830
Endrin ketone	U		0.0118	0.0331	1	12/11/2021 19:23	WG1786830
Heptachlor	U		0.00708	0.0331	1	12/11/2021 19:23	WG1786830
Heptachlor epoxide	U		0.00561	0.0331	1	12/11/2021 19:23	WG1786830
Hexachlorobenzene	U		0.00573	0.0331	1	12/11/2021 19:23	WG1786830
Methoxychlor	U		0.00801	0.0331	1	12/11/2021 19:23	WG1786830
Toxaphene	U		0.205	0.662	1	12/11/2021 19:23	WG1786830
(S) Decachlorobiphenyl	60.3			10.0-135		12/11/2021 19:23	WG1786830
(S) Tetrachloro-m-xylene	66.8			10.0-139		12/11/2021 19:23	WG1786830

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0195	0.0563	1	12/14/2021 03:13	WG1788512
PCB 1221	U		0.0195	0.0563	1	12/14/2021 03:13	WG1788512
PCB 1232	U		0.0195	0.0563	1	12/14/2021 03:13	WG1788512
PCB 1242	U		0.0195	0.0563	1	12/14/2021 03:13	WG1788512
PCB 1248	U		0.0122	0.0281	1	12/14/2021 03:13	WG1788512
PCB 1254	U		0.0122	0.0281	1	12/14/2021 03:13	WG1788512
PCB 1260	U		0.0122	0.0281	1	12/14/2021 03:13	WG1788512
(S) Decachlorobiphenyl	77.3			10.0-135		12/14/2021 03:13	WG1788512
(S) Tetrachloro-m-xylene	81.9			10.0-139		12/14/2021 03:13	WG1788512

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00892	0.0551	1	12/13/2021 21:37	WG1788088
Acenaphthylene	U		0.00776	0.0551	1	12/13/2021 21:37	WG1788088
Anthracene	U		0.00982	0.0551	1	12/13/2021 21:37	WG1788088
Benzo(a)anthracene	U		0.00972	0.0551	1	12/13/2021 21:37	WG1788088
Benzo(b)fluoranthene	U		0.0103	0.0551	1	12/13/2021 21:37	WG1788088
Benzo(k)fluoranthene	U		0.00980	0.0551	1	12/13/2021 21:37	WG1788088
Benzo(g,h,i)perylene	U		0.0101	0.0551	1	12/13/2021 21:37	WG1788088
Benzo(a)pyrene	U		0.0102	0.0551	1	12/13/2021 21:37	WG1788088
Bis(2-chloroethoxy)methane	U		0.0166	0.551	1	12/13/2021 21:37	WG1788088
Bis(2-chloroethyl)ether	U	C3	0.0182	0.551	1	12/13/2021 21:37	WG1788088
2,2-Oxybis(1-Chloropropane)	U		0.0238	0.551	1	12/13/2021 21:37	WG1788088
4-Bromophenyl-phenylether	U		0.0194	0.551	1	12/13/2021 21:37	WG1788088
2-Chloronaphthalene	U		0.00968	0.0551	1	12/13/2021 21:37	WG1788088
4-Chlorophenyl-phenylether	U		0.0192	0.551	1	12/13/2021 21:37	WG1788088
Chrysene	U		0.0110	0.0551	1	12/13/2021 21:37	WG1788088
Dibenz(a,h)anthracene	U		0.0153	0.0551	1	12/13/2021 21:37	WG1788088
3,3-Dichlorobenzidine	U		0.0204	0.551	1	12/13/2021 21:37	WG1788088
2,4-Dinitrotoluene	U		0.0158	0.551	1	12/13/2021 21:37	WG1788088
2,6-Dinitrotoluene	U		0.0180	0.551	1	12/13/2021 21:37	WG1788088
Fluoranthene	U		0.00995	0.0551	1	12/13/2021 21:37	WG1788088
Fluorene	U		0.00897	0.0551	1	12/13/2021 21:37	WG1788088
Hexachlorobenzene	U		0.0195	0.551	1	12/13/2021 21:37	WG1788088
Hexachloro-1,3-butadiene	U		0.0185	0.551	1	12/13/2021 21:37	WG1788088
Hexachlorocyclopentadiene	U		0.0290	0.551	1	12/13/2021 21:37	WG1788088
Hexachloroethane	U		0.0217	0.551	1	12/13/2021 21:37	WG1788088
Indeno(1,2,3-cd)pyrene	U		0.0156	0.0551	1	12/13/2021 21:37	WG1788088
Isophorone	U		0.0169	0.551	1	12/13/2021 21:37	WG1788088
Naphthalene	U		0.0138	0.0551	1	12/13/2021 21:37	WG1788088
Nitrobenzene	U		0.0192	0.551	1	12/13/2021 21:37	WG1788088
n-Nitrosodimethylamine	U		0.0818	0.551	1	12/13/2021 21:37	WG1788088
n-Nitrosodiphenylamine	U		0.0417	0.551	1	12/13/2021 21:37	WG1788088
n-Nitrosodi-n-propylamine	U		0.0184	0.551	1	12/13/2021 21:37	WG1788088
Phenanthrene	U		0.0109	0.0551	1	12/13/2021 21:37	WG1788088
Pyridine	U		0.0364	0.551	1	12/13/2021 21:37	WG1788088
Benzylbutyl phthalate	U		0.0172	0.551	1	12/13/2021 21:37	WG1788088
Bis(2-ethylhexyl)phthalate	U		0.0698	0.551	1	12/13/2021 21:37	WG1788088
Di-n-butyl phthalate	U		0.0189	0.551	1	12/13/2021 21:37	WG1788088
Diethyl phthalate	U		0.0182	0.551	1	12/13/2021 21:37	WG1788088
Dimethyl phthalate	U		0.117	0.551	1	12/13/2021 21:37	WG1788088
Di-n-octyl phthalate	U		0.0372	0.551	1	12/13/2021 21:37	WG1788088
Pyrene	U		0.0107	0.0551	1	12/13/2021 21:37	WG1788088
1,2,4-Trichlorobenzene	U		0.0172	0.551	1	12/13/2021 21:37	WG1788088
4-Chloro-3-methylphenol	U		0.0179	0.551	1	12/13/2021 21:37	WG1788088
2-Chlorophenol	U		0.0182	0.551	1	12/13/2021 21:37	WG1788088
2,4-Dichlorophenol	U		0.0161	0.551	1	12/13/2021 21:37	WG1788088
2,4-Dimethylphenol	U		0.0144	0.551	1	12/13/2021 21:37	WG1788088
4,6-Dinitro-2-methylphenol	U		0.125	0.551	1	12/13/2021 21:37	WG1788088
2,4-Dinitrophenol	U		0.129	0.551	1	12/13/2021 21:37	WG1788088
2-Methylphenol	U		0.0166	0.551	1	12/13/2021 21:37	WG1788088
3&4-Methyl Phenol	0.0285	J	0.0172	0.551	1	12/13/2021 21:37	WG1788088
2-Nitrophenol	U		0.0197	0.551	1	12/13/2021 21:37	WG1788088
4-Nitrophenol	U		0.0172	0.551	1	12/13/2021 21:37	WG1788088
Pentachlorophenol	U		0.0148	0.551	1	12/13/2021 21:37	WG1788088
Phenol	U		0.0222	0.551	1	12/13/2021 21:37	WG1788088
2,4,6-Trichlorophenol	U		0.0177	0.551	1	12/13/2021 21:37	WG1788088
2,4,5-Trichlorophenol	U		0.0187	0.551	1	12/13/2021 21:37	WG1788088

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	70.6			12.0-120		12/13/2021 21:37	WG1788088
(S) Phenol-d5	66.4			10.0-120		12/13/2021 21:37	WG1788088
(S) Nitrobenzene-d5	59.2			10.0-122		12/13/2021 21:37	WG1788088
(S) 2-Fluorobiphenyl	70.4			15.0-120		12/13/2021 21:37	WG1788088
(S) 2,4,6-Tribromophenol	86.9			10.0-127		12/13/2021 21:37	WG1788088
(S) p-Terphenyl-d14	77.6			10.0-120		12/13/2021 21:37	WG1788088

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00381	0.00993	1	12/10/2021 16:37	WG1787327
Acenaphthene	U		0.00346	0.00993	1	12/10/2021 16:37	WG1787327
Acenaphthylene	U		0.00358	0.00993	1	12/10/2021 16:37	WG1787327
Benzo(a)anthracene	U		0.00286	0.00993	1	12/10/2021 16:37	WG1787327
Benzo(a)pyrene	U		0.00296	0.00993	1	12/10/2021 16:37	WG1787327
Benzo(b)fluoranthene	U		0.00253	0.00993	1	12/10/2021 16:37	WG1787327
Benzo(g,h,i)perylene	0.00452	J	0.00293	0.00993	1	12/10/2021 16:37	WG1787327
Benzo(k)fluoranthene	U		0.00356	0.00993	1	12/10/2021 16:37	WG1787327
Chrysene	U		0.00384	0.00993	1	12/10/2021 16:37	WG1787327
Dibenz(a,h)anthracene	U		0.00285	0.00993	1	12/10/2021 16:37	WG1787327
Fluoranthene	U		0.00376	0.00993	1	12/10/2021 16:37	WG1787327
Fluorene	U		0.00339	0.00993	1	12/10/2021 16:37	WG1787327
Indeno(1,2,3-cd)pyrene	U		0.00300	0.00993	1	12/10/2021 16:37	WG1787327
Naphthalene	U		0.00675	0.0331	1	12/10/2021 16:37	WG1787327
Phenanthrene	U		0.00382	0.00993	1	12/10/2021 16:37	WG1787327
Pyrene	0.00358	J	0.00331	0.00993	1	12/10/2021 16:37	WG1787327
1-Methylnaphthalene	U		0.00743	0.0331	1	12/10/2021 16:37	WG1787327
2-Methylnaphthalene	U		0.00707	0.0331	1	12/10/2021 16:37	WG1787327
2-Chloronaphthalene	U		0.00771	0.0331	1	12/10/2021 16:37	WG1787327
(S) Nitrobenzene-d5	77.7			14.0-149		12/10/2021 16:37	WG1787327
(S) 2-Fluorobiphenyl	81.4			34.0-125		12/10/2021 16:37	WG1787327
(S) p-Terphenyl-d14	87.5			23.0-120		12/10/2021 16:37	WG1787327

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	51.3		1	12/10/2021 13:36	WG1786786

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0351	0.0779	1	12/15/2021 10:29	WG1786865

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U	J4	0.323	5.84	5	01/10/2022 19:56	WG1793089
Arsenic	2.62		0.195	1.95	5	01/10/2022 19:56	WG1793089
Barium	36000		118	1950	2000	01/10/2022 23:08	WG1793089
Cadmium	U		0.167	1.95	5	01/10/2022 19:56	WG1793089
Chromium	13.7	B	0.577	9.74	5	01/10/2022 19:56	WG1793089
Copper	19.4		0.257	9.74	5	01/10/2022 19:56	WG1793089
Lead	4.73		0.193	3.90	5	01/10/2022 19:56	WG1793089
Selenium	U		0.351	4.87	5	01/10/2022 21:59	WG1793089
Silver	U		0.169	0.974	5	01/10/2022 19:56	WG1793089
Zinc	34.4	J	1.44	48.7	5	01/10/2022 19:56	WG1793089

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	4.90	J	2.46	7.25	25	12/11/2021 19:47	WG1787827
(S) a,a,a-Trifluorotoluene(FID)	93.2			77.0-120		12/11/2021 19:47	WG1787827

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	2.55	C5 J4	0.106	0.145	1	12/11/2021 18:20	WG1787906
Acrylonitrile	U		0.0105	0.0362	1	12/11/2021 18:20	WG1787906
Benzene	0.00210	B J	0.00135	0.00290	1	12/11/2021 18:20	WG1787906
Bromobenzene	U		0.00261	0.0362	1	12/11/2021 18:20	WG1787906
Bromodichloromethane	U		0.00210	0.00725	1	12/11/2021 18:20	WG1787906
Bromoform	U		0.00339	0.0725	1	12/11/2021 18:20	WG1787906
Bromomethane	U		0.00571	0.0362	1	12/11/2021 18:20	WG1787906
n-Butylbenzene	U		0.0152	0.0362	1	12/11/2021 18:20	WG1787906
sec-Butylbenzene	U		0.00835	0.0362	1	12/11/2021 18:20	WG1787906
tert-Butylbenzene	U		0.00565	0.0145	1	12/11/2021 18:20	WG1787906
Carbon tetrachloride	U		0.00260	0.0145	1	12/11/2021 18:20	WG1787906
Chlorobenzene	U		0.000609	0.00725	1	12/11/2021 18:20	WG1787906
Chlorodibromomethane	U		0.00177	0.00725	1	12/11/2021 18:20	WG1787906
Chloroethane	U		0.00493	0.0145	1	12/11/2021 18:20	WG1787906
Chloroform	U		0.00299	0.00725	1	12/11/2021 18:20	WG1787906
Chloromethane	U		0.0126	0.0362	1	12/11/2021 18:20	WG1787906
2-Chlorotoluene	U		0.00251	0.00725	1	12/11/2021 18:20	WG1787906
4-Chlorotoluene	U		0.00130	0.0145	1	12/11/2021 18:20	WG1787906
1,2-Dibromo-3-Chloropropane	U		0.0113	0.0725	1	12/11/2021 18:20	WG1787906
1,2-Dibromoethane	U		0.00188	0.00725	1	12/11/2021 18:20	WG1787906
Dibromomethane	U		0.00217	0.0145	1	12/11/2021 18:20	WG1787906
1,2-Dichlorobenzene	U		0.00123	0.0145	1	12/11/2021 18:20	WG1787906
1,3-Dichlorobenzene	U		0.00174	0.0145	1	12/11/2021 18:20	WG1787906
1,4-Dichlorobenzene	U		0.00203	0.0145	1	12/11/2021 18:20	WG1787906



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00467	0.00725	1	12/11/2021 18:20	WG1787906
1,1-Dichloroethane	U		0.00142	0.00725	1	12/11/2021 18:20	WG1787906
1,2-Dichloroethane	U		0.00188	0.00725	1	12/11/2021 18:20	WG1787906
1,1-Dichloroethene	U		0.00176	0.00725	1	12/11/2021 18:20	WG1787906
cis-1,2-Dichloroethene	U		0.00213	0.00725	1	12/11/2021 18:20	WG1787906
trans-1,2-Dichloroethene	U		0.00302	0.0145	1	12/11/2021 18:20	WG1787906
1,2-Dichloropropane	U		0.00412	0.0145	1	12/11/2021 18:20	WG1787906
1,1-Dichloropropene	U		0.00235	0.00725	1	12/11/2021 18:20	WG1787906
1,3-Dichloropropane	U		0.00145	0.0145	1	12/11/2021 18:20	WG1787906
cis-1,3-Dichloropropene	U		0.00219	0.00725	1	12/11/2021 18:20	WG1787906
trans-1,3-Dichloropropene	U		0.00331	0.0145	1	12/11/2021 18:20	WG1787906
2,2-Dichloropropane	U		0.00400	0.00725	1	12/11/2021 18:20	WG1787906
Di-isopropyl ether	U		0.00119	0.00290	1	12/11/2021 18:20	WG1787906
Ethylbenzene	U		0.00214	0.00725	1	12/11/2021 18:20	WG1787906
Hexachloro-1,3-butadiene	U		0.0174	0.0725	1	12/11/2021 18:20	WG1787906
Isopropylbenzene	U		0.00123	0.00725	1	12/11/2021 18:20	WG1787906
p-Isopropyltoluene	U		0.00739	0.0145	1	12/11/2021 18:20	WG1787906
2-Butanone (MEK)	U		0.184	0.290	1	12/11/2021 18:20	WG1787906
Methylene Chloride	U		0.0193	0.0725	1	12/11/2021 18:20	WG1787906
4-Methyl-2-pentanone (MIBK)	U		0.00661	0.0725	1	12/11/2021 18:20	WG1787906
Methyl tert-butyl ether	U		0.00101	0.00290	1	12/11/2021 18:20	WG1787906
Naphthalene	U		0.0141	0.0362	1	12/11/2021 18:20	WG1787906
n-Propylbenzene	U		0.00275	0.0145	1	12/11/2021 18:20	WG1787906
Styrene	U		0.000664	0.0362	1	12/11/2021 18:20	WG1787906
1,1,1,2-Tetrachloroethane	U		0.00275	0.00725	1	12/11/2021 18:20	WG1787906
1,1,2,2-Tetrachloroethane	U		0.00202	0.00725	1	12/11/2021 18:20	WG1787906
1,1,2-Trichlorotrifluoroethane	U	C3 J3 J4	0.00219	0.00725	1	12/11/2021 18:20	WG1787906
Tetrachloroethene	U		0.00260	0.00725	1	12/11/2021 18:20	WG1787906
Toluene	U		0.00377	0.0145	1	12/11/2021 18:20	WG1787906
1,2,3-Trichlorobenzene	U	C4	0.0213	0.0362	1	12/11/2021 18:20	WG1787906
1,2,4-Trichlorobenzene	U		0.0128	0.0362	1	12/11/2021 18:20	WG1787906
1,1,1-Trichloroethane	U		0.00268	0.00725	1	12/11/2021 18:20	WG1787906
1,1,2-Trichloroethane	U		0.00173	0.00725	1	12/11/2021 18:20	WG1787906
Trichloroethene	U		0.00169	0.00290	1	12/11/2021 18:20	WG1787906
Trichlorofluoromethane	U	C3	0.00240	0.00725	1	12/11/2021 18:20	WG1787906
1,2,3-Trichloropropane	U		0.00470	0.0362	1	12/11/2021 18:20	WG1787906
1,2,4-Trimethylbenzene	U		0.00458	0.0145	1	12/11/2021 18:20	WG1787906
1,2,3-Trimethylbenzene	U		0.00458	0.0145	1	12/11/2021 18:20	WG1787906
1,3,5-Trimethylbenzene	U		0.00580	0.0145	1	12/11/2021 18:20	WG1787906
Vinyl chloride	U		0.00336	0.00725	1	12/11/2021 18:20	WG1787906
Xylenes, Total	0.00357	J	0.00255	0.0188	1	12/11/2021 18:20	WG1787906
(S) Toluene-d8	105			75.0-131		12/11/2021 18:20	WG1787906
(S) 4-Bromofluorobenzene	99.4			67.0-138		12/11/2021 18:20	WG1787906
(S) 1,2-Dichloroethane-d4	103			70.0-130		12/11/2021 18:20	WG1787906

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		2.59	7.79	1	12/12/2021 18:23	WG1787621
Residual Range Organics (RRO)	U		6.49	19.5	1	12/12/2021 18:23	WG1787621
(S) o-Terphenyl	43.6			18.0-148		12/12/2021 18:23	WG1787621

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00448	0.0117	1	12/10/2021 16:57	WG1787327
Acenaphthene	U		0.00407	0.0117	1	12/10/2021 16:57	WG1787327
Acenaphthylene	U		0.00421	0.0117	1	12/10/2021 16:57	WG1787327
Benzo(a)anthracene	U		0.00337	0.0117	1	12/10/2021 16:57	WG1787327
Benzo(a)pyrene	U		0.00349	0.0117	1	12/10/2021 16:57	WG1787327
Benzo(b)fluoranthene	U		0.00298	0.0117	1	12/10/2021 16:57	WG1787327
Benzo(g,h,i)perylene	U		0.00345	0.0117	1	12/10/2021 16:57	WG1787327
Benzo(k)fluoranthene	U		0.00419	0.0117	1	12/10/2021 16:57	WG1787327
Chrysene	U		0.00452	0.0117	1	12/10/2021 16:57	WG1787327
Dibenz(a,h)anthracene	U		0.00335	0.0117	1	12/10/2021 16:57	WG1787327
Fluoranthene	U		0.00442	0.0117	1	12/10/2021 16:57	WG1787327
Fluorene	U		0.00399	0.0117	1	12/10/2021 16:57	WG1787327
Indeno(1,2,3-cd)pyrene	U		0.00353	0.0117	1	12/10/2021 16:57	WG1787327
Naphthalene	U		0.00795	0.0390	1	12/10/2021 16:57	WG1787327
Phenanthrene	U		0.00450	0.0117	1	12/10/2021 16:57	WG1787327
Pyrene	U		0.00390	0.0117	1	12/10/2021 16:57	WG1787327
1-Methylnaphthalene	U		0.00875	0.0390	1	12/10/2021 16:57	WG1787327
2-Methylnaphthalene	U		0.00832	0.0390	1	12/10/2021 16:57	WG1787327
2-Chloronaphthalene	U		0.00908	0.0390	1	12/10/2021 16:57	WG1787327
(S) Nitrobenzene-d5	82.9			14.0-149		12/10/2021 16:57	WG1787327
(S) 2-Fluorobiphenyl	84.4			34.0-125		12/10/2021 16:57	WG1787327
(S) p-Terphenyl-d14	87.2			23.0-120		12/10/2021 16:57	WG1787327

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		12/26/2021 12:12:22 PM	WG1794817
Fluid	1		12/26/2021 12:12:22 PM	WG1794817
Initial pH	8.76		12/26/2021 12:12:22 PM	WG1794817
Final pH	5.14		12/26/2021 12:12:22 PM	WG1794817

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Metals (ICP) by Method 6010D

Analyte	Result mg/l	Qualifier	RDL mg/l	Limit mg/l	Dilution	Analysis date / time	Batch
Barium	2.56		0.100	100	1	12/28/2021 21:02	WG1795222

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	85.2		1	12/10/2021 13:36	WG1786786

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0211	0.0469	1	12/15/2021 10:31	WG1786865

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	U	<u>J4</u>	0.195	3.52	5	01/10/2022 20:46	WG1793089
Arsenic	0.964	<u>J</u>	0.117	1.17	5	01/10/2022 20:46	WG1793089
Barium	58.1		0.178	2.93	5	01/10/2022 20:46	WG1793089
Cadmium	U		0.100	1.17	5	01/10/2022 20:46	WG1793089
Chromium	8.28	<u>B</u>	0.347	5.87	5	01/10/2022 20:46	WG1793089
Copper	11.2		0.155	5.87	5	01/10/2022 20:46	WG1793089
Lead	1.46	<u>J</u>	0.116	2.35	5	01/10/2022 20:46	WG1793089
Selenium	U		0.211	2.93	5	01/10/2022 22:02	WG1793089
Silver	U		0.101	0.587	5	01/10/2022 20:46	WG1793089
Zinc	21.6	<u>J</u>	0.868	29.3	5	01/10/2022 20:46	WG1793089

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		1.14	3.37	25	12/11/2021 20:09	WG1787827
(S) a,a,a-Trifluorotoluene(FID)	92.3			77.0-120		12/11/2021 20:09	WG1787827

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U	<u>J4</u>	0.0492	0.0674	1	12/11/2021 18:38	WG1787906
Acrylonitrile	U		0.00486	0.0168	1	12/11/2021 18:38	WG1787906
Benzene	0.000900	<u>B J</u>	0.000629	0.00135	1	12/11/2021 18:38	WG1787906
Bromobenzene	U		0.00121	0.0168	1	12/11/2021 18:38	WG1787906
Bromodichloromethane	U		0.000977	0.00337	1	12/11/2021 18:38	WG1787906
Bromoform	U		0.00158	0.0337	1	12/11/2021 18:38	WG1787906
Bromomethane	U		0.00265	0.0168	1	12/11/2021 18:38	WG1787906
n-Butylbenzene	U		0.00707	0.0168	1	12/11/2021 18:38	WG1787906
sec-Butylbenzene	U		0.00388	0.0168	1	12/11/2021 18:38	WG1787906
tert-Butylbenzene	U		0.00263	0.00674	1	12/11/2021 18:38	WG1787906
Carbon tetrachloride	U		0.00121	0.00674	1	12/11/2021 18:38	WG1787906
Chlorobenzene	U		0.000283	0.00337	1	12/11/2021 18:38	WG1787906
Chlorodibromomethane	U		0.000825	0.00337	1	12/11/2021 18:38	WG1787906
Chloroethane	U		0.00229	0.00674	1	12/11/2021 18:38	WG1787906
Chloroform	U		0.00139	0.00337	1	12/11/2021 18:38	WG1787906
Chloromethane	U		0.00586	0.0168	1	12/11/2021 18:38	WG1787906
2-Chlorotoluene	U		0.00117	0.00337	1	12/11/2021 18:38	WG1787906
4-Chlorotoluene	U		0.000606	0.00674	1	12/11/2021 18:38	WG1787906
1,2-Dibromo-3-Chloropropane	U		0.00526	0.0337	1	12/11/2021 18:38	WG1787906
1,2-Dibromoethane	U		0.000873	0.00337	1	12/11/2021 18:38	WG1787906
Dibromomethane	U		0.00101	0.00674	1	12/11/2021 18:38	WG1787906
1,2-Dichlorobenzene	U		0.000573	0.00674	1	12/11/2021 18:38	WG1787906
1,3-Dichlorobenzene	U		0.000809	0.00674	1	12/11/2021 18:38	WG1787906
1,4-Dichlorobenzene	U		0.000943	0.00674	1	12/11/2021 18:38	WG1787906



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00217	0.00337	1	12/11/2021 18:38	WG1787906
1,1-Dichloroethane	U		0.000662	0.00337	1	12/11/2021 18:38	WG1787906
1,2-Dichloroethane	U		0.000875	0.00337	1	12/11/2021 18:38	WG1787906
1,1-Dichloroethene	U		0.000817	0.00337	1	12/11/2021 18:38	WG1787906
cis-1,2-Dichloroethene	U		0.000989	0.00337	1	12/11/2021 18:38	WG1787906
trans-1,2-Dichloroethene	U		0.00140	0.00674	1	12/11/2021 18:38	WG1787906
1,2-Dichloropropane	U		0.00191	0.00674	1	12/11/2021 18:38	WG1787906
1,1-Dichloropropene	U		0.00109	0.00337	1	12/11/2021 18:38	WG1787906
1,3-Dichloropropane	U		0.000675	0.00674	1	12/11/2021 18:38	WG1787906
cis-1,3-Dichloropropene	U		0.00102	0.00337	1	12/11/2021 18:38	WG1787906
trans-1,3-Dichloropropene	U		0.00154	0.00674	1	12/11/2021 18:38	WG1787906
2,2-Dichloropropane	U		0.00186	0.00337	1	12/11/2021 18:38	WG1787906
Di-isopropyl ether	U		0.000553	0.00135	1	12/11/2021 18:38	WG1787906
Ethylbenzene	U		0.000993	0.00337	1	12/11/2021 18:38	WG1787906
Hexachloro-1,3-butadiene	U		0.00809	0.0337	1	12/11/2021 18:38	WG1787906
Isopropylbenzene	U		0.000573	0.00337	1	12/11/2021 18:38	WG1787906
p-Isopropyltoluene	U		0.00344	0.00674	1	12/11/2021 18:38	WG1787906
2-Butanone (MEK)	U		0.0856	0.135	1	12/11/2021 18:38	WG1787906
Methylene Chloride	U		0.00895	0.0337	1	12/11/2021 18:38	WG1787906
4-Methyl-2-pentanone (MIBK)	U		0.00307	0.0337	1	12/11/2021 18:38	WG1787906
Methyl tert-butyl ether	U		0.000472	0.00135	1	12/11/2021 18:38	WG1787906
Naphthalene	U		0.00658	0.0168	1	12/11/2021 18:38	WG1787906
n-Propylbenzene	U		0.00128	0.00674	1	12/11/2021 18:38	WG1787906
Styrene	U		0.000309	0.0168	1	12/11/2021 18:38	WG1787906
1,1,1,2-Tetrachloroethane	U		0.00128	0.00337	1	12/11/2021 18:38	WG1787906
1,1,2,2-Tetrachloroethane	U		0.000937	0.00337	1	12/11/2021 18:38	WG1787906
1,1,2-Trichlorotrifluoroethane	U	C3 J3 J4	0.00102	0.00337	1	12/11/2021 18:38	WG1787906
Tetrachloroethene	U		0.00121	0.00337	1	12/11/2021 18:38	WG1787906
Toluene	U		0.00175	0.00674	1	12/11/2021 18:38	WG1787906
1,2,3-Trichlorobenzene	U	C4	0.00988	0.0168	1	12/11/2021 18:38	WG1787906
1,2,4-Trichlorobenzene	U		0.00593	0.0168	1	12/11/2021 18:38	WG1787906
1,1,1-Trichloroethane	U		0.00124	0.00337	1	12/11/2021 18:38	WG1787906
1,1,2-Trichloroethane	U		0.000805	0.00337	1	12/11/2021 18:38	WG1787906
Trichloroethene	U		0.000787	0.00135	1	12/11/2021 18:38	WG1787906
Trichlorofluoromethane	U	C3	0.00111	0.00337	1	12/11/2021 18:38	WG1787906
1,2,3-Trichloropropane	U		0.00218	0.0168	1	12/11/2021 18:38	WG1787906
1,2,4-Trimethylbenzene	U		0.00213	0.00674	1	12/11/2021 18:38	WG1787906
1,2,3-Trimethylbenzene	U		0.00213	0.00674	1	12/11/2021 18:38	WG1787906
1,3,5-Trimethylbenzene	U		0.00270	0.00674	1	12/11/2021 18:38	WG1787906
Vinyl chloride	U		0.00156	0.00337	1	12/11/2021 18:38	WG1787906
Xylenes, Total	U		0.00119	0.00876	1	12/11/2021 18:38	WG1787906
(S) Toluene-d8	107			75.0-131		12/11/2021 18:38	WG1787906
(S) 4-Bromofluorobenzene	99.9			67.0-138		12/11/2021 18:38	WG1787906
(S) 1,2-Dichloroethane-d4	101			70.0-130		12/11/2021 18:38	WG1787906

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	1.60	J	1.56	4.69	1	12/12/2021 18:36	WG1787621
Residual Range Organics (RRO)	U		3.91	11.7	1	12/12/2021 18:36	WG1787621
(S) o-Terphenyl	29.2			18.0-148		12/12/2021 18:36	WG1787621

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00270	0.00704	1	12/10/2021 17:16	WG1787327
Acenaphthene	U		0.00245	0.00704	1	12/10/2021 17:16	WG1787327
Acenaphthylene	U		0.00253	0.00704	1	12/10/2021 17:16	WG1787327
Benzo(a)anthracene	U		0.00203	0.00704	1	12/10/2021 17:16	WG1787327
Benzo(a)pyrene	U		0.00210	0.00704	1	12/10/2021 17:16	WG1787327
Benzo(b)fluoranthene	U		0.00180	0.00704	1	12/10/2021 17:16	WG1787327
Benzo(g,h,i)perylene	U		0.00208	0.00704	1	12/10/2021 17:16	WG1787327
Benzo(k)fluoranthene	U		0.00252	0.00704	1	12/10/2021 17:16	WG1787327
Chrysene	U		0.00272	0.00704	1	12/10/2021 17:16	WG1787327
Dibenz(a,h)anthracene	U		0.00202	0.00704	1	12/10/2021 17:16	WG1787327
Fluoranthene	U		0.00266	0.00704	1	12/10/2021 17:16	WG1787327
Fluorene	U		0.00241	0.00704	1	12/10/2021 17:16	WG1787327
Indeno(1,2,3-cd)pyrene	U		0.00212	0.00704	1	12/10/2021 17:16	WG1787327
Naphthalene	U		0.00479	0.0235	1	12/10/2021 17:16	WG1787327
Phenanthrene	U		0.00271	0.00704	1	12/10/2021 17:16	WG1787327
Pyrene	U		0.00235	0.00704	1	12/10/2021 17:16	WG1787327
1-Methylnaphthalene	U		0.00527	0.0235	1	12/10/2021 17:16	WG1787327
2-Methylnaphthalene	U		0.00501	0.0235	1	12/10/2021 17:16	WG1787327
2-Chloronaphthalene	U		0.00547	0.0235	1	12/10/2021 17:16	WG1787327
(S) Nitrobenzene-d5	82.8			14.0-149		12/10/2021 17:16	WG1787327
(S) 2-Fluorobiphenyl	90.1			34.0-125		12/10/2021 17:16	WG1787327
(S) p-Terphenyl-d14	92.2			23.0-120		12/10/2021 17:16	WG1787327

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	79.6		1	12/10/2021 13:36	WG1786786

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0226	0.0502	1	12/15/2021 10:34	WG1786865

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	U	J4	0.209	3.77	5	01/10/2022 20:03	WG1793089
Arsenic	2.38		0.126	1.26	5	01/10/2022 20:03	WG1793089
Barium	96.7		0.191	3.14	5	01/10/2022 20:03	WG1793089
Cadmium	U		0.107	1.26	5	01/10/2022 20:03	WG1793089
Chromium	21.1		0.372	6.28	5	01/10/2022 20:03	WG1793089
Copper	18.6		0.166	6.28	5	01/10/2022 20:03	WG1793089
Lead	4.39		0.124	2.51	5	01/10/2022 20:03	WG1793089
Selenium	U		0.226	3.14	5	01/10/2022 22:16	WG1793089
Silver	U		0.109	0.628	5	01/10/2022 20:03	WG1793089
Zinc	39.3		0.930	31.4	5	01/10/2022 20:03	WG1793089

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	U		1.28	3.78	25	12/11/2021 20:31	WG1787827
(S) a,a,a-Trifluorotoluene(FID)	94.8			77.0-120		12/11/2021 20:31	WG1787827

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U	J4	0.0552	0.0756	1	12/11/2021 18:58	WG1787906
Acrylonitrile	U		0.00546	0.0189	1	12/11/2021 18:58	WG1787906
Benzene	0.00121	B J	0.000706	0.00151	1	12/11/2021 18:58	WG1787906
Bromobenzene	U		0.00136	0.0189	1	12/11/2021 18:58	WG1787906
Bromodichloromethane	U		0.00110	0.00378	1	12/11/2021 18:58	WG1787906
Bromoform	U		0.00177	0.0378	1	12/11/2021 18:58	WG1787906
Bromomethane	U		0.00298	0.0189	1	12/11/2021 18:58	WG1787906
n-Butylbenzene	U		0.00794	0.0189	1	12/11/2021 18:58	WG1787906
sec-Butylbenzene	U		0.00436	0.0189	1	12/11/2021 18:58	WG1787906
tert-Butylbenzene	U		0.00295	0.00756	1	12/11/2021 18:58	WG1787906
Carbon tetrachloride	U		0.00136	0.00756	1	12/11/2021 18:58	WG1787906
Chlorobenzene	U		0.000318	0.00378	1	12/11/2021 18:58	WG1787906
Chlorodibromomethane	U		0.000926	0.00378	1	12/11/2021 18:58	WG1787906
Chloroethane	U		0.00257	0.00756	1	12/11/2021 18:58	WG1787906
Chloroform	U		0.00156	0.00378	1	12/11/2021 18:58	WG1787906
Chloromethane	U		0.00658	0.0189	1	12/11/2021 18:58	WG1787906
2-Chlorotoluene	U		0.00131	0.00378	1	12/11/2021 18:58	WG1787906
4-Chlorotoluene	U		0.000681	0.00756	1	12/11/2021 18:58	WG1787906
1,2-Dibromo-3-Chloropropane	U		0.00590	0.0378	1	12/11/2021 18:58	WG1787906
1,2-Dibromoethane	U		0.000980	0.00378	1	12/11/2021 18:58	WG1787906
Dibromomethane	U		0.00113	0.00756	1	12/11/2021 18:58	WG1787906
1,2-Dichlorobenzene	U		0.000643	0.00756	1	12/11/2021 18:58	WG1787906
1,3-Dichlorobenzene	U		0.000908	0.00756	1	12/11/2021 18:58	WG1787906
1,4-Dichlorobenzene	U		0.00106	0.00756	1	12/11/2021 18:58	WG1787906



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00244	0.00378	1	12/11/2021 18:58	WG1787906
1,1-Dichloroethane	U		0.000743	0.00378	1	12/11/2021 18:58	WG1787906
1,2-Dichloroethane	U		0.000982	0.00378	1	12/11/2021 18:58	WG1787906
1,1-Dichloroethene	U		0.000917	0.00378	1	12/11/2021 18:58	WG1787906
cis-1,2-Dichloroethene	U		0.00111	0.00378	1	12/11/2021 18:58	WG1787906
trans-1,2-Dichloroethene	U		0.00157	0.00756	1	12/11/2021 18:58	WG1787906
1,2-Dichloropropane	U		0.00215	0.00756	1	12/11/2021 18:58	WG1787906
1,1-Dichloropropene	U		0.00122	0.00378	1	12/11/2021 18:58	WG1787906
1,3-Dichloropropane	U		0.000758	0.00756	1	12/11/2021 18:58	WG1787906
cis-1,3-Dichloropropene	U		0.00115	0.00378	1	12/11/2021 18:58	WG1787906
trans-1,3-Dichloropropene	U		0.00172	0.00756	1	12/11/2021 18:58	WG1787906
2,2-Dichloropropane	U		0.00209	0.00378	1	12/11/2021 18:58	WG1787906
Di-isopropyl ether	U		0.000620	0.00151	1	12/11/2021 18:58	WG1787906
Ethylbenzene	0.00121	J	0.00111	0.00378	1	12/11/2021 18:58	WG1787906
Hexachloro-1,3-butadiene	U		0.00908	0.0378	1	12/11/2021 18:58	WG1787906
Isopropylbenzene	U		0.000643	0.00378	1	12/11/2021 18:58	WG1787906
p-Isopropyltoluene	U		0.00386	0.00756	1	12/11/2021 18:58	WG1787906
2-Butanone (MEK)	U		0.0961	0.151	1	12/11/2021 18:58	WG1787906
Methylene Chloride	U		0.0100	0.0378	1	12/11/2021 18:58	WG1787906
4-Methyl-2-pentanone (MIBK)	U		0.00345	0.0378	1	12/11/2021 18:58	WG1787906
Methyl tert-butyl ether	U		0.000529	0.00151	1	12/11/2021 18:58	WG1787906
Naphthalene	U		0.00738	0.0189	1	12/11/2021 18:58	WG1787906
n-Propylbenzene	U		0.00144	0.00756	1	12/11/2021 18:58	WG1787906
Styrene	U		0.000346	0.0189	1	12/11/2021 18:58	WG1787906
1,1,1,2-Tetrachloroethane	U		0.00143	0.00378	1	12/11/2021 18:58	WG1787906
1,1,2,2-Tetrachloroethane	U		0.00105	0.00378	1	12/11/2021 18:58	WG1787906
1,1,2-Trichlorotrifluoroethane	U	C3 J3 J4	0.00114	0.00378	1	12/11/2021 18:58	WG1787906
Tetrachloroethene	U		0.00136	0.00378	1	12/11/2021 18:58	WG1787906
Toluene	U		0.00197	0.00756	1	12/11/2021 18:58	WG1787906
1,2,3-Trichlorobenzene	U	C4	0.0111	0.0189	1	12/11/2021 18:58	WG1787906
1,2,4-Trichlorobenzene	U		0.00666	0.0189	1	12/11/2021 18:58	WG1787906
1,1,1-Trichloroethane	U		0.00140	0.00378	1	12/11/2021 18:58	WG1787906
1,1,2-Trichloroethane	U		0.000903	0.00378	1	12/11/2021 18:58	WG1787906
Trichloroethene	U		0.000883	0.00151	1	12/11/2021 18:58	WG1787906
Trichlorofluoromethane	U	C3	0.00125	0.00378	1	12/11/2021 18:58	WG1787906
1,2,3-Trichloropropane	U		0.00245	0.0189	1	12/11/2021 18:58	WG1787906
1,2,4-Trimethylbenzene	U		0.00239	0.00756	1	12/11/2021 18:58	WG1787906
1,2,3-Trimethylbenzene	U		0.00239	0.00756	1	12/11/2021 18:58	WG1787906
1,3,5-Trimethylbenzene	U		0.00303	0.00756	1	12/11/2021 18:58	WG1787906
Vinyl chloride	U		0.00175	0.00378	1	12/11/2021 18:58	WG1787906
Xylenes, Total	0.00738	J	0.00133	0.00983	1	12/11/2021 18:58	WG1787906
(S) Toluene-d8	107			75.0-131		12/11/2021 18:58	WG1787906
(S) 4-Bromofluorobenzene	99.0			67.0-138		12/11/2021 18:58	WG1787906
(S) 1,2-Dichloroethane-d4	101			70.0-130		12/11/2021 18:58	WG1787906

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	17.7		1.67	5.02	1	12/13/2021 11:42	WG1787621
Residual Range Organics (RRO)	81.2		4.18	12.6	1	12/13/2021 11:42	WG1787621
(S) o-Terphenyl	63.6			18.0-148		12/13/2021 11:42	WG1787621

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00289	0.00754	1	12/10/2021 22:12	WG1787327
Acenaphthene	U		0.00263	0.00754	1	12/10/2021 22:12	WG1787327
Acenaphthylene	U		0.00271	0.00754	1	12/10/2021 22:12	WG1787327
Benzo(a)anthracene	0.00309	U	0.00217	0.00754	1	12/10/2021 22:12	WG1787327
Benzo(a)pyrene	0.00343	U	0.00225	0.00754	1	12/10/2021 22:12	WG1787327
Benzo(b)fluoranthene	0.00423	U	0.00192	0.00754	1	12/10/2021 22:12	WG1787327
Benzo(g,h,i)perylene	0.00536	U	0.00222	0.00754	1	12/10/2021 22:12	WG1787327
Benzo(k)fluoranthene	U		0.00270	0.00754	1	12/10/2021 22:12	WG1787327
Chrysene	0.00348	U	0.00291	0.00754	1	12/10/2021 22:12	WG1787327
Dibenz(a,h)anthracene	U		0.00216	0.00754	1	12/10/2021 22:12	WG1787327
Fluoranthene	0.00495	U	0.00285	0.00754	1	12/10/2021 22:12	WG1787327
Fluorene	U		0.00258	0.00754	1	12/10/2021 22:12	WG1787327
Indeno(1,2,3-cd)pyrene	0.00301	U	0.00227	0.00754	1	12/10/2021 22:12	WG1787327
Naphthalene	U		0.00513	0.0251	1	12/10/2021 22:12	WG1787327
Phenanthrene	U		0.00290	0.00754	1	12/10/2021 22:12	WG1787327
Pyrene	0.00574	U	0.00251	0.00754	1	12/10/2021 22:12	WG1787327
1-Methylnaphthalene	U		0.00564	0.0251	1	12/10/2021 22:12	WG1787327
2-Methylnaphthalene	U		0.00536	0.0251	1	12/10/2021 22:12	WG1787327
2-Chloronaphthalene	U		0.00585	0.0251	1	12/10/2021 22:12	WG1787327
(S) Nitrobenzene-d5	80.8			14.0-149		12/10/2021 22:12	WG1787327
(S) 2-Fluorobiphenyl	84.0			34.0-125		12/10/2021 22:12	WG1787327
(S) p-Terphenyl-d14	83.6			23.0-120		12/10/2021 22:12	WG1787327

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.5		1	12/10/2021 13:36	WG1786786

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	0.0444		0.0193	0.0428	1	12/15/2021 10:36	WG1786865

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U	J4	0.178	3.21	5	01/10/2022 20:06	WG1793089
Arsenic	0.695	J	0.107	1.07	5	01/10/2022 20:06	WG1793089
Barium	75.8		0.163	2.67	5	01/10/2022 20:06	WG1793089
Cadmium	U		0.0915	1.07	5	01/10/2022 20:06	WG1793089
Chromium	5.34	B J	0.317	5.35	5	01/10/2022 20:06	WG1793089
Copper	6.82		0.141	5.35	5	01/10/2022 20:06	WG1793089
Lead	1.62	J	0.106	2.14	5	01/10/2022 20:06	WG1793089
Selenium	U		0.193	2.67	5	01/10/2022 22:19	WG1793089
Silver	U		0.0925	0.535	5	01/10/2022 20:06	WG1793089
Zinc	19.3	J	0.792	26.7	5	01/10/2022 20:06	WG1793089

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.95	B J J3	0.967	2.85	25	12/11/2021 20:10	WG1787808
(S) a,a,a-Trifluorotoluene(FID)	92.8			77.0-120		12/11/2021 20:10	WG1787808

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	J4	0.0416	0.0570	1	12/11/2021 19:16	WG1787906
Acrylonitrile	U		0.00412	0.0143	1	12/11/2021 19:16	WG1787906
Benzene	0.000819	B J	0.000532	0.00114	1	12/11/2021 19:16	WG1787906
Bromobenzene	U		0.00103	0.0143	1	12/11/2021 19:16	WG1787906
Bromodichloromethane	U		0.000827	0.00285	1	12/11/2021 19:16	WG1787906
Bromoform	U		0.00133	0.0285	1	12/11/2021 19:16	WG1787906
Bromomethane	U		0.00225	0.0143	1	12/11/2021 19:16	WG1787906
n-Butylbenzene	U		0.00599	0.0143	1	12/11/2021 19:16	WG1787906
sec-Butylbenzene	U		0.00328	0.0143	1	12/11/2021 19:16	WG1787906
tert-Butylbenzene	U		0.00222	0.00570	1	12/11/2021 19:16	WG1787906
Carbon tetrachloride	U		0.00102	0.00570	1	12/11/2021 19:16	WG1787906
Chlorobenzene	U		0.000239	0.00285	1	12/11/2021 19:16	WG1787906
Chlorodibromomethane	U		0.000698	0.00285	1	12/11/2021 19:16	WG1787906
Chloroethane	U		0.00194	0.00570	1	12/11/2021 19:16	WG1787906
Chloroform	U		0.00117	0.00285	1	12/11/2021 19:16	WG1787906
Chloromethane	U		0.00496	0.0143	1	12/11/2021 19:16	WG1787906
2-Chlorotoluene	U		0.000986	0.00285	1	12/11/2021 19:16	WG1787906
4-Chlorotoluene	U		0.000513	0.00570	1	12/11/2021 19:16	WG1787906
1,2-Dibromo-3-Chloropropane	U		0.00445	0.0285	1	12/11/2021 19:16	WG1787906
1,2-Dibromoethane	U		0.000739	0.00285	1	12/11/2021 19:16	WG1787906
Dibromomethane	U		0.000855	0.00570	1	12/11/2021 19:16	WG1787906
1,2-Dichlorobenzene	U		0.000485	0.00570	1	12/11/2021 19:16	WG1787906
1,3-Dichlorobenzene	U		0.000684	0.00570	1	12/11/2021 19:16	WG1787906
1,4-Dichlorobenzene	U		0.000798	0.00570	1	12/11/2021 19:16	WG1787906



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00184	0.00285	1	12/11/2021 19:16	WG1787906
1,1-Dichloroethane	U		0.000560	0.00285	1	12/11/2021 19:16	WG1787906
1,2-Dichloroethane	U		0.000740	0.00285	1	12/11/2021 19:16	WG1787906
1,1-Dichloroethene	U		0.000691	0.00285	1	12/11/2021 19:16	WG1787906
cis-1,2-Dichloroethene	U		0.000837	0.00285	1	12/11/2021 19:16	WG1787906
trans-1,2-Dichloroethene	U		0.00119	0.00570	1	12/11/2021 19:16	WG1787906
1,2-Dichloropropane	U		0.00162	0.00570	1	12/11/2021 19:16	WG1787906
1,1-Dichloropropene	U		0.000922	0.00285	1	12/11/2021 19:16	WG1787906
1,3-Dichloropropane	U		0.000571	0.00570	1	12/11/2021 19:16	WG1787906
cis-1,3-Dichloropropene	U		0.000863	0.00285	1	12/11/2021 19:16	WG1787906
trans-1,3-Dichloropropene	U		0.00130	0.00570	1	12/11/2021 19:16	WG1787906
2,2-Dichloropropane	U		0.00157	0.00285	1	12/11/2021 19:16	WG1787906
Di-isopropyl ether	U		0.000467	0.00114	1	12/11/2021 19:16	WG1787906
Ethylbenzene	U		0.000840	0.00285	1	12/11/2021 19:16	WG1787906
Hexachloro-1,3-butadiene	U		0.00684	0.0285	1	12/11/2021 19:16	WG1787906
Isopropylbenzene	U		0.000485	0.00285	1	12/11/2021 19:16	WG1787906
p-Isopropyltoluene	U		0.00291	0.00570	1	12/11/2021 19:16	WG1787906
2-Butanone (MEK)	U		0.0724	0.114	1	12/11/2021 19:16	WG1787906
Methylene Chloride	U		0.00757	0.0285	1	12/11/2021 19:16	WG1787906
4-Methyl-2-pentanone (MIBK)	U		0.00260	0.0285	1	12/11/2021 19:16	WG1787906
Methyl tert-butyl ether	U		0.000399	0.00114	1	12/11/2021 19:16	WG1787906
Naphthalene	U		0.00556	0.0143	1	12/11/2021 19:16	WG1787906
n-Propylbenzene	U		0.00108	0.00570	1	12/11/2021 19:16	WG1787906
Styrene	U		0.000261	0.0143	1	12/11/2021 19:16	WG1787906
1,1,1,2-Tetrachloroethane	U		0.00108	0.00285	1	12/11/2021 19:16	WG1787906
1,1,2,2-Tetrachloroethane	U		0.000792	0.00285	1	12/11/2021 19:16	WG1787906
1,1,2-Trichlorotrifluoroethane	U	C3 J3 J4	0.000860	0.00285	1	12/11/2021 19:16	WG1787906
Tetrachloroethene	U		0.00102	0.00285	1	12/11/2021 19:16	WG1787906
Toluene	U		0.00148	0.00570	1	12/11/2021 19:16	WG1787906
1,2,3-Trichlorobenzene	U	C4	0.00836	0.0143	1	12/11/2021 19:16	WG1787906
1,2,4-Trichlorobenzene	U		0.00502	0.0143	1	12/11/2021 19:16	WG1787906
1,1,1-Trichloroethane	U		0.00105	0.00285	1	12/11/2021 19:16	WG1787906
1,1,2-Trichloroethane	U		0.000681	0.00285	1	12/11/2021 19:16	WG1787906
Trichloroethene	U		0.000666	0.00114	1	12/11/2021 19:16	WG1787906
Trichlorofluoromethane	U	C3	0.000943	0.00285	1	12/11/2021 19:16	WG1787906
1,2,3-Trichloropropane	U		0.00185	0.0143	1	12/11/2021 19:16	WG1787906
1,2,4-Trimethylbenzene	U		0.00180	0.00570	1	12/11/2021 19:16	WG1787906
1,2,3-Trimethylbenzene	U		0.00180	0.00570	1	12/11/2021 19:16	WG1787906
1,3,5-Trimethylbenzene	U		0.00228	0.00570	1	12/11/2021 19:16	WG1787906
Vinyl chloride	U		0.00132	0.00285	1	12/11/2021 19:16	WG1787906
Xylenes, Total	U		0.00100	0.00741	1	12/11/2021 19:16	WG1787906
(S) Toluene-d8	106			75.0-131		12/11/2021 19:16	WG1787906
(S) 4-Bromofluorobenzene	102			67.0-138		12/11/2021 19:16	WG1787906
(S) 1,2-Dichloroethane-d4	104			70.0-130		12/11/2021 19:16	WG1787906

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		1.42	4.28	1	12/12/2021 18:49	WG1787621
Residual Range Organics (RRO)	U		3.56	10.7	1	12/12/2021 18:49	WG1787621
(S) o-Terphenyl	51.2			18.0-148		12/12/2021 18:49	WG1787621

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.00751	0.0749	1	12/15/2021 17:38	WG1788627
Dalapon	U		0.0121	0.0749	1	12/15/2021 17:38	WG1788627
2,4-DB	U		0.0318	0.0749	1	12/15/2021 17:38	WG1788627
Dicamba	U		0.0168	0.0749	1	12/15/2021 17:38	WG1788627
Dichloroprop	U		0.0262	0.0749	1	12/15/2021 17:38	WG1788627
Dinoseb	U		0.00746	0.0749	1	12/15/2021 17:38	WG1788627
MCPA	U		0.474	6.95	1	12/15/2021 17:38	WG1788627
MCPP	U		0.393	6.95	1	12/15/2021 17:38	WG1788627
2,4,5-T	U		0.00912	0.0749	1	12/15/2021 17:38	WG1788627
2,4,5-TP (Silvex)	U		0.0114	0.0749	1	12/15/2021 17:38	WG1788627
(S) 2,4-Dichlorophenyl Acetic Acid	70.6			22.0-132		12/15/2021 17:38	WG1788627

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00402	0.0214	1	12/11/2021 19:50	WG1786830
Alpha BHC	U		0.00394	0.0214	1	12/11/2021 19:50	WG1786830
Beta BHC	U		0.00405	0.0214	1	12/11/2021 19:50	WG1786830
Delta BHC	U		0.00370	0.0214	1	12/11/2021 19:50	WG1786830
Gamma BHC	U		0.00368	0.0214	1	12/11/2021 19:50	WG1786830
Chlordane	U		0.110	0.321	1	12/11/2021 19:50	WG1786830
4,4-DDD	U		0.00396	0.0214	1	12/11/2021 19:50	WG1786830
4,4-DDE	U		0.00392	0.0214	1	12/11/2021 19:50	WG1786830
4,4-DDT	U		0.00671	0.0214	1	12/11/2021 19:50	WG1786830
Dieldrin	U		0.00368	0.0214	1	12/11/2021 19:50	WG1786830
Endosulfan I	U		0.00388	0.0214	1	12/11/2021 19:50	WG1786830
Endosulfan II	U		0.00358	0.0214	1	12/11/2021 19:50	WG1786830
Endosulfan sulfate	U		0.00389	0.0214	1	12/11/2021 19:50	WG1786830
Endrin	U		0.00374	0.0214	1	12/11/2021 19:50	WG1786830
Endrin aldehyde	U		0.00363	0.0214	1	12/11/2021 19:50	WG1786830
Endrin ketone	U		0.00761	0.0214	1	12/11/2021 19:50	WG1786830
Heptachlor	U		0.00458	0.0214	1	12/11/2021 19:50	WG1786830
Heptachlor epoxide	U		0.00363	0.0214	1	12/11/2021 19:50	WG1786830
Hexachlorobenzene	U		0.00370	0.0214	1	12/11/2021 19:50	WG1786830
Methoxychlor	U		0.00518	0.0214	1	12/11/2021 19:50	WG1786830
Toxaphene	U		0.133	0.428	1	12/11/2021 19:50	WG1786830
(S) Decachlorobiphenyl	76.7			10.0-135		12/11/2021 19:50	WG1786830
(S) Tetrachloro-m-xylene	87.5			10.0-139		12/11/2021 19:50	WG1786830

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0126	0.0364	1	12/14/2021 03:22	WG1788512
PCB 1221	U		0.0126	0.0364	1	12/14/2021 03:22	WG1788512
PCB 1232	U		0.0126	0.0364	1	12/14/2021 03:22	WG1788512
PCB 1242	U		0.0126	0.0364	1	12/14/2021 03:22	WG1788512
PCB 1248	U		0.00790	0.0182	1	12/14/2021 03:22	WG1788512
PCB 1254	U		0.00790	0.0182	1	12/14/2021 03:22	WG1788512
PCB 1260	U		0.00790	0.0182	1	12/14/2021 03:22	WG1788512
(S) Decachlorobiphenyl	72.6			10.0-135		12/14/2021 03:22	WG1788512
(S) Tetrachloro-m-xylene	88.1			10.0-139		12/14/2021 03:22	WG1788512

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00577	0.0356	1	12/13/2021 18:06	WG1788088
Acenaphthylene	U		0.00502	0.0356	1	12/13/2021 18:06	WG1788088
Anthracene	U		0.00634	0.0356	1	12/13/2021 18:06	WG1788088
Benzo(a)anthracene	U		0.00628	0.0356	1	12/13/2021 18:06	WG1788088
Benzo(b)fluoranthene	U		0.00664	0.0356	1	12/13/2021 18:06	WG1788088
Benzo(k)fluoranthene	U		0.00633	0.0356	1	12/13/2021 18:06	WG1788088
Benzo(g,h,i)perylene	U		0.00652	0.0356	1	12/13/2021 18:06	WG1788088
Benzo(a)pyrene	U		0.00662	0.0356	1	12/13/2021 18:06	WG1788088
Bis(2-chloroethoxy)methane	U		0.0107	0.356	1	12/13/2021 18:06	WG1788088
Bis(2-chloroethyl)ether	U	C3	0.0118	0.356	1	12/13/2021 18:06	WG1788088
2,2-Oxybis(1-Chloropropane)	U		0.0154	0.356	1	12/13/2021 18:06	WG1788088
4-Bromophenyl-phenylether	U		0.0125	0.356	1	12/13/2021 18:06	WG1788088
2-Chloronaphthalene	U		0.00626	0.0356	1	12/13/2021 18:06	WG1788088
4-Chlorophenyl-phenylether	U		0.0124	0.356	1	12/13/2021 18:06	WG1788088
Chrysene	U		0.00708	0.0356	1	12/13/2021 18:06	WG1788088
Dibenz(a,h)anthracene	U		0.00987	0.0356	1	12/13/2021 18:06	WG1788088
3,3-Dichlorobenzidine	U		0.0132	0.356	1	12/13/2021 18:06	WG1788088
2,4-Dinitrotoluene	U		0.0102	0.356	1	12/13/2021 18:06	WG1788088
2,6-Dinitrotoluene	U		0.0117	0.356	1	12/13/2021 18:06	WG1788088
Fluoranthene	U		0.00643	0.0356	1	12/13/2021 18:06	WG1788088
Fluorene	U		0.00580	0.0356	1	12/13/2021 18:06	WG1788088
Hexachlorobenzene	U		0.0126	0.356	1	12/13/2021 18:06	WG1788088
Hexachloro-1,3-butadiene	U		0.0120	0.356	1	12/13/2021 18:06	WG1788088
Hexachlorocyclopentadiene	U		0.0187	0.356	1	12/13/2021 18:06	WG1788088
Hexachloroethane	U		0.0140	0.356	1	12/13/2021 18:06	WG1788088
Indeno(1,2,3-cd)pyrene	U		0.0101	0.0356	1	12/13/2021 18:06	WG1788088
Isophorone	U		0.0109	0.356	1	12/13/2021 18:06	WG1788088
Naphthalene	U		0.00894	0.0356	1	12/13/2021 18:06	WG1788088
Nitrobenzene	U		0.0124	0.356	1	12/13/2021 18:06	WG1788088
n-Nitrosodimethylamine	U		0.0529	0.356	1	12/13/2021 18:06	WG1788088
n-Nitrosodiphenylamine	U		0.0270	0.356	1	12/13/2021 18:06	WG1788088
n-Nitrosodi-n-propylamine	U		0.0119	0.356	1	12/13/2021 18:06	WG1788088
Phenanthrene	U		0.00707	0.0356	1	12/13/2021 18:06	WG1788088
Pyridine	U		0.0235	0.356	1	12/13/2021 18:06	WG1788088
Benzylbutyl phthalate	U		0.0111	0.356	1	12/13/2021 18:06	WG1788088
Bis(2-ethylhexyl)phthalate	U		0.0451	0.356	1	12/13/2021 18:06	WG1788088
Di-n-butyl phthalate	U		0.0122	0.356	1	12/13/2021 18:06	WG1788088
Diethyl phthalate	U		0.0118	0.356	1	12/13/2021 18:06	WG1788088
Dimethyl phthalate	U		0.0755	0.356	1	12/13/2021 18:06	WG1788088
Di-n-octyl phthalate	U		0.0241	0.356	1	12/13/2021 18:06	WG1788088
Pyrene	U		0.00693	0.0356	1	12/13/2021 18:06	WG1788088
1,2,4-Trichlorobenzene	U		0.0111	0.356	1	12/13/2021 18:06	WG1788088
4-Chloro-3-methylphenol	U		0.0116	0.356	1	12/13/2021 18:06	WG1788088
2-Chlorophenol	U		0.0118	0.356	1	12/13/2021 18:06	WG1788088
2,4-Dichlorophenol	U		0.0104	0.356	1	12/13/2021 18:06	WG1788088
2,4-Dimethylphenol	U		0.00931	0.356	1	12/13/2021 18:06	WG1788088
4,6-Dinitro-2-methylphenol	U		0.0808	0.356	1	12/13/2021 18:06	WG1788088
2,4-Dinitrophenol	U		0.0833	0.356	1	12/13/2021 18:06	WG1788088
2-Methylphenol	U		0.0107	0.356	1	12/13/2021 18:06	WG1788088
3&4-Methyl Phenol	0.0151	J	0.0111	0.356	1	12/13/2021 18:06	WG1788088
2-Nitrophenol	U		0.0127	0.356	1	12/13/2021 18:06	WG1788088
4-Nitrophenol	U		0.0111	0.356	1	12/13/2021 18:06	WG1788088
Pentachlorophenol	U		0.00959	0.356	1	12/13/2021 18:06	WG1788088
Phenol	U		0.0143	0.356	1	12/13/2021 18:06	WG1788088
2,4,6-Trichlorophenol	U		0.0114	0.356	1	12/13/2021 18:06	WG1788088
2,4,5-Trichlorophenol	U		0.0121	0.356	1	12/13/2021 18:06	WG1788088

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	68.5			12.0-120		12/13/2021 18:06	WG1788088
(S) Phenol-d5	63.7			10.0-120		12/13/2021 18:06	WG1788088
(S) Nitrobenzene-d5	56.4			10.0-122		12/13/2021 18:06	WG1788088
(S) 2-Fluorobiphenyl	67.2			15.0-120		12/13/2021 18:06	WG1788088
(S) 2,4,6-Tribromophenol	78.8			10.0-127		12/13/2021 18:06	WG1788088
(S) p-Terphenyl-d14	76.1			10.0-120		12/13/2021 18:06	WG1788088

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00246	0.00642	1	12/10/2021 17:36	WG1787327
Acenaphthene	U		0.00224	0.00642	1	12/10/2021 17:36	WG1787327
Acenaphthylene	U		0.00231	0.00642	1	12/10/2021 17:36	WG1787327
Benzo(a)anthracene	U		0.00185	0.00642	1	12/10/2021 17:36	WG1787327
Benzo(a)pyrene	U		0.00192	0.00642	1	12/10/2021 17:36	WG1787327
Benzo(b)fluoranthene	U		0.00164	0.00642	1	12/10/2021 17:36	WG1787327
Benzo(g,h,i)perylene	U		0.00189	0.00642	1	12/10/2021 17:36	WG1787327
Benzo(k)fluoranthene	U		0.00230	0.00642	1	12/10/2021 17:36	WG1787327
Chrysene	U		0.00248	0.00642	1	12/10/2021 17:36	WG1787327
Dibenz(a,h)anthracene	U		0.00184	0.00642	1	12/10/2021 17:36	WG1787327
Fluoranthene	U		0.00243	0.00642	1	12/10/2021 17:36	WG1787327
Fluorene	U		0.00219	0.00642	1	12/10/2021 17:36	WG1787327
Indeno(1,2,3-cd)pyrene	U		0.00194	0.00642	1	12/10/2021 17:36	WG1787327
Naphthalene	U		0.00437	0.0214	1	12/10/2021 17:36	WG1787327
Phenanthrene	U		0.00247	0.00642	1	12/10/2021 17:36	WG1787327
Pyrene	U		0.00214	0.00642	1	12/10/2021 17:36	WG1787327
1-Methylnaphthalene	U		0.00480	0.0214	1	12/10/2021 17:36	WG1787327
2-Methylnaphthalene	U		0.00457	0.0214	1	12/10/2021 17:36	WG1787327
2-Chloronaphthalene	U		0.00499	0.0214	1	12/10/2021 17:36	WG1787327
(S) Nitrobenzene-d5	77.0			14.0-149		12/10/2021 17:36	WG1787327
(S) 2-Fluorobiphenyl	83.8			34.0-125		12/10/2021 17:36	WG1787327
(S) p-Terphenyl-d14	85.9			23.0-120		12/10/2021 17:36	WG1787327

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
Total Solids	83.0		1	12/10/2021 14:30	WG1786788

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Mercury	U		0.0217	0.0482	1	12/15/2021 09:42	WG1786865

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Antimony	0.294	J J4	0.200	3.62	5	01/10/2022 20:22	WG1793089
Arsenic	1.65		0.121	1.21	5	01/10/2022 20:22	WG1793089
Barium	91.0		0.183	3.01	5	01/10/2022 20:22	WG1793089
Cadmium	U		0.103	1.21	5	01/10/2022 20:22	WG1793089
Chromium	24.8		0.357	6.03	5	01/10/2022 20:22	WG1793089
Copper	24.1		0.159	6.03	5	01/10/2022 20:22	WG1793089
Lead	3.51		0.119	2.41	5	01/10/2022 20:22	WG1793089
Selenium	0.332	J	0.217	3.01	5	01/10/2022 22:22	WG1793089
Silver	U		0.104	0.603	5	01/10/2022 20:22	WG1793089
Zinc	60.0		0.892	30.1	5	01/10/2022 20:22	WG1793089

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Gasoline Range Organics-NWTPH	2.64	B J	1.20	3.53	25	12/11/2021 20:34	WG1787808
(S) a,a,a-Trifluorotoluene(FID)	93.2			77.0-120		12/11/2021 20:34	WG1787808

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Acetone	U	J4	0.0515	0.0706	1	12/11/2021 19:35	WG1787906
Acrylonitrile	U		0.00510	0.0176	1	12/11/2021 19:35	WG1787906
Benzene	0.00171	B	0.000659	0.00141	1	12/11/2021 19:35	WG1787906
Bromobenzene	U		0.00127	0.0176	1	12/11/2021 19:35	WG1787906
Bromodichloromethane	U		0.00102	0.00353	1	12/11/2021 19:35	WG1787906
Bromoform	U		0.00165	0.0353	1	12/11/2021 19:35	WG1787906
Bromomethane	U		0.00278	0.0176	1	12/11/2021 19:35	WG1787906
n-Butylbenzene	U		0.00741	0.0176	1	12/11/2021 19:35	WG1787906
sec-Butylbenzene	U		0.00407	0.0176	1	12/11/2021 19:35	WG1787906
tert-Butylbenzene	U		0.00275	0.00706	1	12/11/2021 19:35	WG1787906
Carbon tetrachloride	U		0.00127	0.00706	1	12/11/2021 19:35	WG1787906
Chlorobenzene	U		0.000296	0.00353	1	12/11/2021 19:35	WG1787906
Chlorodibromomethane	U		0.000864	0.00353	1	12/11/2021 19:35	WG1787906
Chloroethane	U		0.00240	0.00706	1	12/11/2021 19:35	WG1787906
Chloroform	U		0.00145	0.00353	1	12/11/2021 19:35	WG1787906
Chloromethane	U		0.00614	0.0176	1	12/11/2021 19:35	WG1787906
2-Chlorotoluene	U		0.00122	0.00353	1	12/11/2021 19:35	WG1787906
4-Chlorotoluene	U		0.000635	0.00706	1	12/11/2021 19:35	WG1787906
1,2-Dibromo-3-Chloropropane	U		0.00551	0.0353	1	12/11/2021 19:35	WG1787906
1,2-Dibromoethane	U		0.000915	0.00353	1	12/11/2021 19:35	WG1787906
Dibromomethane	U		0.00106	0.00706	1	12/11/2021 19:35	WG1787906
1,2-Dichlorobenzene	U		0.000600	0.00706	1	12/11/2021 19:35	WG1787906
1,3-Dichlorobenzene	U		0.000847	0.00706	1	12/11/2021 19:35	WG1787906
1,4-Dichlorobenzene	U		0.000988	0.00706	1	12/11/2021 19:35	WG1787906



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00227	0.00353	1	12/11/2021 19:35	WG1787906
1,1-Dichloroethane	U		0.000693	0.00353	1	12/11/2021 19:35	WG1787906
1,2-Dichloroethane	U		0.000916	0.00353	1	12/11/2021 19:35	WG1787906
1,1-Dichloroethene	U		0.000856	0.00353	1	12/11/2021 19:35	WG1787906
cis-1,2-Dichloroethene	U		0.00104	0.00353	1	12/11/2021 19:35	WG1787906
trans-1,2-Dichloroethene	U		0.00147	0.00706	1	12/11/2021 19:35	WG1787906
1,2-Dichloropropane	U		0.00200	0.00706	1	12/11/2021 19:35	WG1787906
1,1-Dichloropropene	U		0.00114	0.00353	1	12/11/2021 19:35	WG1787906
1,3-Dichloropropane	U		0.000707	0.00706	1	12/11/2021 19:35	WG1787906
cis-1,3-Dichloropropene	U		0.00107	0.00353	1	12/11/2021 19:35	WG1787906
trans-1,3-Dichloropropene	U		0.00161	0.00706	1	12/11/2021 19:35	WG1787906
2,2-Dichloropropane	U		0.00195	0.00353	1	12/11/2021 19:35	WG1787906
Di-isopropyl ether	U		0.000579	0.00141	1	12/11/2021 19:35	WG1787906
Ethylbenzene	U		0.00104	0.00353	1	12/11/2021 19:35	WG1787906
Hexachloro-1,3-butadiene	U		0.00847	0.0353	1	12/11/2021 19:35	WG1787906
Isopropylbenzene	U		0.000600	0.00353	1	12/11/2021 19:35	WG1787906
p-Isopropyltoluene	U		0.00360	0.00706	1	12/11/2021 19:35	WG1787906
2-Butanone (MEK)	U		0.0896	0.141	1	12/11/2021 19:35	WG1787906
Methylene Chloride	U		0.00937	0.0353	1	12/11/2021 19:35	WG1787906
4-Methyl-2-pentanone (MIBK)	U		0.00322	0.0353	1	12/11/2021 19:35	WG1787906
Methyl tert-butyl ether	U		0.000494	0.00141	1	12/11/2021 19:35	WG1787906
Naphthalene	U		0.00689	0.0176	1	12/11/2021 19:35	WG1787906
n-Propylbenzene	U		0.00134	0.00706	1	12/11/2021 19:35	WG1787906
Styrene	U		0.000323	0.0176	1	12/11/2021 19:35	WG1787906
1,1,1,2-Tetrachloroethane	U		0.00134	0.00353	1	12/11/2021 19:35	WG1787906
1,1,2,2-Tetrachloroethane	U		0.000981	0.00353	1	12/11/2021 19:35	WG1787906
1,1,2-Trichlorotrifluoroethane	U	C3 J3 J4	0.00106	0.00353	1	12/11/2021 19:35	WG1787906
Tetrachloroethene	U		0.00126	0.00353	1	12/11/2021 19:35	WG1787906
Toluene	U		0.00184	0.00706	1	12/11/2021 19:35	WG1787906
1,2,3-Trichlorobenzene	U	C4	0.0103	0.0176	1	12/11/2021 19:35	WG1787906
1,2,4-Trichlorobenzene	U		0.00621	0.0176	1	12/11/2021 19:35	WG1787906
1,1,1-Trichloroethane	U		0.00130	0.00353	1	12/11/2021 19:35	WG1787906
1,1,2-Trichloroethane	U		0.000843	0.00353	1	12/11/2021 19:35	WG1787906
Trichloroethene	U		0.000824	0.00141	1	12/11/2021 19:35	WG1787906
Trichlorofluoromethane	U	C3	0.00117	0.00353	1	12/11/2021 19:35	WG1787906
1,2,3-Trichloropropane	U		0.00229	0.0176	1	12/11/2021 19:35	WG1787906
1,2,4-Trimethylbenzene	U		0.00223	0.00706	1	12/11/2021 19:35	WG1787906
1,2,3-Trimethylbenzene	U		0.00223	0.00706	1	12/11/2021 19:35	WG1787906
1,3,5-Trimethylbenzene	U		0.00282	0.00706	1	12/11/2021 19:35	WG1787906
Vinyl chloride	U		0.00164	0.00353	1	12/11/2021 19:35	WG1787906
Xylenes, Total	U		0.00124	0.00918	1	12/11/2021 19:35	WG1787906
(S) Toluene-d8	108			75.0-131		12/11/2021 19:35	WG1787906
(S) 4-Bromofluorobenzene	98.0			67.0-138		12/11/2021 19:35	WG1787906
(S) 1,2-Dichloroethane-d4	95.5			70.0-130		12/11/2021 19:35	WG1787906

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	13.5		1.60	4.82	1	12/12/2021 20:06	WG1787621
Residual Range Organics (RRO)	11.4	J	4.01	12.1	1	12/12/2021 20:06	WG1787621
(S) o-Terphenyl	56.0			18.0-148		12/12/2021 20:06	WG1787621

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.00846	0.0844	1	12/15/2021 17:53	WG1788627
Dalapon	U		0.0136	0.0844	1	12/15/2021 17:53	WG1788627
2,4-DB	U		0.0358	0.0844	1	12/15/2021 17:53	WG1788627
Dicamba	U		0.0189	0.0844	1	12/15/2021 17:53	WG1788627
Dichloroprop	U		0.0295	0.0844	1	12/15/2021 17:53	WG1788627
Dinoseb	U		0.00840	0.0844	1	12/15/2021 17:53	WG1788627
MCPA	U		0.534	7.83	1	12/15/2021 17:53	WG1788627
MCPP	U		0.442	7.83	1	12/15/2021 17:53	WG1788627
2,4,5-T	U		0.0103	0.0844	1	12/15/2021 17:53	WG1788627
2,4,5-TP (Silvex)	U		0.0129	0.0844	1	12/15/2021 17:53	WG1788627
(S) 2,4-Dichlorophenyl Acetic Acid	66.7			22.0-132		12/15/2021 17:53	WG1788627

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00453	0.0241	1	12/11/2021 22:27	WG1786830
Alpha BHC	U		0.00443	0.0241	1	12/11/2021 22:27	WG1786830
Beta BHC	U		0.00457	0.0241	1	12/11/2021 22:27	WG1786830
Delta BHC	U		0.00417	0.0241	1	12/11/2021 22:27	WG1786830
Gamma BHC	U		0.00415	0.0241	1	12/11/2021 22:27	WG1786830
Chlordane	U		0.124	0.362	1	12/11/2021 22:27	WG1786830
4,4-DDD	U		0.00446	0.0241	1	12/11/2021 22:27	WG1786830
4,4-DDE	U		0.00441	0.0241	1	12/11/2021 22:27	WG1786830
4,4-DDT	U		0.00756	0.0241	1	12/11/2021 22:27	WG1786830
Dieldrin	U		0.00415	0.0241	1	12/11/2021 22:27	WG1786830
Endosulfan I	U		0.00437	0.0241	1	12/11/2021 22:27	WG1786830
Endosulfan II	U		0.00404	0.0241	1	12/11/2021 22:27	WG1786830
Endosulfan sulfate	U		0.00439	0.0241	1	12/11/2021 22:27	WG1786830
Endrin	U		0.00422	0.0241	1	12/11/2021 22:27	WG1786830
Endrin aldehyde	U		0.00409	0.0241	1	12/11/2021 22:27	WG1786830
Endrin ketone	U		0.00857	0.0241	1	12/11/2021 22:27	WG1786830
Heptachlor	U		0.00516	0.0241	1	12/11/2021 22:27	WG1786830
Heptachlor epoxide	U		0.00409	0.0241	1	12/11/2021 22:27	WG1786830
Hexachlorobenzene	U		0.00417	0.0241	1	12/11/2021 22:27	WG1786830
Methoxychlor	U		0.00583	0.0241	1	12/11/2021 22:27	WG1786830
Toxaphene	U		0.149	0.482	1	12/11/2021 22:27	WG1786830
(S) Decachlorobiphenyl	79.9			10.0-135		12/11/2021 22:27	WG1786830
(S) Tetrachloro-m-xylene	83.7			10.0-139		12/11/2021 22:27	WG1786830

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0142	0.0410	1	12/14/2021 03:31	WG1788512
PCB 1221	U		0.0142	0.0410	1	12/14/2021 03:31	WG1788512
PCB 1232	U		0.0142	0.0410	1	12/14/2021 03:31	WG1788512
PCB 1242	U		0.0142	0.0410	1	12/14/2021 03:31	WG1788512
PCB 1248	U		0.00889	0.0205	1	12/14/2021 03:31	WG1788512
PCB 1254	U		0.00889	0.0205	1	12/14/2021 03:31	WG1788512
PCB 1260	U		0.00889	0.0205	1	12/14/2021 03:31	WG1788512
(S) Decachlorobiphenyl	82.7			10.0-135		12/14/2021 03:31	WG1788512
(S) Tetrachloro-m-xylene	94.9			10.0-139		12/14/2021 03:31	WG1788512

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00650	0.0401	1	12/13/2021 19:30	WG1788088
Acenaphthylene	U		0.00565	0.0401	1	12/13/2021 19:30	WG1788088
Anthracene	U		0.00715	0.0401	1	12/13/2021 19:30	WG1788088
Benzo(a)anthracene	U		0.00707	0.0401	1	12/13/2021 19:30	WG1788088
Benzo(b)fluoranthene	U		0.00748	0.0401	1	12/13/2021 19:30	WG1788088
Benzo(k)fluoranthene	U		0.00713	0.0401	1	12/13/2021 19:30	WG1788088
Benzo(g,h,i)perylene	U		0.00734	0.0401	1	12/13/2021 19:30	WG1788088
Benzo(a)pyrene	U		0.00746	0.0401	1	12/13/2021 19:30	WG1788088
Bis(2-chloroethoxy)methane	U		0.0121	0.401	1	12/13/2021 19:30	WG1788088
Bis(2-chloroethyl)ether	U	C3	0.0133	0.401	1	12/13/2021 19:30	WG1788088
2,2-Oxybis(1-Chloropropane)	U		0.0174	0.401	1	12/13/2021 19:30	WG1788088
4-Bromophenyl-phenylether	U		0.0141	0.401	1	12/13/2021 19:30	WG1788088
2-Chloronaphthalene	U		0.00705	0.0401	1	12/13/2021 19:30	WG1788088
4-Chlorophenyl-phenylether	U		0.0140	0.401	1	12/13/2021 19:30	WG1788088
Chrysene	U		0.00798	0.0401	1	12/13/2021 19:30	WG1788088
Dibenz(a,h)anthracene	U		0.0111	0.0401	1	12/13/2021 19:30	WG1788088
3,3-Dichlorobenzidine	U		0.0148	0.401	1	12/13/2021 19:30	WG1788088
2,4-Dinitrotoluene	U		0.0115	0.401	1	12/13/2021 19:30	WG1788088
2,6-Dinitrotoluene	U		0.0131	0.401	1	12/13/2021 19:30	WG1788088
Fluoranthene	U		0.00724	0.0401	1	12/13/2021 19:30	WG1788088
Fluorene	U		0.00653	0.0401	1	12/13/2021 19:30	WG1788088
Hexachlorobenzene	U		0.0142	0.401	1	12/13/2021 19:30	WG1788088
Hexachloro-1,3-butadiene	U		0.0135	0.401	1	12/13/2021 19:30	WG1788088
Hexachlorocyclopentadiene	U		0.0211	0.401	1	12/13/2021 19:30	WG1788088
Hexachloroethane	U		0.0158	0.401	1	12/13/2021 19:30	WG1788088
Indeno(1,2,3-cd)pyrene	U		0.0113	0.0401	1	12/13/2021 19:30	WG1788088
Isophorone	U		0.0123	0.401	1	12/13/2021 19:30	WG1788088
Naphthalene	U		0.0101	0.0401	1	12/13/2021 19:30	WG1788088
Nitrobenzene	U		0.0140	0.401	1	12/13/2021 19:30	WG1788088
n-Nitrosodimethylamine	U		0.0595	0.401	1	12/13/2021 19:30	WG1788088
n-Nitrosodiphenylamine	U		0.0304	0.401	1	12/13/2021 19:30	WG1788088
n-Nitrosodi-n-propylamine	U		0.0134	0.401	1	12/13/2021 19:30	WG1788088
Phenanthrene	U		0.00797	0.0401	1	12/13/2021 19:30	WG1788088
Pyridine	U		0.0265	0.401	1	12/13/2021 19:30	WG1788088
Benzylbutyl phthalate	U		0.0125	0.401	1	12/13/2021 19:30	WG1788088
Bis(2-ethylhexyl)phthalate	U		0.0509	0.401	1	12/13/2021 19:30	WG1788088
Di-n-butyl phthalate	U		0.0137	0.401	1	12/13/2021 19:30	WG1788088
Diethyl phthalate	U		0.0133	0.401	1	12/13/2021 19:30	WG1788088
Dimethyl phthalate	U		0.0851	0.401	1	12/13/2021 19:30	WG1788088
Di-n-octyl phthalate	U		0.0271	0.401	1	12/13/2021 19:30	WG1788088
Pyrene	U		0.00781	0.0401	1	12/13/2021 19:30	WG1788088
1,2,4-Trichlorobenzene	U		0.0125	0.401	1	12/13/2021 19:30	WG1788088
4-Chloro-3-methylphenol	U		0.0130	0.401	1	12/13/2021 19:30	WG1788088
2-Chlorophenol	U		0.0133	0.401	1	12/13/2021 19:30	WG1788088
2,4-Dichlorophenol	U		0.0117	0.401	1	12/13/2021 19:30	WG1788088
2,4-Dimethylphenol	U		0.0105	0.401	1	12/13/2021 19:30	WG1788088
4,6-Dinitro-2-methylphenol	U		0.0910	0.401	1	12/13/2021 19:30	WG1788088
2,4-Dinitrophenol	U		0.0939	0.401	1	12/13/2021 19:30	WG1788088
2-Methylphenol	U		0.0121	0.401	1	12/13/2021 19:30	WG1788088
3&4-Methyl Phenol	0.0218	J	0.0125	0.401	1	12/13/2021 19:30	WG1788088
2-Nitrophenol	U		0.0143	0.401	1	12/13/2021 19:30	WG1788088
4-Nitrophenol	U		0.0125	0.401	1	12/13/2021 19:30	WG1788088
Pentachlorophenol	U		0.0108	0.401	1	12/13/2021 19:30	WG1788088
Phenol	U		0.0161	0.401	1	12/13/2021 19:30	WG1788088
2,4,6-Trichlorophenol	U		0.0129	0.401	1	12/13/2021 19:30	WG1788088
2,4,5-Trichlorophenol	U		0.0136	0.401	1	12/13/2021 19:30	WG1788088

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	65.9			12.0-120		12/13/2021 19:30	WG1788088
(S) Phenol-d5	62.3			10.0-120		12/13/2021 19:30	WG1788088
(S) Nitrobenzene-d5	56.2			10.0-122		12/13/2021 19:30	WG1788088
(S) 2-Fluorobiphenyl	64.5			15.0-120		12/13/2021 19:30	WG1788088
(S) 2,4,6-Tribromophenol	79.2			10.0-127		12/13/2021 19:30	WG1788088
(S) p-Terphenyl-d14	75.0			10.0-120		12/13/2021 19:30	WG1788088

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00277	0.00723	1	12/10/2021 17:56	WG1787327
Acenaphthene	U		0.00252	0.00723	1	12/10/2021 17:56	WG1787327
Acenaphthylene	U		0.00260	0.00723	1	12/10/2021 17:56	WG1787327
Benzo(a)anthracene	U		0.00208	0.00723	1	12/10/2021 17:56	WG1787327
Benzo(a)pyrene	U		0.00216	0.00723	1	12/10/2021 17:56	WG1787327
Benzo(b)fluoranthene	U		0.00184	0.00723	1	12/10/2021 17:56	WG1787327
Benzo(g,h,i)perylene	U		0.00213	0.00723	1	12/10/2021 17:56	WG1787327
Benzo(k)fluoranthene	U		0.00259	0.00723	1	12/10/2021 17:56	WG1787327
Chrysene	U		0.00280	0.00723	1	12/10/2021 17:56	WG1787327
Dibenz(a,h)anthracene	U		0.00207	0.00723	1	12/10/2021 17:56	WG1787327
Fluoranthene	U		0.00274	0.00723	1	12/10/2021 17:56	WG1787327
Fluorene	U		0.00247	0.00723	1	12/10/2021 17:56	WG1787327
Indeno(1,2,3-cd)pyrene	U		0.00218	0.00723	1	12/10/2021 17:56	WG1787327
Naphthalene	U		0.00492	0.0241	1	12/10/2021 17:56	WG1787327
Phenanthrene	U		0.00278	0.00723	1	12/10/2021 17:56	WG1787327
Pyrene	U		0.00241	0.00723	1	12/10/2021 17:56	WG1787327
1-Methylnaphthalene	U		0.00541	0.0241	1	12/10/2021 17:56	WG1787327
2-Methylnaphthalene	U		0.00515	0.0241	1	12/10/2021 17:56	WG1787327
2-Chloronaphthalene	U		0.00562	0.0241	1	12/10/2021 17:56	WG1787327
(S) Nitrobenzene-d5	76.1			14.0-149		12/10/2021 17:56	WG1787327
(S) 2-Fluorobiphenyl	86.0			34.0-125		12/10/2021 17:56	WG1787327
(S) p-Terphenyl-d14	86.6			23.0-120		12/10/2021 17:56	WG1787327

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	87.9		1	12/10/2021 14:30	WG1786788

Mercury by Method 7471B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Mercury	U		0.0205	0.0455	1	12/15/2021 10:39	WG1786865

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Antimony	U	J4	0.189	3.41	5	01/10/2022 20:25	WG1793089
Arsenic	0.660	J	0.114	1.14	5	01/10/2022 20:25	WG1793089
Barium	121		0.173	2.84	5	01/10/2022 20:25	WG1793089
Cadmium	U		0.0973	1.14	5	01/10/2022 20:25	WG1793089
Chromium	6.04	B	0.337	5.69	5	01/10/2022 20:25	WG1793089
Copper	8.17		0.150	5.69	5	01/10/2022 20:25	WG1793089
Lead	3.09		0.113	2.27	5	01/10/2022 20:25	WG1793089
Selenium	0.322	J	0.205	2.84	5	01/10/2022 22:26	WG1793089
Silver	U		0.0984	0.569	5	01/10/2022 20:25	WG1793089
Zinc	25.7	J	0.842	28.4	5	01/10/2022 20:25	WG1793089

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	2.04	B J	1.08	3.19	25	12/11/2021 20:57	WG1787808
(S) a,a,a-Trifluorotoluene(FID)	93.1			77.0-120		12/11/2021 20:57	WG1787808

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	J4	0.0466	0.0638	1	12/11/2021 19:55	WG1787906
Acrylonitrile	U		0.00460	0.0159	1	12/11/2021 19:55	WG1787906
Benzene	0.000829	B J	0.000596	0.00128	1	12/11/2021 19:55	WG1787906
Bromobenzene	U		0.00115	0.0159	1	12/11/2021 19:55	WG1787906
Bromodichloromethane	U		0.000925	0.00319	1	12/11/2021 19:55	WG1787906
Bromoform	U		0.00149	0.0319	1	12/11/2021 19:55	WG1787906
Bromomethane	U		0.00251	0.0159	1	12/11/2021 19:55	WG1787906
n-Butylbenzene	U		0.00670	0.0159	1	12/11/2021 19:55	WG1787906
sec-Butylbenzene	U		0.00367	0.0159	1	12/11/2021 19:55	WG1787906
tert-Butylbenzene	U		0.00249	0.00638	1	12/11/2021 19:55	WG1787906
Carbon tetrachloride	U		0.00115	0.00638	1	12/11/2021 19:55	WG1787906
Chlorobenzene	U		0.000268	0.00319	1	12/11/2021 19:55	WG1787906
Chlorodibromomethane	U		0.000781	0.00319	1	12/11/2021 19:55	WG1787906
Chloroethane	U		0.00217	0.00638	1	12/11/2021 19:55	WG1787906
Chloroform	U		0.00131	0.00319	1	12/11/2021 19:55	WG1787906
Chloromethane	U		0.00555	0.0159	1	12/11/2021 19:55	WG1787906
2-Chlorotoluene	U		0.00110	0.00319	1	12/11/2021 19:55	WG1787906
4-Chlorotoluene	U		0.000574	0.00638	1	12/11/2021 19:55	WG1787906
1,2-Dibromo-3-Chloropropane	U		0.00497	0.0319	1	12/11/2021 19:55	WG1787906
1,2-Dibromoethane	U		0.000826	0.00319	1	12/11/2021 19:55	WG1787906
Dibromomethane	U		0.000957	0.00638	1	12/11/2021 19:55	WG1787906
1,2-Dichlorobenzene	U		0.000542	0.00638	1	12/11/2021 19:55	WG1787906
1,3-Dichlorobenzene	U		0.000765	0.00638	1	12/11/2021 19:55	WG1787906
1,4-Dichlorobenzene	U		0.000893	0.00638	1	12/11/2021 19:55	WG1787906



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Dichlorodifluoromethane	U		0.00205	0.00319	1	12/11/2021 19:55	WG1787906
1,1-Dichloroethane	U		0.000626	0.00319	1	12/11/2021 19:55	WG1787906
1,2-Dichloroethane	U		0.000828	0.00319	1	12/11/2021 19:55	WG1787906
1,1-Dichloroethene	U		0.000773	0.00319	1	12/11/2021 19:55	WG1787906
cis-1,2-Dichloroethene	U		0.000936	0.00319	1	12/11/2021 19:55	WG1787906
trans-1,2-Dichloroethene	U		0.00133	0.00638	1	12/11/2021 19:55	WG1787906
1,2-Dichloropropane	U		0.00181	0.00638	1	12/11/2021 19:55	WG1787906
1,1-Dichloropropene	U		0.00103	0.00319	1	12/11/2021 19:55	WG1787906
1,3-Dichloropropane	U		0.000639	0.00638	1	12/11/2021 19:55	WG1787906
cis-1,3-Dichloropropene	U		0.000965	0.00319	1	12/11/2021 19:55	WG1787906
trans-1,3-Dichloropropene	U		0.00145	0.00638	1	12/11/2021 19:55	WG1787906
2,2-Dichloropropane	U		0.00176	0.00319	1	12/11/2021 19:55	WG1787906
Di-isopropyl ether	U		0.000523	0.00128	1	12/11/2021 19:55	WG1787906
Ethylbenzene	U		0.000940	0.00319	1	12/11/2021 19:55	WG1787906
Hexachloro-1,3-butadiene	U		0.00765	0.0319	1	12/11/2021 19:55	WG1787906
Isopropylbenzene	U		0.000542	0.00319	1	12/11/2021 19:55	WG1787906
p-Isopropyltoluene	U		0.00325	0.00638	1	12/11/2021 19:55	WG1787906
2-Butanone (MEK)	U		0.0810	0.128	1	12/11/2021 19:55	WG1787906
Methylene Chloride	U		0.00847	0.0319	1	12/11/2021 19:55	WG1787906
4-Methyl-2-pentanone (MIBK)	U		0.00291	0.0319	1	12/11/2021 19:55	WG1787906
Methyl tert-butyl ether	U		0.000446	0.00128	1	12/11/2021 19:55	WG1787906
Naphthalene	U		0.00622	0.0159	1	12/11/2021 19:55	WG1787906
n-Propylbenzene	U		0.00121	0.00638	1	12/11/2021 19:55	WG1787906
Styrene	U		0.000292	0.0159	1	12/11/2021 19:55	WG1787906
1,1,1,2-Tetrachloroethane	U		0.00121	0.00319	1	12/11/2021 19:55	WG1787906
1,1,2,2-Tetrachloroethane	U		0.000886	0.00319	1	12/11/2021 19:55	WG1787906
1,1,2-Trichlorotrifluoroethane	U	C3 J3 J4	0.000962	0.00319	1	12/11/2021 19:55	WG1787906
Tetrachloroethene	U		0.00114	0.00319	1	12/11/2021 19:55	WG1787906
Toluene	U		0.00166	0.00638	1	12/11/2021 19:55	WG1787906
1,2,3-Trichlorobenzene	U	C4	0.00935	0.0159	1	12/11/2021 19:55	WG1787906
1,2,4-Trichlorobenzene	U		0.00561	0.0159	1	12/11/2021 19:55	WG1787906
1,1,1-Trichloroethane	U		0.00118	0.00319	1	12/11/2021 19:55	WG1787906
1,1,2-Trichloroethane	U		0.000761	0.00319	1	12/11/2021 19:55	WG1787906
Trichloroethene	U		0.000745	0.00128	1	12/11/2021 19:55	WG1787906
Trichlorofluoromethane	U	C3	0.00105	0.00319	1	12/11/2021 19:55	WG1787906
1,2,3-Trichloropropane	U		0.00207	0.0159	1	12/11/2021 19:55	WG1787906
1,2,4-Trimethylbenzene	U		0.00202	0.00638	1	12/11/2021 19:55	WG1787906
1,2,3-Trimethylbenzene	U		0.00202	0.00638	1	12/11/2021 19:55	WG1787906
1,3,5-Trimethylbenzene	U		0.00255	0.00638	1	12/11/2021 19:55	WG1787906
Vinyl chloride	U		0.00148	0.00319	1	12/11/2021 19:55	WG1787906
Xylenes, Total	U		0.00112	0.00829	1	12/11/2021 19:55	WG1787906
(S) Toluene-d8	106			75.0-131		12/11/2021 19:55	WG1787906
(S) 4-Bromofluorobenzene	99.1			67.0-138		12/11/2021 19:55	WG1787906
(S) 1,2-Dichloroethane-d4	101			70.0-130		12/11/2021 19:55	WG1787906

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	9.54		1.51	4.55	1	12/12/2021 19:53	WG1787621
Residual Range Organics (RRO)	U		3.79	11.4	1	12/12/2021 19:53	WG1787621
(S) o-Terphenyl	73.3			18.0-148		12/12/2021 19:53	WG1787621

Chlorinated Acid Herbicides (GC) by Method 8151A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,4-D	U		0.00799	0.0796	1	12/15/2021 18:07	WG1788627
Dalapon	U		0.0129	0.0796	1	12/15/2021 18:07	WG1788627
2,4-DB	U		0.0338	0.0796	1	12/15/2021 18:07	WG1788627
Dicamba	U		0.0179	0.0796	1	12/15/2021 18:07	WG1788627
Dichloroprop	U		0.0279	0.0796	1	12/15/2021 18:07	WG1788627
Dinoseb	U		0.00793	0.0796	1	12/15/2021 18:07	WG1788627
MCPA	U		0.504	7.39	1	12/15/2021 18:07	WG1788627
MCPP	U		0.417	7.39	1	12/15/2021 18:07	WG1788627
2,4,5-T	U		0.00969	0.0796	1	12/15/2021 18:07	WG1788627
2,4,5-TP (Silvex)	U		0.0122	0.0796	1	12/15/2021 18:07	WG1788627
(S) 2,4-Dichlorophenyl Acetic Acid	67.9			22.0-132		12/15/2021 18:07	WG1788627

Pesticides (GC) by Method 8081B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Aldrin	U		0.00428	0.0227	1	12/11/2021 22:36	WG1786830
Alpha BHC	U		0.00419	0.0227	1	12/11/2021 22:36	WG1786830
Beta BHC	U		0.00431	0.0227	1	12/11/2021 22:36	WG1786830
Delta BHC	U		0.00394	0.0227	1	12/11/2021 22:36	WG1786830
Gamma BHC	U		0.00391	0.0227	1	12/11/2021 22:36	WG1786830
Chlordane	U		0.117	0.341	1	12/11/2021 22:36	WG1786830
4,4-DDD	U		0.00421	0.0227	1	12/11/2021 22:36	WG1786830
4,4-DDE	U		0.00416	0.0227	1	12/11/2021 22:36	WG1786830
4,4-DDT	U		0.00713	0.0227	1	12/11/2021 22:36	WG1786830
Dieldrin	U		0.00391	0.0227	1	12/11/2021 22:36	WG1786830
Endosulfan I	U		0.00413	0.0227	1	12/11/2021 22:36	WG1786830
Endosulfan II	U		0.00381	0.0227	1	12/11/2021 22:36	WG1786830
Endosulfan sulfate	U		0.00414	0.0227	1	12/11/2021 22:36	WG1786830
Endrin	U		0.00398	0.0227	1	12/11/2021 22:36	WG1786830
Endrin aldehyde	U		0.00386	0.0227	1	12/11/2021 22:36	WG1786830
Endrin ketone	U		0.00809	0.0227	1	12/11/2021 22:36	WG1786830
Heptachlor	U		0.00487	0.0227	1	12/11/2021 22:36	WG1786830
Heptachlor epoxide	U		0.00386	0.0227	1	12/11/2021 22:36	WG1786830
Hexachlorobenzene	U		0.00394	0.0227	1	12/11/2021 22:36	WG1786830
Methoxychlor	U		0.00551	0.0227	1	12/11/2021 22:36	WG1786830
Toxaphene	U		0.141	0.455	1	12/11/2021 22:36	WG1786830
(S) Decachlorobiphenyl	95.8			10.0-135		12/11/2021 22:36	WG1786830
(S) Tetrachloro-m-xylene	88.1			10.0-139		12/11/2021 22:36	WG1786830

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.0134	0.0387	1	12/14/2021 03:40	WG1788512
PCB 1221	U		0.0134	0.0387	1	12/14/2021 03:40	WG1788512
PCB 1232	U		0.0134	0.0387	1	12/14/2021 03:40	WG1788512
PCB 1242	U		0.0134	0.0387	1	12/14/2021 03:40	WG1788512
PCB 1248	U		0.00839	0.0193	1	12/14/2021 03:40	WG1788512
PCB 1254	U		0.00839	0.0193	1	12/14/2021 03:40	WG1788512
PCB 1260	U		0.00839	0.0193	1	12/14/2021 03:40	WG1788512
(S) Decachlorobiphenyl	98.9			10.0-135		12/14/2021 03:40	WG1788512
(S) Tetrachloro-m-xylene	99.2			10.0-139		12/14/2021 03:40	WG1788512

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.00613	0.0379	1	12/13/2021 17:45	WG1788088
Acenaphthylene	U		0.00533	0.0379	1	12/13/2021 17:45	WG1788088
Anthracene	U		0.00675	0.0379	1	12/13/2021 17:45	WG1788088
Benzo(a)anthracene	U		0.00668	0.0379	1	12/13/2021 17:45	WG1788088
Benzo(b)fluoranthene	U		0.00706	0.0379	1	12/13/2021 17:45	WG1788088
Benzo(k)fluoranthene	U		0.00673	0.0379	1	12/13/2021 17:45	WG1788088
Benzo(g,h,i)perylene	U		0.00693	0.0379	1	12/13/2021 17:45	WG1788088
Benzo(a)pyrene	U		0.00704	0.0379	1	12/13/2021 17:45	WG1788088
Bis(2-chloroethoxy)methane	U		0.0114	0.379	1	12/13/2021 17:45	WG1788088
Bis(2-chloroethyl)ether	U	C3	0.0125	0.379	1	12/13/2021 17:45	WG1788088
2,2-Oxybis(1-Chloropropane)	U		0.0164	0.379	1	12/13/2021 17:45	WG1788088
4-Bromophenyl-phenylether	U		0.0133	0.379	1	12/13/2021 17:45	WG1788088
2-Chloronaphthalene	U		0.00665	0.0379	1	12/13/2021 17:45	WG1788088
4-Chlorophenyl-phenylether	U		0.0132	0.379	1	12/13/2021 17:45	WG1788088
Chrysene	U		0.00753	0.0379	1	12/13/2021 17:45	WG1788088
Dibenz(a,h)anthracene	U		0.0105	0.0379	1	12/13/2021 17:45	WG1788088
3,3-Dichlorobenzidine	U		0.0140	0.379	1	12/13/2021 17:45	WG1788088
2,4-Dinitrotoluene	U		0.0109	0.379	1	12/13/2021 17:45	WG1788088
2,6-Dinitrotoluene	U		0.0124	0.379	1	12/13/2021 17:45	WG1788088
Fluoranthene	U		0.00684	0.0379	1	12/13/2021 17:45	WG1788088
Fluorene	U		0.00617	0.0379	1	12/13/2021 17:45	WG1788088
Hexachlorobenzene	U		0.0134	0.379	1	12/13/2021 17:45	WG1788088
Hexachloro-1,3-butadiene	U		0.0127	0.379	1	12/13/2021 17:45	WG1788088
Hexachlorocyclopentadiene	U		0.0199	0.379	1	12/13/2021 17:45	WG1788088
Hexachloroethane	U		0.0149	0.379	1	12/13/2021 17:45	WG1788088
Indeno(1,2,3-cd)pyrene	U		0.0107	0.0379	1	12/13/2021 17:45	WG1788088
Isophorone	U		0.0116	0.379	1	12/13/2021 17:45	WG1788088
Naphthalene	U		0.00951	0.0379	1	12/13/2021 17:45	WG1788088
Nitrobenzene	U		0.0132	0.379	1	12/13/2021 17:45	WG1788088
n-Nitrosodimethylamine	U		0.0562	0.379	1	12/13/2021 17:45	WG1788088
n-Nitrosodiphenylamine	U		0.0287	0.379	1	12/13/2021 17:45	WG1788088
n-Nitrosodi-n-propylamine	U		0.0126	0.379	1	12/13/2021 17:45	WG1788088
Phenanthrene	U		0.00752	0.0379	1	12/13/2021 17:45	WG1788088
Pyridine	U		0.0250	0.379	1	12/13/2021 17:45	WG1788088
Benzylbutyl phthalate	U		0.0118	0.379	1	12/13/2021 17:45	WG1788088
Bis(2-ethylhexyl)phthalate	U		0.0480	0.379	1	12/13/2021 17:45	WG1788088
Di-n-butyl phthalate	U		0.0130	0.379	1	12/13/2021 17:45	WG1788088
Diethyl phthalate	U		0.0125	0.379	1	12/13/2021 17:45	WG1788088
Dimethyl phthalate	U		0.0803	0.379	1	12/13/2021 17:45	WG1788088
Di-n-octyl phthalate	U		0.0256	0.379	1	12/13/2021 17:45	WG1788088
Pyrene	U		0.00737	0.0379	1	12/13/2021 17:45	WG1788088
1,2,4-Trichlorobenzene	U		0.0118	0.379	1	12/13/2021 17:45	WG1788088
4-Chloro-3-methylphenol	U		0.0123	0.379	1	12/13/2021 17:45	WG1788088
2-Chlorophenol	U		0.0125	0.379	1	12/13/2021 17:45	WG1788088
2,4-Dichlorophenol	U		0.0110	0.379	1	12/13/2021 17:45	WG1788088
2,4-Dimethylphenol	U		0.00990	0.379	1	12/13/2021 17:45	WG1788088
4,6-Dinitro-2-methylphenol	U		0.0859	0.379	1	12/13/2021 17:45	WG1788088
2,4-Dinitrophenol	U		0.0886	0.379	1	12/13/2021 17:45	WG1788088
2-Methylphenol	U		0.0114	0.379	1	12/13/2021 17:45	WG1788088
3&4-Methyl Phenol	0.0210	J	0.0118	0.379	1	12/13/2021 17:45	WG1788088
2-Nitrophenol	U		0.0135	0.379	1	12/13/2021 17:45	WG1788088
4-Nitrophenol	U		0.0118	0.379	1	12/13/2021 17:45	WG1788088
Pentachlorophenol	U		0.0102	0.379	1	12/13/2021 17:45	WG1788088
Phenol	U		0.0152	0.379	1	12/13/2021 17:45	WG1788088
2,4,6-Trichlorophenol	U		0.0122	0.379	1	12/13/2021 17:45	WG1788088
2,4,5-Trichlorophenol	U		0.0129	0.379	1	12/13/2021 17:45	WG1788088

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270E

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) 2-Fluorophenol	72.0			12.0-120		12/13/2021 17:45	WG1788088
(S) Phenol-d5	68.1			10.0-120		12/13/2021 17:45	WG1788088
(S) Nitrobenzene-d5	57.5			10.0-122		12/13/2021 17:45	WG1788088
(S) 2-Fluorobiphenyl	69.7			15.0-120		12/13/2021 17:45	WG1788088
(S) 2,4,6-Tribromophenol	83.1			10.0-127		12/13/2021 17:45	WG1788088
(S) p-Terphenyl-d14	81.6			10.0-120		12/13/2021 17:45	WG1788088

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00262	0.00682	1	12/10/2021 18:15	WG1787327
Acenaphthene	U		0.00238	0.00682	1	12/10/2021 18:15	WG1787327
Acenaphthylene	U		0.00246	0.00682	1	12/10/2021 18:15	WG1787327
Benzo(a)anthracene	U		0.00197	0.00682	1	12/10/2021 18:15	WG1787327
Benzo(a)pyrene	U		0.00204	0.00682	1	12/10/2021 18:15	WG1787327
Benzo(b)fluoranthene	U		0.00174	0.00682	1	12/10/2021 18:15	WG1787327
Benzo(g,h,i)perylene	U		0.00201	0.00682	1	12/10/2021 18:15	WG1787327
Benzo(k)fluoranthene	U		0.00245	0.00682	1	12/10/2021 18:15	WG1787327
Chrysene	U		0.00264	0.00682	1	12/10/2021 18:15	WG1787327
Dibenz(a,h)anthracene	U		0.00196	0.00682	1	12/10/2021 18:15	WG1787327
Fluoranthene	U		0.00258	0.00682	1	12/10/2021 18:15	WG1787327
Fluorene	U		0.00233	0.00682	1	12/10/2021 18:15	WG1787327
Indeno(1,2,3-cd)pyrene	U		0.00206	0.00682	1	12/10/2021 18:15	WG1787327
Naphthalene	U		0.00464	0.0227	1	12/10/2021 18:15	WG1787327
Phenanthrene	U		0.00263	0.00682	1	12/10/2021 18:15	WG1787327
Pyrene	U		0.00227	0.00682	1	12/10/2021 18:15	WG1787327
1-Methylnaphthalene	U		0.00511	0.0227	1	12/10/2021 18:15	WG1787327
2-Methylnaphthalene	U		0.00486	0.0227	1	12/10/2021 18:15	WG1787327
2-Chloronaphthalene	U		0.00530	0.0227	1	12/10/2021 18:15	WG1787327
(S) Nitrobenzene-d5	81.5			14.0-149		12/10/2021 18:15	WG1787327
(S) 2-Fluorobiphenyl	88.0			34.0-125		12/10/2021 18:15	WG1787327
(S) p-Terphenyl-d14	92.2			23.0-120		12/10/2021 18:15	WG1787327

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3739587-1 12/10/21 13:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.00100			

1 Cp

2 Tc

3 Ss

L1439700-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1439700-13 12/10/21 13:36 • (DUP) R3739587-3 12/10/21 13:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	85.2	85.5	1	0.347		10

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3739587-2 12/10/21 13:36

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3739591-1 12/10/21 14:30

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

1 Cp

2 Tc

3 Ss

L1439773-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1439773-09 12/10/21 14:30 • (DUP) R3739591-3 12/10/21 14:30

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	87.9	93.2	1	5.81		10

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3739591-2 12/10/21 14:30

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3740872-1 12/15/21 09:37

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Mercury	U		0.0180	0.0400

1 Cp

2 Tc

3 Ss

Laboratory Control Sample (LCS)

(LCS) R3740872-2 12/15/21 09:39

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Mercury	0.500	0.492	98.4	80.0-120	

4 Cn

5 Sr

6 Qc

L1439773-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439773-08 12/15/21 09:42 • (MS) R3740872-3 12/15/21 09:44 • (MSD) R3740872-4 12/15/21 09:47

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Mercury	0.603	U	0.539	0.590	89.4	97.9	1	75.0-125			9.03	20

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3745951-1 12/28/21 20:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Barium	U		0.0333	0.100

¹Cp

²Tc

³Ss

Laboratory Control Sample (LCS)

(LCS) R3745951-2 12/28/21 20:12

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Barium	10.0	9.99	99.9	80.0-120	

⁴Cn

⁵Sr

L1437892-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437892-02 12/28/21 20:15 • (MS) R3745951-4 12/28/21 20:21 • (MSD) R3745951-5 12/28/21 20:24

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Barium	10.0	0.455	10.4	10.4	99.7	99.3	1	75.0-125			0.380	20

⁶Qc

⁷Gl

⁸Al

L1439784-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439784-02 12/28/21 20:27 • (MS) R3745951-6 12/28/21 20:29 • (MSD) R3745951-7 12/28/21 20:32

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Barium	10.0	ND	10.1	10.1	100	101	1	75.0-125			0.245	20

⁹Sc

Method Blank (MB)

(MB) R3748610-1 01/10/22 18:50

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.166	3.00
Arsenic	U		0.100	1.00
Barium	U		0.152	2.50
Cadmium	U		0.0855	1.00
Chromium	0.722	U	0.297	5.00
Copper	0.151	U	0.133	5.00
Lead	U		0.0990	2.00
Selenium	U		0.180	2.50
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3748610-2 01/10/22 18:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	130	130	80.0-120	J4
Arsenic	100	102	102	80.0-120	
Barium	100	103	103	80.0-120	
Cadmium	100	109	109	80.0-120	
Chromium	100	106	106	80.0-120	
Copper	100	98.5	98.5	80.0-120	
Lead	100	109	109	80.0-120	
Selenium	100	105	105	80.0-120	
Silver	20.0	22.6	113	80.0-120	
Zinc	100	102	102	80.0-120	

L1438230-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1438230-03 01/10/22 18:56 • (MS) R3748610-5 01/10/22 19:06 • (MSD) R3748610-6 01/10/22 19:10

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	117	0.604	124	129	106	110	5	75.0-125			3.96	20
Arsenic	117	2.94	104	121	86.2	102	5	75.0-125			16.0	20
Barium	117	39.5	147	168	92.5	110	5	75.0-125			13.0	20
Cadmium	117	0.324	119	132	102	112	5	75.0-125			9.83	20
Chromium	117	10.8	115	136	89.4	107	5	75.0-125			16.6	20
Copper	117	6.00	114	124	92.2	101	5	75.0-125			8.44	20

L1438230-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1438230-03 01/10/22 18:56 • (MS) R3748610-5 01/10/22 19:06 • (MSD) R3748610-6 01/10/22 19:10

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Lead	117	7.41	126	138	101	112	5	75.0-125			9.47	20
Selenium	117	0.790	116	129	98.9	110	5	75.0-125			10.6	20
Silver	23.4	U	24.7	27.1	106	116	5	75.0-125			9.46	20
Zinc	117	26.0	127	152	86.7	108	5	75.0-125			18.0	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3746112-1 12/29/21 19:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Antimony	U		0.166	3.00
Arsenic	U		0.100	1.00
Cadmium	U		0.0855	1.00
Chromium	U		0.297	5.00
Copper	0.159	↓	0.133	5.00
Lead	U		0.0990	2.00
Silver	U		0.0865	0.500
Zinc	U		0.740	25.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Method Blank (MB)

(MB) R3746112-7 12/30/21 00:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Barium	0.438	↓	0.152	2.50
Selenium	U		0.180	2.50

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3746112-2 12/29/21 19:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony	100	120	120	80.0-120	
Arsenic	100	94.5	94.5	80.0-120	
Cadmium	100	97.6	97.6	80.0-120	
Chromium	100	93.8	93.8	80.0-120	
Copper	100	100	100	80.0-120	
Lead	100	99.1	99.1	80.0-120	
Silver	20.0	20.8	104	80.0-120	
Zinc	100	92.9	92.9	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3746112-8 12/30/21 00:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Barium	100	93.9	93.9	80.0-120	
Selenium	100	93.4	93.4	80.0-120	

L1445546-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1445546-02 12/29/21 19:17 • (MS) R3746112-5 12/29/21 19:28 • (MSD) R3746112-6 12/29/21 19:32

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Antimony	114	0.382	113	115	99.3	101	5	75.0-125			1.27	20
Arsenic	114	1.24	99.9	99.5	86.8	86.5	5	75.0-125			0.335	20
Cadmium	114	U	103	102	90.8	89.8	5	75.0-125			1.12	20
Chromium	114	6.19	109	105	90.1	87.0	5	75.0-125			3.31	20
Copper	114	10.7	115	116	91.3	92.3	5	75.0-125			0.961	20
Lead	114	1.25	106	106	92.5	92.6	5	75.0-125			0.0406	20
Silver	22.7	U	22.0	22.0	96.9	96.7	5	75.0-125			0.279	20
Zinc	114	11.7	111	114	87.7	90.0	5	75.0-125			2.32	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1445546-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1445546-02 12/30/21 00:54 • (MS) R3746112-11 12/30/21 01:05 • (MSD) R3746112-12 12/30/21 01:08

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Barium	114	90.6	184	181	82.4	79.8	5	75.0-125			1.60	20
Selenium	114	0.319	95.7	99.7	83.9	87.4	5	75.0-125			4.06	20

⁷ Gl

⁸ Al

⁹ Sc

Method Blank (MB)

(MB) R3739715-3 12/11/21 12:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPHG C6 - C12	1.81	<u>J</u>	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	91.8			77.0-120

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3739715-1 12/11/21 11:24 • (LCSD) R3739715-2 12/11/21 11:47

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPHG C6 - C12	5.50	5.90	5.01	107	91.1	71.0-124			16.3	20
(S) a,a,a-Trifluorotoluene(FID)				101	98.4	77.0-120				

L1439773-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439773-07 12/11/21 20:10 • (MS) R3739715-4 12/11/21 21:20 • (MSD) R3739715-5 12/11/21 21:43

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	155	1.95	209	128	133	81.1	25	50.0-150		<u>J3</u>	48.1	27
(S) a,a,a-Trifluorotoluene(FID)					106	97.9		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3739988-1 12/11/21 10:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TPHG C6 - C12	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	93.9			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3739988-2 12/11/21 11:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
TPHG C6 - C12	5.50	5.13	93.3	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			115	77.0-120	

L1439773-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439773-01 12/11/21 19:03 • (MS) R3739988-3 12/11/21 21:37 • (MSD) R3739988-4 12/11/21 21:59

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Gasoline Range Organics-NWTPH	466	U	429	364	92.0	78.3	25	50.0-150			16.2	27
(S) a,a,a-Trifluorotoluene(FID)					112	110		77.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3740551-3 12/11/21 14:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	0.000475	U	0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00250
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250
Isopropylbenzene	U		0.000425	0.00250

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

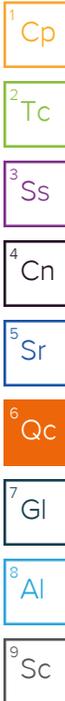
8 Al

9 Sc

Method Blank (MB)

(MB) R3740551-3 12/11/21 14:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	0.128		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	107			75.0-131
(S) 4-Bromofluorobenzene	97.8			67.0-138
(S) 1,2-Dichloroethane-d4	104			70.0-130



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3740551-1 12/11/21 13:08 • (LCSD) R3740551-2 12/11/21 13:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	1.16	1.16	186	186	10.0-160	J4	J4	0.000	31
Acrylonitrile	0.625	0.928	0.957	148	153	45.0-153			3.08	22
Benzene	0.125	0.124	0.121	99.2	96.8	70.0-123			2.45	20
Bromobenzene	0.125	0.108	0.108	86.4	86.4	73.0-121			0.000	20
Bromodichloromethane	0.125	0.124	0.122	99.2	97.6	73.0-121			1.63	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3740551-1 12/11/21 13:08 • (LCSD) R3740551-2 12/11/21 13:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	0.125	0.120	0.120	96.0	96.0	64.0-132			0.000	20
Bromomethane	0.125	0.112	0.112	89.6	89.6	56.0-147			0.000	20
n-Butylbenzene	0.125	0.113	0.113	90.4	90.4	68.0-135			0.000	20
sec-Butylbenzene	0.125	0.106	0.109	84.8	87.2	74.0-130			2.79	20
tert-Butylbenzene	0.125	0.107	0.109	85.6	87.2	75.0-127			1.85	20
Carbon tetrachloride	0.125	0.121	0.121	96.8	96.8	66.0-128			0.000	20
Chlorobenzene	0.125	0.119	0.116	95.2	92.8	76.0-128			2.55	20
Chlorodibromomethane	0.125	0.118	0.116	94.4	92.8	74.0-127			1.71	20
Chloroethane	0.125	0.108	0.108	86.4	86.4	61.0-134			0.000	20
Chloroform	0.125	0.135	0.131	108	105	72.0-123			3.01	20
Chloromethane	0.125	0.106	0.0980	84.8	78.4	51.0-138			7.84	20
2-Chlorotoluene	0.125	0.113	0.110	90.4	88.0	75.0-124			2.69	20
4-Chlorotoluene	0.125	0.112	0.113	89.6	90.4	75.0-124			0.889	20
1,2-Dibromo-3-Chloropropane	0.125	0.132	0.141	106	113	59.0-130			6.59	20
1,2-Dibromoethane	0.125	0.118	0.119	94.4	95.2	74.0-128			0.844	20
Dibromomethane	0.125	0.119	0.117	95.2	93.6	75.0-122			1.69	20
1,2-Dichlorobenzene	0.125	0.124	0.125	99.2	100	76.0-124			0.803	20
1,3-Dichlorobenzene	0.125	0.113	0.116	90.4	92.8	76.0-125			2.62	20
1,4-Dichlorobenzene	0.125	0.111	0.111	88.8	88.8	77.0-121			0.000	20
Dichlorodifluoromethane	0.125	0.127	0.126	102	101	43.0-156			0.791	20
1,1-Dichloroethane	0.125	0.125	0.123	100	98.4	70.0-127			1.61	20
1,2-Dichloroethane	0.125	0.132	0.127	106	102	65.0-131			3.86	20
1,1-Dichloroethene	0.125	0.123	0.123	98.4	98.4	65.0-131			0.000	20
cis-1,2-Dichloroethene	0.125	0.116	0.116	92.8	92.8	73.0-125			0.000	20
trans-1,2-Dichloroethene	0.125	0.125	0.123	100	98.4	71.0-125			1.61	20
1,2-Dichloropropane	0.125	0.129	0.125	103	100	74.0-125			3.15	20
1,1-Dichloropropene	0.125	0.134	0.132	107	106	73.0-125			1.50	20
1,3-Dichloropropane	0.125	0.129	0.124	103	99.2	80.0-125			3.95	20
cis-1,3-Dichloropropene	0.125	0.122	0.121	97.6	96.8	76.0-127			0.823	20
trans-1,3-Dichloropropene	0.125	0.119	0.119	95.2	95.2	73.0-127			0.000	20
2,2-Dichloropropane	0.125	0.135	0.134	108	107	59.0-135			0.743	20
Di-isopropyl ether	0.125	0.123	0.119	98.4	95.2	60.0-136			3.31	20
Ethylbenzene	0.125	0.113	0.114	90.4	91.2	74.0-126			0.881	20
Hexachloro-1,3-butadiene	0.125	0.110	0.110	88.0	88.0	57.0-150			0.000	20
Isopropylbenzene	0.125	0.117	0.116	93.6	92.8	72.0-127			0.858	20
p-Isopropyltoluene	0.125	0.104	0.104	83.2	83.2	72.0-133			0.000	20
2-Butanone (MEK)	0.625	0.760	0.811	122	130	30.0-160			6.49	24
Methylene Chloride	0.125	0.126	0.118	101	94.4	68.0-123			6.56	20
4-Methyl-2-pentanone (MIBK)	0.625	0.714	0.710	114	114	56.0-143			0.562	20
Methyl tert-butyl ether	0.125	0.132	0.132	106	106	66.0-132			0.000	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3740551-1 12/11/21 13:08 • (LCSD) R3740551-2 12/11/21 13:27

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.125	0.107	0.112	85.6	89.6	59.0-130			4.57	20
n-Propylbenzene	0.125	0.113	0.113	90.4	90.4	74.0-126			0.000	20
Styrene	0.125	0.108	0.107	86.4	85.6	72.0-127			0.930	20
1,1,1,2-Tetrachloroethane	0.125	0.111	0.115	88.8	92.0	74.0-129			3.54	20
1,1,2,2-Tetrachloroethane	0.125	0.119	0.123	95.2	98.4	68.0-128			3.31	20
Tetrachloroethene	0.125	0.126	0.125	101	100	70.0-136			0.797	20
Toluene	0.125	0.119	0.119	95.2	95.2	75.0-121			0.000	20
1,1,2-Trichlorotrifluoroethane	0.125	0.0918	0.0619	73.4	49.5	61.0-139		J3 J4	38.9	20
1,2,3-Trichlorobenzene	0.125	0.108	0.112	86.4	89.6	59.0-139			3.64	20
1,2,4-Trichlorobenzene	0.125	0.112	0.117	89.6	93.6	62.0-137			4.37	20
1,1,1-Trichloroethane	0.125	0.127	0.124	102	99.2	69.0-126			2.39	20
1,1,2-Trichloroethane	0.125	0.120	0.122	96.0	97.6	78.0-123			1.65	20
Trichloroethene	0.125	0.131	0.126	105	101	76.0-126			3.89	20
Trichlorofluoromethane	0.125	0.0997	0.0925	79.8	74.0	61.0-142			7.49	20
1,2,3-Trichloropropane	0.125	0.121	0.119	96.8	95.2	67.0-129			1.67	20
1,2,3-Trimethylbenzene	0.125	0.108	0.108	86.4	86.4	74.0-124			0.000	20
1,2,4-Trimethylbenzene	0.125	0.112	0.113	89.6	90.4	70.0-126			0.889	20
1,3,5-Trimethylbenzene	0.125	0.105	0.107	84.0	85.6	73.0-127			1.89	20
Vinyl chloride	0.125	0.119	0.120	95.2	96.0	63.0-134			0.837	20
Xylenes, Total	0.375	0.352	0.353	93.9	94.1	72.0-127			0.284	20
(S) Toluene-d8				105	104	75.0-131				
(S) 4-Bromofluorobenzene				99.2	98.6	67.0-138				
(S) 1,2-Dichloroethane-d4				109	106	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1440337-27 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1440337-27 12/11/21 22:27 • (MS) R3740551-4 12/11/21 22:46 • (MSD) R3740551-5 12/11/21 23:05

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.908	U	0.825	0.663	90.8	73.1	1	10.0-160			21.7	40
Acrylonitrile	0.908	U	1.22	0.784	134	86.3	1	10.0-160		J3	43.2	40
Benzene	0.182	0.00105	0.118	0.161	64.7	88.1	1	10.0-149			30.5	37
Bromobenzene	0.182	U	0.124	0.145	68.5	79.9	1	10.0-156			15.3	38
Bromodichloromethane	0.182	U	0.134	0.152	74.0	83.9	1	10.0-143			12.6	37
Bromoform	0.182	U	0.148	0.145	81.5	79.9	1	10.0-146			1.90	36
Bromomethane	0.182	U	0.0880	0.122	48.5	67.4	1	10.0-149			32.7	38
n-Butylbenzene	0.182	U	0.133	0.158	73.5	87.1	1	10.0-160			17.0	40
sec-Butylbenzene	0.182	U	0.125	0.155	69.0	85.5	1	10.0-159			21.4	39
tert-Butylbenzene	0.182	U	0.122	0.154	67.1	84.7	1	10.0-156			23.2	39

L1440337-27 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1440337-27 12/11/21 22:27 • (MS) R3740551-4 12/11/21 22:46 • (MSD) R3740551-5 12/11/21 23:05

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.182	U	0.102	0.145	56.1	79.9	1	10.0-145			35.0	37
Chlorobenzene	0.182	U	0.123	0.157	67.6	86.3	1	10.0-152			24.3	39
Chlorodibromomethane	0.182	U	0.140	0.149	76.9	82.3	1	10.0-146			6.69	37
Chloroethane	0.182	U	0.0514	0.107	28.3	58.9	1	10.0-146		J3	70.1	40
Chloroform	0.182	U	0.135	0.170	74.4	93.5	1	10.0-146			22.9	37
Chloromethane	0.182	U	0.0763	0.106	42.0	58.1	1	10.0-159			32.2	37
2-Chlorotoluene	0.182	U	0.116	0.148	64.1	81.5	1	10.0-159			23.8	38
4-Chlorotoluene	0.182	U	0.117	0.152	64.4	83.9	1	10.0-155			26.2	39
1,2-Dibromo-3-Chloropropane	0.182	U	0.146	0.134	80.3	74.0	1	10.0-151			8.15	39
1,2-Dibromoethane	0.182	U	0.148	0.149	81.5	82.3	1	10.0-148			0.985	34
Dibromomethane	0.182	U	0.140	0.142	77.3	78.4	1	10.0-147			1.35	35
1,2-Dichlorobenzene	0.182	U	0.152	0.168	83.9	92.7	1	10.0-155			10.0	37
1,3-Dichlorobenzene	0.182	U	0.131	0.158	71.9	87.1	1	10.0-153			19.1	38
1,4-Dichlorobenzene	0.182	U	0.131	0.146	71.9	80.6	1	10.0-151			11.4	38
Dichlorodifluoromethane	0.182	U	0.102	0.160	56.2	87.9	1	10.0-160		J3	44.0	35
1,1-Dichloroethane	0.182	U	0.123	0.163	67.6	89.5	1	10.0-147			27.9	37
1,2-Dichloroethane	0.182	U	0.148	0.154	81.5	84.7	1	10.0-148			3.88	35
1,1-Dichloroethene	0.182	U	0.0621	0.129	34.2	71.0	1	10.0-155		J3	69.9	37
cis-1,2-Dichloroethene	0.182	U	0.118	0.151	64.8	83.1	1	10.0-149			24.8	37
trans-1,2-Dichloroethene	0.182	U	0.105	0.146	57.6	80.6	1	10.0-150			33.4	37
1,2-Dichloropropane	0.182	U	0.136	0.170	74.8	93.5	1	10.0-148			22.2	37
1,1-Dichloropropene	0.182	U	0.113	0.171	62.3	94.4	1	10.0-153		J3	41.0	35
1,3-Dichloropropane	0.182	U	0.161	0.163	88.7	89.5	1	10.0-154			0.905	35
cis-1,3-Dichloropropene	0.182	U	0.136	0.158	74.9	87.1	1	10.0-151			15.0	37
trans-1,3-Dichloropropene	0.182	U	0.140	0.152	77.3	83.9	1	10.0-148			8.21	37
2,2-Dichloropropane	0.182	U	0.116	0.167	63.7	91.9	1	10.0-138		J3	36.3	36
Di-isopropyl ether	0.182	U	0.140	0.160	77.3	87.9	1	10.0-147			12.8	36
Ethylbenzene	0.182	U	0.117	0.157	64.3	86.3	1	10.0-160			29.2	38
Hexachloro-1,3-butadiene	0.182	U	0.152	0.137	83.9	75.5	1	10.0-160			10.5	40
Isopropylbenzene	0.182	U	0.125	0.164	68.6	90.3	1	10.0-155			27.3	38
p-Isopropyltoluene	0.182	U	0.121	0.148	66.7	81.5	1	10.0-160			19.9	40
2-Butanone (MEK)	0.908	U	1.01	0.740	111	81.5	1	10.0-160			30.7	40
Methylene Chloride	0.182	U	0.0624	0.0702	34.4	38.6	1	10.0-141			11.7	37
4-Methyl-2-pentanone (MIBK)	0.908	U	0.924	0.819	102	90.2	1	10.0-160			12.1	35
Methyl tert-butyl ether	0.182	U	0.164	0.149	90.3	82.3	1	11.0-147			9.35	35
Naphthalene	0.182	U	0.145	0.136	79.9	75.2	1	10.0-160			6.14	36
n-Propylbenzene	0.182	U	0.122	0.160	67.3	87.9	1	10.0-158			26.6	38
Styrene	0.182	U	0.115	0.142	63.4	78.4	1	10.0-160			21.2	40
1,1,1,2-Tetrachloroethane	0.182	U	0.128	0.149	70.6	82.3	1	10.0-149			15.2	39

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1440337-27 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1440337-27 12/11/21 22:27 • (MS) R3740551-4 12/11/21 22:46 • (MSD) R3740551-5 12/11/21 23:05

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,2,2-Tetrachloroethane	0.182	U	0.133	0.117	73.1	64.4	1	10.0-160			12.7	35
Tetrachloroethene	0.182	U	0.122	0.167	67.2	91.9	1	10.0-156			31.1	39
Toluene	0.182	U	0.117	0.160	64.4	87.9	1	10.0-156			30.9	38
1,1,2-Trichlorotrifluoroethane	0.182	U	0.0401	0.0353	22.1	19.4	1	10.0-160			12.8	36
1,2,3-Trichlorobenzene	0.182	U	0.152	0.144	83.9	79.4	1	10.0-160			5.53	40
1,2,4-Trichlorobenzene	0.182	U	0.154	0.155	84.7	85.5	1	10.0-160			0.948	40
1,1,1-Trichloroethane	0.182	U	0.107	0.151	58.8	83.1	1	10.0-144			34.2	35
1,1,2-Trichloroethane	0.182	U	0.157	0.155	86.3	85.5	1	10.0-160			0.939	35
Trichloroethene	0.182	U	0.136	0.198	74.9	109	1	10.0-156			36.9	38
Trichlorofluoromethane	0.182	U	0.0822	0.0756	45.2	41.6	1	10.0-160			8.36	40
1,2,3-Trichloropropane	0.182	U	0.158	0.154	87.1	84.7	1	10.0-156			2.82	35
1,2,3-Trimethylbenzene	0.182	U	0.127	0.146	69.9	80.2	1	10.0-160			13.6	36
1,2,4-Trimethylbenzene	0.182	U	0.124	0.155	68.3	85.5	1	10.0-160			22.3	36
1,3,5-Trimethylbenzene	0.182	U	0.116	0.146	63.9	80.5	1	10.0-160			23.0	38
Vinyl chloride	0.182	U	0.0871	0.134	48.0	73.5	1	10.0-160		J3	42.1	37
Xylenes, Total	0.545	U	0.363	0.477	66.7	87.6	1	10.0-160			27.2	38
(S) Toluene-d8					105	105		75.0-131				
(S) 4-Bromofluorobenzene					103	102		67.0-138				
(S) 1,2-Dichloroethane-d4					103	101		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3739807-1 12/12/21 16:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
<i>(S) o-Terphenyl</i>	69.5			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3739807-2 12/12/21 17:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	28.8	57.6	50.0-150	
<i>(S) o-Terphenyl</i>			69.2	18.0-148	

L1439573-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439573-22 12/12/21 17:18 • (MS) R3739807-3 12/12/21 17:31 • (MSD) R3739807-4 12/12/21 17:44

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	56.0	U	30.0	34.3	53.5	61.0	1	50.0-150			13.4	20
<i>(S) o-Terphenyl</i>					60.5	76.6		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3740924-1 12/15/21 10:48

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
2,4-D	U		0.00702	0.0700
Dalapon	U		0.0113	0.0700
2,4-DB	U		0.0297	0.0700
Dicamba	U		0.0157	0.0700
Dichloroprop	U		0.0245	0.0700
Dinoseb	U		0.00697	0.0700
MCPA	U		0.443	6.50
MCPP	U		0.367	6.50
2,4,5-T	U		0.00852	0.0700
2,4,5-TP (Silvex)	U		0.0107	0.0700
(S) 2,4-Dichlorophenyl Acetic Acid	56.7			22.0-132

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3740924-2 12/15/21 11:02

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
2,4-D	0.167	0.0750	44.9	40.0-120	P
Dalapon	0.167	0.0731	43.8	15.0-120	
2,4-DB	0.167	0.0765	45.8	25.0-143	
Dicamba	0.167	0.0856	51.3	43.0-120	
Dichloroprop	0.167	0.0844	50.5	32.0-129	
Dinoseb	0.167	0.0650	38.9	10.0-120	
MCPA	16.7	7.84	46.9	31.0-121	P
MCPP	16.7	7.14	42.8	28.0-133	P
2,4,5-T	0.167	0.0892	53.4	41.0-120	
2,4,5-TP (Silvex)	0.167	0.0883	52.9	42.0-120	
(S) 2,4-Dichlorophenyl Acetic Acid			54.1	22.0-132	

L1439399-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439399-01 12/15/21 13:58 • (MS) R3740924-3 12/15/21 14:12 • (MSD) R3740924-4 12/15/21 14:27

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
2,4-D	0.163	U	0.134	0.114	82.2	69.5	1	10.0-160			16.1	24
Dalapon	0.163	U	0.104	0.103	63.8	62.8	1	10.0-121			0.966	27
2,4-DB	0.163	U	0.132	0.126	81.0	76.8	1	10.0-160			4.65	22
Dicamba	0.163	U	0.101	0.0998	62.0	60.9	1	10.0-154			1.20	21

L1439399-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439399-01 12/15/21 13:58 • (MS) R3740924-3 12/15/21 14:12 • (MSD) R3740924-4 12/15/21 14:27

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Dichloroprop	0.163	0.0261	0.119	0.124	57.0	59.7	1	10.0-158			4.12	20
Dinoseb	0.163	U	0.0931	0.0941	57.1	57.4	1	10.0-120			1.07	40
MCPA	16.3	U	11.3	11.8	69.3	72.0	1	10.0-160	P	P	4.33	40
MCPP	16.3	U	13.5	11.1	82.8	67.7	1	10.0-160			19.5	40
2,4,5-T	0.163	U	0.113	0.112	69.3	68.3	1	10.0-157			0.889	20
2,4,5-TP (Silvex)	0.163	U	0.115	0.115	70.6	70.1	1	10.0-156			0.000	20
(S) 2,4-Dichlorophenyl Acetic Acid					69.3	60.9		22.0-132				

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3739820-1 12/11/21 18:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Aldrin	U		0.00376	0.0200
Alpha BHC	U		0.00368	0.0200
Beta BHC	U		0.00379	0.0200
Delta BHC	U		0.00346	0.0200
Gamma BHC	U		0.00344	0.0200
4,4-DDD	U		0.00370	0.0200
4,4-DDE	U		0.00366	0.0200
4,4-DDT	U		0.00627	0.0200
Dieldrin	U		0.00344	0.0200
Endosulfan I	U		0.00363	0.0200
Endosulfan II	U		0.00335	0.0200
Endosulfan sulfate	U		0.00364	0.0200
Endrin	U		0.00350	0.0200
Endrin aldehyde	U		0.00339	0.0200
Endrin ketone	U		0.00711	0.0200
Heptachlor	U		0.00428	0.0200
Heptachlor epoxide	U		0.00339	0.0200
Hexachlorobenzene	U		0.00346	0.0200
Methoxychlor	U		0.00484	0.0200
Chlordane	U		0.103	0.300
Toxaphene	U		0.124	0.400
(S) Decachlorobiphenyl	41.7			10.0-135
(S) Tetrachloro-m-xylene	37.5			10.0-139

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3739820-2 12/11/21 18:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aldrin	0.0666	0.0278	41.7	34.0-136	
Alpha BHC	0.0666	0.0289	43.4	34.0-139	
Beta BHC	0.0666	0.0273	41.0	34.0-133	
Delta BHC	0.0666	0.0275	41.3	34.0-135	
Gamma BHC	0.0666	0.0288	43.2	34.0-136	
4,4-DDD	0.0666	0.0283	42.5	33.0-141	
4,4-DDE	0.0666	0.0279	41.9	34.0-134	
4,4-DDT	0.0666	0.0260	39.0	30.0-143	
Dieldrin	0.0666	0.0287	43.1	35.0-137	
Endosulfan I	0.0666	0.0287	43.1	34.0-134	

Laboratory Control Sample (LCS)

(LCS) R3739820-2 12/11/21 18:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Endosulfan II	0.0666	0.0280	42.0	35.0-132	
Endosulfan sulfate	0.0666	0.0269	40.4	35.0-132	
Endrin	0.0666	0.0277	41.6	34.0-137	
Endrin aldehyde	0.0666	0.0246	36.9	23.0-121	
Endrin ketone	0.0666	0.0293	44.0	35.0-144	
Heptachlor	0.0666	0.0262	39.3	36.0-141	
Heptachlor epoxide	0.0666	0.0269	40.4	36.0-134	
Hexachlorobenzene	0.0666	0.0272	40.8	33.0-129	
Methoxychlor	0.0666	0.0256	38.4	28.0-150	
<i>(S) Decachlorobiphenyl</i>			57.4	10.0-135	
<i>(S) Tetrachloro-m-xylene</i>			59.5	10.0-139	

L1439773-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439773-02 12/11/21 19:23 • (MS) R3739820-3 12/11/21 19:32 • (MSD) R3739820-4 12/11/21 19:41

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Aldrin	0.110	U	0.0823	0.0761	74.6	69.1	1	20.0-135			7.73	37
Alpha BHC	0.110	U	0.0895	0.0833	81.2	75.5	1	27.0-140			7.28	35
Beta BHC	0.110	U	0.0826	0.0753	74.9	68.3	1	23.0-141			9.22	37
Delta BHC	0.110	U	0.0841	0.0778	76.3	70.6	1	21.0-138			7.77	35
Gamma BHC	0.110	U	0.0872	0.0799	79.1	72.5	1	27.0-137			8.71	36
4,4-DDD	0.110	U	0.0828	0.0735	75.1	66.7	1	15.0-152			11.9	39
4,4-DDE	0.110	U	0.0803	0.0722	72.8	65.5	1	10.0-152			10.6	40
4,4-DDT	0.110	U	0.0849	0.0712	77.0	64.6	1	10.0-151	P		17.6	40
Dieldrin	0.110	U	0.0824	0.0753	74.8	68.3	1	17.0-145			9.02	37
Endosulfan I	0.110	U	0.0819	0.0746	74.3	67.7	1	20.0-137			9.30	36
Endosulfan II	0.110	U	0.0816	0.0717	74.0	65.0	1	15.0-141			13.0	37
Endosulfan sulfate	0.110	U	0.0886	0.0685	80.3	62.2	1	15.0-143			25.5	38
Endrin	0.110	U	0.0833	0.0753	75.5	68.3	1	19.0-143			10.0	37
Endrin aldehyde	0.110	U	0.0621	0.0629	56.3	57.1	1	10.0-139			1.32	40
Endrin ketone	0.110	U	0.0844	0.0765	76.6	69.4	1	17.0-149			9.88	38
Heptachlor	0.110	U	0.0831	0.0776	75.4	70.4	1	22.0-138			6.80	37
Heptachlor epoxide	0.110	U	0.0794	0.0725	72.1	65.8	1	22.0-138			9.15	36
Hexachlorobenzene	0.110	U	0.0859	0.0798	77.9	72.4	1	25.0-126			7.39	35
Methoxychlor	0.110	U	0.0806	0.0708	73.1	64.3	1	10.0-159			12.9	40
<i>(S) Decachlorobiphenyl</i>					72.8	75.5		10.0-135				
<i>(S) Tetrachloro-m-xylene</i>					86.8	89.9		10.0-139				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3740330-1 12/14/21 00:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/kg		mg/kg	mg/kg
PCB 1016	U		0.0118	0.0340
PCB 1221	U		0.0118	0.0340
PCB 1232	U		0.0118	0.0340
PCB 1242	U		0.0118	0.0340
PCB 1248	U		0.00738	0.0170
PCB 1254	U		0.00738	0.0170
PCB 1260	U		0.00738	0.0170
(S) Decachlorobiphenyl	95.8			10.0-135
(S) Tetrachloro-m-xylene	97.1			10.0-139

Laboratory Control Sample (LCS)

(LCS) R3740330-2 12/14/21 00:09

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/kg	mg/kg	%	%	
PCB 1260	0.167	0.169	101	37.0-145	
PCB 1016	0.167	0.162	97.0	36.0-141	
(S) Decachlorobiphenyl			106	10.0-135	
(S) Tetrachloro-m-xylene			104	10.0-139	

L1439524-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439524-09 12/14/21 00:27 • (MS) R3740330-3 12/14/21 00:36 • (MSD) R3740330-4 12/14/21 00:44

Analyte	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
PCB 1260	0.173	U	0.556	0.630	322	364	1	10.0-160	J5 P	J5 P	12.4	38
PCB 1016	0.173	U	0.819	1.00	473	580	1	10.0-160	J5 P	J5 P	20.3	37
(S) Decachlorobiphenyl					94.0	106		10.0-135				
(S) Tetrachloro-m-xylene					94.0	103		10.0-139				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3740383-2 12/13/21 17:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acenaphthene	U		0.00539	0.0333
Acenaphthylene	U		0.00469	0.0333
Anthracene	U		0.00593	0.0333
Benzo(a)anthracene	U		0.00587	0.0333
Benzo(b)fluoranthene	U		0.00621	0.0333
Benzo(k)fluoranthene	U		0.00592	0.0333
Benzo(g,h,i)perylene	U		0.00609	0.0333
Benzo(a)pyrene	U		0.00619	0.0333
Bis(2-chloroethoxy)methane	U		0.0100	0.333
Bis(2-chloroethyl)ether	U		0.0110	0.333
2,2-oxybis(1-chloropropane)	U		0.0144	0.333
4-Bromophenyl-phenylether	U		0.0117	0.333
2-Chloronaphthalene	U		0.00585	0.0333
4-Chlorophenyl-phenylether	U		0.0116	0.333
Chrysene	U		0.00662	0.0333
Dibenz(a,h)anthracene	U		0.00923	0.0333
3,3-Dichlorobenzidine	U		0.0123	0.333
2,4-Dinitrotoluene	U		0.00955	0.333
2,6-Dinitrotoluene	U		0.0109	0.333
Fluoranthene	U		0.00601	0.0333
Fluorene	U		0.00542	0.0333
Hexachlorobenzene	U		0.0118	0.333
Hexachloro-1,3-butadiene	U		0.0112	0.333
Hexachlorocyclopentadiene	U		0.0175	0.333
Hexachloroethane	U		0.0131	0.333
Indeno(1,2,3-cd)pyrene	U		0.00941	0.0333
Isophorone	U		0.0102	0.333
Naphthalene	U		0.00836	0.0333
Nitrobenzene	U		0.0116	0.333
n-Nitrosodimethylamine	U		0.0494	0.333
n-Nitrosodiphenylamine	U		0.0252	0.333
n-Nitrosodi-n-propylamine	U		0.0111	0.333
Phenanthrene	U		0.00661	0.0333
Benzylbutyl phthalate	U		0.0104	0.333
Bis(2-ethylhexyl)phthalate	U		0.0422	0.333
Di-n-butyl phthalate	U		0.0114	0.333
Diethyl phthalate	U		0.0110	0.333
Dimethyl phthalate	U		0.0706	0.333
Di-n-octyl phthalate	U		0.0225	0.333
Pyrene	U		0.00648	0.0333

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3740383-2 12/13/21 17:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Pyridine	U		0.0220	0.333
1,2,4-Trichlorobenzene	U		0.0104	0.333
4-Chloro-3-methylphenol	U		0.0108	0.333
2-Chlorophenol	U		0.0110	0.333
2-Methylphenol	U		0.0100	0.333
3&4-Methyl Phenol	U		0.0104	0.333
2,4-Dichlorophenol	U		0.00970	0.333
2,4-Dimethylphenol	U		0.00870	0.333
4,6-Dinitro-2-methylphenol	U		0.0755	0.333
2,4-Dinitrophenol	U		0.0779	0.333
2-Nitrophenol	U		0.0119	0.333
4-Nitrophenol	U		0.0104	0.333
Pentachlorophenol	U		0.00896	0.333
Phenol	U		0.0134	0.333
2,4,5-Trichlorophenol	U		0.0113	0.333
2,4,6-Trichlorophenol	U		0.0107	0.333
<i>(S) Nitrobenzene-d5</i>	53.2			10.0-122
<i>(S) 2-Fluorobiphenyl</i>	62.2			15.0-120
<i>(S) p-Terphenyl-d14</i>	79.0			10.0-120
<i>(S) Phenol-d5</i>	62.0			10.0-120
<i>(S) 2-Fluorophenol</i>	64.9			12.0-120
<i>(S) 2,4,6-Tribromophenol</i>	74.6			10.0-127

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3740383-1 12/13/21 17:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.666	0.442	66.4	38.0-120	
Acenaphthylene	0.666	0.473	71.0	40.0-120	
Anthracene	0.666	0.479	71.9	42.0-120	
Benzo(a)anthracene	0.666	0.548	82.3	44.0-120	
Benzo(b)fluoranthene	0.666	0.523	78.5	43.0-120	
Benzo(k)fluoranthene	0.666	0.507	76.1	44.0-120	
Benzo(g,h,i)perylene	0.666	0.505	75.8	43.0-120	
Benzo(a)pyrene	0.666	0.512	76.9	45.0-120	
Bis(2-chlorethoxy)methane	0.666	0.357	53.6	20.0-120	
Bis(2-chloroethyl)ether	0.666	0.448	67.3	16.0-120	
2,2-Oxybis(1-Chloropropane)	0.666	0.397	59.6	23.0-120	

Laboratory Control Sample (LCS)

(LCS) R3740383-1 12/13/21 17:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
4-Bromophenyl-phenylether	0.666	0.501	75.2	40.0-120	
2-Chloronaphthalene	0.666	0.444	66.7	35.0-120	
4-Chlorophenyl-phenylether	0.666	0.490	73.6	40.0-120	
Chrysene	0.666	0.500	75.1	43.0-120	
Dibenz(a,h)anthracene	0.666	0.528	79.3	44.0-120	
3,3-Dichlorobenzidine	1.33	1.03	77.4	28.0-120	
2,4-Dinitrotoluene	0.666	0.570	85.6	45.0-120	
2,6-Dinitrotoluene	0.666	0.517	77.6	42.0-120	
Fluoranthene	0.666	0.513	77.0	44.0-120	
Fluorene	0.666	0.481	72.2	41.0-120	
Hexachlorobenzene	0.666	0.489	73.4	39.0-120	
Hexachloro-1,3-butadiene	0.666	0.375	56.3	15.0-120	
Hexachlorocyclopentadiene	0.666	0.461	69.2	15.0-120	
Hexachloroethane	0.666	0.390	58.6	17.0-120	
Indeno(1,2,3-cd)pyrene	0.666	0.542	81.4	45.0-120	
Isophorone	0.666	0.365	54.8	23.0-120	
Naphthalene	0.666	0.344	51.7	18.0-120	
Nitrobenzene	0.666	0.344	51.7	17.0-120	
n-Nitrosodimethylamine	0.666	0.344	51.7	10.0-125	
n-Nitrosodiphenylamine	0.666	0.459	68.9	40.0-120	
n-Nitrosodi-n-propylamine	0.666	0.406	61.0	26.0-120	
Phenanthrene	0.666	0.466	70.0	42.0-120	
Benzylbutyl phthalate	0.666	0.521	78.2	40.0-120	
Bis(2-ethylhexyl)phthalate	0.666	0.525	78.8	41.0-120	
Di-n-butyl phthalate	0.666	0.499	74.9	43.0-120	
Diethyl phthalate	0.666	0.511	76.7	43.0-120	
Dimethyl phthalate	0.666	0.498	74.8	43.0-120	
Di-n-octyl phthalate	0.666	0.539	80.9	40.0-120	
Pyrene	0.666	0.494	74.2	41.0-120	
Pyridine	0.666	0.258	38.7	10.0-120	
1,2,4-Trichlorobenzene	0.666	0.374	56.2	17.0-120	
4-Chloro-3-methylphenol	0.666	0.404	60.7	28.0-120	
2-Chlorophenol	0.666	0.432	64.9	28.0-120	
2-Methylphenol	0.666	0.439	65.9	35.0-120	
3&4-Methyl Phenol	0.666	0.520	78.1	42.0-120	
2,4-Dichlorophenol	0.666	0.394	59.2	25.0-120	
2,4-Dimethylphenol	0.666	0.383	57.5	15.0-120	
4,6-Dinitro-2-methylphenol	0.666	0.538	80.8	16.0-120	
2,4-Dinitrophenol	0.666	0.383	57.5	10.0-120	
2-Nitrophenol	0.666	0.411	61.7	20.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Laboratory Control Sample (LCS)

(LCS) R3740383-1 12/13/21 17:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Nitrophenol	0.666	0.564	84.7	27.0-120	
Pentachlorophenol	0.666	0.541	81.2	29.0-120	
Phenol	0.666	0.425	63.8	28.0-120	
2,4,5-Trichlorophenol	0.666	0.505	75.8	38.0-120	
2,4,6-Trichlorophenol	0.666	0.494	74.2	37.0-120	
(S) Nitrobenzene-d5			47.7	10.0-122	
(S) 2-Fluorobiphenyl			67.3	15.0-120	
(S) p-Terphenyl-d14			79.9	10.0-120	
(S) Phenol-d5			65.5	10.0-120	
(S) 2-Fluorophenol			67.6	12.0-120	
(S) 2,4,6-Tribromophenol			87.2	10.0-127	

L1439773-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439773-08 12/13/21 19:30 • (MS) R3740383-3 12/13/21 19:51 • (MSD) R3740383-4 12/13/21 20:12

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.778	U	0.392	0.471	50.3	60.9	1	18.0-120			18.4	32
Acenaphthylene	0.778	U	0.417	0.495	53.6	64.0	1	25.0-120			17.2	32
Anthracene	0.778	U	0.458	0.530	58.8	68.5	1	22.0-120			14.6	29
Benzo(a)anthracene	0.778	U	0.519	0.615	66.7	79.4	1	25.0-120			16.8	29
Benzo(b)fluoranthene	0.778	U	0.474	0.557	60.8	72.0	1	19.0-122			16.1	31
Benzo(k)fluoranthene	0.778	U	0.459	0.539	59.0	69.6	1	23.0-120			15.9	30
Benzo(g,h,i)perylene	0.778	U	0.456	0.534	58.5	69.0	1	10.0-120			15.8	33
Benzo(a)pyrene	0.778	U	0.474	0.565	60.8	73.1	1	24.0-120			17.6	30
Bis(2-chloroethoxy)methane	0.778	U	0.302	0.378	38.9	48.9	1	10.0-120			22.3	34
Bis(2-chloroethyl)ether	0.778	U	0.364	0.465	46.7	60.1	1	10.0-120			24.4	40
2,2-Oxybis(1-Chloropropane)	0.778	U	0.299	0.419	38.4	54.2	1	10.0-120			33.6	40
4-Bromophenyl-phenylether	0.778	U	0.474	0.552	60.8	71.3	1	27.0-120			15.3	30
2-Chloronaphthalene	0.778	U	0.383	0.468	49.2	60.4	1	20.0-120			19.8	32
4-Chlorophenyl-phenylether	0.778	U	0.445	0.530	57.1	68.5	1	24.0-120			17.6	29
Chrysene	0.778	U	0.469	0.559	60.2	72.3	1	21.0-120			17.6	29
Dibenz(a,h)anthracene	0.778	U	0.482	0.575	61.9	74.3	1	10.0-120			17.6	32
3,3-Dichlorobenzidine	1.55	U	0.950	1.18	61.1	76.3	1	10.0-120			21.3	34
2,4-Dinitrotoluene	0.778	U	0.537	0.633	69.0	81.8	1	30.0-120			16.3	31
2,6-Dinitrotoluene	0.778	U	0.472	0.560	60.7	72.4	1	25.0-120			17.0	31
Fluoranthene	0.778	U	0.495	0.574	63.6	74.1	1	18.0-126			14.7	32
Fluorene	0.778	U	0.435	0.517	55.9	66.8	1	25.0-120			17.2	30
Hexachlorobenzene	0.778	U	0.462	0.539	59.3	69.6	1	27.0-120			15.4	28

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1439773-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439773-08 12/13/21 19:30 • (MS) R3740383-3 12/13/21 19:51 • (MSD) R3740383-4 12/13/21 20:12

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	0.778	U	0.305	0.405	39.2	52.3	1	10.0-120			28.2	38
Hexachlorocyclopentadiene	0.778	U	0.302	0.411	38.9	53.1	1	10.0-120			30.4	40
Hexachloroethane	0.778	U	0.287	0.401	36.8	51.9	1	10.0-120			33.3	40
Indeno(1,2,3-cd)pyrene	0.778	U	0.493	0.588	63.3	76.0	1	10.0-120			17.6	32
Isophorone	0.778	U	0.317	0.400	40.7	51.7	1	13.0-120			23.2	34
Naphthalene	0.778	U	0.280	0.369	35.9	47.7	1	10.0-120			27.5	35
Nitrobenzene	0.778	U	0.278	0.364	35.8	47.0	1	10.0-120			26.6	36
n-Nitrosodimethylamine	0.778	U	0.251	0.339	32.2	43.8	1	10.0-127			29.9	40
n-Nitrosodiphenylamine	0.778	U	0.435	0.515	55.9	66.5	1	17.0-120			16.8	29
n-Nitrosodi-n-propylamine	0.778	U	0.327	0.423	42.0	54.7	1	10.0-120			25.7	37
Phenanthrene	0.778	U	0.447	0.522	57.4	67.4	1	17.0-120			15.4	31
Benzylbutyl phthalate	0.778	U	0.541	0.628	69.5	81.2	1	23.0-120			14.8	30
Bis(2-ethylhexyl)phthalate	0.778	U	0.540	0.643	69.3	83.2	1	17.0-126			17.5	30
Di-n-butyl phthalate	0.778	U	0.510	0.580	65.5	74.9	1	30.0-120			12.8	29
Diethyl phthalate	0.778	U	0.469	0.551	60.2	71.2	1	26.0-120			16.1	28
Dimethyl phthalate	0.778	U	0.437	0.521	56.2	67.3	1	25.0-120			17.4	29
Di-n-octyl phthalate	0.778	U	0.572	0.681	73.5	88.0	1	21.0-123			17.3	29
Pyrene	0.778	U	0.469	0.557	60.2	72.0	1	16.0-121			17.2	32
Pyridine	0.778	U	0.231	0.324	29.7	41.9	1	10.0-120			33.4	40
1,2,4-Trichlorobenzene	0.778	U	0.306	0.405	39.3	52.3	1	12.0-120			27.8	37
4-Chloro-3-methylphenol	0.778	U	0.392	0.459	50.3	59.3	1	15.0-120			15.9	30
2-Chlorophenol	0.778	U	0.343	0.456	44.1	58.9	1	15.0-120			28.1	37
2-Methylphenol	0.778	U	0.370	0.460	47.5	59.5	1	11.0-120			21.8	40
3&4-Methyl Phenol	0.778	0.0218	0.445	0.546	54.3	67.7	1	12.0-123			20.4	38
2,4-Dichlorophenol	0.778	U	0.368	0.448	47.2	57.9	1	20.0-120			19.8	31
2,4-Dimethylphenol	0.778	U	0.355	0.425	45.7	55.0	1	10.0-120			17.9	33
4,6-Dinitro-2-methylphenol	0.778	U	0.552	0.559	70.9	72.3	1	10.0-120			1.30	39
2,4-Dinitrophenol	0.778	U	0.528	0.507	67.8	65.6	1	10.0-121			3.96	40
2-Nitrophenol	0.778	U	0.399	0.468	51.2	60.4	1	12.0-120			15.9	39
4-Nitrophenol	0.778	U	0.559	0.650	71.8	84.0	1	10.0-137			15.0	32
Pentachlorophenol	0.778	U	0.590	0.698	75.9	90.2	1	10.0-160			16.7	31
Phenol	0.778	U	0.348	0.441	44.7	57.0	1	12.0-120			23.5	38
2,4,5-Trichlorophenol	0.778	U	0.478	0.574	61.5	74.1	1	20.0-120			18.1	30
2,4,6-Trichlorophenol	0.778	U	0.464	0.534	59.6	69.0	1	19.0-120			14.0	32
(S) Nitrobenzene-d5					32.8	43.9		10.0-122				
(S) 2-Fluorobiphenyl					48.6	61.7		15.0-120				
(S) p-Terphenyl-d14					64.4	78.5		10.0-120				
(S) Phenol-d5					44.4	59.2		10.0-120				
(S) 2-Fluorophenol					44.3	61.8		12.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1439773-08 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439773-08 12/13/21 19:30 • (MS) R3740383-3 12/13/21 19:51 • (MSD) R3740383-4 12/13/21 20:12

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 2,4,6-Tribromophenol					72.6	89.3		10.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3740000-2 12/10/21 15:38

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) Nitrobenzene-d5	77.6			14.0-149
(S) 2-Fluorobiphenyl	83.8			34.0-125
(S) p-Terphenyl-d14	86.6			23.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3740000-1 12/10/21 15:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0609	76.1	50.0-126	
Acenaphthene	0.0800	0.0639	79.9	50.0-120	
Acenaphthylene	0.0800	0.0632	79.0	50.0-120	
Benzo(a)anthracene	0.0800	0.0610	76.3	45.0-120	
Benzo(a)pyrene	0.0800	0.0544	68.0	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0632	79.0	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0615	76.9	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0632	79.0	49.0-125	
Chrysene	0.0800	0.0644	80.5	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0617	77.1	47.0-125	
Fluoranthene	0.0800	0.0604	75.5	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R3740000-1 12/10/21 15:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	0.0800	0.0625	78.1	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0641	80.1	46.0-125	
Naphthalene	0.0800	0.0618	77.3	50.0-120	
Phenanthrene	0.0800	0.0639	79.9	47.0-120	
Pyrene	0.0800	0.0624	78.0	43.0-123	
1-Methylnaphthalene	0.0800	0.0622	77.8	51.0-121	
2-Methylnaphthalene	0.0800	0.0635	79.4	50.0-120	
2-Chloronaphthalene	0.0800	0.0626	78.3	50.0-120	
<i>(S) Nitrobenzene-d5</i>			74.0	14.0-149	
<i>(S) 2-Fluorobiphenyl</i>			75.5	34.0-125	
<i>(S) p-Terphenyl-d14</i>			74.5	23.0-120	

L1440040-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1440040-05 12/10/21 19:34 • (MS) R3740000-3 12/10/21 19:54 • (MSD) R3740000-4 12/10/21 20:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	0.0830	U	0.0778	0.0760	93.8	92.1	1	10.0-145			2.34	30
Acenaphthene	0.0830	U	0.0818	0.0811	98.5	98.2	1	14.0-127			0.780	27
Acenaphthylene	0.0830	U	0.0789	0.0776	95.0	94.0	1	21.0-124			1.62	25
Benzo(a)anthracene	0.0830	U	0.0753	0.0758	90.7	91.8	1	10.0-139			0.701	30
Benzo(a)pyrene	0.0830	U	0.0843	0.0834	102	101	1	10.0-141			1.14	31
Benzo(b)fluoranthene	0.0830	U	0.0839	0.0824	101	99.7	1	10.0-140			1.78	36
Benzo(g,h,i)perylene	0.0830	U	0.0799	0.0793	96.2	96.0	1	10.0-140			0.665	33
Benzo(k)fluoranthene	0.0830	U	0.0786	0.0780	94.6	94.4	1	10.0-137			0.812	31
Chrysene	0.0830	U	0.0820	0.0813	98.7	98.5	1	10.0-145			0.778	30
Dibenz(a,h)anthracene	0.0830	U	0.0794	0.0778	95.7	94.2	1	10.0-132			2.02	31
Fluoranthene	0.0830	U	0.0786	0.0774	94.6	93.7	1	10.0-153			1.49	33
Fluorene	0.0830	U	0.0778	0.0784	93.8	94.9	1	11.0-130			0.678	29
Indeno(1,2,3-cd)pyrene	0.0830	U	0.0811	0.0808	97.7	97.8	1	10.0-137			0.392	32
Naphthalene	0.0830	U	0.0808	0.0798	97.3	96.5	1	10.0-135			1.32	27
Phenanthrene	0.0830	U	0.0831	0.0813	100	98.5	1	10.0-144			2.19	31
Pyrene	0.0830	U	0.0808	0.0783	97.3	94.7	1	10.0-148			3.20	35
1-Methylnaphthalene	0.0830	U	0.0799	0.0791	96.2	95.8	1	10.0-142			0.933	28
2-Methylnaphthalene	0.0830	U	0.0827	0.0811	99.6	98.2	1	10.0-137			1.94	28
2-Chloronaphthalene	0.0830	U	0.0794	0.0794	95.7	96.2	1	29.0-120			0.000	24
<i>(S) Nitrobenzene-d5</i>					90.8	91.1		14.0-149				
<i>(S) 2-Fluorobiphenyl</i>					94.7	96.9		34.0-125				
<i>(S) p-Terphenyl-d14</i>					94.9	95.6		23.0-120				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
C5	The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.



GLOSSARY OF TERMS

Qualifier	Description
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
P	RPD between the primary and confirmatory analysis exceeded 40%.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Company Name/Address: **Shannon & Wilson - OR**
 3990 Collins Way, Ste. 100
 Lake Oswego, OR 97035

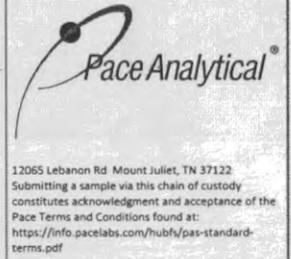
Billing Information:
 Accounts Payable
 3990 Collins Way, Ste. 100
 Lake Oswego, OR 97035

Report to:
Lauren Sherman

Email To: **Lauren.Sherman@shanwil.com**

Project Description: **EQRB** City/State Collected: **Portland, OR** Please Circle: **PT** MT CT ET

Phone: **503-210-4750** Client Project # **102636** Lab Project # **SHAWILOR-102636**



Collected by (print): **Lauren Sherman** Site/Facility ID # _____ P.O. # _____

Collected by (signature): _____ **Rush?** (Lab MUST Be Notified)
 ___ Same Day ___ Five Day
 ___ Next Day ___ 5 Day (Rad Only)
 ___ Two Day ___ 10 Day (Rad Only)
 ___ Three Day

Quote # _____ Date Results Needed _____

Immediately Packed on Ice N ___ Y

SDG # **1103** (with handwritten **11434773**)

Acctnum: **SHAWILOR**
 Template: **T197028**
 Prelogin: **P882696**
 PM: **110 - Brian Ford**
 PB: _____

Shipped Via: _____

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DX no silica 8ozClr-NoPres	Herbicides 8151 8ozClr-NoPres	NWTPHGX 40mlAmb/MeOH10ml/Syr	OCPs 8081 8ozClr-NoPres	PAHs 8270ESIM 8ozClr-NoPres	PCBs 8082 8ozClr-NoPres	RCRA8 Metals 6020 8ozClr-NoPres	SVOCs 8270D 8ozClr-NoPres	Sb,Cu,Zn 6020 8ozClr-NoPres	VOCs 8260D 40mlAmb/MeOH10ml/Syr	Remarks	Sample # (lab only)
EQRB-UNK-BS	COMP	SS		12/01/21	1200	2	X	X	X	X	X	X	X	X	X	X		-01
B-14-SCBS	COMP	SS		12/01/21	1300	2	X	X	X	X	X	X	X	X	X	X		-02
B-21-Ba-SCBS		SS		"	1500	2	X		X		X		X		X	X	TCLP Ba X	-03-04
B-22-SC		SS		"	1315	2	X		X		X		X		X	X		-05
B-23-SC		SS		"	1330	2	X		X		X		X		X	X		-04
B-28-SC		SS		"	1345	2	X	X	X	X	X	X	X	X	X	X		-07
B-30-SC		SS		"	1405	2	X	X	X	X	X	X	X	X	X	X		-08
B-31-SC		SS		"	1425	2	X	X	X	X	X	X	X	X	X	X		-09

* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other _____

Remarks: **Run B-21-Ba-SCBS for TCLP Barium**

Tracking # **9463 1914 484**

Samples returned via: UPS FedEx Courier

pH _____ Temp _____ Flow _____ Other _____

Sample Receipt Checklist:
 COC Seal Present/Intact: Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 If Applicable:
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 mR/hr: Y N

Relinquished by: (Signature) LS	Date: 12/07/21	Time: 1600	Received by: (Signature) _____	Trip Blank Received: Yes/No <input checked="" type="checkbox"/> HCL / MeOH TBR	Temp: 3.85 = 3.8	Bottles Received: 16	If preservation required by Login: Date/Time
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date: 12/8/21	Time:	Hold:	Condition: NCF / OK

Shannon & Wilson - OR

Sample Delivery Group: L1439784

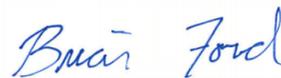
Samples Received: 12/08/2021

Project Number: 102636

Description: EQRB

Report To: Lauren Sherman
3990 Collins Way, Ste. 100
Lake Oswego, OR 97035

Entire Report Reviewed By:



Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

TABLE OF CONTENTS

Cp: Cover Page	1	
Tc: Table of Contents	2	
Ss: Sample Summary	3	
Cn: Case Narrative	4	
Sr: Sample Results	5	
EQRB-UNK-DW L1439784-01	5	
EQRB-UNK-DW L1439784-02	8	
Qc: Quality Control Summary	9	
Mercury by Method 7470A	9	
Metals (ICP) by Method 6010D	10	
Metals (ICPMS) by Method 6020B	11	
Volatile Organic Compounds (GC) by Method NWTPHGX	12	
Volatile Organic Compounds (GC/MS) by Method 8260D	13	
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	17	
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	18	
Gl: Glossary of Terms	20	
Al: Accreditations & Locations	21	
Sc: Sample Chain of Custody	22	

SAMPLE SUMMARY

EQRB-UNK-DW L1439784-01 GW

Collected by: Lauren Sherman
 Collected date/time: 11/30/21 12:00
 Received date/time: 12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1786522	1	12/09/21 10:30	12/10/21 12:29	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG1797450	1	01/04/22 07:13	01/12/22 14:28	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1787886	1	12/12/21 00:43	12/12/21 00:43	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG1788167	1	12/13/21 06:04	12/13/21 06:04	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1788829	1	12/13/21 21:00	12/14/21 10:33	WCR	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG1786614	2	12/09/21 13:09	12/09/21 22:02	LEA	Mt. Juliet, TN

EQRB-UNK-DW L1439784-02 Waste

Collected by: Lauren Sherman
 Collected date/time: 11/30/21 12:00
 Received date/time: 12/08/21 10:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Preparation by Method 1311	WG1794817	1	12/26/21 12:12	12/26/21 12:12	APH	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1795222	1	12/27/21 14:34	12/28/21 20:27	CCE	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

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6 Qc

7 Gl

8 Al

9 Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Mercury,Dissolved	U		0.100	0.200	1	12/10/2021 12:29	WG1786522

Metals (ICPMS) by Method 6020B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Arsenic,Dissolved	1.31	J	0.180	2.00	1	01/12/2022 14:28	WG1797450
Barium,Dissolved	38.8		0.381	2.00	1	01/12/2022 14:28	WG1797450
Cadmium,Dissolved	U		0.150	1.00	1	01/12/2022 14:28	WG1797450
Chromium,Dissolved	1.28	J	1.24	2.00	1	01/12/2022 14:28	WG1797450
Lead,Dissolved	U		0.849	2.00	1	01/12/2022 14:28	WG1797450
Selenium,Dissolved	1.45	J	0.300	2.00	1	01/12/2022 14:28	WG1797450
Silver,Dissolved	U		0.0700	2.00	1	01/12/2022 14:28	WG1797450

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Gasoline Range Organics-NWTPH	U		31.6	100	1	12/12/2021 00:43	WG1787886
(S) a,a,a-Trifluorotoluene(FID)	108			78.0-120		12/12/2021 00:43	WG1787886

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	12/13/2021 06:04	WG1788167
Acrolein	U	C3	2.54	50.0	1	12/13/2021 06:04	WG1788167
Acrylonitrile	U		0.671	10.0	1	12/13/2021 06:04	WG1788167
Benzene	U		0.0941	1.00	1	12/13/2021 06:04	WG1788167
Bromobenzene	U		0.118	1.00	1	12/13/2021 06:04	WG1788167
Bromodichloromethane	U		0.136	1.00	1	12/13/2021 06:04	WG1788167
Bromoform	U		0.129	1.00	1	12/13/2021 06:04	WG1788167
Bromomethane	U		0.605	5.00	1	12/13/2021 06:04	WG1788167
n-Butylbenzene	U		0.157	1.00	1	12/13/2021 06:04	WG1788167
sec-Butylbenzene	U		0.125	1.00	1	12/13/2021 06:04	WG1788167
tert-Butylbenzene	U		0.127	1.00	1	12/13/2021 06:04	WG1788167
Carbon tetrachloride	U		0.128	1.00	1	12/13/2021 06:04	WG1788167
Chlorobenzene	U		0.116	1.00	1	12/13/2021 06:04	WG1788167
Chlorodibromomethane	U		0.140	1.00	1	12/13/2021 06:04	WG1788167
Chloroethane	U		0.192	5.00	1	12/13/2021 06:04	WG1788167
Chloroform	U		0.111	5.00	1	12/13/2021 06:04	WG1788167
Chloromethane	U		0.960	2.50	1	12/13/2021 06:04	WG1788167
2-Chlorotoluene	U		0.106	1.00	1	12/13/2021 06:04	WG1788167
4-Chlorotoluene	U		0.114	1.00	1	12/13/2021 06:04	WG1788167
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	12/13/2021 06:04	WG1788167
1,2-Dibromoethane	U		0.126	1.00	1	12/13/2021 06:04	WG1788167
Dibromomethane	U		0.122	1.00	1	12/13/2021 06:04	WG1788167
1,2-Dichlorobenzene	U		0.107	1.00	1	12/13/2021 06:04	WG1788167
1,3-Dichlorobenzene	U		0.110	1.00	1	12/13/2021 06:04	WG1788167
1,4-Dichlorobenzene	U		0.120	1.00	1	12/13/2021 06:04	WG1788167
Dichlorodifluoromethane	U		0.374	5.00	1	12/13/2021 06:04	WG1788167
1,1-Dichloroethane	U		0.100	1.00	1	12/13/2021 06:04	WG1788167
1,2-Dichloroethane	U		0.0819	1.00	1	12/13/2021 06:04	WG1788167
1,1-Dichloroethene	U		0.188	1.00	1	12/13/2021 06:04	WG1788167
cis-1,2-Dichloroethene	U		0.126	1.00	1	12/13/2021 06:04	WG1788167
trans-1,2-Dichloroethene	U		0.149	1.00	1	12/13/2021 06:04	WG1788167



Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,2-Dichloropropane	U		0.149	1.00	1	12/13/2021 06:04	WG1788167
1,1-Dichloropropene	U		0.142	1.00	1	12/13/2021 06:04	WG1788167
1,3-Dichloropropane	U		0.110	1.00	1	12/13/2021 06:04	WG1788167
cis-1,3-Dichloropropene	U		0.111	1.00	1	12/13/2021 06:04	WG1788167
trans-1,3-Dichloropropene	U		0.118	1.00	1	12/13/2021 06:04	WG1788167
2,2-Dichloropropane	U	J3	0.161	1.00	1	12/13/2021 06:04	WG1788167
Di-isopropyl ether	U		0.105	1.00	1	12/13/2021 06:04	WG1788167
Ethylbenzene	U		0.137	1.00	1	12/13/2021 06:04	WG1788167
Hexachloro-1,3-butadiene	U		0.337	1.00	1	12/13/2021 06:04	WG1788167
Isopropylbenzene	U		0.105	1.00	1	12/13/2021 06:04	WG1788167
p-Isopropyltoluene	U		0.120	1.00	1	12/13/2021 06:04	WG1788167
2-Butanone (MEK)	U		1.19	10.0	1	12/13/2021 06:04	WG1788167
Methylene Chloride	U		0.430	5.00	1	12/13/2021 06:04	WG1788167
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	12/13/2021 06:04	WG1788167
Methyl tert-butyl ether	U		0.101	1.00	1	12/13/2021 06:04	WG1788167
Naphthalene	U		1.00	5.00	1	12/13/2021 06:04	WG1788167
n-Propylbenzene	U		0.0993	1.00	1	12/13/2021 06:04	WG1788167
Styrene	U		0.118	1.00	1	12/13/2021 06:04	WG1788167
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	12/13/2021 06:04	WG1788167
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	12/13/2021 06:04	WG1788167
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	12/13/2021 06:04	WG1788167
Tetrachloroethene	U		0.300	1.00	1	12/13/2021 06:04	WG1788167
Toluene	U		0.278	1.00	1	12/13/2021 06:04	WG1788167
1,2,3-Trichlorobenzene	U		0.230	1.00	1	12/13/2021 06:04	WG1788167
1,2,4-Trichlorobenzene	U		0.481	1.00	1	12/13/2021 06:04	WG1788167
1,1,1-Trichloroethane	U		0.149	1.00	1	12/13/2021 06:04	WG1788167
1,1,2-Trichloroethane	U		0.158	1.00	1	12/13/2021 06:04	WG1788167
Trichloroethene	U		0.190	1.00	1	12/13/2021 06:04	WG1788167
Trichlorofluoromethane	U		0.160	5.00	1	12/13/2021 06:04	WG1788167
1,2,3-Trichloropropane	U		0.237	2.50	1	12/13/2021 06:04	WG1788167
1,2,4-Trimethylbenzene	U		0.322	1.00	1	12/13/2021 06:04	WG1788167
1,2,3-Trimethylbenzene	U		0.104	1.00	1	12/13/2021 06:04	WG1788167
1,3,5-Trimethylbenzene	U		0.104	1.00	1	12/13/2021 06:04	WG1788167
Vinyl chloride	U		0.234	1.00	1	12/13/2021 06:04	WG1788167
Xylenes, Total	U		0.174	3.00	1	12/13/2021 06:04	WG1788167
(S) Toluene-d8	97.6			80.0-120		12/13/2021 06:04	WG1788167
(S) 4-Bromofluorobenzene	98.1			77.0-126		12/13/2021 06:04	WG1788167
(S) 1,2-Dichloroethane-d4	104			70.0-130		12/13/2021 06:04	WG1788167



Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	152		33.3	100	1	12/14/2021 10:33	WG1788829
Residual Range Organics (RRO)	U		83.3	250	1	12/14/2021 10:33	WG1788829
(S) o-Terphenyl	59.5			31.0-160		12/14/2021 10:33	WG1788829

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U	T8	0.0380	0.100	2	12/09/2021 22:02	WG1786614
Acenaphthene	U	T8	0.0380	0.100	2	12/09/2021 22:02	WG1786614
Acenaphthylene	U	T8	0.0342	0.100	2	12/09/2021 22:02	WG1786614
Benzo(a)anthracene	U	T8	0.0406	0.100	2	12/09/2021 22:02	WG1786614
Benzo(a)pyrene	U	T8	0.0368	0.100	2	12/09/2021 22:02	WG1786614
Benzo(b)fluoranthene	U	T8	0.0336	0.100	2	12/09/2021 22:02	WG1786614

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U	<u>T8</u>	0.0368	0.100	2	12/09/2021 22:02	WG1786614
Benzo(k)fluoranthene	U	<u>T8</u>	0.0404	0.100	2	12/09/2021 22:02	WG1786614
Chrysene	U	<u>T8</u>	0.0358	0.100	2	12/09/2021 22:02	WG1786614
Dibenz(a,h)anthracene	U	<u>T8</u>	0.0320	0.100	2	12/09/2021 22:02	WG1786614
Fluoranthene	U	<u>T8</u>	0.0540	0.200	2	12/09/2021 22:02	WG1786614
Fluorene	U	<u>T8</u>	0.0338	0.100	2	12/09/2021 22:02	WG1786614
Indeno(1,2,3-cd)pyrene	U	<u>T8</u>	0.0316	0.100	2	12/09/2021 22:02	WG1786614
Naphthalene	U	<u>T8</u>	0.183	0.500	2	12/09/2021 22:02	WG1786614
Phenanthrene	U	<u>T8</u>	0.0360	0.100	2	12/09/2021 22:02	WG1786614
Pyrene	U	<u>T8</u>	0.0338	0.100	2	12/09/2021 22:02	WG1786614
1-Methylnaphthalene	U	<u>T8</u>	0.137	0.500	2	12/09/2021 22:02	WG1786614
2-Methylnaphthalene	U	<u>T8</u>	0.135	0.500	2	12/09/2021 22:02	WG1786614
2-Chloronaphthalene	U	<u>T8</u>	0.136	0.500	2	12/09/2021 22:02	WG1786614
<i>(S)</i> Nitrobenzene-d5	119			31.0-160		12/09/2021 22:02	WG1786614
<i>(S)</i> 2-Fluorobiphenyl	109			48.0-148		12/09/2021 22:02	WG1786614
<i>(S)</i> p-Terphenyl-d14	91.6			37.0-146		12/09/2021 22:02	WG1786614

Sample Narrative:

L1439784-01 WG1786614: Dilution due to matrix impact during extraction procedure.

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Preparation by Method 1311

Analyte	Result	Qualifier	Prep date / time	Batch
TCLP Extraction	-		12/26/2021 12:12:22 PM	WG1794817
Fluid	1		12/26/2021 12:12:22 PM	WG1794817
Initial pH	N/A		12/26/2021 12:12:22 PM	WG1794817
Final pH	N/A		12/26/2021 12:12:22 PM	WG1794817

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	RDL	Limit	Dilution	Analysis date / time	Batch
Barium	ND		0.100	100	1	12/28/2021 20:27	WG1795222

Method Blank (MB)

(MB) R3739419-1 12/10/21 11:43

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Mercury,Dissolved	U		0.100	0.200

Laboratory Control Sample (LCS)

(LCS) R3739419-2 12/10/21 11:45

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury,Dissolved	3.00	3.26	109	80.0-120	

L1438664-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1438664-01 12/10/21 11:53 • (MS) R3739419-3 12/10/21 11:55 • (MSD) R3739419-4 12/10/21 11:57

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury,Dissolved	3.00	U	3.17	3.01	106	100	1	75.0-125			5.12	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3745951-1 12/28/21 20:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Barium	U		0.0333	0.100

¹Cp

²Tc

³Ss

Laboratory Control Sample (LCS)

(LCS) R3745951-2 12/28/21 20:12

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Barium	10.0	9.99	99.9	80.0-120	

⁴Cn

⁵Sr

L1437892-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1437892-02 12/28/21 20:15 • (MS) R3745951-4 12/28/21 20:21 • (MSD) R3745951-5 12/28/21 20:24

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Barium	10.0	0.455	10.4	10.4	99.7	99.3	1	75.0-125			0.380	20

⁶Qc

⁷Gl

L1439784-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439784-02 12/28/21 20:27 • (MS) R3745951-6 12/28/21 20:29 • (MSD) R3745951-7 12/28/21 20:32

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Barium	10.0	ND	10.1	10.1	100	101	1	75.0-125			0.245	20

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3749331-1 01/12/22 14:07

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Arsenic,Dissolved	U		0.180	2.00
Barium,Dissolved	U		0.381	2.00
Cadmium,Dissolved	U		0.150	1.00
Chromium,Dissolved	U		1.24	2.00
Lead,Dissolved	U		0.849	2.00
Selenium,Dissolved	U		0.300	2.00
Silver,Dissolved	U		0.0700	2.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

Laboratory Control Sample (LCS)

(LCS) R3749331-2 01/12/22 14:11

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Arsenic,Dissolved	50.0	52.9	106	80.0-120	
Barium,Dissolved	50.0	53.1	106	80.0-120	
Cadmium,Dissolved	50.0	55.6	111	80.0-120	
Chromium,Dissolved	50.0	58.5	117	80.0-120	
Lead,Dissolved	50.0	54.7	109	80.0-120	
Selenium,Dissolved	50.0	54.9	110	80.0-120	
Silver,Dissolved	50.0	54.9	110	80.0-120	

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1439928-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1439928-01 01/12/22 14:14 • (MS) R3749331-4 01/12/22 14:21 • (MSD) R3749331-5 01/12/22 14:24

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Arsenic,Dissolved	50.0	1.40	57.3	54.1	112	105	1	75.0-125			5.83	20
Barium,Dissolved	50.0	65.8	120	115	108	97.5	1	75.0-125			4.47	20
Cadmium,Dissolved	50.0	U	57.0	54.8	114	110	1	75.0-125			4.00	20
Chromium,Dissolved	50.0	1.83	60.6	57.3	118	111	1	75.0-125			5.58	20
Lead,Dissolved	50.0	0.870	56.0	53.2	110	105	1	75.0-125			5.11	20
Selenium,Dissolved	50.0	U	54.2	55.5	108	111	1	75.0-125			2.25	20
Silver,Dissolved	50.0	U	55.8	54.3	112	109	1	75.0-125			2.77	20

Method Blank (MB)

(MB) R3740133-2 12/11/21 21:14

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	U		31.6	100
(S) a,a,a-Trifluorotoluene(FID)	108			78.0-120

Laboratory Control Sample (LCS)

(LCS) R3740133-1 12/11/21 20:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5040	91.6	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			98.0	78.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3740160-2 12/13/21 04:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3740160-2 12/13/21 04:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,3-Trimethylbenzene	U		0.104	1.00
1,2,4-Trimethylbenzene	U		0.322	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	97.0			80.0-120
(S) 4-Bromofluorobenzene	97.5			77.0-126
(S) 1,2-Dichloroethane-d4	103			70.0-130

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3740160-1 12/13/21 02:40 • (LCSD) R3740160-3 12/13/21 11:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	25.6	27.8	102	111	19.0-160			8.24	27
Acrolein	25.0	15.9	20.1	63.6	80.4	10.0-160			23.3	26
Acrylonitrile	25.0	26.7	27.4	107	110	55.0-149			2.59	20
Benzene	5.00	5.22	5.20	104	104	70.0-123			0.384	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3740160-1 12/13/21 02:40 • (LCSD) R3740160-3 12/13/21 11:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Bromobenzene	5.00	4.90	4.69	98.0	93.8	73.0-121			4.38	20
Bromodichloromethane	5.00	5.63	5.49	113	110	75.0-120			2.52	20
Bromoform	5.00	5.28	5.00	106	100	68.0-132			5.45	20
Bromomethane	5.00	4.88	5.29	97.6	106	10.0-160			8.06	25
n-Butylbenzene	5.00	5.11	4.57	102	91.4	73.0-125			11.2	20
sec-Butylbenzene	5.00	4.85	4.62	97.0	92.4	75.0-125			4.86	20
tert-Butylbenzene	5.00	4.94	4.79	98.8	95.8	76.0-124			3.08	20
Carbon tetrachloride	5.00	5.06	5.47	101	109	68.0-126			7.79	20
Chlorobenzene	5.00	5.29	5.01	106	100	80.0-121			5.44	20
Chlorodibromomethane	5.00	5.30	5.24	106	105	77.0-125			1.14	20
Chloroethane	5.00	4.85	5.17	97.0	103	47.0-150			6.39	20
Chloroform	5.00	5.37	5.56	107	111	73.0-120			3.48	20
Chloromethane	5.00	5.15	5.47	103	109	41.0-142			6.03	20
2-Chlorotoluene	5.00	4.83	4.65	96.6	93.0	76.0-123			3.80	20
4-Chlorotoluene	5.00	4.89	4.83	97.8	96.6	75.0-122			1.23	20
1,2-Dibromo-3-Chloropropane	5.00	4.77	4.10	95.4	82.0	58.0-134			15.1	20
1,2-Dibromoethane	5.00	5.24	5.19	105	104	80.0-122			0.959	20
Dibromomethane	5.00	5.49	5.42	110	108	80.0-120			1.28	20
1,2-Dichlorobenzene	5.00	5.12	4.63	102	92.6	79.0-121			10.1	20
1,3-Dichlorobenzene	5.00	5.10	4.72	102	94.4	79.0-120			7.74	20
1,4-Dichlorobenzene	5.00	5.03	4.80	101	96.0	79.0-120			4.68	20
Dichlorodifluoromethane	5.00	4.42	5.13	88.4	103	51.0-149			14.9	20
1,1-Dichloroethane	5.00	5.44	5.54	109	111	70.0-126			1.82	20
1,2-Dichloroethane	5.00	5.54	5.41	111	108	70.0-128			2.37	20
1,1-Dichloroethene	5.00	4.81	5.05	96.2	101	71.0-124			4.87	20
cis-1,2-Dichloroethene	5.00	5.50	5.48	110	110	73.0-120			0.364	20
trans-1,2-Dichloroethene	5.00	5.31	5.31	106	106	73.0-120			0.000	20
1,2-Dichloropropane	5.00	5.28	5.16	106	103	77.0-125			2.30	20
1,1-Dichloropropene	5.00	5.06	5.47	101	109	74.0-126			7.79	20
1,3-Dichloropropane	5.00	5.28	5.14	106	103	80.0-120			2.69	20
cis-1,3-Dichloropropene	5.00	5.16	5.18	103	104	80.0-123			0.387	20
trans-1,3-Dichloropropene	5.00	4.95	4.72	99.0	94.4	78.0-124			4.76	20
2,2-Dichloropropane	5.00	4.67	5.84	93.4	117	58.0-130		J3	22.3	20
Di-isopropyl ether	5.00	5.15	5.44	103	109	58.0-138			5.48	20
Ethylbenzene	5.00	5.19	5.10	104	102	79.0-123			1.75	20
Hexachloro-1,3-butadiene	5.00	5.46	5.03	109	101	54.0-138			8.20	20
Isopropylbenzene	5.00	5.27	5.04	105	101	76.0-127			4.46	20
p-Isopropyltoluene	5.00	5.14	4.73	103	94.6	76.0-125			8.31	20
2-Butanone (MEK)	25.0	25.3	26.5	101	106	44.0-160			4.63	20
Methylene Chloride	5.00	5.18	5.47	104	109	67.0-120			5.45	20

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3740160-1 12/13/21 02:40 • (LCSD) R3740160-3 12/13/21 11:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	25.0	27.1	27.2	108	109	68.0-142			0.368	20
Methyl tert-butyl ether	5.00	5.26	5.35	105	107	68.0-125			1.70	20
Naphthalene	5.00	4.75	4.04	95.0	80.8	54.0-135			16.2	20
n-Propylbenzene	5.00	4.75	4.58	95.0	91.6	77.0-124			3.64	20
Styrene	5.00	5.49	4.87	110	97.4	73.0-130			12.0	20
1,1,1,2-Tetrachloroethane	5.00	5.46	5.39	109	108	75.0-125			1.29	20
1,1,2,2-Tetrachloroethane	5.00	4.60	4.76	92.0	95.2	65.0-130			3.42	20
Tetrachloroethene	5.00	5.19	5.25	104	105	72.0-132			1.15	20
Toluene	5.00	5.03	4.90	101	98.0	79.0-120			2.62	20
1,1,2-Trichlorotrifluoroethane	5.00	4.18	5.01	83.6	100	69.0-132			18.1	20
1,2,3-Trichlorobenzene	5.00	5.28	4.43	106	88.6	50.0-138			17.5	20
1,2,4-Trichlorobenzene	5.00	4.80	4.27	96.0	85.4	57.0-137			11.7	20
1,1,1-Trichloroethane	5.00	5.51	5.85	110	117	73.0-124			5.99	20
1,1,2-Trichloroethane	5.00	5.54	5.22	111	104	80.0-120			5.95	20
Trichloroethene	5.00	5.56	5.52	111	110	78.0-124			0.722	20
Trichlorofluoromethane	5.00	5.05	5.57	101	111	59.0-147			9.79	20
1,2,3-Trichloropropane	5.00	5.23	5.06	105	101	73.0-130			3.30	20
1,2,3-Trimethylbenzene	5.00	5.20	4.85	104	97.0	77.0-120			6.97	20
1,2,4-Trimethylbenzene	5.00	5.00	4.74	100	94.8	76.0-121			5.34	20
1,3,5-Trimethylbenzene	5.00	5.12	4.88	102	97.6	76.0-122			4.80	20
Vinyl chloride	5.00	4.49	5.01	89.8	100	67.0-131			10.9	20
Xylenes, Total	15.0	15.9	15.1	106	101	79.0-123			5.16	20
(S) Toluene-d8				98.6	97.9	80.0-120				
(S) 4-Bromofluorobenzene				103	101	77.0-126				
(S) 1,2-Dichloroethane-d4				104	103	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3740676-1 12/14/21 09:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		33.3	100
Residual Range Organics (RRO)	U		83.3	250
<i>(S) o-Terphenyl</i>	77.5			31.0-160

Laboratory Control Sample (LCS)

(LCS) R3740676-2 12/14/21 10:07

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Diesel Range Organics (DRO)	1500	1340	89.3	50.0-150	
<i>(S) o-Terphenyl</i>			87.0	31.0-160	

L1440392-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1440392-01 12/14/21 11:50 • (MS) R3740676-3 12/14/21 12:16 • (MSD) R3740676-4 12/14/21 12:42

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Diesel Range Organics (DRO)	1500	U	1300	1250	86.7	83.3	1	50.0-150			3.92	20
<i>(S) o-Terphenyl</i>					83.5	82.0		31.0-160				



Method Blank (MB)

(MB) R3739128-3 12/09/21 16:42

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	112			31.0-160
(S) 2-Fluorobiphenyl	113			48.0-148
(S) p-Terphenyl-d14	122			37.0-146

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3739128-1 12/09/21 16:02 • (LCSD) R3739128-2 12/09/21 16:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	2.00	2.41	2.36	120	118	67.0-150			2.10	20
Acenaphthene	2.00	2.50	2.45	125	122	65.0-138			2.02	20
Acenaphthylene	2.00	2.45	2.42	122	121	66.0-140			1.23	20
Benzo(a)anthracene	2.00	2.47	2.41	123	120	61.0-140			2.46	20
Benzo(a)pyrene	2.00	2.68	2.59	134	129	60.0-143			3.42	20
Benzo(b)fluoranthene	2.00	2.45	2.42	122	121	58.0-141			1.23	20
Benzo(g,h,i)perylene	2.00	2.26	2.21	113	111	52.0-153			2.24	20
Benzo(k)fluoranthene	2.00	2.31	2.45	115	122	58.0-148			5.88	20
Chrysene	2.00	2.57	2.48	129	124	64.0-144			3.56	20
Dibenz(a,h)anthracene	2.00	2.28	2.23	114	111	52.0-155			2.22	20
Fluoranthene	2.00	2.40	2.36	120	118	69.0-153			1.68	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3739128-1 12/09/21 16:02 • (LCSD) R3739128-2 12/09/21 16:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Fluorene	2.00	2.52	2.50	126	125	64.0-136			0.797	20
Indeno(1,2,3-cd)pyrene	2.00	2.42	2.39	121	119	54.0-153			1.25	20
Naphthalene	2.00	2.34	2.33	117	117	61.0-137			0.428	20
Phenanthrene	2.00	2.41	2.37	120	118	62.0-137			1.67	20
Pyrene	2.00	2.66	2.60	133	130	60.0-142			2.28	20
1-Methylnaphthalene	2.00	2.38	2.37	119	118	66.0-142			0.421	20
2-Methylnaphthalene	2.00	2.41	2.40	120	120	62.0-136			0.416	20
2-Chloronaphthalene	2.00	2.46	2.42	123	121	64.0-140			1.64	20
<i>(S) Nitrobenzene-d5</i>				131	122	31.0-160				
<i>(S) 2-Fluorobiphenyl</i>				131	122	48.0-148				
<i>(S) p-Terphenyl-d14</i>				133	124	37.0-146				

1 Cp

2 Tc

3 Ss

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5 Sr

6 Qc

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8 Al

9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

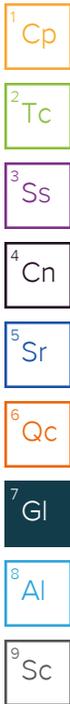
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
T8	Sample(s) received past/too close to holding time expiration.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

