

ATTACHMENT 9

Limited Phase II Environmental Site Assessment
City of Portland Water Bureau and
Bureau of Environmental Services
8344 SE Cottrell Road, Boring, Oregon 97009



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Subject: Limited Phase II Environmental Site Assessment
8344 SE Cottrell Road
Boring, Oregon 97209
Task Order Number 7ESWAEI00338

October 21, 2025

To Whom It May Concern:

Cascade Environmental Solutions (Cascade Environmental) has prepared this Limited Phase II Environmental Site Assessment (Phase II ESA) for the site located at 8344 SE Cottrell Road in Boring, Oregon (Subject Property). This Phase II ESA report summarizes the environmental investigation activities requested by City of Portland's Bureau of Environmental Services (BES) and conducted on August 19, 2025. A Phase I ESA was also completed by Cascade Environmental in August 2025.

The Subject Property is located on Multnomah County Tax Lot #1S4E22CD 300 in Boring, Oregon. The Subject Property is an 8.14-acre parcel with a 2,314 square foot single family residence, farm building, creek fed pond bound by an earthen damn downstream, and two agricultural fields. It is located in the town of Boring, Oregon, in a residential/agricultural area. The City of Portland Water Bureau is planning to purchase the property as part of the Johnson Creek watershed restoration project. They plan to remove the pond and restore the creek to the original flow state. The residential structure was built in 1964 and is one-story with a basement and garage. There is an additional large outbuilding being used to store lawn equipment, household chemicals and vehicles.

Cascade Environmental prepared this Limited Phase II ESA to focus on evaluating the current environmental conditions and to ensure that any potential contaminants are identified before restoring the site to its natural state. The Phase II was conducted to identify the possible presence and to characterize the nature and extent of possible contaminants of concern associated with the adjacent agricultural use. This type of assessment is pertinent for determining the feasibility and approach for ecological restoration and is being contracted by the City of Portland's department of BES.

CONCLUSIONS AND RECOMMENDATIONS

Sampling activities were completed on August 19, 2025. The collected soil samples C1-N. Field, C2-Shore, C3-Up Stream, C4-Dam and C6-S. Field were analyzed for Organochlorine Pesticides by Environmental Protection Agency (EPA) 8081B, Total Metals by EPA 6020B, and Herbicides by EPA 8321B. Soil sample C5-HOT-W was analyzed for Hydrocarbon Identification.

The laboratory analysis for the samples collected during this Limited Phase II ESA reported detections exceeding the Oregon Department of Environmental Quality Risk-Based Concentrations (RBC) values for individual chemicals for total metals arsenic and nickel. The arsenic detections exceed the Residential Receptor Scenario RBC value for Soil Ingestion, Dermal Contact, and Inhalation Exposure Pathway in samples collected from the following areas of the subject property: North Field, Up Stream (creek), and South Field. The nickel detections exceed the RBC value for Sediment Ecological Risk Assessment in the Dam area. However, none of the total metal detections exceeding the applicable RBC values were reported greater than the Oregon Default Background Metals values for the Cascade Mountains area, the established Regional Boundary of the subject property and vicinity.

In addition, these values were reported below the clean fill screening criteria. Therefore, any excavated soil or sediment may be reused as clean fill on- or off-site, in areas above typical high water levels.

As a result of these findings, no further environmental investigations are necessitated at this time. However, the subject property sediment surfaces should be evaluated during construction activities, to confirm if the sediment levels are below the Sediment Evaluation Framework (SEF) Screening for the Pacific Northwest and Oregon DEQ Ecological Risk Concentrations criteria. If the site use or intended use of the site changes, or if the existing regulatory standards are lowered, results from this investigation may need to be reevaluated.

The Phase II report and site investigation activities were conducted in accordance with current Oregon Department of Environmental Quality guidance and Oregon Administrative Rules Chapter 340, Division 122 Hazardous Substance Remedial Action Rules. These rules establish the standards and procedures to be used under Oregon Revised Statutes 465.200 through 465.455 and 465.900 for the determination of removal and remedial action necessary to assure protection of the present and future public health, safety and welfare, and the environment in the event of a release or threat of a release of a hazardous substance.

Sincerely,

Cascade Environmental Solutions

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ACRONYMS

ASTM	American Society for Testing and Materials
BES	Bureau of Environmental Services
Bgs	Below Ground Surface
CFR	Code of Federal Regulations
DEQ/ODEQ	Department of Environmental Quality (Oregon)
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
GPS	Global Positioning System
HOT	Heating Oil Tank
LUST	Leaking Underground Storage Tanks
mg/kg	Milligrams per kilogram
NFA	No Further Action
OAR	Oregon Administrative Rule
Ppm	Parts Per Million
QA/QC	Quality Assurance and Quality Control
RBCs	Risk-Based Concentrations
REC	Recognized Environmental Condition
VOC	Volatile Organic Compounds

1 INTRODUCTION

This Limited Phase II Environmental Site Assessment (Phase II ESA) report documents the implementation of soil sampling activities conducted on August 19, 2025, at the Cottrell Pond and Farm Property located at 8344 SE Cottrell Road in Boring, Multnomah County, Oregon (Subject Property). A Phase I ESA was completed by Cascade Environmental in August 2025 and identified agricultural use onsite and adjacent properties. This was identified as a recognized environmental condition for the Subject Property, as discussed below.

The sampling activities were conducted to characterize the nature and extent of potential contamination at the Subject Property. This Report and the site investigation activities were conducted in accordance with current Oregon Department of Environmental Quality (ODEQ) guidance and Oregon Administrative Rules (OAR) Chapter 340, Division 122 Hazardous Substance Remedial Action Rules. These rules establish the standards and procedures to be used under Oregon Revised Statutes 465.200 through 465.455 and 465.900 for the determination of removal and remedial action necessary to assure protection of the present and future public health, safety and welfare, and the environment in the event of a release or threat of a release of a hazardous substance.

2 SUBJECT PROPERTY DETAILS

The following sections detail the Subject Property and site vicinity. A Site Vicinity Map is attached as Figure 1.

2.1 SITE LOCATION AND DESCRIPTION

The Subject Property is an 8.14-acre parcel with a 2,314 square foot (sf) single family residence, farm building and a pond. It is located in the town of Boring, Oregon, in a residential/agricultural area. The City of Portland Water Bureau is planning to purchase the property as part of the Johnson Creek watershed restoration project. They plan to remove the pond and restore the creek to the original flow state. Attached Figure 2 is a Site Map.

During the preparation of the Phase I ESA, a site reconnaissance was performed Wednesday August 6, 2025, at 13:00, by Cascade Environmental personnel, accompanied by a representative of the City of Portland's Bureau of Environmental Services (Keir Allison-Bourne). The entire site was traversed by foot. The property is comprised of a residential structure, a barn structure, two agricultural fields, a creek fed pond bound by an earthen dam and landscaping. An aboveground storage tank was observed approximately two feet south of the residential structure, on a cement slab. It is known to contain oil utilized for heating the residence. The residential structure was built in 1964 and is one-story with a basement and garage. The additional large outbuilding was observed to be used to store lawn equipment, household chemicals and vehicles.

2.2 SITE VICINITY

Aerial photographs indicate that the vicinity has long been (approximately 1948-present) historical homestead/ rural residential with small scale agricultural use. Though, the Subject Property itself appears to have been residential with a pond with minimal agricultural history.

2.3 SUBJECT PROPERTY GEOLOGY AND HYDROGEOLOGY

Based on a review of topographic maps for the area, the Subject Property is situated at an elevation of approximately 632 feet above mean sea level, and the property was observed generally level in the area of the single family residence, with the northern area sloping gently south, and the southern area sloping gently to the north, both towards the creek and pond, with the western area gently sloping west-northwest. Shallow groundwater in the vicinity of the Subject Property is expected to flow north and south towards Johnson Creek (the onsite creek), then to the west following Johnson Creek. Specific groundwater flow directions vary based on various hydrogeological conditions and can only be defined by a subsurface investigation and monitoring. The United States Geological Survey and underground investigations in the area indicate a depth to seasonal high groundwater at the property of 80-140 feet below ground surface.

According to United States Department of Agriculture Natural Resources Conservation Service, the soil on site is comprised of Wollent silt loam and Cazadero silty clay loam, 8 to 15 percent slopes. These soils are typically present on convex side slopes of broad, rolling ridgetops on hillslopes. The parent materials consist of old alluvium. According to Oregon Department of Geology and Mineral Industries, regional geology is sedimentary rocks from the Pliocene to Pleistocene age, primarily sandstone-mudstone with semi consolidated lacustrine and fluvial ashy and palagonitic sedimentary rocks.

The Oregon Water Resources Department website was reviewed for wells located on the Subject Property. There are no water wells at the Subject Property, though there are several water supply wells in the vicinity. The Subject Property is supplied by Pleasant Home Water District. A septic system and drain field are present at the Subject Property.

3 HISTORIC SITE INVESTIGATION ACTIVITIES

Per American Society for Testing and Materials (ASTM) standards, a database report was ordered through Environmental Risk Information Services (ERIS) and additional available records reviewed through Oregon DEQ, City of Portland and Multnomah County websites. The Subject Property is listed on four databases, all for a former leaking underground storage tank (LUST) onsite. It is listed on Facility Registry Service/Facility Index, LUST database and twice on the delisted LUST list. Cascade Environmental filed records requests with the Oregon DEQ. ODEQ provided Cascade Environmental with a LUST document that included a report, laboratory reports, ODEQ communications and an No Further Action (NFA) letter.

In 2005, a leaking heating oil UST (ODEQ Log Number 03-05-2292) was discovered at the Subject Property, approximately two feet south of the residence at a depth of 59 inches to the bottom of the tank. A soil matrix cleanup was conducted by a licensed service provider. Groundwater was not encountered during the cleanup. Two soil samples were collected, one from the east end of the tank and one from the west. The east sample was non-detect, and the west sample tested 138 parts per millions (ppm) for diesel, below established soil matrix levels and ODEQ's risk-based concentration thresholds. No additional analysis was run on the diesel detection. The listing was closed with an NFA letter in April 2006. This listing was identified as an historical recognized environmental condition (HREC) for the Subject Property, with a recommendation that diesel analysis be run during additional site sampling of the agricultural fields, creek and pond sediments, and earthen dam. Attached Figure 2 is a Site Map showing the Subject Property details.

Based on the August 6, 2025, site reconnaissance and a review of environmental and municipal records, Cascade Environmental identified historical agricultural use in the vicinity and the historic LUST as environmental concerns. No additional analysis was run on the diesel detection during the decommissioning work. The historic leaking heating oil UST (ODEQ Log Number 03-05- 2292) at the Subject Property is an HREC for the Subject Property. Sampling of the on-site pond was recommended, and further investigation commenced in August 2025.

4 2025 SCOPE OF WORK

The scope of services for this Phase II ESA was conducted in accordance with the standards and practices for all appropriate inquiries specified in 40 Code of Federal Regulations (CFR) Part 312 and ASTM E1903-19 and Oregon DEQ Rules and Regulations. Composite sampling was performed in five (5) areas. Soil sample analytical results are summarized in the attached Tables as follows: Table 1 – Soil Sample Analytical Results – Total Petroleum Hydrocarbons, Table 2 – Soil Sample Results - Total Metals, Table 3 – Soil Sample Results - Organochlorine Pesticides, and Table 4 – Soil Sample Results - Herbicides. Attached Figure 3 shows the sample locations.

Below discusses the five (5) areas where composite samples were collected and the purpose for the sample collections:

Composite sampling:

- North Field – Sampling of former agricultural field
- Pond/Earthen Dam Western Shore, downstream – Sampling for potential agricultural runoff
- Creek Banks, upstream – Sampling for potential agricultural runoff
- Earthen Dam – Sampling of material compiling the earthen dam
- South Field – Sampling of former agricultural field

In addition to the 5 composite sampling areas, at the request of City of Portland's Bureau of Environmental Services (BES), a discreet soil sample was collected adjacent to a former heating oil tank (HOT), which was located adjacent to the southern exterior of the single-family residence.

4.1 SAMPLE AREAS AND SAMPLE LOCATION SELECTION

The general sampling areas are shown on Figure 3. Within each sample area, Cascade Environmental field staff staked a point that will be a randomly selected originating point. Attempts were made to locate this point using a hand-held Global Positioning System (GPS) unit while in the field (overhead riparian flora may impede GPS use). Cascade Environmental field staff then measured a specific distance from the stake and collected a sample. The distance varied in each sample area discussed below based on the overall area of the sample locations. Cascade Environmental field staff then moved laterally and collected a second sample, and so forth. This approach continued throughout the sample areas until five (5) or ten (10) incremental samples had been collected in each sample area. Sample locations were spaced as evenly as possible within each sample area. These sample locations were marked on figures in the field. The location of each of the sample points within the composite sampling areas, as well as the HOT sampling area are marked on Figure 3.

The specific sampling locations and identifications (in parentheses) are as follows:

- Sampling the north agricultural field – One (1) composite sample of the north field – comprised of ten (10) grab samples (C1-N. Field)
- Sampling of the pond western bank/ earthen dam shore – One (1) composite sample of ten (10) grab samples (C2-Shore)
- Sampling up stream of Pond/ Creek area – One (1) composite sample, comprised of five (5) grab samples (C3-Up)
- Sampling of the Earthen Dam material – One (1) composite sample, comprised of ten (10) grab samples (C4-Dam)
- Sampling of the west end of the HOT – One (1) discrete sample (C5-HOT)
- Sampling the south agricultural field – One (1) composite sample of the south field – comprised of ten (10) grab samples (C6-S. Field)

Once collected, samples were stored on ice and transported under a documented chain of custody to APEX laboratories.

4.2 SAMPLE ANALYSIS

Per the scope of the project, samples were submitted to ORELAP accredited Apex laboratory for analysis on a turnaround-time basis of 5 business days. Laboratory results were compared to Oregon DEQ RBCs, natural occurring background levels, and other appropriate screening levels, as warranted.

Samples were analyzed for all of the following analytes, based on location (noted with the specific sample ID):

- Gasoline-range hydrocarbons by Northwest Method NWTPH-Gx and diesel- and heavy oil- range hydrocarbons by Northwest Method NWTPH-Dx, pending any HCID detection (C5-HOT)
- Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (EPA) Method 8260B pending any gasoline detection.
- Polycyclic Aromatic Hydrocarbons by EPA Method 8270C SIM pending any diesel or heavy oil detection.
- Oregon Agricultural 17 Metals, including: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc by EPA Method 6020B (C1-N. Field, C2-Shore, C3-Up stream, C4-Dam, C6-S. Field)
- Pesticides by EPA Method 8081B, (C1-N. Field, C2-Shore, C3-Up stream, C4-Dam, C6-S. Field), and
- Herbicides by EPA Method 8321B, (C1-N. Field, C2-Shore, C3-Up stream, C4-Dam, C6-S. Field), subcontracted and analyzed by Eurofins for laboratory analysis.

Attached Figure 3 shows sample locations.

5 PHASE II SITE INVESTIGATION ACTIVITIES

On August 19, 2025, Cascade Environmental Solutions (Cascade Environmental) team mobilized to the property located at 8344 SE Cottrell Road, Boring, Oregon to complete a Limited Phase II ESA investigation. The Phase II ESA was conducted in accordance with the Task Order (for CSA On-Call Service Contractors) returned by Brian Marcum of BES on August 14, 2025. A summary of the Phase II field activities and observations are detailed below.

Prior to sampling activities, a private utility location was completed with ground penetrating radar by Alpha Locates, Inc. Cascade Environmental then collected soil samples at the Subject Property from six designated areas, as outlined in the proposal for Task Order No.: 7ESWAEI00338, as follows:

- C1-North Field
- C2-Shore
- C3-Up Stream
- C4-Dam
- C5-HOT
- C6-South Field

5.1 SAMPLING METHODOLOGY

Hand augers were utilized to collect soil and sediment samples, with decontamination cleaning between collecting sample points within each sample area. Silty-clay/ clayey-silt with trace sands, small gravels, and vegetation (roots) were observed throughout all areas of the subject property.

Ten sample points were composited for a single sample from area C1, C2, C4, and C6. Five sample points were composited for a single sample from area C3. Soil and sediment samples from areas C1, C2, C3, and C6 were collected from approximately 6-12" below ground surface (bgs). Soil samples from the dam area (C4) were collected from approximately 12-18" bgs. A restrictive feature was observed in all ten sample points of C4. Large quarry spalls/ landscaping rocks were observed on the surface at various areas of the dam and may be the restrictive feature(s) that comprise the dam, with sediment filled in to create the earthen dam feature.

Area C5, the former HOT is located on the south side of the single-family residence at the subject property. The GPR was utilized to outline the boundaries of the HOT. Cascade Environmental advanced the hand auger on the western side of the HOT, in the approximate location of the previous sample, which reported a diesel detection, as collected during the prior HOT decommissioning activities. The C5-HOT sample was collected at 5.5-6' bgs. No visual indications of petroleum contamination were observed. A handheld photoionization detector (PID) reported VOC detections up to 0.6 ppm in the soil sampled, with no alarms of elevated VOC levels.

The soil sample from west of the HOT was analyzed for Hydrocarbon Identification Screen by NWTPH-HCID.

The composite soil samples collected from the agricultural fields (north; C1-N. Field and south C6-S. Field), pond western shore (C2-Shore), Johnson Creek upstream (C3-Up Stream) and earthen dam (C4-Dam) were analyzed for:

- Organochlorine Pesticides by EPA 8081B,
- Total Metals by EPA 6020B (Inductively coupled plasma-mass spectrometry), and
- Herbicides by EPA 8321B

Samples were requested to be analyzed on a 5-day turn-around-time. Herbicide analysis was provided within a 10-day turn-around-time.

5.2 QUALITY ASSURANCE AND QUALITY CONTROL

The general quality assurance (QA) and quality control (QC) objectives for this project were to develop and implement procedures for obtaining and evaluating data of a specified quality that can be used in a risk assessment. To collect such information, analytical data must have an

appropriate degree of accuracy and reproducibility, samples collected must be representative of actual field conditions, and samples must be collected and analyzed using unbroken chain-of-custody procedures.

QA/QC objectives were practiced throughout the field activities. All sampling equipment was decontaminated or disposed of between sampling events. Decontamination of field sampling equipment was performed by washing in an aqueous detergent solution consisting of a non-phosphate detergent and potable water, followed by rinsing with potable water.

Additionally, one Field Duplicate (FD) sample was to be collected as a QC measure. The FD sample was to be collected in the field using the same sampling techniques as required for other samples collected. This QC was utilized as a data quality indicator for sample precision. The measurement of performance criteria for a soil FD is a relative percentage difference of $\leq 50\%$ for values two times the reporting limit.

Cascade Environmental collected the FD sample from the composite soils collected in the South Field area, with sample C6-S.Field-081925 recorded as the parent sample for the FD, identified sample ID: DUP-081925. In comparison to the reported values of sample C6-S.Field-081925, the variable of laboratory results for individual chemical values of DUP-081925 do not exceed two times the reporting limits. See the attached Tables for laboratory results of sample DUP-081925.

Based on the laboratory results, no significant variance was encountered. In addition, an indeterminate bias between samples C6-S.Field-081925 and DUP-081925 has not been identified.

6 SUBSURFACE INVESTIGATION RESULTS

All samples were submitted to Apex Laboratories on August 20, 2025. Soil and sediment samples were analyzed for area specific contaminants of concern, as outlined in the Phase II Proposal and discussed above. On September 10, 2025, the final laboratory report was received. The HCID laboratory results for the sample collected adjacent to the former HOT, sample C5-HOT-W-081925 was reported non-detect for the HCID analytes, gasoline-, diesel-, and oil range organics. The PID reported minor detects at 0.6 ppm in the field. As a result of the analysis results, no follow ups were requested.

The composite soil samples collected from the agricultural fields (north; C1-N. Field and south C6-S. Field), pond western shore (C2-Shore), Johnson Creek upstream (C3-Up Stream) and earthen dam (C4-Dam) were analyzed for Organochlorine Pesticides by EPA 8081B, Total Metals by EPA 6020B (Inductively coupled plasma-mass spectrometry), and Herbicides by EPA 8321B, as detailed above. The Total Metals and Organochlorine Pesticides laboratory results reported various detections. All soil sample analytical results are summarized in the attached Tables as follows, with the detections detailed following the list of tables:

Table 1 – Soil Sample Analytical Results – Total Petroleum Hydrocarbons, Table 2 – Soil Sample Results - Total Metals, Table 3 – Soil Sample Results - Organochlorine Pesticides, and Table 4 – Soil Sample Results - Herbicides. Laboratory Analytical results are provided in Appendix A.

The laboratory analytical results were compared to the various Oregon DEQ RBCs for individual chemicals by Exposure Pathways and Receptor Scenarios, Oregon DEQ Ecological Risk Concentrations, the Sediment Evaluation Framework (SEF) Screening for the Pacific Northwest, and the Oregon Background Levels for the Portland Basin.

For Organochlorine Pesticide laboratory analysis, the following detections were reported:

- Sample C2-Shore: 4-4' DDE (0.00818 milligrams/kilogram (mg/kg) and 4-4' DDD (0.00326 mg/kg)
- Sample C3-Up Stream: 4-4' DDE (0.0118 mg/kg)
- Sample C-4 Dam: cis-Chlordane (0.00988 mg/kg), trans-Chlordane (0.00437 mg/kg) and Chlordane (technical) (0.0648 mg/kg)
- Sample C6-S. Field: 4-4' DDE (0.00286 mg/kg)

All detections of Organochlorine Pesticides were reported below the applicable values when compared to the above mentioned RBCs and SEF. In addition, Sample C1-N. Field was reported with no detections for all Organochlorine Pesticide analytes. In addition, samples C1-N. Field, C2-Shore, C3-Up Stream, C4-Dam, and C6-S. Field were analyzed for Herbicides. No laboratory detections for Herbicides were reported.

For Total Metals laboratory analysis, the following detections were reported:

- Sample C1-N. Field: arsenic (2.34 mg/kg), barium (155 mg/kg), beryllium (0.710 mg/kg), chromium (24.9 mg/kg), cobalt (12.7 mg/kg), copper (15.0 mg/kg), lead (11.6 mg/kg), nickel (11.7 mg/kg), vanadium (63.4 mg/kg), and zinc (46.5 mg/kg)
- Sample C2-Shore: barium (180 mg/kg), beryllium (0.802 mg/kg), chromium (28.6 mg/kg), cobalt (8.41 mg/kg), copper (18.3 mg/kg), lead (12.6 mg/kg), nickel (13.0 mg/kg), vanadium (63.1 mg/kg), and zinc (50.0 mg/kg)
- Sample C3-Up Stream: arsenic (2.56 mg/kg), barium (180 mg/kg), beryllium (1.020 mg/kg), chromium (23.3 mg/kg), cobalt (12.6 mg/kg), copper (17.7 mg/kg), lead (13.0 mg/kg), nickel (12.1 mg/kg), vanadium (62.5 mg/kg), and zinc (58.9 mg/kg)
- Sample C4-Dam: barium (215 mg/kg), beryllium (0.922 mg/kg), chromium (28.8 mg/kg), cobalt (7.71 mg/kg), copper (22.5 mg/kg), lead (9.66 mg/kg), nickel (21.3 mg/kg), vanadium (70.5 mg/kg), and zinc (30.3 mg/kg)
- Sample C6-S. Field: arsenic (3.4 mg/kg), barium (207 mg/kg), beryllium (0.847 mg/kg), chromium (28.6 mg/kg), cobalt (14.6 mg/kg), copper (19.3 mg/kg), lead (12.4 mg/kg), nickel (16.2 mg/kg), vanadium (68.6 mg/kg), and zinc (61.9 mg/kg)

All detections of Total Metals were reported below the applicable values when compared to the above mentioned RBCs and SEF, except for the following: The arsenic detections exceed the Residential Receptor Scenario RBC value for Soil Ingestion, Dermal contact, and Inhalation Exposure Pathway in samples C1-N. Field, C3-Up Stream, and C5-S. Field. In addition, the nickel detections exceed the RBC value for Sediment Ecological Risk Assessment. However, none of the detections exceeding the applicable RBC values were reported greater than the Oregon Default Background Metals values for the Cascade Mountains area, the established Regional Boundary of the subject property and vicinity.

7 CONCLUSIONS AND RECOMMENDATIONS

Sampling activities were completed on August 19, 2025. The collected soil samples C1-N. Field, C2-Shore, C3-Up Stream, C4-Dam and C6-S. Field were analyzed for Organochlorine Pesticides by EPA 8081B, Total Metals by EPA 6020B, and Herbicides by EPA 8321B. Soil sample C5-HOT-W was analyzed for Hydrocarbon Identification.

The laboratory analysis for the samples collected during this Limited Phase II ESA reported detections exceeding the Oregon DEQ RBC values for individual chemicals for total metals arsenic and nickel. The arsenic detections exceed the Residential Receptor Scenario RBC value for Soil Ingestion, Dermal contact, and Inhalation Exposure Pathway in samples collected from the following areas of the subject property: North Field, Up Stream (creek), and South Field. The nickel detections exceed the RBC value for Sediment Ecological Risk Assessment in the Dam area. However, none of the total metal detections exceeding the applicable RBC values were reported greater than the Oregon Default Background Metal values for the Cascade Mountains area, the established Regional Boundary of the subject property and vicinity. In addition, the detection values are reported below the clean fill screening criteria. Therefore, any excavated soil or sediment may be reused as clean fill on- or off-site, in areas above typical high water levels.

As a result of these findings, no further environmental investigations are necessitated at this time. However, the Subject Property sediment surfaces should be evaluated during construction activities, to confirm if the sediment levels are below the (SEF) Screening for the Pacific Northwest and Oregon DEQ Ecological Risk Concentrations criteria. If the site use or intended use of the site changes, or if the existing regulatory standards are lowered, results from this investigation may need to be reevaluated.

8 PERFORMANCE STANDARDS

This Phase II ESA has been prepared for use by the City of Portland Bureau of Environmental Services. Cascade Environmental does not make any warranties or guarantees regarding the accuracy of information provided or compiled by others. The Phase II ESA activities described herein are intended to reduce (but not eliminate) uncertainty regarding the potential for environmental concerns associated with this property. Our services pertaining to this Phase II ESA have been conducted in accordance with the generally accepted environmental practices for Phase II ESAs in this area at the time this report was prepared. No warranty or other conditions, expressed or implied, should be intended. In performing the services, consultant shall exercise the degree of skill and care normally exercised by consultants in the same community providing the same or similar services for projects of comparable size, complexity, budget, schedule and other characteristics of the project (the “Standard of Care”). Except as set forth in the immediately preceding sentence, consultant makes no warranty, express or implied, with respect to the services or any of its oral or written reports. Client acknowledges and agrees that (I) the services may require judgment to be made by consultant that are based upon limited data rather than upon scientific certainties; (II) consultant’s approach, recommendations, and associated cost

estimates, if any, are based on industry practices and averages; (III) professional opinions are based upon observations made and data obtained at the time of assessment; and (IV) ultimate outcomes could be inconsistent with the conclusions, results and projections of the consultant. All information regarding operations, plans, specifications, conditions, or other data which is provided to consultant by client, owners or third parties (including without limitation, any point of contact at the site), is deemed by consultant to be correct and complete without independent verification by consultant.

9 LIMITATIONS OF LIABILITY

In no event shall consultant be liable for latent or hidden conditions, conditions not actually observed by consultant within the limited scope of the services, the potential consequences of observable conditions, conditions of which client had knowledge at the time of the assessment, or any unauthorized assignment of or reliance upon the reports. The liability of the consultant, and that of its officers, directors, employees, agents and subcontractors, to client or to any third party claiming by and through client, including any company affiliated with such parties or any officer, director, employee, agent, subcontractor, successor, or assign of such parties, for any losses, whether in contract or tort (including negligence and strict liability), related to the services, the agreement or otherwise, shall not exceed the aggregate sum of twenty five thousand dollars (\$25,000.00). In no event shall consultant be liable to client for any indirect, incidental, special, or consequential damages (including lost profits) arising from or in any way connected with its performance or failure to perform under the agreement, even if the affected party has knowledge of the possibility of such damages.

Reliance on this report by other parties is strictly at risk of those parties, and Cascade Environmental will grant no third-party reliance unless specifically requested in writing by our client for whom this report was prepared. Cascade Environmental performed this work in accordance with generally accepted professional practices related to the nature of the work accomplished, in the same or similar localities, at the time the services were performed. This report is for the specific application to the referenced project and for the exclusive use of City of Portland Bureau of Environmental Services. No other warranty, expressed or implied, is made.

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FIGURES

FIGURE 1

SITE LOCATION MAP

FIGURE 2

SITE MAP

FIGURE 3

SAMPLE LOCATION MAP

FIGURE 4

LIMITED PHASE II ESA PROJECT PHOTOGRAPHS



FIGURE 1- Vicinity Map
August 2025
8344 SE Cottrell Road
Boring, Oregon
Phase II ESA



Johnson Creek at Cottrell Pond - Site Map



North



Figure 2- Site Map
August 2025
Phase II Environmental Site Assessment
8344 SE Cottrell Road
Boring, Oregon





 Former Heating Oil Tank
 Sample Point

C5-HOT: No detections
 C1-, C2-, C3-, C4-, & C-6: Detections of Total Metals & Organochlorine Pesticide; See Tables

North



Figure 3- Sample Location Map
 Sampling August 19, 2025
 Limited Phase II Environmental Site Assessment
 8344 SE Cottrell Road
 Boring, Oregon 97009





1. Cottrell Pond and Farm located at 8344 SE Cottrell Road, Boring, Oregon; view across pond towards the single family residence, outbuilding, and South field.



2. North field with general view north towards adjacent residence and agriculture.



3. View of a typical sampling point (orange marker flag) in North Field; 1 of 10, composite sample: C1-N. Field.



4. Composite soils and sample containers for sample C1-N. Field.



5. South field, general view east across field prior to selecting sampling points.



6. View of a typical sampling point (orange marker flag) in South Field viewing north; 1 of 10, composite sample: C6-S. Field.



7. Composite soils and sample containers for sample C6-S. Field.



8. Marked former heating oil tank (HOT) location, adjacent to southern elevation of single family residence



9. View of soils removed from 0 to 5.5 feet bgs on Visqueen, and from 5.5 to 6 feet bgs in ziplock bag prior to sampling west side of HOT; sample C5-HOT.



10. View of south bank of creek, upstream sampling locations, 5 sample points for composite sample C3-Upstream



11. View south across creek upstream area



12. Composite sample containers for upstream area, Sample C3-Upstream



13. View of pond western/ downstream shore area, 10 sample points for composite sample C2-Shore



14. Composite soils and sample containers for sample C2-Shore.



15. View of a typical sampling point (orange marker flag) from Earthen Dam, 1 of 10, composite sample: C4-Dam, with view of surface soils and imbedded cobbles. Sample area along western bank of the Dam, adjacent to creek culvert outfall area.



16. Composite soils and sample containers for sample C4-Dam

TABLES

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS – TOTAL
PETROLEUM HYDROCARBONS

TABLE 2

SOIL SAMPLE ANALYTICAL RESULTS – TOTAL METALS

TABLE 3

SOIL SAMPLE ANALYTICAL RESULTS –
ORGANOCHLORINE PESTICIDES

TABLE 4

SOIL SAMPLE ANALYTICAL RESULTS – HERBICIDES

TABLE 1
Soil Sample Analytical Results - Total Petroleum Hydrocarbons
Cottrell Pond

Soil Sample ID	Sample Depth (feet bgs)	Date	NWTPH-Dx (ppm)		
			Gasoline	Diesel	Oil
August 19, 2025 Investigation - Cascade Environmental					
C5-HOT-W-081925	5.5-6	8/19/25	< 29.3	< 73.3	< 147
Risk-Based Concentrations for Generic Soil Pathways (mg/L) - Occupational					
RBCss - Soil Ingestion, Dermal Contact, and Inhalation			20,000	14,000	36,000
RBCso - Volatilization to Outdoor Air			69,000	>Max	>Max
RBCsi - Vapor Intrusion into Buildings			>Max	>Max	>Max
RBCsw - Leaching to Groundwater			130	> Max	> Max
Risk-Based Concentrations for Generic Soil Pathways (mg/L) - Urban Residential					
RBCss - Soil Ingestion, Dermal Contact, and Inhalation			2,500	2,200	5,700
RBCso - Volatilization to Outdoor Air			5,900	>Max	>Max
RBCsi Vapor Intrusion into Buildings			94	>Max	>Max
RBCsw - Leaching to Groundwater			31	9,500	> Max
RBCss - Construction Worker			9,700	4,600	11,000
RBCss - Excavation Worker			>Max	>Max	>Max
Risk-Based Concentrations for Generic Soil Pathways (mg/L)- Residential					
RBCss - Soil Ingestion, Dermal Contact, and Inhalation			1,200	1,100	2,800
RBCso - Volatilization to Outdoor Air			5,900	>Max	>Max
RBCsi - Vapor Intrusion into Buildings			94	>Max	>Max
RBSsw- Leaching to Groundwater			31	9,500	>Max
Ecological Risk Assessment, September 2020 (ppm)					
RBCS for Fresh Water Values			440	640	640
Clean fill screening levels - ODEQ (mg/kg)					
Clean fill screening levels			31	1,100	2,800
Benthic Toxicity screening levels.					
Freshwater - Bulk Total Petroleum Hydrocarbobns (TPHs) (mg/kg)					
TPH -diesel				SL1 = 340 ppm SL2 = 510 ppm	
TPH - residual			SL1 = 3,460 ppm SL2 = 4,400 ppm		
Notes:					
bgs = below ground surface >Max = The constituent RBC for this pathway is calculated as greater than 1,000,000 mg/kg or 1,000,000 mg/L.					
mg/L = micrograms per Liter; ppm = parts per million. Shaded cells indicate the analyte exceeded one or more DEQ RBC.					
Bold indicates analyte was detected. DNE = Does not exist					
SL1 corresponds to a concentration below which adverse effects to benthic communities would not be expected.					
SL2 corresponds to a concentration above which more than minor adverse effects may be observed in benthic organisms.					
RBCss - Soil Ingestion, Dermal Contact, and Inhalation			RBCSW - Leaching to Groundwater		
RBCSO - Volatilization to Outdoor Air			RBCsi - Vapor Intrusion into Buildings		

TABLE 2
Soil Sample Results
Total Metals by EPA 6020B (ICPMS)
Cottrell Pond

Sample I.D.	Date	Total Metas (mg/kg)																
		Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
August 2023 Investigation - Cascade Environmental																		
C1-N.Field-081925	8/19/25	< 1.22	2.34	155	0.710	< 0.244	24.9	12.7	15.0	11.6	< 0.0975	< 1.22	11.7	< 1.22	< 0.244	< 0.244	63.4	46.5
C2-Shore-081925	8/19/25	< 1.66	< 1.66	180	0.802	< 0.332	28.6	8.41	18.3	12.6	< 0.133	< 1.66	13.0	< 1.66	< 0.332	< 0.332	63.1	50.0
C3-Up Stream-081925	8/19/25	< 2.14	2.56	180	1.020	< 0.429	23.3	12.6	17.7	13.0	< 0.171	< 2.14	12.1	< 2.14	< 0.429	< 0.429	62.5	58.9
C4-Dam-081925	8/19/25	< 1.33	< 1.33	215	0.922	< 0.265	28.8	7.71	22.5	9.66	< 0.106	< 1.33	21.3	< 1.33	< 0.265	< 0.265	70.5	30.3
C6-S.Field-081925	8/19/25	< 1.26	3.4	207	0.847	< 0.252	28.6	14.6	19.3	12.4	< 0.101	< 1.26	16.2	< 1.26	< 0.252	< 0.252	68.6	61.9
DUP-081925	8/19/25	< 1.17	3.45	172	0.879	< 0.233	35.2	14.9	21.4	11.6	< 0.0934	< 1.17	20.5	< 1.17	< 0.233	< 0.233	82.5	64.6
Risk-Based Concentrations for Soil Pathways (mg/kg) - Residential																		
RBcss Soil Ingestion, Dermal Contact, and	NA	0.43	15,000	160	78	120,000	NA	3,100	400	23	NA	1,500	NA	390	NA	NA	NA	NA
RBcso- Volatilization to Outdoor Air	NA	NV	NV	NV	NV	NV	NA	NV	NV	NV	NA	NV	NA	NV	NA	NA	NA	NA
RBcsw - Leaching to Groundwater	NA	*	*	*	*	*	NA	*	30	*	NA	*	NA	*	NA	NA	NA	NA
Construction Worker	NA	15	69,000	700	350	530,000	NA	14,000	800	110	NA	7,000	NA	1,800	NA	NA	NA	NA
Excavation Worker	NA	420	> Max	19,000	9,700	> Max	NA	390,000	800	2,900	NA	190,000	NA	49,000	NA	NA	NA	NA
Risk-Based Concentrations for Soil Pathways (mg/kg) - Urban Residential																		
RBcss Soil Ingestion, Dermal Contact, and	NA	1	31,000	310	160	230,000	NA	6,200	400	47	NA	3,100	NA	780	NA	NA	NA	NA
RBcwo- Volatilization to Outdoor Air	NA	NV	NV	NV	NV	NV	NA	NV	NV	NV	NA	NV	NA	NV	NA	NA	NA	NA
RBcsw - Leaching to Groundwater	NA	*	*	*	*	*	NA	*	30	*	NA	*	NA	*	NA	NA	NA	NA
Risk-Based Concentrations for Soil Pathways (mg/kg) - Occupational																		
RBcss Soil Ingestion, Dermal Contact, and	NA	1.9	220,000	2,300	1,100	> Max	NA	47,000	800	350	NA	22,000	NA	5,800	NA	NA	NA	NA
RBcwo- Volatilization to Outdoor Air	NA	NV	NV	NV	NV	NV	NA	NV	NV	NV	NA	NV	NA	NV	NA	NA	NA	NA
RBcsw - Leaching to Groundwater	NA	*	*	*	*	*	NA	*	30	*	NA	*	NA	*	NA	NA	NA	NA
Oregon Background Metal Levels																		
Cascade Mountain Range	0.67	19	630	2.1	0.54	200	NA	73	34	0.24	NA	110	0.52	0.17	2.8	280	170	
Ecological Risk Assessment, September 2020 (ppm)																		
Risk-Based Concentrations for Sediment	3	6	NA	NA	0.6	37	NA	36	35	0.2	NA	18	NA	4.5	NA	NA	123	
Clean fill screening levels - ODEQ (mg/kg)																		
Clean fill screening levels	31	10	NA	NA	NA	NA	NA	390	34	NA	NA	NA	390	NA	0.78	NA	NA	
Benthic Toxicity screening levels.																		
Freshwater - (Floating Percentile Methodology) (mg/kg)																		
Freshwater SL1	NA	14	NA	NA	2.1	72	NA	4,000	360	0.66	NA	26	11	0.57	NA	NA	3,200	
Freshwater SL2	NA	120	NA	NA	5.4	88	NA	1,200	>1,300	0.8	NA	110	>20	1.7	NA	NA	>4,200	
Notes:																		
Bold indicates analyte was detected.				RBcwo - Volatilization to Outdoor Air														
Shaded cells indicate the analyte exceeded one or more DEQ RBC.				RBcwi - Vapor Intrusion into Buildings														
DNE = generic risk-based concentrations (RBCs) Do Not Exist for this constituent																		
> S This groundwater RBC exceeds the solubility limit																		
NV = No Value																		
mg/kg = milligrams per kilograms																		
RBctw - Ingestion & Inhalation from Tapwater																		
RBcwe = Groundwater in Excavation																		
NA = Not available																		

TABLE 3 Soil Sample Results - Organochlorine Pesticides Cottrell Pond									
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Sample I.D.	Date	Organochlorine Pesticides by EPA Method 8081B																					
		Aldrin	alpha-BHC	beta-BHC	delta-BHC	gamma-BHC (Lindane)	cis-Chlordane	trans-Chlordane	4,4'-DDD	4,4'-DDE	4,4'-DDT	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor epoxide	Methoxychlor	Chlordane (Technical)	Toxaphene (Total)
August 2025 Investigation - Cascade Environmental																							
C1-N Field-081925	8/19/2025	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00624	< 0.0624	< 0.0624
C2-Shore-081925	8/19/2025	< 0.00290	< 0.00290	< 0.00290	< 0.00290	< 0.00290	< 0.00290	< 0.00290	0.00326	0.00818	< 0.00290	< 0.00290	< 0.00290	< 0.00290	< 0.00290	< 0.00290	< 0.00290	< 0.00290	< 0.00290	< 0.00290	< 0.00869	< 0.0869	< 0.0869
C3-Up Stream-081925	8/19/2025	< 0.00377	< 0.00377	< 0.00377	< 0.00377	< 0.00377	< 0.00377	< 0.00377	< 0.00377	0.0118	< 0.00377	< 0.00377	< 0.00377	< 0.00377	< 0.00377	< 0.00377	< 0.00377	< 0.00377	< 0.00377	< 0.00377	< 0.0113	< 0.113	< 0.113
C4-Dam-081925	8/19/2025	< 0.00211	< 0.00211	< 0.00211	< 0.00211	< 0.00211	0.00988	0.00437	< 0.00211	< 0.00211	< 0.00211	< 0.00211	< 0.00211	< 0.00211	< 0.00211	< 0.00211	< 0.00211	< 0.00211	< 0.00211	< 0.00211	< 0.00633	0.0648	< 0.0633
C6-S Field-081925	8/19/2025	< 0.00209	< 0.00209	< 0.00209	< 0.00209	< 0.00209	< 0.00209	< 0.00209	< 0.00209	0.00286	< 0.00209	< 0.00209	< 0.00209	< 0.00209	< 0.00209	< 0.00209	< 0.00209	< 0.00209	< 0.00209	< 0.00209	< 0.00627	< 0.0627	< 0.0627
DUP-081925	8/19/2025	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00208	< 0.00625	< 0.0625	< 0.0625
Risk-Based Concentrations for Soil Pathways (mg/Kg) - Occupational																							
RBCcs Soil Ingestion, Dermal Contact, and Inhalation	0.13	DNE	DNE	DNE	0.49	1.7	1.7	2.2	1.8	1.9	0.034	380	380	380	19	19	19	19	0.11	0.11	DNE	1.7	0.49
RBCso- Volatization to Outdoor Air	>Csat	DNE	DNE	DNE	1.2	>Csat	>Csat	NV	>Csat	NV	NV	> Max	> Max	> Max	NV	NV	NV	NV	18	18	DNE	>Csat	0.36
RBCsw- Leaching to Groundwater	0.023	DNE	DNE	DNE	2.1	0.45	0.45	1.1	1.6	12	0.01	>Csat	>Csat	>Csat	11	11	11	0.017	0.017	DNE	0.45	0.015	
Construction Worker	1.1	DNE	DNE	DNE	17	61	61	9.7	66	66	1.2	1,600	1,600	1,600	80	80	80	4.0	4.0	DNE	61	17	
Excavation Worker	30	DNE	DNE	DNE	470	1,700	1,700	270	1,800	1,800	33	45,000	45,000	45,000	2,200	2,200	2,200	110	110	DNE	1,700	470	
Risk-Based Concentrations for Soil Pathways (mg/kg) - Urban Residential																							
RBCcs Soil Ingestion, Dermal Contact, and Inhalation	0.078	DNE	DNE	DNE	NV	4.2	4.2	4.4	4.5	4.6	0.085	760	760	760	38	38	38	0.28	0.28	DNE	4.2	1.2	
RBCwo- Volatization to Outdoor Air	>Csat	DNE	DNE	DNE	NV	>Csat	>Csat	NV	>Csat	NV	NV	> Max	> Max	> Max	NV	NV	NV	42	42	DNE	>Csat	1.2	
RBCsw- Leaching to Groundwater	0.100	DNE	DNE	DNE	NV	2.1	2.1	3.7	7	46	0.035	>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	0.063	0.063	DNE	2.1	0.063	
Risk-Based Concentrations for Soil Pathways (mg/kg) - Residential																							
RBCcs Soil Ingestion, Dermal Contact, and Inhalation	0.031	DNE	DNE	DNE	0.036	7.4	7.4	12	8.2	8.5	0.14	4,900	4,900	4,900	250	250	250	0.45	0.45	DNE	7.4	2.1	
RBCwo- Volatization to Outdoor Air	>Csat	DNE	DNE	DNE	0.13	>Csat	>Csat	NV	>Csat	NV	NV	> Max	> Max	> Max	NV	NV	NV	230	230	DNE	>Csat	0.93	
RBCsw- Leaching to Groundwater	0.100	DNE	DNE	DNE	0.13	2.1	2.1	2.6	7.5	70	0.049	>Csat	>Csat	>Csat	>Csat	>Csat	>Csat	0.048	0.048	DNE	2.1	0.04	
Ecological Risk Assessment, September 2020 (ppm)																							
Risk-Based Concentrations for Sediment (freshwater)	40	DNE	DNE	DNE	DNE	DNE	DNE	DNE	4	1.5	4	3	DNE	DNE	DNE	3	DNE	DNE	10	0.6	DNE	DNE	0.0002
Clean fill screening levels - ODEQ (mg/kg)																							
Clean fill screening levels	0.023	0.0063	0.009	DNE	0.0095	DNE	DNE	0.0063	0.01	0.01	0.0045	0.64	0.64	0.64	0.0014	0.0014	0.0014	0.017	0.0042	5.1	0.91	0.36	

Notes:	
Bold indicates analyte was detected.	
Shaded cells indicate the analyte exceeded one or more DEQ RBC.	NA = Not Analyzed
DNE = generic risk-based concentrations (RBCs) Do Not Exist for this constituent	> S This groundwater RBC exceeds the solubility limit
mg/kg = milligrams per Kilogram; ppm = parts per million.	

APPENDIX A

LABORATORY ANALYTICAL RESULTS AND CHAINS OF CUSTODY



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Wednesday, September 10, 2025

Kaitlyn Allegretti
Cascade Environmental Solutions, LLC
7302 N. Richmond
Portland, OR 97203

RE: A5H1392 - Cottrell Pond - 2000-B25-8344 Cottrell

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

Enclosed are the results of analyses for work order A5H1392, which was received by the laboratory on 8/20/2025 at 11:15:00AM.

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

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

Cooler Receipt Information		
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>		
(See Cooler Receipt Form for details)		
Default Cooler	2.8	degC

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

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



Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Cascade Environmental Solutions, LLC

7302 N. Richmond
Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
C1-N.Field-081925	A5H1392-01	Soil	08/19/25 10:56	08/20/25 11:15
C2-Shore-081925	A5H1392-02	Soil	08/19/25 14:10	08/20/25 11:15
C3-Up Stream-081925	A5H1392-03	Soil	08/19/25 13:06	08/20/25 11:15
C4-Dam-081925	A5H1392-04	Soil	08/19/25 15:11	08/20/25 11:15
C5-HOT-W-081925	A5H1392-05	Soil	08/19/25 12:18	08/20/25 11:15
C6-S.Field-081925	A5H1392-06	Soil	08/19/25 10:16	08/20/25 11:15
DUP-081925	A5H1392-07	Soil	08/19/25 00:00	08/20/25 11:15

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C5-HOT-W-081925 (A5H1392-05)				Matrix: Soil		Batch: 25H0757		
Gasoline Range Organics	ND	---	29.3	mg/kg dry	1	08/21/25 21:55	NWTPH-HCID	
Diesel Range Organics	ND	---	73.3	mg/kg dry	1	08/21/25 21:55	NWTPH-HCID	
Oil Range Organics	ND	---	147	mg/kg dry	1	08/21/25 21:55	NWTPH-HCID	
Surrogate: o-Terphenyl (Surr)			Recovery: 82 %	Limits: 50-150 %	1	08/21/25 21:55	NWTPH-HCID	
4-Bromofluorobenzene (Surr)			90 %	50-150 %	1	08/21/25 21:55	NWTPH-HCID	

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C1-N.Field-081925 (A5H1392-01RE1)				Matrix: Soil		Batch: 25H0776		C-05
Aldrin	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
alpha-BHC	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
beta-BHC	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
delta-BHC	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
gamma-BHC (Lindane)	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
cis-Chlordane	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
trans-Chlordane	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
4,4'-DDD	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
4,4'-DDE	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
4,4'-DDT	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Dieldrin	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Endosulfan I	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Endosulfan II	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Endosulfan sulfate	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Endrin	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Endrin aldehyde	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Endrin ketone	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Heptachlor	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Heptachlor epoxide	ND	---	0.00208	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Methoxychlor	ND	---	0.00624	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Chlordane (Technical)	ND	---	0.0624	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Toxaphene (Total)	ND	---	0.0624	mg/kg dry	1	08/27/25 23:17	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Recovery:	103 %	Limits:	42-129 %	1	08/27/25 23:17	EPA 8081B
Decachlorobiphenyl (Surr)			98 %		55-130 %	1	08/27/25 23:17	EPA 8081B

C2-Shore-081925 (A5H1392-02RE1)

Matrix: Soil

Batch: 25H0776

C-05

Aldrin	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
alpha-BHC	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
beta-BHC	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
delta-BHC	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
gamma-BHC (Lindane)	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
cis-Chlordane	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
4,4'-DDE	0.00818	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
4,4'-DDT	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Dieldrin	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Endosulfan I	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Endosulfan II	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C2-Shore-081925 (A5H1392-02RE1)				Matrix: Soil		Batch: 25H0776		C-05
Endosulfan sulfate	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Endrin	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Endrin aldehyde	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Endrin ketone	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Heptachlor	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Heptachlor epoxide	ND	---	0.00290	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Methoxychlor	ND	---	0.00869	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Chlordane (Technical)	ND	---	0.0869	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Toxaphene (Total)	ND	---	0.0869	mg/kg dry	1	08/27/25 23:33	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Recovery:	120 %	Limits:	42-129 %	1	08/27/25 23:33	EPA 8081B
Decachlorobiphenyl (Surr)			109 %		55-130 %	1	08/27/25 23:33	EPA 8081B
C2-Shore-081925 (A5H1392-02RE2)				Matrix: Soil		Batch: 25H0776		C-05
trans-Chlordane	ND	---	0.00290	mg/kg dry	1	08/28/25 21:44	EPA 8081B	
4,4'-DDD	0.00326	---	0.00290	mg/kg dry	1	08/28/25 21:44	EPA 8081B	
C3-Up Stream-081925 (A5H1392-03RE1)				Matrix: Soil		Batch: 25H0776		C-05
Aldrin	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
alpha-BHC	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
beta-BHC	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
delta-BHC	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
gamma-BHC (Lindane)	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
cis-Chlordane	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
trans-Chlordane	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
4,4'-DDE	0.0118	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
4,4'-DDT	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Dieldrin	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Endosulfan I	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Endosulfan II	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Endosulfan sulfate	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Endrin	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Endrin aldehyde	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Endrin ketone	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Heptachlor	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Heptachlor epoxide	ND	---	0.00377	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Methoxychlor	ND	---	0.0113	mg/kg dry	1	08/27/25 23:49	EPA 8081B	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C3-Up Stream-081925 (A5H1392-03RE1)				Matrix: Soil		Batch: 25H0776		C-05
Chlordane (Technical)	ND	---	0.113	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Toxaphene (Total)	ND	---	0.113	mg/kg dry	1	08/27/25 23:49	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Recovery:	106 %	Limits: 42-129 %	1	08/27/25 23:49	EPA 8081B	
Decachlorobiphenyl (Surr)			84 %	55-130 %	1	08/27/25 23:49	EPA 8081B	
C3-Up Stream-081925 (A5H1392-03RE2)				Matrix: Soil		Batch: 25H0776		C-05
4,4'-DDD	ND	---	0.00377	mg/kg dry	1	08/28/25 22:01	EPA 8081B	
C4-Dam-081925 (A5H1392-04RE1)				Matrix: Soil		Batch: 25H0776		C-05
Aldrin	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
alpha-BHC	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
beta-BHC	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
delta-BHC	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
gamma-BHC (Lindane)	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
4,4'-DDD	ND	---	0.00302	mg/kg dry	1	08/28/25 00:05	EPA 8081B	R-02
4,4'-DDE	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
4,4'-DDT	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Dieldrin	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Endosulfan I	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Endosulfan II	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Endosulfan sulfate	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Endrin	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Endrin aldehyde	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Endrin ketone	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Heptachlor	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Heptachlor epoxide	ND	---	0.00211	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Methoxychlor	ND	---	0.00633	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Toxaphene (Total)	ND	---	0.0633	mg/kg dry	1	08/28/25 00:05	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Recovery:	111 %	Limits: 42-129 %	1	08/28/25 00:05	EPA 8081B	
Decachlorobiphenyl (Surr)			99 %	55-130 %	1	08/28/25 00:05	EPA 8081B	
C4-Dam-081925 (A5H1392-04RE2)				Matrix: Soil		Batch: 25H0776		C-05
cis-Chlordane	0.00988	---	0.00211	mg/kg dry	1	08/28/25 22:19	EPA 8081B	
trans-Chlordane	0.00437	---	0.00211	mg/kg dry	1	08/28/25 22:19	EPA 8081B	
Chlordane (Technical)	0.0648	---	0.0633	mg/kg dry	1	08/28/25 22:19	EPA 8081B	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

Page 6 of 33

Page 6 of 54



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C6-S.Field-081925 (A5H1392-06RE1)				Matrix: Soil		Batch: 25H0776		C-05
Aldrin	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
alpha-BHC	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
beta-BHC	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
delta-BHC	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
gamma-BHC (Lindane)	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
cis-Chlordane	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
trans-Chlordane	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
4,4'-DDD	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
4,4'-DDE	0.00286	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
4,4'-DDT	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Dieldrin	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Endosulfan I	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Endosulfan II	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Endosulfan sulfate	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Endrin	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Endrin aldehyde	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Endrin ketone	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Heptachlor	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Heptachlor epoxide	ND	---	0.00209	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Methoxychlor	ND	---	0.00627	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Chlordane (Technical)	ND	---	0.0627	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Toxaphene (Total)	ND	---	0.0627	mg/kg dry	1	08/28/25 00:22	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Recovery:	105 %	Limits:	42-129 %	1	08/28/25 00:22	EPA 8081B
Decachlorobiphenyl (Surr)			96 %		55-130 %	1	08/28/25 00:22	EPA 8081B

DUP-081925 (A5H1392-07RE1)

Matrix: Soil

Batch: 25H0776

C-05

Aldrin	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B
alpha-BHC	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B
beta-BHC	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B
delta-BHC	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B
gamma-BHC (Lindane)	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B
cis-Chlordane	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B
trans-Chlordane	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B
4,4'-DDD	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B
4,4'-DDE	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B
4,4'-DDT	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B
Dieldrin	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Cascade Environmental Solutions, LLC

7302 N. Richmond
Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell
Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DUP-081925 (A5H1392-07RE1)				Matrix: Soil		Batch: 25H0776		C-05
Endosulfan I	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B	
Endosulfan II	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B	
Endosulfan sulfate	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B	
Endrin	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B	
Endrin aldehyde	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B	
Endrin ketone	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B	
Heptachlor	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B	
Heptachlor epoxide	ND	---	0.00208	mg/kg dry	1	08/26/25 16:56	EPA 8081B	
Methoxychlor	ND	---	0.00625	mg/kg dry	1	08/26/25 16:56	EPA 8081B	
Chlordane (Technical)	ND	---	0.0625	mg/kg dry	1	08/26/25 16:56	EPA 8081B	
Toxaphene (Total)	ND	---	0.0625	mg/kg dry	1	08/26/25 16:56	EPA 8081B	
Surrogate: 2,4,5,6-TCMX (Surr)		Recovery: 94 %		Limits: 42-129 %	1	08/26/25 16:56	EPA 8081B	
Decachlorobiphenyl (Surr)		116 %		55-130 %	1	08/26/25 16:56	EPA 8081B	

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7302 N. Richmond

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Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C1-N.Field-081925 (A5H1392-01)				Matrix: Soil				
Batch: 25H0925								
Antimony	ND	---	1.22	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Arsenic	2.34	---	1.22	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Barium	155	---	1.22	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Beryllium	0.710	---	0.244	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Cadmium	ND	---	0.244	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Chromium	24.9	---	1.22	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Cobalt	12.7	---	1.22	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Copper	15.0	---	2.44	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Lead	11.6	---	0.244	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Mercury	ND	---	0.0975	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Molybdenum	ND	---	1.22	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Nickel	11.7	---	2.44	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Selenium	ND	---	1.22	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Silver	ND	---	0.244	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Thallium	ND	---	0.244	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Vanadium	63.4	---	2.44	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
Zinc	46.5	---	4.88	mg/kg dry	10	08/27/25 23:44	EPA 6020B	
C2-Shore-081925 (A5H1392-02)				Matrix: Soil				
Batch: 25H0925								
Antimony	ND	---	1.66	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Arsenic	ND	---	1.66	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Barium	180	---	1.66	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Beryllium	0.802	---	0.332	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Cadmium	ND	---	0.332	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Chromium	28.6	---	1.66	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Cobalt	8.41	---	1.66	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Copper	18.3	---	3.32	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Lead	12.6	---	0.332	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Mercury	ND	---	0.133	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Molybdenum	ND	---	1.66	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Nickel	13.0	---	3.32	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Selenium	ND	---	1.66	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Silver	ND	---	0.332	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Thallium	ND	---	0.332	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
Vanadium	63.1	---	3.32	mg/kg dry	10	08/27/25 23:49	EPA 6020B	

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C2-Shore-081925 (A5H1392-02)				Matrix: Soil				
Zinc	50.0	---	6.63	mg/kg dry	10	08/27/25 23:49	EPA 6020B	
C3-Up Stream-081925 (A5H1392-03)				Matrix: Soil				
Batch: 25H0925								
Antimony	ND	---	2.14	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Arsenic	2.56	---	2.14	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Barium	180	---	2.14	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Beryllium	1.02	---	0.429	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Cadmium	ND	---	0.429	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Chromium	23.3	---	2.14	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Cobalt	12.6	---	2.14	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Copper	17.7	---	4.29	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Lead	13.0	---	0.429	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Mercury	ND	---	0.171	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Molybdenum	ND	---	2.14	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Nickel	12.1	---	4.29	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Selenium	ND	---	2.14	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Silver	ND	---	0.429	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Thallium	ND	---	0.429	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Vanadium	62.5	---	4.29	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
Zinc	58.9	---	8.57	mg/kg dry	10	08/27/25 23:55	EPA 6020B	
C4-Dam-081925 (A5H1392-04)				Matrix: Soil				
Batch: 25H0925								
Antimony	ND	---	1.33	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Arsenic	ND	---	1.33	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Barium	215	---	1.33	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Beryllium	0.933	---	0.265	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Cadmium	ND	---	0.265	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Chromium	28.8	---	1.33	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Cobalt	7.71	---	1.33	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Copper	22.5	---	2.65	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Lead	9.66	---	0.265	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Mercury	ND	---	0.106	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Molybdenum	ND	---	1.33	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Nickel	21.3	---	2.65	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Selenium	ND	---	1.33	mg/kg dry	10	08/28/25 00:12	EPA 6020B	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C4-Dam-081925 (A5H1392-04)				Matrix: Soil				
Silver	ND	---	0.265	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Thallium	ND	---	0.265	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Vanadium	70.5	---	2.65	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
Zinc	30.3	---	5.30	mg/kg dry	10	08/28/25 00:12	EPA 6020B	
C6-S.Field-081925 (A5H1392-06)				Matrix: Soil				
Batch: 25H0925								
Antimony	ND	---	1.26	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Arsenic	3.40	---	1.26	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Barium	207	---	1.26	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Beryllium	0.847	---	0.252	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Cadmium	ND	---	0.252	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Chromium	28.6	---	1.26	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Cobalt	14.6	---	1.26	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Copper	19.3	---	2.52	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Lead	12.4	---	0.252	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Mercury	ND	---	0.101	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Molybdenum	ND	---	1.26	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Nickel	16.2	---	2.52	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Selenium	ND	---	1.26	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Silver	ND	---	0.252	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Thallium	ND	---	0.252	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Vanadium	68.6	---	2.52	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
Zinc	61.9	---	5.04	mg/kg dry	10	08/28/25 00:17	EPA 6020B	
DUP-081925 (A5H1392-07)				Matrix: Soil				
Batch: 25H0704								
Antimony	ND	---	1.17	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Arsenic	3.45	---	1.17	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Barium	172	---	1.17	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Beryllium	0.879	---	0.233	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Cadmium	ND	---	0.233	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Chromium	35.2	---	1.17	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Cobalt	14.9	---	1.17	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Copper	21.4	---	2.33	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Lead	11.6	---	0.233	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Mercury	ND	---	0.0934	mg/kg dry	10	08/20/25 19:58	EPA 6020B	

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ANALYTICAL REPORT

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
DUP-081925 (A5H1392-07)				Matrix: Soil				
Molybdenum	ND	---	1.17	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Nickel	20.5	---	2.33	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Selenium	ND	---	1.17	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Silver	ND	---	0.233	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Thallium	ND	---	0.233	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Vanadium	82.5	---	2.33	mg/kg dry	10	08/20/25 19:58	EPA 6020B	
Zinc	64.6	---	4.67	mg/kg dry	10	08/20/25 19:58	EPA 6020B	

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7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
C1-N.Field-081925 (A5H1392-01)				Matrix: Soil		Batch: 25H0727		
% Solids	87.1	---	1.00	%	1	08/22/25 05:29	EPA 8000D	
C2-Shore-081925 (A5H1392-02)				Matrix: Soil		Batch: 25H0727		
% Solids	60.0	---	1.00	%	1	08/22/25 05:29	EPA 8000D	
C3-Up Stream-081925 (A5H1392-03)				Matrix: Soil		Batch: 25H0727		
% Solids	47.6	---	1.00	%	1	08/22/25 05:29	EPA 8000D	
C4-Dam-081925 (A5H1392-04)				Matrix: Soil		Batch: 25H0727		
% Solids	83.3	---	1.00	%	1	08/22/25 05:29	EPA 8000D	
C5-HOT-W-081925 (A5H1392-05)				Matrix: Soil		Batch: 25H0727		
% Solids	67.8	---	1.00	%	1	08/22/25 05:29	EPA 8000D	
C6-S.Field-081925 (A5H1392-06)				Matrix: Soil		Batch: 25H0727		
% Solids	86.6	---	1.00	%	1	08/22/25 05:29	EPA 8000D	
DUP-081925 (A5H1392-07)				Matrix: Soil		Batch: 25H0727		
% Solids	86.6	---	1.00	%	1	08/22/25 05:29	EPA 8000D	

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ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

QUALITY CONTROL (QC) SAMPLE RESULTS

Hydrocarbon Identification Screen by NWTPH-HCID

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25H0757 - NWTPH-HCID (Soil)						Soil						
Blank (25H0757-BLK1)		Prepared: 08/21/25 15:30 Analyzed: 08/21/25 21:31										
<u>NWTPH-HCID</u>												
Gasoline Range Organics	ND	---	20.0	mg/kg wet	1	---	---	---	---	---	---	
Diesel Range Organics	ND	---	50.0	mg/kg wet	1	---	---	---	---	---	---	
Oil Range Organics	ND	---	100	mg/kg wet	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		Recovery: 84 %		Limits: 50-150 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		92 %		50-150 %		"						
Duplicate (25H0757-DUP1)		Prepared: 08/21/25 15:30 Analyzed: 08/21/25 22:19										
<u>QC Source Sample: C5-HOT-W-081925 (A5H1392-05)</u>												
<u>NWTPH-HCID</u>												
Gasoline Range Organics	ND	---	28.8	mg/kg dry	1	---	ND	---	---	---	30%	
Diesel Range Organics	ND	---	72.0	mg/kg dry	1	---	ND	---	---	---	30%	
Oil Range Organics	ND	---	144	mg/kg dry	1	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		Recovery: 83 %		Limits: 50-150 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		91 %		50-150 %		"						

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ANALYTICAL REPORT

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Project Manager: Kaitlyn Allegretti

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A5H1392 - 09 10 25 1009

QUALITY CONTROL (QC) SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25H0756 - EPA 3546						Soil						
Blank (25H0756-BLK1)		Prepared: 08/21/25 15:34		Analyzed: 08/28/25 20:35						AMEND		
EPA 8081B												
Aldrin	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
alpha-BHC	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
beta-BHC	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
delta-BHC	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
gamma-BHC (Lindane)	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
cis-Chlordane	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
trans-Chlordane	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
4,4'-DDD	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
4,4'-DDE	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
4,4'-DDT	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
Dieldrin	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
Endosulfan I	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
Endosulfan II	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
Endosulfan sulfate	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
Endrin	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
Endrin aldehyde	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
Endrin ketone	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
Heptachlor	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
Heptachlor epoxide	ND	---	0.00100	mg/kg wet	1	---	---	---	---	---	---	
Methoxychlor	ND	---	0.00300	mg/kg wet	1	---	---	---	---	---	---	
Chlordane (Technical)	ND	---	0.0300	mg/kg wet	1	---	---	---	---	---	---	
Toxaphene (Total)	ND	---	0.0300	mg/kg wet	1	---	---	---	---	---	---	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 95 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		110 %		55-130 %		"						

LCS (25H0756-BS1)		Prepared: 08/21/25 15:34 Analyzed: 08/28/25 20:52										AMEND
EPA 8081B												
Aldrin	0.0397	---	0.00100	mg/kg wet	1	0.0500	---	79	45 - 136%	---	---	
alpha-BHC	0.0544	---	0.00100	mg/kg wet	1	0.0500	---	109	45 - 137%	---	---	
beta-BHC	0.0490	---	0.00100	mg/kg wet	1	0.0500	---	98	50 - 136%	---	---	
delta-BHC	0.0498	---	0.00100	mg/kg wet	1	0.0500	---	100	47 - 139%	---	---	
gamma-BHC (Lindane)	0.0503	---	0.00100	mg/kg wet	1	0.0500	---	101	49 - 135%	---	---	
cis-Chlordane	0.0505	---	0.00100	mg/kg wet	1	0.0500	---	101	54 - 133%	---	---	

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7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

QUALITY CONTROL (QC) SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25H0756 - EPA 3546						Soil						
LCS (25H0756-BS1)						Prepared: 08/21/25 15:34 Analyzed: 08/28/25 20:52						AMEND
trans-Chlordane	0.0498	---	0.00100	mg/kg wet	1	0.0500	---	100	53 - 135%	---	---	
4,4'-DDD	0.0518	---	0.00100	mg/kg wet	1	0.0500	---	104	56 - 139%	---	---	
4,4'-DDE	0.0536	---	0.00100	mg/kg wet	1	0.0500	---	107	56 - 134%	---	---	
4,4'-DDT	0.0548	---	0.00100	mg/kg wet	1	0.0500	---	110	50 - 141%	---	---	
Dieldrin	0.0521	---	0.00100	mg/kg wet	1	0.0500	---	104	56 - 136%	---	---	
Endosulfan I	0.0488	---	0.00100	mg/kg wet	1	0.0500	---	98	53 - 132%	---	---	
Endosulfan II	0.0501	---	0.00100	mg/kg wet	1	0.0500	---	100	53 - 134%	---	---	
Endosulfan sulfate	0.0484	---	0.00100	mg/kg wet	1	0.0500	---	97	55 - 136%	---	---	
Endrin	0.0526	---	0.00100	mg/kg wet	1	0.0500	---	105	57 - 140%	---	---	
Endrin aldehyde	0.0448	---	0.00100	mg/kg wet	1	0.0500	---	90	35 - 137%	---	---	
Endrin ketone	0.0497	---	0.00100	mg/kg wet	1	0.0500	---	99	55 - 136%	---	---	
Heptachlor	0.0510	---	0.00100	mg/kg wet	1	0.0500	---	102	47 - 136%	---	---	
Heptachlor epoxide	0.0495	---	0.00100	mg/kg wet	1	0.0500	---	99	52 - 136%	---	---	
Methoxychlor	0.0574	---	0.00300	mg/kg wet	1	0.0500	---	115	52 - 143%	---	---	Q-41
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 88 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		101 %		55-130 %		"						

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

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

QUALITY CONTROL (QC) SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25H0776 - EPA 3546/3640A (GPC)						Soil						
Blank (25H0776-BLK1)		Prepared: 08/21/25 15:34		Analyzed: 08/26/25 14:55						C-05		
EPA 8081B												
Aldrin	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
alpha-BHC	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
beta-BHC	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
delta-BHC	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
gamma-BHC (Lindane)	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
cis-Chlordane	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
trans-Chlordane	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
4,4'-DDD	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
4,4'-DDE	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
4,4'-DDT	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Dieldrin	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endosulfan I	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endosulfan II	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endosulfan sulfate	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endrin	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endrin aldehyde	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Endrin ketone	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Heptachlor	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Heptachlor epoxide	ND	---	0.00200	mg/kg wet	1	---	---	---	---	---	---	
Methoxychlor	ND	---	0.00600	mg/kg wet	1	---	---	---	---	---	---	
Chlordane (Technical)	ND	---	0.0600	mg/kg wet	1	---	---	---	---	---	---	
Toxaphene (Total)	ND	---	0.0600	mg/kg wet	1	---	---	---	---	---	---	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 97 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		127 %		55-130 %		"						

LCS (25H0776-BS1)

Prepared: 08/21/25 15:34 Analyzed: 08/26/25 15:12

C-05

EPA 8081B

Aldrin	0.0513	---	0.00200	mg/kg wet	1	0.0500	---	103	45 - 136%	---	---
alpha-BHC	0.0525	---	0.00200	mg/kg wet	1	0.0500	---	105	45 - 137%	---	---
beta-BHC	0.0514	---	0.00200	mg/kg wet	1	0.0500	---	103	50 - 136%	---	---
delta-BHC	0.0497	---	0.00200	mg/kg wet	1	0.0500	---	99	47 - 139%	---	---
gamma-BHC (Lindane)	0.0519	---	0.00200	mg/kg wet	1	0.0500	---	104	49 - 135%	---	---
cis-Chlordane	0.0524	---	0.00200	mg/kg wet	1	0.0500	---	105	54 - 133%	---	---

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

QUALITY CONTROL (QC) SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25H0776 - EPA 3546/3640A (GPC)						Soil						
LCS (25H0776-BS1)						Prepared: 08/21/25 15:34 Analyzed: 08/26/25 15:12						C-05
trans-Chlordane	0.0534	---	0.00200	mg/kg wet	1	0.0500	---	107	53 - 135%	---	---	
4,4'-DDD	0.0541	---	0.00200	mg/kg wet	1	0.0500	---	108	56 - 139%	---	---	
4,4'-DDE	0.0574	---	0.00200	mg/kg wet	1	0.0500	---	115	56 - 134%	---	---	
4,4'-DDT	0.0590	---	0.00200	mg/kg wet	1	0.0500	---	118	50 - 141%	---	---	
Dieldrin	0.0556	---	0.00200	mg/kg wet	1	0.0500	---	111	56 - 136%	---	---	
Endosulfan I	0.0532	---	0.00200	mg/kg wet	1	0.0500	---	106	53 - 132%	---	---	
Endosulfan II	0.0551	---	0.00200	mg/kg wet	1	0.0500	---	110	53 - 134%	---	---	
Endosulfan sulfate	0.0512	---	0.00200	mg/kg wet	1	0.0500	---	102	55 - 136%	---	---	
Endrin	0.0564	---	0.00200	mg/kg wet	1	0.0500	---	113	57 - 140%	---	---	
Endrin aldehyde	0.0475	---	0.00200	mg/kg wet	1	0.0500	---	95	35 - 137%	---	---	
Endrin ketone	0.0572	---	0.00200	mg/kg wet	1	0.0500	---	114	55 - 136%	---	---	
Heptachlor	0.0519	---	0.00200	mg/kg wet	1	0.0500	---	104	47 - 136%	---	---	
Heptachlor epoxide	0.0529	---	0.00200	mg/kg wet	1	0.0500	---	106	52 - 136%	---	---	
Methoxychlor	0.0602	---	0.00600	mg/kg wet	1	0.0500	---	120	52 - 143%	---	---	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 95 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		119 %		55-130 %		"						

Matrix Spike (25H0776-MS1) Prepared: 08/21/25 15:34 Analyzed: 08/26/25 17:14 C-05

QC Source Sample: DUP-081925 (A5H1392-07RE1)

EPA 8081B

Aldrin	0.0523	---	0.00210	mg/kg dry	1	0.0524	ND	100	45 - 136%	---	---	
alpha-BHC	0.0552	---	0.00210	mg/kg dry	1	0.0524	ND	105	45 - 137%	---	---	
beta-BHC	0.0559	---	0.00210	mg/kg dry	1	0.0524	ND	107	50 - 136%	---	---	
delta-BHC	0.0562	---	0.00210	mg/kg dry	1	0.0524	ND	107	47 - 139%	---	---	
gamma-BHC (Lindane)	0.0546	---	0.00210	mg/kg dry	1	0.0524	ND	104	49 - 135%	---	---	
cis-Chlordane	0.0543	---	0.00210	mg/kg dry	1	0.0524	ND	104	54 - 133%	---	---	
trans-Chlordane	0.0535	---	0.00210	mg/kg dry	1	0.0524	ND	102	53 - 135%	---	---	
4,4'-DDD	0.0602	---	0.00210	mg/kg dry	1	0.0524	ND	115	56 - 139%	---	---	
4,4'-DDE	0.0611	---	0.00210	mg/kg dry	1	0.0524	0.00121	114	56 - 134%	---	---	
4,4'-DDT	0.0625	---	0.00210	mg/kg dry	1	0.0524	ND	119	50 - 141%	---	---	
Dieldrin	0.0560	---	0.00210	mg/kg dry	1	0.0524	ND	107	56 - 136%	---	---	
Endosulfan I	0.0542	---	0.00210	mg/kg dry	1	0.0524	ND	103	53 - 132%	---	---	
Endosulfan II	0.0572	---	0.00210	mg/kg dry	1	0.0524	ND	109	53 - 134%	---	---	
Endosulfan sulfate	0.0565	---	0.00210	mg/kg dry	1	0.0524	ND	108	55 - 136%	---	---	

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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Page 18 of 54



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

QUALITY CONTROL (QC) SAMPLE RESULTS

Organochlorine Pesticides by EPA 8081B

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25H0776 - EPA 3546/3640A (GPC)						Soil						
Matrix Spike (25H0776-MS1)		Prepared: 08/21/25 15:34		Analyzed: 08/26/25 17:14		C-05						
QC Source Sample: DUP-081925 (A5H1392-07RE1)												
Endrin	0.0569	---	0.00210	mg/kg dry	1	0.0524	ND	109	57 - 140%	---	---	
Endrin aldehyde	0.0528	---	0.00210	mg/kg dry	1	0.0524	ND	101	35 - 137%	---	---	
Endrin ketone	0.0605	---	0.00210	mg/kg dry	1	0.0524	ND	115	55 - 136%	---	---	
Heptachlor	0.0545	---	0.00210	mg/kg dry	1	0.0524	ND	104	47 - 136%	---	---	
Heptachlor epoxide	0.0550	---	0.00210	mg/kg dry	1	0.0524	ND	105	52 - 136%	---	---	
Methoxychlor	0.0675	---	0.00629	mg/kg dry	1	0.0524	ND	129	52 - 143%	---	---	
Surr: 2,4,5,6-TCMX (Surr)		Recovery: 94 %		Limits: 42-129 %		Dilution: 1x						
Decachlorobiphenyl (Surr)		108 %		55-130 %		"						

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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Page 19 of 54



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: **Cottrell Pond**Project Number: **2000-B25-8344 Cottrell**Project Manager: **Kaitlyn Allegretti****Report ID:****A5H1392 - 09 10 25 1009**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25H0704 - EPA 3051A												
Soil												
Blank (25H0704-BLK1)												
Prepared: 08/20/25 12:20 Analyzed: 08/20/25 18:37												
EPA 6020B												
Antimony	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Beryllium	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Cobalt	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	---	2.00	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	---	0.0800	mg/kg wet	10	---	---	---	---	---	---	
Molybdenum	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Nickel	ND	---	2.00	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Thallium	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Vanadium	ND	---	2.00	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	---	4.00	mg/kg wet	10	---	---	---	---	---	---	

LCS (25H0704-BS1)

Prepared: 08/20/25 12:20 Analyzed: 08/20/25 18:42

EPA 6020B

Antimony	26.0	---	1.00	mg/kg wet	10	25.0	---	104	80 - 120%	---	---
Arsenic	49.6	---	1.00	mg/kg wet	10	50.0	---	99	80 - 120%	---	---
Barium	50.7	---	1.00	mg/kg wet	10	50.0	---	101	80 - 120%	---	---
Beryllium	24.6	---	0.200	mg/kg wet	10	25.0	---	99	80 - 120%	---	---
Cadmium	50.5	---	0.200	mg/kg wet	10	50.0	---	101	80 - 120%	---	---
Chromium	49.7	---	1.00	mg/kg wet	10	50.0	---	99	80 - 120%	---	---
Cobalt	51.0	---	1.00	mg/kg wet	10	50.0	---	102	80 - 120%	---	---
Copper	49.4	---	2.00	mg/kg wet	10	50.0	---	99	80 - 120%	---	---
Lead	50.8	---	0.200	mg/kg wet	10	50.0	---	102	80 - 120%	---	---
Mercury	1.01	---	0.0800	mg/kg wet	10	1.00	---	101	80 - 120%	---	---
Molybdenum	24.7	---	1.00	mg/kg wet	10	25.0	---	99	80 - 120%	---	---
Nickel	51.3	---	2.00	mg/kg wet	10	50.0	---	103	80 - 120%	---	---
Selenium	24.8	---	1.00	mg/kg wet	10	25.0	---	99	80 - 120%	---	---

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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Page 20 of 54



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Cascade Environmental Solutions, LLC
7302 N. Richmond
Portland, OR 97203

Project: Cottrell Pond
Project Number: 2000-B25-8344 Cottrell
Project Manager: Kaitlyn Allegretti

Report ID:
A5H1392 - 09 10 25 1009

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25H0704 - EPA 3051A							Soil					
LCS (25H0704-BS1)		Prepared: 08/20/25 12:20				Analyzed: 08/20/25 18:42						
Silver	25.4	---	0.200	mg/kg wet	10	25.0	---	101	80 - 120%	---	---	
Thallium	24.5	---	0.200	mg/kg wet	10	25.0	---	98	80 - 120%	---	---	
Vanadium	51.2	---	2.00	mg/kg wet	10	50.0	---	102	80 - 120%	---	---	
Zinc	49.4	---	4.00	mg/kg wet	10	50.0	---	99	80 - 120%	---	---	

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

Apex Laboratories

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ANALYTICAL REPORT

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6700 S.W. Sandburg Street

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503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: **Cottrell Pond**Project Number: **2000-B25-8344 Cottrell**Project Manager: **Kaitlyn Allegretti****Report ID:****A5H1392 - 09 10 25 1009**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25H0925 - EPA 3051A												
Soil												
Blank (25H0925-BLK1)												
Prepared: 08/26/25 13:25 Analyzed: 08/27/25 22:39												
EPA 6020B												
Antimony	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Arsenic	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Barium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Beryllium	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Cadmium	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Chromium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Cobalt	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Copper	ND	---	2.00	mg/kg wet	10	---	---	---	---	---	---	
Lead	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Mercury	ND	---	0.0800	mg/kg wet	10	---	---	---	---	---	---	
Molybdenum	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Nickel	ND	---	2.00	mg/kg wet	10	---	---	---	---	---	---	
Selenium	ND	---	1.00	mg/kg wet	10	---	---	---	---	---	---	
Silver	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Thallium	ND	---	0.200	mg/kg wet	10	---	---	---	---	---	---	
Vanadium	ND	---	2.00	mg/kg wet	10	---	---	---	---	---	---	
Zinc	ND	---	4.00	mg/kg wet	10	---	---	---	---	---	---	

LCS (25H0925-BS1)

Prepared: 08/26/25 13:25 Analyzed: 08/27/25 23:02

EPA 6020B

Antimony	27.6	---	1.00	mg/kg wet	10	25.0	---	110	80 - 120%	---	---
Arsenic	51.3	---	1.00	mg/kg wet	10	50.0	---	103	80 - 120%	---	---
Barium	51.9	---	1.00	mg/kg wet	10	50.0	---	104	80 - 120%	---	---
Beryllium	24.6	---	0.200	mg/kg wet	10	25.0	---	98	80 - 120%	---	---
Cadmium	52.7	---	0.200	mg/kg wet	10	50.0	---	105	80 - 120%	---	---
Chromium	51.6	---	1.00	mg/kg wet	10	50.0	---	103	80 - 120%	---	---
Cobalt	52.7	---	1.00	mg/kg wet	10	50.0	---	105	80 - 120%	---	---
Copper	52.0	---	2.00	mg/kg wet	10	50.0	---	104	80 - 120%	---	---
Lead	53.1	---	0.200	mg/kg wet	10	50.0	---	106	80 - 120%	---	---
Mercury	1.01	---	0.0800	mg/kg wet	10	1.00	---	101	80 - 120%	---	---
Molybdenum	25.1	---	1.00	mg/kg wet	10	25.0	---	100	80 - 120%	---	---
Nickel	52.9	---	2.00	mg/kg wet	10	50.0	---	106	80 - 120%	---	---
Selenium	25.8	---	1.00	mg/kg wet	10	25.0	---	103	80 - 120%	---	---

Apex Laboratories

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ANALYTICAL REPORT

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Cascade Environmental Solutions, LLC
7302 N. Richmond
Portland, OR 97203

Project: Cottrell Pond
Project Number: 2000-B25-8344 Cottrell
Project Manager: Kaitlyn Allegretti

Report ID:
A5H1392 - 09 10 25 1009

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25H0925 - EPA 3051A							Soil					
LCS (25H0925-BS1)		Prepared: 08/26/25 13:25				Analyzed: 08/27/25 23:02						
Silver	25.6	---	0.200	mg/kg wet	10	25.0	---	103	80 - 120%	---	---	
Thallium	25.5	---	0.200	mg/kg wet	10	25.0	---	102	80 - 120%	---	---	
Vanadium	51.6	---	2.00	mg/kg wet	10	50.0	---	103	80 - 120%	---	---	
Zinc	53.9	---	4.00	mg/kg wet	10	50.0	---	108	80 - 120%	---	---	

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

Apex Laboratories

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Cameron O'Brien For Darrell Auvil, Client Services Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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

Cascade Environmental Solutions, LLC
7302 N. Richmond
Portland, OR 97203

Project: **Cottrell Pond**
Project Number: **2000-B25-8344 Cottrell**
Project Manager: **Kaitlyn Allegretti**

Report ID:
A5H1392 - 09 10 25 1009

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 25H0727 - Dry Weight Prep (EPA 8000D)							Soil					
Duplicate (25H0727-DUP2)		Prepared: 08/21/25 10:24 Analyzed: 08/22/25 05:29										
QC Source Sample: C1-N.Field-081925 (A5H1392-01)												
EPA 8000D												
% Solids	87.4	---	1.00	%	1	---	87.1	---	---	0.4	10%	

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SAMPLE PREPARATION INFORMATION

Hydrocarbon Identification Screen by NWTPH-HCID

Prep: NWTPH-HCID (Soil)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 25H0757							
A5H1392-05	Soil	NWTPH-HCID	08/19/25 12:18	08/21/25 15:30	10.07g/10mL	10g/10mL	0.99

Organochlorine Pesticides by EPA 8081B

Prep: EPA 3546/3640A (GPC)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 25H0776							
A5H1392-01RE1	Soil	EPA 8081B	08/19/25 10:56	08/21/25 15:34	11.05g/10mL	10g/5mL	1.81
A5H1392-02RE1	Soil	EPA 8081B	08/19/25 14:10	08/21/25 15:34	11.52g/10mL	10g/5mL	1.74
A5H1392-02RE2	Soil	EPA 8081B	08/19/25 14:10	08/21/25 15:34	11.52g/10mL	10g/5mL	1.74
A5H1392-03RE1	Soil	EPA 8081B	08/19/25 13:06	08/21/25 15:34	11.13g/10mL	10g/5mL	1.80
A5H1392-03RE2	Soil	EPA 8081B	08/19/25 13:06	08/21/25 15:34	11.13g/10mL	10g/5mL	1.80
A5H1392-04RE1	Soil	EPA 8081B	08/19/25 15:11	08/21/25 15:34	11.39g/10mL	10g/5mL	1.76
A5H1392-04RE2	Soil	EPA 8081B	08/19/25 15:11	08/21/25 15:34	11.39g/10mL	10g/5mL	1.76
A5H1392-06RE1	Soil	EPA 8081B	08/19/25 10:16	08/21/25 15:34	11.06g/10mL	10g/5mL	1.81
A5H1392-07RE1	Soil	EPA 8081B	08/19/25 00:00	08/21/25 15:34	11.1g/10mL	10g/5mL	1.80

Total Metals by EPA 6020B (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 25H0704							
A5H1392-07	Soil	EPA 6020B	08/19/25 00:00	08/20/25 12:20	0.495g/50mL	0.5g/50mL	1.01
Batch: 25H0925							
A5H1392-01	Soil	EPA 6020B	08/19/25 10:56	08/26/25 13:25	0.471g/50mL	0.5g/50mL	1.06
A5H1392-02	Soil	EPA 6020B	08/19/25 14:10	08/26/25 13:25	0.503g/50mL	0.5g/50mL	0.99
A5H1392-03	Soil	EPA 6020B	08/19/25 13:06	08/26/25 13:25	0.49g/50mL	0.5g/50mL	1.02
A5H1392-04	Soil	EPA 6020B	08/19/25 15:11	08/26/25 13:25	0.453g/50mL	0.5g/50mL	1.10
A5H1392-06	Soil	EPA 6020B	08/19/25 10:16	08/26/25 13:25	0.458g/50mL	0.5g/50mL	1.09

Percent Dry Weight

Prep: Dry Weight Prep (EPA 8000D)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 25H0727							
A5H1392-01	Soil	EPA 8000D	08/19/25 10:56	08/21/25 10:24	1g	1g	1.00

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Cameron O'Brien For Darrell Auvil, Client Services Manager

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell Pond

Project Number: 2000-B25-8344 Cottrell

Project Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Dry Weight Prep (EPA 8000D)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A5H1392-02	Soil	EPA 8000D	08/19/25 14:10	08/21/25 10:24	1g	1g	1.00
A5H1392-03	Soil	EPA 8000D	08/19/25 13:06	08/21/25 10:24	1g	1g	1.00
A5H1392-04	Soil	EPA 8000D	08/19/25 15:11	08/21/25 10:24	1g	1g	1.00
A5H1392-05	Soil	EPA 8000D	08/19/25 12:18	08/21/25 10:24	1g	1g	1.00
A5H1392-06	Soil	EPA 8000D	08/19/25 10:16	08/21/25 10:24	1g	1g	1.00
A5H1392-07	Soil	EPA 8000D	08/19/25 00:00	08/21/25 10:24	1g	1g	1.00

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Project Manager: **Kaitlyn Allegretti**

Report ID:

A5H1392 - 09 10 25 1009

QUALIFIER DEFINITIONS

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

Apex Laboratories

- AMEND** The Result, Reporting Level, Recovery and/or RPD has changed. Note: Batch QC marked as AMENDED may or may not have been issued prior to the change. Case Narrative included if client data is affected.
- C-05** Extract has undergone a GPC (Gel-Permeation Chromatography) cleanup per EPA 3640A. Reporting levels may be raised due to dilution necessary for cleanup. Sample Final Volume includes the GPC dilution factor, see the Prep page for details.
- Q-41** Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.

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Report ID:
A5H1392 - 09 10 25 1009

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting and Detection Limits: Default Limits

Default Reporting and Detection Limits are based on 100% dry weight with the minimum dilution for the analysis. Reporting and Detection Limits are raised due to moisture content, additional dilutions required for analysis, matrix interferences and in other cases, as necessary.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

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

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

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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A5H1392 - 09 10 25 1009

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to one half of the Reporting Limit (RL).

Blank results for gravimetric analyses are evaluated to the Reporting Level, not to half of the Reporting Level.

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

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

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

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

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

Soil and Sediment Samples:

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

Sampling and Preservation Notes:

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

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

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Project Number: **2000-B25-8344 Cottrell**

Project Manager: **Kaitlyn Allegretti**

Report ID:

A5H1392 - 09 10 25 1009

Decanted Samples:

Soils/Sediments:

Unless TCLP analysis is required or there is notification otherwise for a specific project, all Soil and Sediments containing excess water are decanted prior to analysis in order to provide the most representative sample for analysis.

Water Samples:

Water samples containing solids and sediment may need to be decanted in order to eliminate these particulates from the water extractions. In the case of organics extractions, a solvent rinse of the container will not be performed.

Volatiles Soils (5035s)

Samples that are field preserved by 5035 for volatiles are dry weight corrected using the same dry weight correction as for normal analyses.

In the case of decanted samples, the dry weight may be performed on a decanted sample, while the aliquot for 5035 may not have been treated the same way. If this is a concern, please submit separate containers for dry weight analysis for volatiles can be provided.

All samples decanted in the laboratory are noted in this report with the DCNT qualifier indicating the sample was decanted.

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Project Number: 2000-B25-8344 Cottrell

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Report ID:

A5H1392 - 09 10 25 1009

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation)

EPA ID: OR01039

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

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
--------	----------	--------	---------	--------	---------------

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

Secondary Accreditations

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

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.

Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

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

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Report ID:

A5H1392 - 09 10 25 1009

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

CHAIN OF CUSTODY

Lab # A5H1392 COC 1 of 1

Project Name: Cottrell Pond Project # 2000-B25-8344 Cottrell

Company: Cascade Environmental Solutions, LLC Email: Kaitlyn Allegretti Phone: 503-459-1079

Address: 7302 N. Richmond Ave, Portland, OR 97203

Sampled by: K. Allegretti

Site Location: State OR County MULT.

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-DC	NWTPH-GX	8260D BTEX	8260D RBDM VOCs	8260D Halo VOCs	8260D VOCs Full List	8270E PAHs	8270E Semi-Vols Full List	8082A PCBs	8081B Pesticides	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Ti, V, Zn	TOTAL DISS. TCLP	TCLP Metals (8)	OR Ag, Metals (17)	Pesticides EPA 8816	Herbicides	Hold Sample	Frozen Archive	
1 C1-N-Field-081925	8/19/25	1056	S	2																					
2 C2-Share-		1410		2																					
3 C3-UpStream-		1306		2																					
4 C4-Dam-		1511		2																					
5 C5-HOTW-		1218		6																					
6 C6-S-Field-		1016		2																					
7																									
8																									
9																									
10																									

SPECIAL INSTRUCTIONS:
Please hold for possible follow ups pending initial results.

Normal Turn Around Time (TAT) = 10 Business Days → ☐

***** RUSH - Request → Indicate Date Needed: *****

*****Rush TAT requests may incur additional cost**
For TAT calculations, samples received after 3pm will be considered received the next business day.
Data will be reported by 6pm.
Samples with <72 hrs of hold time may be surcharged.

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: <u>Kaitlyn Allegretti</u>	Signature: <u>Kaitlyn Allegretti</u>	Signature: <u>Kaitlyn Allegretti</u>	Signature: <u>Kaitlyn Allegretti</u>
Date: <u>8/19/25</u>	Date: <u>8/19/25</u>	Date: <u>8/19/25</u>	Date: <u>8/20/25</u>
Time: <u>5:50PM</u>	Time: <u>11:15AM</u>	Time: <u>11:15AM</u>	Time: <u>11:15</u>
Printed Name: <u>Kaitlyn Allegretti</u>	Printed Name: <u>Kaitlyn Allegretti</u>	Printed Name: <u>Kaitlyn Allegretti</u>	Printed Name: <u>Kaitlyn Allegretti</u>
Company: <u>Cascade Environmental Solutions</u>	Company: <u>Cascade Environmental Solutions</u>	Company: <u>Cascade Environmental Solutions</u>	Company: <u>Apex</u>

Form Y-002 R-02

Apex Laboratories

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Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Cascade Environmental Solutions, LLC

7302 N. Richmond

Portland, OR 97203

Project: Cottrell PondProject Number: 2000-B25-8344 CottrellProject Manager: Kaitlyn Allegretti

Report ID:

A5H1392 - 09 10 25 1009

APEX LABS COOLER RECEIPT FORM

Client: Cascade Environmental Solutions Present WO#: A5 H1392Project/Project #: Cottrell Pond / 2000-B25-8344 Cottrell

Delivery Info:

Date/time received: 8/20/25 @ 1115 By: ATMDelivered by: Apex ☒ Client ☐ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐From USDA Regulated Origin? Yes ☐ No ☒Cooler Inspection Date/time inspected: 8/20/25 @ 1212 By: ATMChain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐Contains USDA Reg. Soils? Yes ☐ No ☒ Unsure (email RegSoils) ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>2.8</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>Y</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>In</u>						

Cooler out of temp? (Y/N) Possible reason why: Green dots applied to out of temperature samples? Yes ☐ No ☒Out of temperature samples form initiated? Yes ☐ No ☒Sample Inspection: Date/time inspected: 8/20/25 @ 12:41 By: ATMAll samples intact? Yes ☒ No ☐ Comments: Bottle labels/COCs agree? Yes ☒ No ☐ Comments: ATM 8/20/25received but not listed on COC. Cnts. don't have Suffix: 081925 or time.COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments: Do VOA vials have visible headspace? Yes ☐ No ☐ NA ☒Comments: Water samples: pH checked: Yes ☐ No ☐ NA ☒ pH appropriate? Yes ☐ No ☐ NA ☒ pH ID: Comments: Labeled by: ATMWitness: KNCooler Inspected by: ATM

Form Y-003 R-02 -

Apex Laboratories

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Cameron O'Brien For Darrell Auvi, Client Services Manager

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ANALYTICAL REPORT

PREPARED FOR

Attn: Darrell Auvil
Apex Laboratories LLC
6700 SW Sandburg St.
Tigard, Oregon 97223

Generated 8/28/2025 8:02:42 AM

JOB DESCRIPTION

A5H1392

JOB NUMBER

280-212333-1

Eurofins Denver

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



Generated
8/28/2025 8:02:42 AM

Authorized for release by
Nicole Ryan, Project Manager I
Nicole.Ryan@ET.eurofinsus.com
(303)736-0100

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Definitions/Glossary

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

Qualifiers

LCMS

Qualifier	Qualifier Description
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Apex Laboratories LLC
Project: A5H1392

Job ID: 280-212333-1

Job ID: 280-212333-1

Eurofins Denver

Job Narrative 280-212333-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

Receipt

The samples were received on 8/21/2025 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.2°C.

Method 8321B - Herbicides (LC/MS)

Samples C1-N.Field-081925 (280-212333-1), C2-Shore-081925 (280-212333-2), C3-Up Stream-081925 (280-212333-3), C4-Dam-081925 (280-212333-4), C6-S.Field-081925 (280-212333-5) and DUP-081925 (280-212333-6) were analyzed for Herbicides (LC/MS). The samples were prepared and analyzed on 8/26/2025.

Samples C2-Shore-081925 (280-212333-2)[5x] and C3-Up Stream-081925 (280-212333-3)[5x] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The following samples were diluted due to color: C2-Shore-081925 (280-212333-2) and C3-Up Stream-081925 (280-212333-3). Elevated reporting limits (RL) are provided.

Surrogate recovery for the following sample was outside control limits: C1-N.Field-081925 (280-212333-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method Moisture - Percent Moisture

Samples C1-N.Field-081925 (280-212333-1), C2-Shore-081925 (280-212333-2), C3-Up Stream-081925 (280-212333-3), C4-Dam-081925 (280-212333-4), C6-S.Field-081925 (280-212333-5) and DUP-081925 (280-212333-6) were analyzed for Percent Moisture. The samples were analyzed on 8/23/2025.

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Detection Summary

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

Client Sample ID: C1-N.Field-081925

Lab Sample ID: 280-212333-1

No Detections.

Client Sample ID: C2-Shore-081925

Lab Sample ID: 280-212333-2

No Detections.

Client Sample ID: C3-Up Stream-081925

Lab Sample ID: 280-212333-3

No Detections.

Client Sample ID: C4-Dam-081925

Lab Sample ID: 280-212333-4

No Detections.

Client Sample ID: C6-S.Field-081925

Lab Sample ID: 280-212333-5

No Detections.

Client Sample ID: DUP-081925

Lab Sample ID: 280-212333-6

No Detections.

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

Method	Method Description	Protocol	Laboratory
8321B	Herbicides (LC/MS)	SW846	EET DEN
Moisture	Percent Moisture	EPA	EET DEN
Auto Shaker	Wrist Action Shaker Extraction Technique	None	EET DEN

Protocol References:

EPA = US Environmental Protection Agency

None = None

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
280-212333-1	C1-N.Field-081925	Solid	08/19/25 10:56	08/21/25 09:50	Colorado
280-212333-2	C2-Shore-081925	Solid	08/19/25 14:10	08/21/25 09:50	Colorado
280-212333-3	C3-Up Stream-081925	Solid	08/19/25 13:06	08/21/25 09:50	Colorado
280-212333-4	C4-Dam-081925	Solid	08/19/25 15:11	08/21/25 09:50	Colorado
280-212333-5	C6-S.Field-081925	Solid	08/19/25 10:16	08/21/25 09:50	Colorado
280-212333-6	DUP-081925	Solid	08/19/25 00:00	08/21/25 09:50	Colorado

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Client Sample Results

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

Method: SW846 8321B - Herbicides (LC/MS)

Client Sample ID: C1-N.Field-081925

Date Collected: 08/19/25 10:56

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-1

Matrix: Solid

Percent Solids: 87.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-DB	ND		11	2.9	ug/Kg	✱	08/26/25 10:14	08/26/25 21:52	1
2,4-D	ND		5.7	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 21:52	1
MCPA	ND		5.7	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 21:52	1
2,4,5-T	ND		5.7	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 21:52	1
Silvex (2,4,5-TP)	ND		5.7	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 21:52	1
MCPP	ND		5.7	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 21:52	1
Dicamba	ND		5.7	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 21:52	1
Dichlorprop	ND		5.7	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 21:52	1
Dalapon	ND		11	2.9	ug/Kg	✱	08/26/25 10:14	08/26/25 21:52	1
Dinoseb	ND		11	2.9	ug/Kg	✱	08/26/25 10:14	08/26/25 21:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCAA (Surr)	39	S1-	45 - 130	08/26/25 10:14	08/26/25 21:52	1

Client Sample ID: C2-Shore-081925

Date Collected: 08/19/25 14:10

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-2

Matrix: Solid

Percent Solids: 60.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-DB	ND		79	20	ug/Kg	✱	08/26/25 10:14	08/26/25 21:59	5
2,4-D	ND		39	9.9	ug/Kg	✱	08/26/25 10:14	08/26/25 21:59	5
MCPA	ND		39	9.9	ug/Kg	✱	08/26/25 10:14	08/26/25 21:59	5
2,4,5-T	ND		39	9.9	ug/Kg	✱	08/26/25 10:14	08/26/25 21:59	5
Silvex (2,4,5-TP)	ND		39	9.9	ug/Kg	✱	08/26/25 10:14	08/26/25 21:59	5
MCPP	ND		39	9.9	ug/Kg	✱	08/26/25 10:14	08/26/25 21:59	5
Dicamba	ND		39	9.9	ug/Kg	✱	08/26/25 10:14	08/26/25 21:59	5
Dichlorprop	ND		39	9.9	ug/Kg	✱	08/26/25 10:14	08/26/25 21:59	5
Dalapon	ND		79	20	ug/Kg	✱	08/26/25 10:14	08/26/25 21:59	5
Dinoseb	ND		79	20	ug/Kg	✱	08/26/25 10:14	08/26/25 21:59	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCAA (Surr)	60	D	45 - 130	08/26/25 10:14	08/26/25 21:59	5

Client Sample ID: C3-Up Stream-081925

Date Collected: 08/19/25 13:06

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-3

Matrix: Solid

Percent Solids: 50.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-DB	ND		93	23	ug/Kg	✱	08/26/25 10:14	08/26/25 22:06	5
2,4-D	ND		47	12	ug/Kg	✱	08/26/25 10:14	08/26/25 22:06	5
MCPA	ND		47	12	ug/Kg	✱	08/26/25 10:14	08/26/25 22:06	5
2,4,5-T	ND		47	12	ug/Kg	✱	08/26/25 10:14	08/26/25 22:06	5
Silvex (2,4,5-TP)	ND		47	12	ug/Kg	✱	08/26/25 10:14	08/26/25 22:06	5
MCPP	ND		47	12	ug/Kg	✱	08/26/25 10:14	08/26/25 22:06	5
Dicamba	ND		47	12	ug/Kg	✱	08/26/25 10:14	08/26/25 22:06	5
Dichlorprop	ND		47	12	ug/Kg	✱	08/26/25 10:14	08/26/25 22:06	5
Dalapon	ND		93	23	ug/Kg	✱	08/26/25 10:14	08/26/25 22:06	5
Dinoseb	ND		93	23	ug/Kg	✱	08/26/25 10:14	08/26/25 22:06	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCAA (Surr)	71	D	45 - 130	08/26/25 10:14	08/26/25 22:06	5

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Client Sample Results

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

Method: SW846 8321B - Herbicides (LC/MS)

Client Sample ID: C4-Dam-081925

Date Collected: 08/19/25 15:11

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-4

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-DB	ND		12	2.9	ug/Kg	✱	08/26/25 10:14	08/26/25 22:12	1
2,4-D	ND		5.8	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:12	1
MCPA	ND		5.8	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:12	1
2,4,5-T	ND		5.8	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:12	1
Silvex (2,4,5-TP)	ND		5.8	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:12	1
MCPP	ND		5.8	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:12	1
Dicamba	ND		5.8	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:12	1
Dichlorprop	ND		5.8	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:12	1
Dalapon	ND		12	2.9	ug/Kg	✱	08/26/25 10:14	08/26/25 22:12	1
Dinoseb	ND		12	2.9	ug/Kg	✱	08/26/25 10:14	08/26/25 22:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCAA (Surr)	48		45 - 130	08/26/25 10:14	08/26/25 22:12	1

Client Sample ID: C6-S.Field-081925

Date Collected: 08/19/25 10:16

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-5

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-DB	ND		11	2.7	ug/Kg	✱	08/26/25 10:14	08/26/25 22:19	1
2,4-D	ND		5.4	1.3	ug/Kg	✱	08/26/25 10:14	08/26/25 22:19	1
MCPA	ND		5.4	1.3	ug/Kg	✱	08/26/25 10:14	08/26/25 22:19	1
2,4,5-T	ND		5.4	1.3	ug/Kg	✱	08/26/25 10:14	08/26/25 22:19	1
Silvex (2,4,5-TP)	ND		5.4	1.3	ug/Kg	✱	08/26/25 10:14	08/26/25 22:19	1
MCPP	ND		5.4	1.3	ug/Kg	✱	08/26/25 10:14	08/26/25 22:19	1
Dicamba	ND		5.4	1.3	ug/Kg	✱	08/26/25 10:14	08/26/25 22:19	1
Dichlorprop	ND		5.4	1.3	ug/Kg	✱	08/26/25 10:14	08/26/25 22:19	1
Dalapon	ND		11	2.7	ug/Kg	✱	08/26/25 10:14	08/26/25 22:19	1
Dinoseb	ND		11	2.7	ug/Kg	✱	08/26/25 10:14	08/26/25 22:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCAA (Surr)	52		45 - 130	08/26/25 10:14	08/26/25 22:19	1

Client Sample ID: DUP-081925

Date Collected: 08/19/25 00:00

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-6

Matrix: Solid

Percent Solids: 86.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-DB	ND		11	2.7	ug/Kg	✱	08/26/25 10:14	08/26/25 22:25	1
2,4-D	ND		5.5	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:25	1
MCPA	ND		5.5	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:25	1
2,4,5-T	ND		5.5	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:25	1
Silvex (2,4,5-TP)	ND		5.5	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:25	1
MCPP	ND		5.5	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:25	1
Dicamba	ND		5.5	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:25	1
Dichlorprop	ND		5.5	1.4	ug/Kg	✱	08/26/25 10:14	08/26/25 22:25	1
Dalapon	ND		11	2.7	ug/Kg	✱	08/26/25 10:14	08/26/25 22:25	1
Dinoseb	ND		11	2.7	ug/Kg	✱	08/26/25 10:14	08/26/25 22:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCAA (Surr)	45		45 - 130	08/26/25 10:14	08/26/25 22:25	1

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Client Sample Results

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

General Chemistry

Client Sample ID: C1-N.Field-081925

Date Collected: 08/19/25 10:56

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-1

Matrix: Solid

Percent Solids: 87.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	12.8		0.1	0.1	%			08/23/25 09:02	1
Percent Solids (EPA Moisture)	87.2		0.1	0.1	%			08/23/25 09:02	1

Client Sample ID: C2-Shore-081925

Date Collected: 08/19/25 14:10

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-2

Matrix: Solid

Percent Solids: 60.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	39.7		0.1	0.1	%			08/23/25 09:02	1
Percent Solids (EPA Moisture)	60.3		0.1	0.1	%			08/23/25 09:02	1

Client Sample ID: C3-Up Stream-081925

Date Collected: 08/19/25 13:06

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-3

Matrix: Solid

Percent Solids: 50.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	49.2		0.1	0.1	%			08/23/25 09:07	1
Percent Solids (EPA Moisture)	50.8		0.1	0.1	%			08/23/25 09:07	1

Client Sample ID: C4-Dam-081925

Date Collected: 08/19/25 15:11

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-4

Matrix: Solid

Percent Solids: 82.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	17.8		0.1	0.1	%			08/23/25 09:07	1
Percent Solids (EPA Moisture)	82.2		0.1	0.1	%			08/23/25 09:07	1

Client Sample ID: C6-S.Field-081925

Date Collected: 08/19/25 10:16

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-5

Matrix: Solid

Percent Solids: 85.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	14.6		0.1	0.1	%			08/23/25 09:07	1
Percent Solids (EPA Moisture)	85.4		0.1	0.1	%			08/23/25 09:07	1

Client Sample ID: DUP-081925

Date Collected: 08/19/25 00:00

Date Received: 08/21/25 09:50

Lab Sample ID: 280-212333-6

Matrix: Solid

Percent Solids: 86.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	13.5		0.1	0.1	%			08/23/25 09:07	1
Percent Solids (EPA Moisture)	86.5		0.1	0.1	%			08/23/25 09:07	1

Surrogate Summary

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

Method: 8321B - Herbicides (LC/MS)
Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)		
Lab Sample ID	Client Sample ID	DCPAA (45-130)
280-212333-1	C1-N.Field-081925	39 S1-
280-212333-2	C2-Shore-081925	60 D
280-212333-3	C3-Up Stream-081925	71 D
280-212333-4	C4-Dam-081925	48
280-212333-5	C6-S.Field-081925	52
280-212333-6	DUP-081925	45
LCS 280-710717/2-A	Lab Control Sample	72
MB 280-710717/1-A	Method Blank	72
Surrogate Legend		
DCPAA = DCAA (Surr)		

QC Sample Results

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

Method: 8321B - Herbicides (LC/MS)

Lab Sample ID: MB 280-710717/1-A

Matrix: Solid

Analysis Batch: 710851

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 710717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-DB	ND		10	2.5	ug/Kg		08/26/25 10:14	08/26/25 21:39	1
2,4-D	ND		5.0	1.3	ug/Kg		08/26/25 10:14	08/26/25 21:39	1
MCPA	ND		5.0	1.3	ug/Kg		08/26/25 10:14	08/26/25 21:39	1
2,4,5-T	ND		5.0	1.3	ug/Kg		08/26/25 10:14	08/26/25 21:39	1
Silvex (2,4,5-TP)	ND		5.0	1.3	ug/Kg		08/26/25 10:14	08/26/25 21:39	1
MCPP	ND		5.0	1.3	ug/Kg		08/26/25 10:14	08/26/25 21:39	1
Dicamba	ND		5.0	1.3	ug/Kg		08/26/25 10:14	08/26/25 21:39	1
Dichlorprop	ND		5.0	1.3	ug/Kg		08/26/25 10:14	08/26/25 21:39	1
Dalapon	ND		10	2.5	ug/Kg		08/26/25 10:14	08/26/25 21:39	1
Dinoseb	ND		10	2.5	ug/Kg		08/26/25 10:14	08/26/25 21:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCAA (Surr)	72		45 - 130	08/26/25 10:14	08/26/25 21:39	1

Lab Sample ID: LCS 280-710717/2-A

Matrix: Solid

Analysis Batch: 710851

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 710717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-DB	20.0	12.8		ug/Kg		64	46 - 130
2,4-D	20.0	17.7		ug/Kg		88	48 - 130
MCPA	20.0	15.2		ug/Kg		76	54 - 130
2,4,5-T	20.0	19.0		ug/Kg		95	48 - 131
Silvex (2,4,5-TP)	20.0	15.8		ug/Kg		79	42 - 130
MCPP	20.0	15.6		ug/Kg		78	48 - 130
Dicamba	20.0	13.4		ug/Kg		67	45 - 130
Dichlorprop	20.0	15.4		ug/Kg		77	45 - 130
Dalapon	20.0	17.2		ug/Kg		86	25 - 150
Dinoseb	20.0	11.6		ug/Kg		58	29 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCAA (Surr)	72		45 - 130

QC Association Summary

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

LCMS

Prep Batch: 710717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-212333-1	C1-N.Field-081925	Total/NA	Solid	Auto Shaker	
280-212333-2	C2-Shore-081925	Total/NA	Solid	Auto Shaker	
280-212333-3	C3-Up Stream-081925	Total/NA	Solid	Auto Shaker	
280-212333-4	C4-Dam-081925	Total/NA	Solid	Auto Shaker	
280-212333-5	C6-S.Field-081925	Total/NA	Solid	Auto Shaker	
280-212333-6	DUP-081925	Total/NA	Solid	Auto Shaker	
MB 280-710717/1-A	Method Blank	Total/NA	Solid	Auto Shaker	
LCS 280-710717/2-A	Lab Control Sample	Total/NA	Solid	Auto Shaker	

Analysis Batch: 710851

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-212333-1	C1-N.Field-081925	Total/NA	Solid	8321B	710717
280-212333-2	C2-Shore-081925	Total/NA	Solid	8321B	710717
280-212333-3	C3-Up Stream-081925	Total/NA	Solid	8321B	710717
280-212333-4	C4-Dam-081925	Total/NA	Solid	8321B	710717
280-212333-5	C6-S.Field-081925	Total/NA	Solid	8321B	710717
280-212333-6	DUP-081925	Total/NA	Solid	8321B	710717
MB 280-710717/1-A	Method Blank	Total/NA	Solid	8321B	710717
LCS 280-710717/2-A	Lab Control Sample	Total/NA	Solid	8321B	710717

General Chemistry

Analysis Batch: 710448

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-212333-1	C1-N.Field-081925	Total/NA	Solid	Moisture	
280-212333-2	C2-Shore-081925	Total/NA	Solid	Moisture	

Analysis Batch: 710456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-212333-3	C3-Up Stream-081925	Total/NA	Solid	Moisture	
280-212333-4	C4-Dam-081925	Total/NA	Solid	Moisture	
280-212333-5	C6-S.Field-081925	Total/NA	Solid	Moisture	
280-212333-6	DUP-081925	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

Client Sample ID: C1-N.Field-081925

Lab Sample ID: 280-212333-1

Date Collected: 08/19/25 10:56

Matrix: Solid

Date Received: 08/21/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			710448	08/23/25 09:02	JMS	EET DEN

Client Sample ID: C1-N.Field-081925

Lab Sample ID: 280-212333-1

Date Collected: 08/19/25 10:56

Matrix: Solid

Date Received: 08/21/25 09:50

Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Auto Shaker			10.03 g	10 mL	710717	08/26/25 10:14	JS	EET DEN
Total/NA	Analysis	8321B		1	1 mL	1 mL	710851	08/26/25 21:52	JR	EET DEN

Client Sample ID: C2-Shore-081925

Lab Sample ID: 280-212333-2

Date Collected: 08/19/25 14:10

Matrix: Solid

Date Received: 08/21/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			710448	08/23/25 09:02	JMS	EET DEN

Client Sample ID: C2-Shore-081925

Lab Sample ID: 280-212333-2

Date Collected: 08/19/25 14:10

Matrix: Solid

Date Received: 08/21/25 09:50

Percent Solids: 60.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Auto Shaker			10.51 g	10 mL	710717	08/26/25 10:14	JS	EET DEN
Total/NA	Analysis	8321B		5	1 mL	1 mL	710851	08/26/25 21:59	JR	EET DEN

Client Sample ID: C3-Up Stream-081925

Lab Sample ID: 280-212333-3

Date Collected: 08/19/25 13:06

Matrix: Solid

Date Received: 08/21/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			710456	08/23/25 09:07	JMS	EET DEN

Client Sample ID: C3-Up Stream-081925

Lab Sample ID: 280-212333-3

Date Collected: 08/19/25 13:06

Matrix: Solid

Date Received: 08/21/25 09:50

Percent Solids: 50.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Auto Shaker			10.53 g	10 mL	710717	08/26/25 10:14	JS	EET DEN
Total/NA	Analysis	8321B		5	1 mL	1 mL	710851	08/26/25 22:06	JR	EET DEN

Client Sample ID: C4-Dam-081925

Lab Sample ID: 280-212333-4

Date Collected: 08/19/25 15:11

Matrix: Solid

Date Received: 08/21/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			710456	08/23/25 09:07	JMS	EET DEN

Eurofins Denver

Lab Chronicle

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

Client Sample ID: C4-Dam-081925

Lab Sample ID: 280-212333-4

Date Collected: 08/19/25 15:11

Matrix: Solid

Date Received: 08/21/25 09:50

Percent Solids: 82.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Auto Shaker			10.56 g	10 mL	710717	08/26/25 10:14	JS	EET DEN
Total/NA	Analysis	8321B		1	1 mL	1 mL	710851	08/26/25 22:12	JR	EET DEN

Client Sample ID: C6-S.Field-081925

Lab Sample ID: 280-212333-5

Date Collected: 08/19/25 10:16

Matrix: Solid

Date Received: 08/21/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			710456	08/23/25 09:07	JMS	EET DEN

Client Sample ID: C6-S.Field-081925

Lab Sample ID: 280-212333-5

Date Collected: 08/19/25 10:16

Matrix: Solid

Date Received: 08/21/25 09:50

Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Auto Shaker			10.94 g	10 mL	710717	08/26/25 10:14	JS	EET DEN
Total/NA	Analysis	8321B		1	1 mL	1 mL	710851	08/26/25 22:19	JR	EET DEN

Client Sample ID: DUP-081925

Lab Sample ID: 280-212333-6

Date Collected: 08/19/25 00:00

Matrix: Solid

Date Received: 08/21/25 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			710456	08/23/25 09:07	JMS	EET DEN

Client Sample ID: DUP-081925

Lab Sample ID: 280-212333-6

Date Collected: 08/19/25 00:00

Matrix: Solid

Date Received: 08/21/25 09:50

Percent Solids: 86.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Auto Shaker			10.56 g	10 mL	710717	08/26/25 10:14	JS	EET DEN
Total/NA	Analysis	8321B		1	1 mL	1 mL	710851	08/26/25 22:25	JR	EET DEN

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Eurofins Denver

Accreditation/Certification Summary

Client: Apex Laboratories LLC
Project/Site: A5H1392

Job ID: 280-212333-1

Laboratory: Eurofins Denver

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	18-001	11-30-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8321B	Auto Shaker	Solid	Dalapon
8321B	Auto Shaker	Solid	Dicamba
8321B	Auto Shaker	Solid	Dichlorprop
8321B	Auto Shaker	Solid	Dinoseb
8321B	Auto Shaker	Solid	MCPA
8321B	Auto Shaker	Solid	MCPP
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Oregon	NELAP	4025	01-08-26
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Solids

Washington	State	C583	08-03-26
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Solids

SUBCONTRACT ORDER

Apex Laboratories

A5H1392

SENDING LABORATORY:

Apex Laboratories
6700 S.W. Sandburg Street
Tigard, OR 97223
Phone: (503) 718-2323
Fax: (503) 336-0745
Project Manager: Darrell Auvil ✓

RECEIVING LABORATORY:

Eurofins - Denver
4955 Yarrow Street
Arvada, CO 80002-4517 ✓
Phone : (303) 736-0100
Fax: (303) 431-7171



Conts. do not read suffix 081925, or time

Sample Name: C1-N.Field-081925 , Soil Sampled: 08/19/25 10:56 (A5H1392-01)

Analysis	Due	Expires	Comments
8321 Herbicides (SUB) Containers Supplied: (B)4 oz Glass Jar ✓	09/03/25 17:00	09/02/25 10:56	indclude dinoseb and dry wt correction.

Conts. do not read suffix 081925, or time

Sample Name: C2-Shore-081925 , Soil Sampled: 08/19/25 14:10 (A5H1392-02)

Analysis	Due	Expires	Comments
8321 Herbicides (SUB) Containers Supplied: (B)4 oz Glass Jar	09/03/25 17:00	09/02/25 14:10	indclude dinoseb and dry wt correction.

Conts. do not read suffix 081925, or time

Sample Name: C3-Up Stream-081925 , Soil Sampled: 08/19/25 13:06 (A5H1392-03)

Analysis	Due	Expires	Comments
8321 Herbicides (SUB) Containers Supplied: (B)4 oz Glass Jar	09/03/25 17:00	09/02/25 13:06	indclude dinoseb and dry wt correction.

Conts. do not read suffix 081925, or time

Sample Name: C4-Dam-081925 , Soil Sampled: 08/19/25 15:11 (A5H1392-04)

Analysis	Due	Expires	Comments
8321 Herbicides (SUB) Containers Supplied: (B)4 oz Glass Jar	09/03/25 17:00	09/02/25 15:11	indclude dinoseb and dry wt correction.

STANDARD TAT

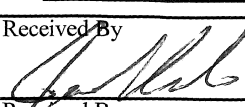


280-212333 Chain of Custody

Released By  8/20/25 Date

UPS (Shipper)

UPS (Shipper)

Received By  8/21/25 9:50 Date

Released By Date

Received By Date

SUBCONTRACT ORDER

Apex Laboratories

A5H1392

Conts. do not read suffix 081925, or time

Sample Name: C6-S.Field-081925

Soil

Sampled: 08/19/25 10:16

(A5H1392-06)

Analysis	Due	Expires	Comments
8321 Herbicides (SUB)	09/03/25 17:00	09/02/25 10:16	indclude dinoseb and dry wt correction.
Containers Supplied:			
(B)4 oz Glass Jar			

Not listed on CoC

Sample Name: DUP-081925

Soil

Sampled: 08/19/25 00:00

(A5H1392-07)

Analysis	Due	Expires	Comments
8321 Herbicides (SUB)	08/25/25 17:00	09/02/25 00:00	include dinoseb and dry wt correction.
Containers Supplied:			
(B)4 oz Glass Jar			

Released By	Date	Received By	Date
UPS (Shipper)	8/20/25	UPS (Shipper)	8/20/25
Released By	Date	Received By	Date
			9/5/25

1 OF 1

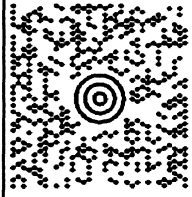
27 LBS

DWT: 16,15,10

SHIPPING DEPT
5037182323
APEX LABS
6700 SW SANDBURG ST
TIGARD OR 97223

SHIP TO:
SAMPLE RECEIVING
3037360100
EUROFINS - DENVER
4955 YARROW STREET
ARVADA CO 80002

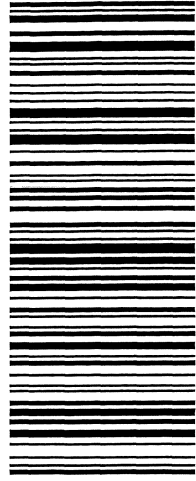
CO 802 9-30



UPS NEXT DAY AIR

1

TRACKING #: 1Z C1B 065 01 3384 8304

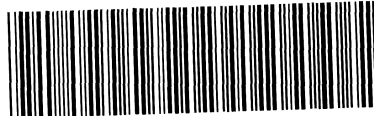


BILLING: P/P



TM

XOL 25 08.19 NV/45 34.0A 08/2025*



280-212333 Waybill

Login Sample Receipt Checklist

Client: Apex Laboratories LLC

Job Number: 280-212333-1

Login Number: 212333

List Source: Eurofins Denver

List Number: 1

Creator: Roehsner, Karen P

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT 10

Strobel, Burke

From: Marcum, Brian
Sent: Thursday, February 26, 2026 4:10 PM
To: Strobel, Burke
Cc: Kimpo, Angie
Subject: Fwd: PSET Review: No Further Testing Determinations NWP-2025-426 CoP PWB Cottrell Dam removal

Hi Burke,

See below regarding the No Test Determination.

Thanks!
Brian

Begin forwarded message:

From: "Holm, James A CIV USARMY CENWP (USA)" <James.A.Holm@usace.army.mil>
Date: February 26, 2026 at 3:28:35 PM PST
To: "Stanek, Katrina G CIV USARMY CENWO (USA)" <Katrina.G.Stanek@usace.army.mil>, "Kimpo, Angie" <Angie.Kimpo@portlandoregon.gov>, "Fraley, Robert Henry (Trey) III CIV USARMY CENWP (USA)" <Robert.H.Fraley@usace.army.mil>, "Marcum, Brian" <Brian.Marcum@portlandoregon.gov>
Cc: Bridgette Lohrman <lohrman.bridgette@epa.gov>, "Yballe, Dominic P CIV USARMY CENWP (USA)" <Dominic.P.Yballe@usace.army.mil>, peter.anderson@deq.oregon.gov, "Van Meter, Robin J" <robin_vanmeter@fws.gov>, "Tom Hausmann - NOAA Federal (tom.hausmann@noaa.gov)" <tom.hausmann@noaa.gov>, "Olinger, Clayton R CIV USARMY CENWP (USA)" <Clayton.R.Olinger@usace.army.mil>
Subject: PSET Review: No Further Testing Determinations NWP-2025-426 CoP PWB Cottrell Dam removal

Good day Katrinia, Angie, Trey and Brian,

This email correspondence constitutes the Portland Sediment Evaluation Team's (PSET's) determination regarding the December 2, 2025, Joint Permit Application (JPA) and the November 18, 2025, Phase I and Phase II Environmental Site Assessment (ESA) Findings for City of Portland Water Bureau's (PWB) Cottrell Pond Restoration project (Corps permit No. NWP-2025-426). This determination was made in accordance with the May 2018 Sediment Evaluation Framework for the Pacific Northwest (SEF). This email documents the PSET's decision to not require additional sediment testing per Subpart G of the Clean Water Act section 404(b)(1) guidelines (see 40 CFR 230.60-230.61).

PROJECT DESCRIPTION: The PWB stream restoration project is in a rural setting and on an 8-acre agricultural and rural property in unincorporated Boring, Multnomah County, Oregon. The Johnson Creek stream restoration project is near its headwaters,

at river mile 23.75. The project includes the removal of an artificial earthen dam, reestablishing a natural stream channel, and creating riparian pools within the footprint of the current pond. Approximately 1,500 cubic yards of material will be removed from the dam and placed at an upland site on the property. Approximately 2,000 cubic yards of pond sediments will be graded upstream of the dam.

SOURCES OF CONTAMINATION: The project is located on Johnson Creek, within an agricultural land use area near rural residential developments. The property includes farm fields, a barn, a single family residential home (built in 1964), and an irrigation storage pond. The Phase I and II ESAs were conducted by Cascade Environmental Solutions (CES) for the PWB in April and October 2025. A Leaking Underground Storage Tank (LUST) was located onsite in 2005. The Oregon DEQ issued a No Further Action in April 2006. The Phase II ESA was conducted to identify potential presence of chemicals of concern. The Phase II ESA collected sediment samples in August 2025 for focused testing of pesticides, metals, SVOCs, PAHs, and total petroleum hydrocarbons. The contaminants of potential concern concentrations were compared to the 2018 SEF freshwater SLs (see Phase II ESA Tables 1, 2, 3, & 4). There were no exceedances of SEF SLs.

MANAGEMENT AREA RANK: The PSET assigns a "Low" site management area ranking to this project due to the test results, location setting, previous and planned land use, and that there is no reason to believe that the project sediments have chemicals of concern at concentrations above SEF freshwater SLs or above natural background concentrations.

REGULATORY REQUIREMENTS FOR SEDIMENT EVALUATION: In accordance with the CWA section 404(b)(1) guidelines (40 CFR 230.60), when provided information indicates the sediment, with reasonable assurances that the dredged material is not a carrier of contaminants, then testing is unnecessary. Sediments were tested for due diligence, and the results are applicable for this "No Further Testing" determination.

NO FURTHER TESTING DETERMINATION: Based on the information provided, the PSET has determined that the restoration activities do not require additional sediment physical or chemical evaluation per the CWA section 404(b)(1) guidelines. If the project changes or if additional information is available, then this "No Further Testing" determination must be re-evaluated, and sediment testing may be required. Based on a "Low" rank, this PSET determination is valid until February 2033 (7 years).

REVIEWING PSET AGENCIES: U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, Oregon Department of Environmental Quality, U.S. Fish and Wildlife Service, National Marine Fisheries Service.

CONTACT: If you have questions regarding this PSET determination, please email or call me.

Best regards,
James

James A. Holm
Sediment Quality Team: Biologist & PSET Lead
Waterways Maintenance, Navigation Division

U.S. Army Corps of Engineers - Portland District
503-808-4963 (desk), 503-758-5571 (cell)
james.a.holm@usace.army.mil