

Report of Cascadia Subduction Zone Earthquake Impacts

Oregon Critical Energy Infrastructure Hub
Portland, Oregon

Prepared for
ECONorthwest and Multnomah County

February 2, 2022
Job No. 0202424-000 (154-035-019)



SALUS RESILIENCE



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Oregon Critical Energy Infrastructure Hub

Portland, Oregon

1.0 INTRODUCTION

This report summarizes our evaluation of the infrastructure impacts of a Cascadia Subduction Zone (CSZ) Earthquake on the Critical Energy Infrastructure (CEI) Hub in Northwest Portland, Oregon. The impacts to infrastructure were developed based on the geotechnical evaluation presented in our *Summary of Available Data and Report of Expected Earthquake Risk* dated February 2, 2022, (Salus 2022), the previous work completed at the site by others as referenced in Salus (2022), and the standards and references included in this document. No on-site evaluation was completed for this scope of work.

The geotechnical evaluation summarized in Salus (2022) developed estimates of earthquake-induced ground deformation due to liquefaction settlement and lateral spreading (movement toward the river) due to a CSZ event. This report discusses the potential effects of those estimated ground movements on the seismic performance of numerous aboveground storage tanks (ASTs) at the CEI Hub. This performance evaluation is broadly based on the assumed design/construction standards for the tanks based on their age and does not account for subsequent seismic upgrades which may have been undertaken by individual property owners. Information about the tanks, such as age, capacity, and contents, is provided in Salus (2022). The data, along with the results of the tank evaluations, are also presented in Appendix A to this report.

2.0 TANK DAMAGE ASSESSMENT METHODOLOGY

As discussed in Salus (2022), tank data were collected from the Office of Oregon State Fire Marshal (OSFM) and the City of Portland (City), the latter of which was developed from the Portland State University (PSU) 2019 study of the CEI Hub (Dusicka and Norton 2019). After a review of the available data, it was determined that the City dataset was more complete than the OSFM dataset and would be used as the main source for the tank inventory, with additional tank counts coming from a review of aerial photographs.

The evaluation of the tank inventory indicated that 630 tanks are present at the CEI Hub:

- 512 of the 630 tanks were listed in the City database in Area 1 through Area 4. One hundred and seventeen (117) of the 630 tanks were identified through figures provided by Portland Fire and Rescue (PF&R 2021) in Area 1 through 5. One additional tank was identified through City of Portland maps (Portlandmaps.com 2021) Of these 630 tanks:
 - 390 of the 630 tanks have a material assigned to the tank.
 - 240 of the 630 tanks do not have known contents, and therefore, were not evaluated.
 - 143 are listed as Out of Service.

- 72 are listed as Unknown and do not have any information on status (in service or out of service), year built, latitude and longitude, contents, or capacity. All of these tanks are located at the Zenith property.
- 18 are listed as Empty.
- 7 are listed as Unavailable and do not have any information on status (in service or out of service), contents, or capacity.
- 193 of the 630 tanks do not have a known tank age, and therefore, were assumed to be constructed prior to 1993.

This results in 390 tanks that have enough information to be evaluated for release potential and are addressed in Sections 3.1 through 3.3. The locations of these tanks were based on either the specific location provided in the City database (latitude/longitude) or the property where it was located when a latitude/longitude was not provided. For tanks that were only located by property, the damage zones were decided based on visual inspection of the aerial photographs. Two hundred and nineteen (219) of the 390 tanks had specific locations identified. The remaining 171 of the 390 tanks had property information only. Further assumptions made for our evaluation include:

- Tank contents have not changed since the PSU study (Dusicka and Norton 2019) from which the City data are based.
- Tank capacity was provided for 516 tanks, and average fill was provided for 314 tanks from the collected data. We calculated the percent fill of the 314 tanks that had both capacity and average fill volumes by dividing the average fill volume by the tank capacity volume. The percent fill of these 314 tanks was found to be 67 percent. We then assumed that all tanks would have this same percent fill. We then applied the calculated percent fill to all tanks across the CEI Hub that had a known capacity (516 of the 630 tanks). The result was the “Expected Fill,” which is the known tank capacity multiplied by 67 percent.
- Zenith property, which has no data in the City tank data, was evaluated based on figures provided by Portland Fire & Rescue (PF&R 2021) and the volumes provided for 10 tanks on that figure are assumed to be Expected Fill. Therefore, we did not apply the average percent fill of 67 percent these 10 tanks.
- Equilon, which has no data in the City tank data or the OSFM, was evaluated based on the figure provided by Portland Fire & Rescue (PF&R 2021). Tank capacity was listed as barrels (BBLs) on the provided figure. The data was converted to gallons using the assumption that there are 42 gallons in a barrel. The average percent fill of 67 percent was then applied to the tank capacity to obtain the average expected fill.
- NW Natural has no information on materials present in the City tank data or the OSFM, however capacity for the 7.1-million-gallon Liquefied Natural Gas (LNG) tank was obtained from City of Portland permit records. We have labeled this tank *NWN-Tank 001* for evaluation purposes.

2.1 Tank Damage Assumptions

Tank damage assumptions were developed using information provided on building codes within the DOGAMI report (Wang 2012), specifically a memorandum by the Oregon Building Codes Division (OBCD) summarizing changing seismic design requirements in Oregon (OBCD 2012), and tank design standards provided by the American Petroleum Institute (API), American Concrete Institute (ACI), and the American Society of Civil Engineers (ASCE). These references are listed in our reference section.

No structural engineering evaluation was completed for this study. As described below, the expected performance of tanks was broadly grouped based on tank age and the building code requirements at the time of tank construction. No tank- or site-specific information regarding detailed site characterization or historical seismic upgrade work was made available to use for this study. Geotechnical assessments were based on publicly available (and limited confidential) data and information as described in Salus (2022).

Tank damage was generally based either on the tank age and/or anticipated ground deformations, as described below.

2.1.1 Tank Age

The age of tanks was used to determine the likely standards that were followed during the design of the tanks. For our evaluation we assumed that seismic design of the tanks at the CEI Hub location followed city/state building codes, and therefore, age-appropriate UBC-/IBC-/ASCE-based seismic requirements were used for the tanks. We have not accounted for any subsequent seismic upgrade work which may have been completed by individual property owners.

Based on our review and OBCD information (OBCD 2012) UBC/IBC/ASCE design standards, and state and city building codes were adopted in Oregon in 1974 and included seismic design parameters for a Seismic Zone of 2. It was not until 1993 that Oregon was designated a Seismic Zone 3 and the seismic design requirements were significantly increased (by 50%) to better reflect the local seismic risk. (OBCD 2012).. Further, based on information provided by the City of Portland Bureau of Development Services to DOGAMI (Wang 2012), the City of Portland first required geotechnical reports to evaluate liquefaction potential and soil strength loss in 1996. However, it was not until 2004 that silty soils such as those located at the CEI Hub were considered liquefiable. Prior to 2004 these soils were widely considered non-liquefiable.

Based on this information, we have made the following broad assumptions about tank design and performance based on the tank age.

- Tanks constructed prior to 1993 were not designed to resist levels of seismic loading required by current seismic standards and thus we have assumed that they will experience significant damage that has the potential to result in a release of materials during the CSZ event. There are 402 tanks that have been identified as being constructed prior to 1993. There are an additional 193 tanks with no tank age data that are assumed to have been constructed prior to 1993. In total, 595

tanks at the CEI Hub are assumed to be constructed prior to 1993 and therefore not designed to resist current levels of seismic loading and will release material during the CSZ event.

- Tanks constructed in 1993 through 2004 are assumed to be designed for greater levels of seismic shaking than older tanks, but are assumed to be potentially susceptible to damage due to liquefaction settlement and lateral spread in sandy and silty soils. There are 23 tanks that have been identified as being constructed between 1993 and 2004.
- Tanks constructed after 2004 are assumed to have been designed to withstand earthquake shaking and associated ground deformation levels associated with current seismic design standards, and thus are unlikely to release material during the CSZ event. There are 12 tanks that have been identified as being constructed after 2004. (This does not include any older tanks which may have seismically upgraded by individual tank owners.)

Due to their age and the lack of modern-era seismic design standards, we anticipate the 402 tanks known to have been constructed before 1993 and the 193 with no age (assumed to be constructed before 1993) will likely be damaged and release material during a CSZ earthquake event.

We recognize that even tanks designed and constructed after 2004 will not necessarily have been designed to resist seismic shaking equal to the intensities that are anticipated to be associated with the CSZ. Therefore, even some of these more modern tanks are likely to experience damage; however, for purposes of this scenario evaluation that has not been quantified.

2.1.2 Ground Deformation

In Salus (2022), the potential for ground deformation due to liquefaction-induced ground settlement, lateral spreading, and slope failure was estimated. If significant enough, ground deformation can cause damage to tanks. Based on our review of tank standards and information assembled by Akhavan-Zanjani (2009), steel tanks can undergo settlement on the order of 1 to 3 feet depending on tank diameter without suffering significant distress. Allowable tilt is on the order of 0.5 to 1 foot depending on tank height. Allowable settlements are expected to be less for concrete tanks.

Tanks built during 1993 and before 2004 were evaluated based on the anticipated settlement, lateral spread, and expected slope failure due to site geometry (retaining walls, slope etc.). If settlement and lateral spread or slope failure is expected to exceed allowable amounts, the tanks were assumed to be damaged enough to release material. However, based on our evaluation, the 23 tanks built between 1993 and 2004 were not located in areas expected to exceed the allowable deformations noted above, and therefore, were not considered to release material.

2.1.3 Tank Material Release

As noted above, we anticipate the 402 tanks constructed before 1993, and the 193 assumed to be constructed before 1993, will likely be damaged during a CSZ event. The consequence of tank damage is a release of materials. We have assumed that tank damage will result in between 50 to 100 percent of the contents being released to the ground or in the water.

The 23 tanks built between 1993 and 2004 and the 12 tanks built after 2004 are expected to remain relatively intact after a CSZ event; however, we have assumed releases due to connection failures and other incidental damage may result in up to 10 percent release.

2.1.4 Tank Characterization

Tanks were grouped by content and age as outlined above. Further, we categorized the materials as flammable and hazardous based on the material identified as contents. We referenced the Safety Data Sheets (SDS) for each material to categorize the tanks as outlined below. SDS sheets were generally accessed through an online software database (CSS 2021). Tank characterizations as outlined below were incorporated into GIS and are shown on figures in Appendix C of Salus 2021.

■ Tank Groups

- Group 1 - No information on contents/amount of material present (79 of 630 tanks)
- Group 2 - Out of Service/Empty (161 of 630 tanks)
- Group 3 - Content and amount of material present available
 - Group 3A - Built before 1993 (357 of 630 tanks)
 - Group 3B - Built 1993-2004 (21 of 630 tanks)
 - Group 3C - Built after 2004 (12 of 630 tanks)

■ Tank Material Impact Categories

- Flammability
 - Category 1 - Liquids with flashpoints below 73.4°F (23°C) and boiling points at or below 95°F (35°C) [106 of 630 tanks]
 - Category 2 - Liquids with flashpoints below 73.4°F (23°C) and boiling points at or above 95°F (35°C) [28 of 630 tanks]
 - Category 3 - Liquids with flashpoints at or above 73.4°F (23°C) and at or below 140°F (60°C) [66 of 630 tanks]
 - Category 4 - Liquids having flashpoints above 140°F (60°C) and at or below 199.4°F (93°C) [0 tanks]
 - None (Out of Service/Empty) [161 of 630 tanks]
 - Not Flammable (14 of 630 tanks)
 - Unknown (255 of 630 tanks)

■ Hazardous

- Yes - Hazardous (All flammable materials are considered hazardous) [337 of 630 tanks]
- No - Non-Hazardous (7 of 630 tanks)
- None (Out of Service/Empty) [161 of 630 tanks]
- Unknown (125 of 630 tanks)

2.1.5 Damage Zone Characterization

Damage zones were developed to indicate where materials released from failed tanks are anticipated to be located and were categorized into three categories, including released material remains on the ground, released material flows into the Willamette River, and released material has the potential to spread or be spread by water or rain to the Willamette River. These zones were estimated based on proximity to water, expected settlement and lateral spread estimates as determined in Salus (2022) our geotechnical evaluation, and topography (retaining walls and existing slopes).

We understand that containment berms, walls and other structures are present at the various CEI Hub properties. We do not have any information on these structures, no site visits were conducted, and no structural engineering evaluations were completed. However, concrete and berm structures are generally susceptible to settlement and lateral spread and have been assumed to fail, and therefore, release material where more than 1 foot of lateral movement is expected. Further, based on Environmental Protection Agency (EPA) guidance for preparation of spill prevention and control plans, these standards generally require that tank spill containment be designed to contain between 100 and 110 percent of the capacity of the largest tank within the containment area. Based on aerial photography, these containment areas generally contain several tanks that may be damaged and release their contents, therefore, the containment structures are not assumed to prevent spills during a seismic event where more than one tank is likely to be damaged and significant ground movement is anticipated.

Based on our evaluation, the damage zones were defined as shown in Table 2.1 and in Appendix C of the main report (Salus 2021).

Table 2.1 - Damage Zone Summary

	Damage Zone (distance from slope crest/wall (feet))		
	Material In Water	Material Potentially in Water	Material On Land
Area 1 - Kinder Morgan N	0-500	500-750	750+
Area 2 - Linnton N	0-500	500-750	750+
Area 2 - Linnton S	0-500	500-750	750+
Area 3 - NW Natural	0-250	250-500	500+
Area 4 - Willbridge	0-250	250-500	500+
Area 5 - Equilon	n/a	n/a	All

These damage zones were incorporated into GIS and compared to the City dataset. A discussion of the tank damage assessment results for the 630 tanks evaluated is provided in Section 3.

3.0 MATERIAL RELEASE ESTIMATES AT THE CEI HUB

In Section 2, we evaluated the potential for tanks to be damaged in a seismic event based on age and ground deformation. In this section, we estimate the potential volume of materials that might be released from susceptible tanks. The loss of materials is grouped in material type and proximity to the Willamette River.

3.1 Estimate of Hazardous Materials Spilled to Willamette River

Of the 630 tanks present, 114 tanks were estimated to have the potential to release the contents to the Willamette River based on tank age and location. However, 30 of these tanks were categorized as Out of Service or Unavailable, and therefore not included in this summary. A detailed table of the tanks is provided in Appendix B.

3.1.1 Full Spill - 50 to 100 Percent of Contents

We estimate that 78 of the 84 tanks, which are all built before 1993, have the potential to release between 50 to 100 percent of their contents to the Willamette River. These tanks were sorted by content and minimum and maximum expected volume lost. A total of 20 unique substances are included in these releases as summarized below in Table 3.1.

Table 3.1 - Materials with Potential to Release to the Willamette River by Area - Full Spill

Area	Property	Contents	Volume Lost Minimum (gallons)	Volume Lost Maximum (gallons)
1	Kinder Morgan North	Contact Water	7,668	15,336
		Diesel	509,615	1,019,231
		Gasoline	2,497,509	4,995,019
		Storm Water	45,910	91,821
2	BP	Biodiesel	344,026	688,051
		Diesel	2,968,193	5,936,386
		Ethanol	404,794	809,588
		Gasoline	3,752,258	7,504,516
		Gasoline Additive	87,303	174,607
		Groundwater Remediation	412,385	824,770
		Oily Wastewater	66,607	133,215
	Shore Terminals	Biodiesel	290,062	580,124
		Biodiesel Additive ⁷	NA	NA
		Cutter	103,682	207,364
		Diesel	1,907,140	3,814,279
		Ethanol	911,472	1,822,944
		Ethanol/Gasoline ²	131,705	263,410
		Gasoline	3,504,071	7,008,142
3	Pacific Terminal Services	Gasoline/Diesel Additive ⁴	5,941	11,881
		Gasoline/Diesel ³	6,411,500	12,822,999
4	McCall Oil	Marine Fuel Oil	1,190,136	2,380,271
		Diesel Oil	20,104	40,208
		Residual Oil ⁶	65,325	130,650
		Asphalt	3,767,805	7,535,611
		Biodiesel	333,937	667,875
		Bunker	3,134,909	6,269,817
		Diesel	1,788,635	3,577,269
		Oil and water	10,130	20,261

3.1.2 Minor Releases - Up to 10 Percent of Contents

We estimate that 6 of the 86 tanks (built during or after 1993) have the potential to release up to 10 percent of their contents into the Willamette River. These six tanks were sorted by content and minimum and maximum expected volume lost. A total of five unique substances are included in these releases as summarized in Table 3.2.

Table 3.2 - Materials with Potential to Release to the Willamette River by Area - Minor Release

Area	Property	Contents	Volume Lost Maximum (gallons)
1	Kinder Morgan North	Diesel	190,434
2	BP	Diesel Additive	134
		Diesel Lubricity Additive	141
	Shore Terminals	Gasoline/Diesel ³	562,800
3	Pacific Terminal Services	Residual Oil ⁶	32

3.2 of Hazardous Materials Potentially Spilled to Willamette River

Our evaluation indicates that 18 tanks are expected to release the following percentage of contents in areas that could potentially be released into to the Willamette River via overland flow or carried by water runoff. A detailed table of these tanks is provided in Appendix C.

3.2.1 Full Spill - 50 to 100 Percent of Contents

We estimate that 12 of the 18 tanks (built prior to 1993) have the potential to release between 50 and 100 percent of their contents onto the ground surface and potentially into the Willamette River. Seven unique substances are included in these releases as summarized in Table 3.3.

Table 3.3 - Materials with Potential to Release and Flow to the Willamette River by Area - Full Spill

Area	Property	Contents	Volume Lost Minimum (gallons)	Volume Lost Maximum (gallons)
3	Pacific Terminal Services	Residual Oil ⁶	6,700	13,400
4	Conoco Phillips	Unleaded Gasoline	990,106	1,980,212
	McCall Oil	Anti-strip	1,646	3,292
		Asphalt	4,385,098	8,770,197
		Boiler Fuel	2,800	5,600
		Flux	17,433	34,865
	Unichem	3,685	7,370	

3.2.2 Minor Releases - 10 Percent of Contents

We estimate that 6 of the 18 tanks (built after 1993) have the potential to release up to 10 percent of the tank contents in areas that could potentially reach the Willamette River due to connection failures. The tanks are located in Area 4 as summarized in Table 3.4.

Table 3.4 - Materials with Potential to Release and Flow to the Willamette River - Minor Release

Area	Property	Contents	Volume Lost Maximum (gallons)
4	Chevron	Unleaded Gasoline	228,625
	McCall Oil	Asphalt	17,317
		Polyphosphoric Acid	362

3.3 Estimate of Hazardous Materials Spilled to Ground Surface

Of the tanks with known locations, 498 have the potential to release contents onto to the ground. However, 209 of these tanks are categorized as Out of Service, Empty, NA, or Unavailable. A detailed table of the remaining 289 tanks is provided in Appendix D.

3.3.1 Full Spill - 50 to 100 Percent of Contents

We estimate that 268 tanks have the potential to release 50 to 100 percent of their tank contents onto the ground. These tanks were sorted by content and minimum and maximum expected volume lost. A total of 149 unique substances have the potential to be released to the ground surface as summarized in Table 3.5.

Table 3.5 - Materials with Potential to Release to the Ground Surface - Full Spill

Area	Property	Contents	Volume Lost Minimum (gallons)	Volume Lost Maximum (gallons)
4	Chevron	1000 THF	20,724	41,449
		Additive	11,808	23,616
		ATF dex 111	36,842	73,684
		Base Oil	964,907	1,929,813
		Blend Mix/ Line Wash	24,200	48,400
		Blended Oil	3,527	7,054
		Chevron 7075F	66,600	133,200
		Citgo Brt Stock 150	51,065	102,130
		Clarity PM 150	2,903	5,806
		Clarity PM 220	14,549	29,097
		Clarity Saw Guide 46	5,806	11,612
		Compressor Oil	5,790	11,580
		CVX 3105	5,888	11,777
		Delo 100-40	8,550	17,100
		Delo 400-10	8,479	16,958
		Delo 400-15W40	97,910	195,821
		Delo 400-30	27,812	55,625
		Delo 400-40	20,724	41,449
		Delo 6170 CFO 20W40	63,765	127,530
		Delo G/L 80/90	5,969	11,938
		Delo GL 80/90	5,904	11,808
		Diesel	282,832	565,664
		Drive Train Fluid HD 10	11,643	23,287
		ExxonMobil EM-100	196,411	392,822
		ExxonMobile EHC45	9,825	19,649
		FAMM Tara 30 DP 30	8,502	17,004
		Famm Taro Sepcial 70	33,699	67,398
		Gear Lube	5,904	11,808
GEO HDAX L ASH 40	33,593	67,186		
GST ISO 100	8,502	17,004		

Area	Property	Contents	Volume Lost Minimum (gallons)	Volume Lost Maximum (gallons)
		GST ISO 32	5,904	11,808
		Havoline 10W30	20,724	41,449
		Hybase C414	11,710	23,420
		Industrial EP 150	5,953	11,907
		Industrial EP 220	5,904	11,808
		Infineum M7038	5,904	11,808
		Jet Fuel	336,536	673,073
		Lubrizol 4991	11,710	23,419
		Lubrizol 4991D	70,992	141,983
		Map 100	27,946	55,893
		MAR EO 9250-40	5,938	11,875
		Neutral 220R	145,980	291,960
		Neutral 600R	134,127	268,254
		Neutral Oil	122,554	245,109
		Oil Stop	6,509	13,019
		Oloa 2000	20,354	40,707
		Oloa 44200	5,920	11,840
		Oloa 550006L	9,910	19,821
		Oloa 6073EV	5,969	11,938
		Oloa 9740C	5,920	11,840
		Paratone 8451	161,248	322,496
		Pennzoil 75HC	9,739	19,478
		Raffene 2000L	5,904	11,808
		Raffene 750L	15,303	30,607
		Red Chain Bar 150	3,936	7,873
		RPM HDMO 15W40	48,857	97,714
		RPM HDMO 30	8,814	17,628
		RPM UGL 80W90	20,781	41,562
		Rykon Oil 46	30,607	61,214
		Rykon Oil 68	22,585	45,171
		Rykon Prem 32	44,550	89,099
		Rykon Prem MV	35,140	70,281
		Saw Guide 150	5,790	11,580
		Shell MV1 100	8,502	17,004
		Supreme 5W30	20,781	41,562
		SynFluid \$, 4CST	2,919	5,837
		Techron Additive	69,822	139,645
		Texaco Havoline 5S30	5,806	11,612
		Transmix	8,525	17,049
		Turbine Oil	17,712	35,424
		Undefined Petroleum	5,938	11,875
		Unleaded Gasoline	1,209,264	2,418,528
		VER 800 Mar 30	11,336	22,672
		Viscoplex 1-604	4,689	9,378

Area	Property	Contents	Volume Lost Minimum (gallons)	Volume Lost Maximum (gallons)
		Viscoplex 7-305	4,663	9,325
		Water/Oil Slop	132,843	265,686
	Conoco Phillips	Bar & Chain 150	4,523	9,045
		Biodiesel	135,424	270,848
		Decant Oil	317,602	635,204
		Diesel #1	233,055	466,111
		Diesel #2	2,597,632	5,195,263
		Ethanol	93,453	186,906
		Ethyl HITEC 388	4,523	9,045
		Ethyl HITEC 5756	4,523	9,045
		Ethyl HITEC 6888E	8,543	17,085
		Firebird 15W/40	4,523	9,045
		Fleet Sup EC 15W/40	4,523	9,045
		Flush	5,863	11,725
		Gasoline Slops ⁵	3,377	6,754
		Guardol 15W/40	36,515	73,030
		Guardol 30	4,523	9,045
		HITEC 1193	5,863	11,725
		HITEC 1193A	4,523	9,045
		HITEC 3472	4,523	9,045
		HITEC 5751	5,863	11,725
		HiTech 6576	6,106	12,213
		HT4/10W	5,863	11,725
		HT4/30W	4,523	9,045
		Hydraulic Tractor Oil	6,399	12,797
		HYNAP N100	5,863	11,725
		Industrial Fuel Oil	1,108,069	2,216,138
		Line Clippings	6,030	12,060
		Lubrizol 48254	5,863	11,725
		Lubrizol 4990CH	5,863	11,725
		Lubrizol 4998C	5,863	11,725
		Lubrizol 7075F	5,863	11,725
		Lubrizol 9692A	4,523	9,045
		Lubrizol 9990A	4,523	9,045
		Marine Diesel	150,647	301,295
		Marine Fuel Oil	525,810	1,051,620
		Mohawk 150	4,523	9,045
		Mohawk 450	5,863	11,725
		MP Gear Lube 80/90	5,863	11,725
		Point Premier 10W/30	5,863	11,725
PS 300	153,870	307,739		
Raffene 750L	5,863	11,725		
Ramar CLF 17E	14,405	28,810		

Area	Property	Contents	Volume Lost Minimum (gallons)	Volume Lost Maximum (gallons)
		Residual Fuel Oil ⁶	304,827	609,653
		RLOP 100N	139,863	279,725
		RLOP 220 N	379,723	759,445
		RLOP 600N	98,658	197,315
		Stop Oil	13,127	26,255
		SUN 150 B/S	67,000	134,000
		SUN 525	72,863	145,725
		Sup Syn BL 10W/30	11,725	23,450
		SUP SYN BL 5W/30	40,200	80,400
		Super 5W/20	5,863	11,725
		Super ATF	17,588	35,175
		T5X HD 15W/40	11,725	23,450
		Transmix	68,845	137,689
		TSX HD10	4,523	9,045
		ULTRA S-4	67,000	134,000
		Unax AW 46	36,515	73,030
		UNAX AW 68	5,863	11,725
		UNAX AW 68	5,863	11,725
		Uniguide II 100	11,725	23,450
		Unleaded Gasoline	2,133,716	4,267,431
		Utility	37,889	75,777
		UTRA 58	8,543	17,085
		UTRA 59	5,863	11,725
		Versa Tran ATF	5,863	11,725
	Kinder Morgan South	Additive	8,892	17,784
		Avgas	191,563	383,126
		Biodiesel	189,945	379,890
		Contact Water	19,304	38,608
		Diesel	3,070,074	6,140,148
		Ethanol	72,293	144,586
		Gasoline	7,675,185	15,350,370
		Jet A	4,090,121	8,180,242
		Lubricity Additive	56,280	112,560
		Slop Water	2,111	4,221
		Storm Water	211,050	422,100
		Transmix	472,006	944,013
	McCall Oil	Asphalt	6,346	12,691
	Zenith Energy	Asphalt	NA	NA
		Avgas	701,190	1,402,380
		Biodiesel	111,000	222,000
		Caustic	NA	NA
		Charge Stock	NA	NA
Crude Oil		13,890,431	27,780,862	
	Murol	NA	NA	

Area	Property	Contents	Volume Lost Minimum (gallons)	Volume Lost Maximum (gallons)
		Universal Low-Sulfur Diesel	1,594,299	3,188,598
		Wastewater	NA	NA
5	Equilon	Diesel	2,558,686	5,117,372
		Ethanol	781,124	1,562,248
		Gasoline	4,080,821	8,161,641
		Water	89,598	179,196

3.3.2 Minor Releases - 10 Percent of Contents

We estimate that 21 tanks have the potential to release up to 10 percent of their contents onto the ground. The 21 tanks were sorted by content and minimum and maximum expected volume lost. Eight unique substances have the potential to be released onto the ground surface as summarized in Table 3.6. All of these tanks are located in Area 4.

Table 3.6 - Materials with Potential to Release to the Ground Surface - Minor Release

Area	Property	Contents	Volume Lost Maximum (gallons)
3	Northwest Natural Gas	Liquefied Natural Gas	475,700
4	Conoco Phillips	Octel 9056	1,249
	Chevron	Base Oil	56,085
		Blended Oil	5,964
		Ethanol	64,232
		Swing Tank	851,457
		Unleaded Gasoline	951,669
	Kinder Morgan South	Diesel	337,680
		Gasoline	337,680
Jet A		337,680	

3.4 Estimate of Hazardous Materials Expected to Burn

During the development of the tank inventory, the materials present in the tanks were reviewed for flammability based on the flammability categories outlined on the standard MSDSs. The 390 tanks evaluated were divided based on the flammability categories defined in Section 2 (Step 2). The number of tanks in each flammability category are as follow:

- Category 1 - 106 Tanks
- Category 2 - 28 Tanks
- Category 3 - 66 Tanks
- Category 4 - 0 Tanks
- Not Flammable - 14 Tanks
- Unknown (Contents Known, Flammability Category Not Found) - 176 Tanks

Of the 390 tanks with known contents at the CEI Hub, 200 (approximately 51 percent) have materials that are known to be flammable. The estimated volume of flammable materials present at the CEI Hub

is 209,533,756 gallons. Therefore, the contents of these tanks all have the potential to burn, either on land or in the water. Because burning requires both a fuel and ignition source, it is not possible to have a specific numerical value for the estimated quantity of materials that will burn. Rather, it is only possible to estimate that 209,533,756 gallons have the *potential* to burn.

Based on the Tank Damage Assessment Methodology, we estimate that 87,246,258 to 179,996,640 gallons of flammable material will be released either to the Willamette River or on land.

3.5 Estimate of Hazardous Materials Present

In addition to the flammability of materials present at the CEI Hub, tank contents were also evaluated for their hazardous characteristics. The 390 tanks evaluated were divided based on hazardous or non-hazardous characteristics as defined in Section 2 (Step 2). The number of tanks in each hazard category are as follow:

- Hazardous - 337 Tanks
- Non-Hazardous - 7 Tanks
- Unknown (Contents Known, Hazard Category Not Found) - 46 Tanks

Of the 390 tanks with known contents at the CEI Hub, 337 (approximately 86 percent) have materials that have are known to be hazardous.

4.0 REFERENCES

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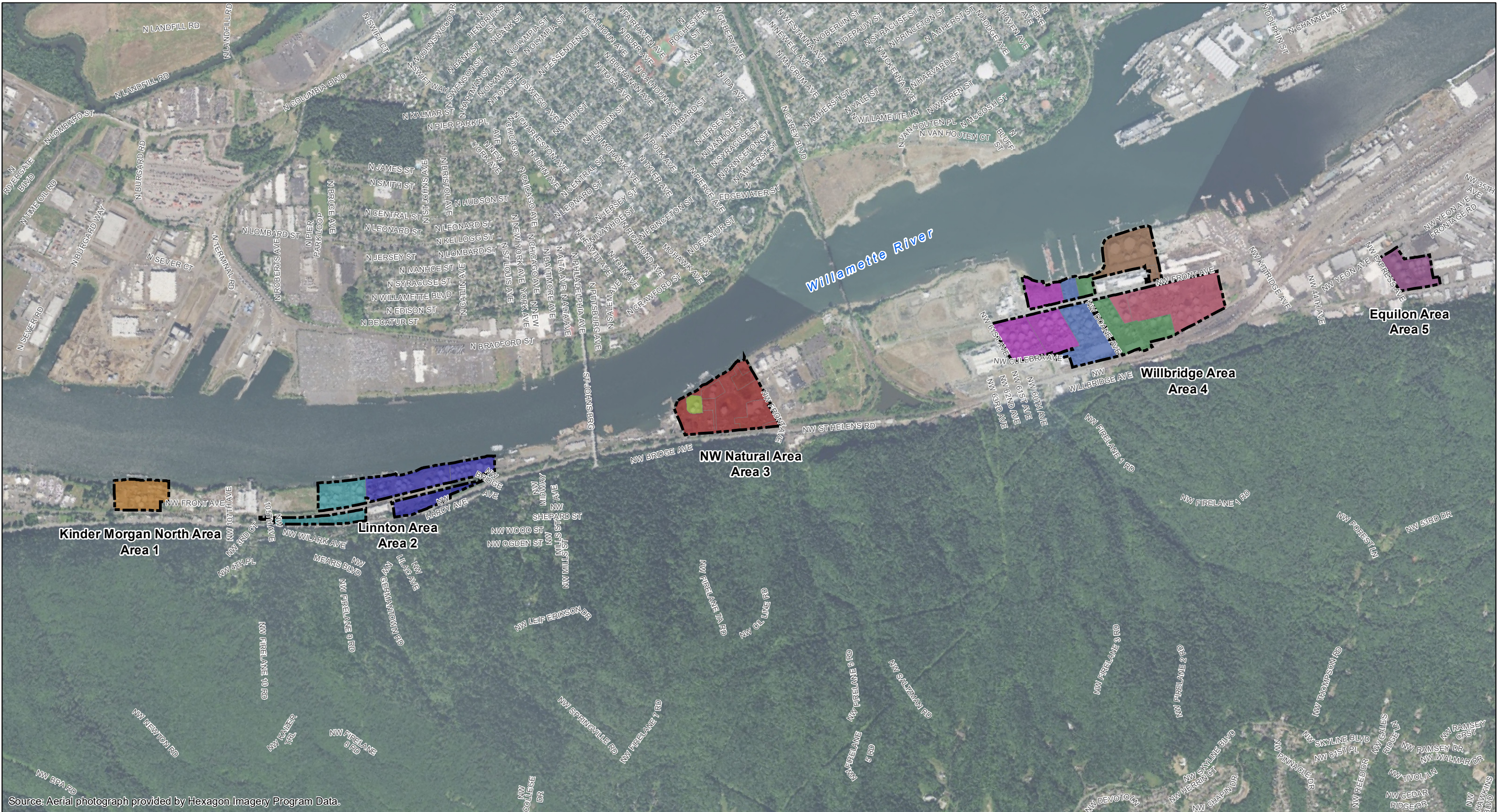
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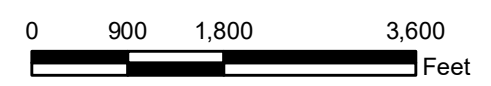
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Source: Aerial photograph provided by Hexagon Imagery Program Data.

Legend

- Project Areas
- Kinder Morgan North Area Owners**
- Kinder Morgan
- Linnton Area Owners**
- BP West Coast
- Shore Terminals / Nustar
- NW Natural Area Owners**
- NW Natural
- Pacific Terminal Services
- Equilon Area Owners**
- Equilon
- Willbridge Area Owners**
- Chevron
- Conoco Phillips
- Kinder Morgan
- McCall Oil
- Zenith Energy Terminals



Note: Feature locations are approximate.

Oregon Critical Energy Infrastructure Hub
Portland, Oregon

CEI Hub Map

154-035-019

04/21



Figure

1



Tank Release

- ▲ Flammable and Hazardous
- ▲ Empty or Out of Service

No Tank Release

- Flammable and Hazardous
- Taxlot Boundary

Damage Zone

- Material in Water
- Potentially in Water



FIGURE 2A
KINDER MORGAN NORTH

FEBRUARY 2022
GIS FIGURE PROVIDED BY ECONORTHWEST



Tank Release

- ▲ Flammable and Hazardous
- ▲ No Data
- ▲ Empty or Out of Service
- ▲ Tank Failure, not Flammable and not Hazardous

No Tank Release

- Flammable and Hazardous
- Taxlot Boundary

Damage Zone

- Material in Water
- Potentially in Water



**FIGURE 2B
LINNTON**

FEBRUARY 2022
GIS FIGURE PROVIDED BY ECONORTHWEST



Tank Release

▲ Flammable and Hazardous

No Tank Release

● Flammable and Hazardous

▭ Taxlot Boundary

Damage Zone

■ Material in Water

■ Potentially in Water



FIGURE 2C
NW NATURAL

FEBRUARY 2022
GIS FIGURE PROVIDED BY ECONORTHWEST



Tank Release

- ▲ Flammable and Hazardous
- ▲ Flammable (but not Hazardous)
- ▲ Hazardous (but not Flammable)
- ▲ No Data

▲ Empty or Out of Service

▲ Tank Failure, not Flammable and not Hazardous

Damage Zone

- Material in Water
- Potentially in Water

No Tank Release

- Flammable and Hazardous
- Hazardous (but not Flammable)
- No Data
- Taxlot Boundary



FIGURE 2D
WILLBRIDGE

FEBRUARY 2022
GIS FIGURE PROVIDED BY ECONORTHWEST



Tank Release

- ▲ Flammable and Hazardous
- ▲ Empty or Out of Service
- ▲ Tank Failure, not Flammable and not Hazardous
- Taxlot Boundary

Damage Zone

- Material in Water
- Potentially in Water



**FIGURE 2E
EQUILON**

FEBRUARY 2022
GIS FIGURE PROVIDED BY ECONORTHWEST

APPENDIX A
Full Tank Data

Appendix A: Full Tank Data

Area	Property	Tank ID ¹	Latitude	Longitude	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ⁸	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost Min	Percent Lost Max	Volume Lost Min	Volume Lost Max
2	BP	BP1	-122.7806873	45.59494967	Gasoline	3,808,434	2,551,651	1940	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	1,275,825	2,551,651
2	BP	BP10	-122.7788011	45.59386607	Diesel	1,008,840	675,923	1941	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	337,961	675,923
2	BP	BP11	-122.7800489	45.59444227	Gasoline	1,354,122	907,262	1940	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	453,631	907,262
2	BP	BP12	-122.7802194	45.59496165	Ethanol	605,346	404,006	1961	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	202,791	404,006
2	BP	BP13	-122.7804499	45.59525087	Ethanol	602,994	404,006	1961	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	202,003	404,006
2	BP	BP14	-122.7794397	45.59361625	Diesel	1,121,736	751,563	1942	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	375,782	751,563
2	BP	BP15	-122.7791647	45.59373755	Biodesel	804,972	539,331	1943	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	269,666	539,331
2	BP	BP17	-122.7786956	45.5935232	Diesel	3,329,340	2,230,658	1940	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	1,115,329	2,230,658
2	BP	BP18	-122.7797157	45.5935084	Diesel	1,104,728	740,166	1945	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	370,083	740,166
2	BP	BP19	-122.7785286	45.59376099	Only Wastewater	198,828	133,215	1961	Internal Floating Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	66,607	133,215
2	BP	BP2	-122.7807702	45.5946449	Groundwater Remediation	1,231,000	824,770	1957	Internal Floating Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	412,385	824,770
2	BP	BP21	-122.7782544	45.59352925	Gasoline Additive	220,800	147,454	1961	Fixed Roof	Group 3A	Category 2	Yes	Material in Water	Tank Failure	50%	100%	73,727	147,454
2	BP	BP23a	Unknown	Unknown	Diesel Additive	2,000	1,340	2005	Fixed Roof	Group 3C	Category 3	Yes	Material in Water	No Tank Failure	0%	10%	0	134
2	BP	BP23b	Unknown	Unknown	Diesel Lubricity Additive	2,100	1,407	2005	Horizontal Tank	Group 3C	Category 3	Yes	Material in Water	No Tank Failure	0%	10%	0	141
2	BP	BP24	Unknown	Unknown	Gasoline Additive	20,286	13,592	1970	Fixed Roof	Group 3A	Category 2	Yes	Material in Water	Tank Failure	50%	100%	6,796	13,592
2	BP	BP25	Unknown	Unknown	Gasoline Additive	20,241	13,561	1966	Fixed Roof	Group 3A	Category 2	Yes	Material in Water	Tank Failure	50%	100%	6,781	13,561
2	BP	BP3	-122.7813045	45.59482967	Gasoline	1,584,366	1,061,525	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	530,763	1,061,525
2	BP	BP4	-122.7810795	45.59457546	Gasoline	1,105,860	740,926	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	370,463	740,926
2	BP	BP40	-122.7793826	45.59410523	Unavailable	0	0	1954	Fixed Roof	Group 1	Unknown	Unknown	Material in Water	Tank Failure	50%	100%	0	0
2	BP	BP41	-122.7792266	45.59415752	Out of Service	0	0	1954	Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
2	BP	BP42	-122.7790785	45.59420894	Out of Service	0	0	1954	Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
2	BP	BP43	-122.778926	45.59426297	Out of Service	0	0	1954	Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
2	BP	BP44	-122.7789974	45.59410785	Out of Service	0	0	1954	Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
2	BP	BP45	-122.7791499	45.59405643	Unavailable	0	0	1954	Fixed Roof	Group 1	Unknown	Unknown	Material in Water	Tank Failure	50%	100%	0	0
2	BP	BP46	-122.7793016	45.59400501	Biodesel	221,970	148,720	1954	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	74,360	148,720
2	BP	BP5	-122.7807976	45.59434127	Gasoline	895,314	599,860	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	299,930	599,860
2	BP	BP6	-122.7804436	45.5945153	Gasoline	1,014,384	679,637	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	339,619	679,637
2	BP	BP7	-122.7803002	45.59476875	Gasoline	648,018	434,172	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	217,086	434,172
2	BP	BP8	-122.7803993	45.59427087	Gasoline	790,272	529,482	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	264,741	529,482
2	BP	BP9	-122.7792567	45.59324486	Diesel	2,295,636	1,538,076	1940	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	769,038	1,538,076
4	Chevron	CH1	-122.7414229	45.56525743	Unleaded Gasoline	3,412,315	2,286,251	1997	Internal Floating Roof	Group 3B	Category 1	Yes	Potentially in Water	Tank Failure	0%	10%	0	228,625
4	Chevron	CH10	Unknown	Unknown	Paratone 8451	169,616	113,643	1950	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	56,821	113,643
4	Chevron	CH100	-122.7429011	45.5642678	Gear Lube	17,624	11,808	1946	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	5,904	11,808
4	Chevron	CH101	-122.7429342	45.56422771	Compressor Oil	17,284	11,580	1958	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	5,790	11,580
4	Chevron	CH102	Unknown	Unknown	Out of Service	12,954	8,679	1978	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH103	Unknown	Unknown	Out of Service	13,006	8,714	1978	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH104	Unknown	Unknown	Texaco Havoline S530	17,331	11,612	1947	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,896	11,612
4	Chevron	CH105	Unknown	Unknown	Empty	17,624	11,808	1969	Fixed Roof	Group 3A	Unknown	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH106	Unknown	Unknown	Delo G/L 80/90	17,818	11,938	1969	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,969	11,938
4	Chevron	CH108	Unknown	Unknown	Techon Additive	208,425	139,645	1970	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	69,822	139,645
4	Chevron	CH109	-122.7429586	45.56419459	Delo GL 80/90	17,624	11,808	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,904	11,808
4	Chevron	CH11	Unknown	Unknown	Lubrizol 4991D	211,915	141,983	1950	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	70,992	141,983
4	Chevron	CH110	Unknown	Unknown	GST ISO 32	17,624	11,808	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,904	11,808
4	Chevron	CH112	Unknown	Unknown	Olao 6073EV	17,818	11,938	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,969	11,938
4	Chevron	CH113	Unknown	Unknown	Hybase C414	17,378	11,643	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,822	11,643
4	Chevron	CH114	Unknown	Unknown	Industrial EP 220	17,624	11,808	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,904	11,808
4	Chevron	CH115	Unknown	Unknown	Empty	17,724	11,875	1976	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH117	Unknown	Unknown	Raffene 2000L	17,624	11,808	1976	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	5,904	11,808
4	Chevron	CH118	Unknown	Unknown	Blend Mix/ Line Wash	17,577	11,777	1976	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	5,888	11,777
4	Chevron	CH119	Unknown	Unknown	Out of Service	19,593	13,127	1977	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH12	Unknown	Unknown	ExxonMobil EM-100	586,302	392,822	1950	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	196,411	392,822
4	Chevron	CH120	Unknown	Unknown	Out of Service	19,593	13,127	1977	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH121	Unknown	Unknown	NA	NA	NA	1978	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH122	Unknown	Unknown	1000 THF	61,864	41,449	NA	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	20,724	41,449
4	Chevron	CH123	Unknown	Unknown	Delo 400-40	61,864	41,449	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	20,724	41,449
4	Chevron	CH127	Unknown	Unknown	ATF delc 111	109,976	73,684	NA	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	36,842	73,684
4	Chevron	CH128	-122.7425148	45.5645508	Rykon Prem 32	74,586	49,973	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	24,986	49,973
4	Chevron	CH129	-122.7425998	45.5635242	Base Oil	642,935	430,166	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	215,383	430,166
4	Chevron	CH13	Unknown	Unknown	Raffene 750L	45,682	30,607	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	15,303	30,607
4	Chevron	CH130	-122.7424451	45.56367296	Base Oil	255,112	170,925	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	85,463	170,925
4	Chevron	CH131	Unknown	Unknown	Hybase C414	17,577	11,777	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,888	11,777
4	Chevron	CH132	Unknown	Unknown	Empty	18,165	12,171	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH133	Unknown	Unknown	CVX 3105	17,577	11,777	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,888	11,777
4	Chevron	CH135	Unknown	Unknown	Out of Service	19,379	12,982	1982	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH136	Unknown	Unknown	Out of Service	20,303	13,603	1982	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH137	Unknown	Unknown	Olao 2000	60,757	40,707	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	20,354	40,707
4	Chevron	CH138	Unknown	Unknown	Drive Train Fluid HD 10	17,378	11,643	NA	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	5,822	11,643
4	Chevron	CH139	Unknown	Unknown	Blend Mix/ Line Wash	25,591	17,146	NA	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	8,573	17,146
4	Chevron	CH14	Unknown	Unknown	Delo 6170 CFO 20W40	190,343	127,530	1950	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	63,765	127,530
4	Chevron	CH140	Unknown	Unknown	Out of Service	83,234	55,767	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH141	Unknown	Unknown	Out of Service	140,308	94,006	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH142	-122.7419897	45.56398912	Base Oil	648,620	434,575	1984	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	217,288	434,575
4	Chevron	CH143	-122.7423285	45.56487029	Supreme 5W30	62,033	41,562	NA	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	20,781	41,562
4	Chevron	CH144	-122.7422762	45.56493129	Havoline 10W30	61,86												

Area	Property	Tank ID ¹	Latitude	Longitude	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ⁹	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost Min	Percent Lost Max	Volume Lost Min	Volume Lost Max
4	Chevron	CH177	Unknown	Unknown	Blended Oil	2,632	1,763	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	882	1,763
4	Chevron	CH178	Unknown	Unknown	Blended Oil	2,632	1,763	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	882	1,763
4	Chevron	CH179	Unknown	Unknown	Blended Oil	2,632	1,763	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	882	1,763
4	Chevron	CH18	Unknown	Unknown	Oloa 550006L	29,583	19,821	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	9,910	19,821
4	Chevron	CH180	Unknown	Unknown	Blended Oil	4,700	3,149	1993	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	315
4	Chevron	CH181	Unknown	Unknown	Blended Oil	4,700	3,149	1993	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	315
4	Chevron	CH182	Unknown	Unknown	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762
4	Chevron	CH183	Unknown	Unknown	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762
4	Chevron	CH184	Unknown	Unknown	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762
4	Chevron	CH185	Unknown	Unknown	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762
4	Chevron	CH186	Unknown	Unknown	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762
4	Chevron	CH187	Unknown	Unknown	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762
4	Chevron	CH188	Unknown	Unknown	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762
4	Chevron	CH19	Unknown	Unknown	Empty	29,071	19,478	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH20	Unknown	Unknown	Pennzoil 75HC	29,071	19,478	1914	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	9,739	19,478
4	Chevron	CH21	Unknown	Unknown	Empty	29,583	19,821	1992	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH22	Unknown	Unknown	Clarity PM 220	13,982	9,368	1954	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,684	9,368
4	Chevron	CH23	Unknown	Unknown	Empty	13,982	9,368	1997	Fixed Roof	Group 2	None	None	On Land	No Tank Failure ⁸	0%	10%	NA	NA
4	Chevron	CH24	Unknown	Unknown	Empty	8,859	5,966	1993	Fixed Roof	Group 2	None	None	On Land	No Tank Failure ⁸	0%	10%	NA	NA
4	Chevron	CH25	Unknown	Unknown	Clarity PM 150	8,865	5,906	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	2,903	5,806
4	Chevron	CH26	Unknown	Unknown	Rykon Prem 32	29,447	19,821	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	9,729	19,447
4	Chevron	CH27	Unknown	Unknown	Chevron 7075F	29,613	19,841	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	9,920	19,841
4	Chevron	CH28	Unknown	Unknown	Blend Mx/ Line Wash	29,071	19,478	1913	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	9,739	19,478
4	Chevron	CH28	Unknown	Unknown	Industrial EP 150	17,771	11,907	1949	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,953	11,907
4	Chevron	CH29	Unknown	Unknown	Empty	11,750	7,873	1949	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH29	Unknown	Unknown	Unavailable	17,724	11,875	1949	Fixed Roof	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	5,938	11,875
4	Chevron	CH3	-122.7417869	45.56487609	Unleaded Gasoline	2,392,178	1,602,759	1999	Fixed Roof	Group 3B	Category 1	Yes	On Land	No Tank Failure	0%	10%	0	160,276
4	Chevron	CH30	Unknown	Unknown	Empty	11,750	7,873	1949	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH31	Unknown	Unknown	SynFluid 5, 4CST	8,712	5,837	1953	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	2,919	5,837
4	Chevron	CH32	Unknown	Unknown	Viscoplex 7-305	13,918	9,325	1950	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,663	9,325
4	Chevron	CH33	Unknown	Unknown	Viscoplex 1-604	13,997	9,378	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,689	9,378
4	Chevron	CH34	Unknown	Unknown	Empty	25,379	17,004	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH35	Unknown	Unknown	FAMM Tar 30 DP 30	25,379	17,004	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,502	17,004
4	Chevron	CH36	Unknown	Unknown	Shell MVI 100	25,379	17,004	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,502	17,004
4	Chevron	CH37	Unknown	Unknown	Drive Train Fluid HD 10	17,378	11,643	1949	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	5,822	11,643
4	Chevron	CH4	Unknown	Unknown	Neutral 220R	435,761	291,960	1913	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	145,980	291,960
4	Chevron	CH40	Unknown	Unknown	Empty	18,018	12,072	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH41	Unknown	Unknown	Clarity Saw Guide 46	17,331	11,612	1949	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,806	11,612
4	Chevron	CH42	Unknown	Unknown	Empty	29,583	19,821	1913	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH43	-122.7420833	45.56380088	Base Oil	837,085	560,847	1993	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure	0%	10%	0	56,085
4	Chevron	CH44	-122.7423374	45.56351791	Base Oil	835,393	559,713	1920	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	279,857	559,713
4	Chevron	CH45	-122.7413834	45.56448431	Ethanol	958,693	642,324	1999	Fixed Roof	Group 3B	Category 3	Yes	On Land	No Tank Failure	0%	10%	0	64,232
4	Chevron	CH46	Unknown	Unknown	Red Chain Bar 150	11,750	7,873	1924	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	3,936	7,873
4	Chevron	CH47	-122.7427205	45.56392263	Unleaded Gasoline	3,609,743	2,418,528	1929	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,209,264	2,418,528
4	Chevron	CH48	-122.7426967	45.56427618	Water/Oil Slip	396,547	265,586	1979	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	132,843	265,586
4	Chevron	CH49	Unknown	Unknown	Neutral Oil	365,834	245,109	1913	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	122,554	245,109
4	Chevron	CH51	-122.7411057	45.56422328	Unavailable	NA	NA	NA	Fixed Roof	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH56	Unknown	Unknown	GST ISO 100	25,379	17,004	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,502	17,004
4	Chevron	CH57	Unknown	Unknown	Citgo Bt Stock 150	152,433	102,130	1921	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	51,065	102,130
4	Chevron	CH6	Unknown	Unknown	GEO HDAX L ASH 40	100,277	67,186	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	33,593	67,186
4	Chevron	CH60	-122.7419626	45.56331505	Unleaded Gasoline	4,999,697	3,349,797	2001	Fixed Roof	Group 3B	Category 1	Yes	On Land	No Tank Failure	0%	10%	0	334,990
4	Chevron	CH61	Unknown	Unknown	Neutral 600R	400,379	268,254	1941	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	134,127	268,254
4	Chevron	CH62	-122.741521	45.56385926	Unleaded Gasoline	6,812,135	4,564,130	2000	Fixed Roof	Group 3B	Category 1	Yes	On Land	No Tank Failure	0%	10%	0	456,413
4	Chevron	CH64	-122.7407524	45.56450931	Diesel	844,275	565,664	1947	Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	282,832	565,664
4	Chevron	CH65	Unknown	Unknown	Lubrizol 4991	17,524	11,741	1938	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,871	11,741
4	Chevron	CH7	Unknown	Unknown	Famm Taro Seppical 70	100,594	67,398	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	33,699	67,398
4	Chevron	CH72	Unknown	Unknown	Saw Guide 150	17,284	11,580	1959	Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	5,790	11,580
4	Chevron	CH75	-122.7422719	45.56410069	Jet Fuel	1,004,586	673,073	1952	Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	336,536	673,073
4	Chevron	CH76	-122.7414661	45.56418238	Base Oil	498,258	333,833	1960	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	166,916	333,833
4	Chevron	CH77	Unknown	Unknown	RPM HDMO 15W40	128,511	86,102	1960	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	43,051	86,102
4	Chevron	CH78	Unknown	Unknown	Paratron 8451	311,722	208,854	1960	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	104,427	208,854
4	Chevron	CH79	Unknown	Unknown	Empty	17,378	11,643	1960	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH8	Unknown	Unknown	Rykon Prem MV	104,897	70,281	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	35,140	70,281
4	Chevron	CH80	Unknown	Unknown	Out of Service	17,378	11,643	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH81	Unknown	Unknown	Empty	17,724	11,875	1951	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH82	Unknown	Unknown	Infinium M7038	17,624	11,808	1951	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,904	11,808
4	Chevron	CH83	Unknown	Unknown	RPM HDMO 15W40	17,331	11,612	1951	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,806	11,612
4	Chevron	CH84	Unknown	Unknown	Empty	17,184	11,513	1952	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH85	Unknown	Unknown	Oloa 44200	17,671	11,840	1952	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,920	11,840
4	Chevron	CH87	Unknown	Unknown	Lubrizol 4991	17,430	11,678	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,839	11,678
4	Chevron	CH88	Unknown	Unknown	Empty	17,624	11,808	1850	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH89	Unknown	Unknown	Oil Stop	19,431	13,019	1952	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	6,509	13,019
4	Chevron	CH9	Unknown	Unknown	Chevron 7075F	169,193	113,359	1949	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	56,680	113,359
4	Chevron	CH90	Unknown	Unknown	Delo 400-15W40	208,848	139,928	1954	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	69,964	139,928
4	Chevron	CH91	Unknown	Unknown	Oloa 9740C	17,671	11,840	1961	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,920	11,840
4	Chevron	CH92	Unknown	Unknown	Out of Service	17,577	11,777	1961	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH94	Unknown	Unknown	Rykon Oil 68	67,419	45,171	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	22,585	45,171
4	Chevron	CH96																

Area	Property	Tank ID ¹	Latitude	Longitude	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ²	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost Min	Percent Lost Max	Volume Lost Min	Volume Lost Max
1	Kinder Morgan North	KML1007	-122.7874617	45.60392099	Out of Service	418,278	179,196	1922	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML10117	-122.7862918	45.60312007	Out of Service	469,938	179,196	1941	Internal Floating Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML11019	-122.7863772	45.60325802	Out of Service	469,896	179,196	1941	Internal Floating Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML17018	-122.7859262	45.60341741	Gasoline	735,714	179,196	1941	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	89,598	179,196
1	Kinder Morgan North	KML17020	-122.7860185	45.60333534	Gasoline	742,896	179,196	1941	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	89,598	179,196
1	Kinder Morgan North	KML17027	-122.7857571	45.60292581	Gasoline	739,074	179,196	1954	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	89,598	179,196
1	Kinder Morgan North	KML20011	-122.7866833	45.60270641	Diesel	856,506	179,196	1937	Vertical Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	89,598	179,196
1	Kinder Morgan North	KML2024	-122.7876809	45.603684	Out of Service	92,896	179,196	1937	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML30016	-122.7861755	45.6028543	Diesel	1,253,784	840,035	1941	Vertical Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	420,018	840,035
1	Kinder Morgan North	KML3034	Unknown	Unknown	Storm Water	137,046	91,821	1925	Vertical Fixed Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	45,910	91,821
1	Kinder Morgan North	KML305	Unknown	Unknown	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML306	Unknown	Unknown	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML309	Unknown	Unknown	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML310	Unknown	Unknown	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML312	Unknown	Unknown	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML313	Unknown	Unknown	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML314	Unknown	Unknown	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML315	Unknown	Unknown	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML326	Unknown	Unknown	Out of Service	12,600	8,442	NA	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML330	Unknown	Unknown	Out of Service	12,012	8,045	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML331	Unknown	Unknown	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML45028	-122.7858017	45.60286188	Gasoline	1,889,538	1,265,990	1941	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	632,995	1,265,990
1	Kinder Morgan North	KML532	Unknown	Unknown	Out of Service	29,908	20,038	1965	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML55008	-122.7868222	45.60301106	Out of Service	2,288,832	1,533,517	1933	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML55022	-122.7869825	45.60331957	Gasoline	2,309,286	1,547,222	1928	Vertical Fixed Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	773,611	1,547,222
1	Kinder Morgan North	KML55023	-122.7872335	45.60367514	Out of Service	2,312,016	1,549,051	1944	Internal Floating Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
1	Kinder Morgan North	KML59029	-122.7863092	45.60250695	Gasoline	2,454,060	1,644,220	1955	Vertical Fixed Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	822,110	1,644,220
1	Kinder Morgan North	KML72021	-122.7875141	45.60336489	Diesel	1,842,297	1,904,339	2011	Vertical Fixed Roof	Group 3C	Category 3	Yes	Material in Water	No Tank Failure	0%	10%	0	190,434
1	Kinder Morgan North	KMLSat tower	Unknown	Unknown	Contact Water	22,890	15,336	NA	Vertical Fixed Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	7,668	15,336
4	Kinder Morgan South	KMW10	Unknown	Unknown	Out of Service	22,722	15,224	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW100	-122.7450631	45.56630332	Diesel	3,381,000	2,265,270	1949	Vertical Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	1,132,635	2,265,270
4	Kinder Morgan South	KMW101	-122.7446768	45.56671985	Gasoline	3,381,000	2,265,270	1949	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,132,635	2,265,270
4	Kinder Morgan South	KMW102	-122.7449134	45.56581185	Out of Service	306,600	205,422	1951	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW103	-122.7450578	45.56589813	Out of Service	169,000	112,560	1951	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW104	-122.7452213	45.56589451	Lubricity Additive	168,000	112,560	1950	Vertical Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	56,280	112,560
4	Kinder Morgan South	KMW105	-122.7451319	45.5657998	Ethanol	168,000	112,560	1951	Internal Floating Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	56,280	112,560
4	Kinder Morgan South	KMW106	-122.7450207	45.56569496	Out of Service	302,546	202,706	1951	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW11	Unknown	Unknown	Out of Service	22,722	15,224	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW116	-122.7449925	45.56714896	Gasoline	3,385,200	2,268,084	1961	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,134,042	2,268,084
4	Kinder Morgan South	KMW117	-122.7457153	45.56637261	Biodiesel	567,000	379,890	1951	Internal Floating Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	189,945	379,890
4	Kinder Morgan South	KMW118	-122.7460259	45.56666204	Gasoline	2,360,400	1,581,468	1951	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	790,734	1,581,468
4	Kinder Morgan South	KMW12	Unknown	Unknown	Out of Service	22,722	15,224	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW12001	-122.7420717	45.56569288	Jet A	5,040,000	3,376,800	2012	Internal Floating Roof	Group 3C	Category 2	Yes	On Land	No Tank Failure	0%	10%	0	337,680
4	Kinder Morgan South	KMW12002	-122.7428327	45.56573364	Diesel	5,040,000	3,376,800	2012	Internal Floating Roof	Group 3C	Category 3	Yes	On Land	No Tank Failure	0%	10%	0	337,680
4	Kinder Morgan South	KMW12003	-122.7438959	45.56671288	Gasoline	5,040,000	3,376,800	2012	Internal Floating Roof	Group 3C	Category 1	Yes	On Land	No Tank Failure	0%	10%	0	337,680
4	Kinder Morgan South	KMW123	-122.7449048	45.5679582	Gasoline	3,322,200	2,225,874	1952	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,122,937	2,225,874
4	Kinder Morgan South	KMW124	-122.7453868	45.56614273	Gasoline	3,393,600	2,273,712	1952	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,136,856	2,273,712
4	Kinder Morgan South	KMW125	Unknown	Unknown	Out of Service	12,525	8,392	1946	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW126	Unknown	Unknown	Out of Service	24,703	16,551	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW127	Unknown	Unknown	Out of Service	24,703	16,551	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW128	-122.745293	45.56757832	Gasoline	2,347,800	1,573,026	1953	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	786,513	1,573,026
4	Kinder Morgan South	KMW129	Unknown	Unknown	Out of Service	7,728	5,178	1927	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW13	Unknown	Unknown	Out of Service	2,856	1,914	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW131	Unknown	Unknown	Out of Service	4,737	3,174	1954	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW134	-122.7456716	45.5671514	Gasoline	2,364,600	1,584,282	1955	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	792,141	1,584,282
4	Kinder Morgan South	KMW137	-122.7453716	45.56593857	Out of Service	222,936	149,367	1956	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW138	-122.7456704	45.56616745	Avgas	571,830	383,126	1956	Internal Floating Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	191,563	383,126
4	Kinder Morgan South	KMW139	-122.7459149	45.56627102	Out of Service	572,628	383,661	1956	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW14	Unknown	Unknown	Out of Service	2,856	1,914	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW140	-122.7444371	45.56708639	Storm Water	630,000	422,100	1956	Vertical Fixed Roof	Group 3A	Not Flammable	Unknown	On Land	Tank Failure	50%	100%	211,050	422,100
4	Kinder Morgan South	KMW141	-122.7448053	45.5675197	Out of Service	730,800	489,636	1956	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW143	-122.7454429	45.56604664	Out of Service	252,927	169,461	1959	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW145	Unknown	Unknown	Out of Service	7,980	5,347	1960	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW146	Unknown	Unknown	Out of Service	7,980	5,347	1960	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW147	Unknown	Unknown	Out of Service	7,980	5,347	1961	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW148	Unknown	Unknown	Out of Service	7,980	5,347	1961	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW15	Unknown	Unknown	Out of Service	2,856	1,914	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW152	-122.7446024	45.56640741	Ethanol	47,800	32,026	1964	Internal Floating Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	16,013	32,026
4	Kinder Morgan South	KMW153	Unknown	Unknown	Out of Service	7,637	5,117	1965	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW154	Unknown	Unknown	Out of Service	7,637	5,117	1965	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW155	-122.7435566	45.5653165	Out of Service	4,200	2,814	1926	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW156	-122.7435017	45.56501857	Out of Service	4,667	3,137	1965	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW157	-122.7430586	45.56489556	Out of Service	24,868	16,662	1969	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA</	

Area	Property	Tank ID ¹	Latitude	Longitude	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ²	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost Min	Percent Lost Max	Volume Lost Min	Volume Lost Max
4	Kinder Morgan South	KMW190	Unknown	Unknown	Additive	8,400	5,628	NA	Horizontal Tank	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	2,814	5,628
4	Kinder Morgan South	KMW192	Unknown	Unknown	Additive	8,064	5,403	NA	Horizontal Tank	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	2,701	5,403
4	Kinder Morgan South	KMW193	Unknown	Unknown	Additive	10,080	6,754	NA	Horizontal Tank	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	3,377	6,754
4	Kinder Morgan South	KMW194	Unknown	Unknown	Slop Water	6,300	4,221	NA	Horizontal Tank	Group 3A	Not Flammable	Unknown	On Land	Tank Failure	50%	100%	2,111	4,221
4	Kinder Morgan South	KMW2	-122.7437849	45.56538264	Jet A	3,175,200	2,127,384	1915	Vertical Fixed Roof	Group 2A	Category 2	Yes	On Land	Tank Failure	50%	100%	1,063,692	2,127,384
4	Kinder Morgan South	KMW22	Unknown	Unknown	Out of Service	11,760	7,879	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW23	Unknown	Unknown	Out of Service	11,760	7,879	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW25	Unknown	Unknown	Out of Service	22,806	15,280	1916	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW3	-122.7434053	45.56515531	Out of Service	553,350	370,745	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW30	Unknown	Unknown	Out of Service	11,718	7,851	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW31	Unknown	Unknown	Out of Service	11,760	7,879	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW32	Unknown	Unknown	Out of Service	11,472	7,686	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW33	Unknown	Unknown	Out of Service	17,472	11,706	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW34	Unknown	Unknown	Out of Service	17,481	11,712	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW35	Unknown	Unknown	Out of Service	4,397	2,946	1924	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW36	Unknown	Unknown	Out of Service	4,368	2,927	1924	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW37	Unknown	Unknown	Out of Service	4,368	2,927	1924	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW38	Unknown	Unknown	Out of Service	4,368	2,927	1924	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW39	Unknown	Unknown	Out of Service	4,397	2,946	1924	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW4	Unknown	Unknown	Out of Service	215,754	144,355	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW40	Unknown	Unknown	Out of Service	5,544	3,714	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW41	Unknown	Unknown	Out of Service	5,502	3,686	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW42	Unknown	Unknown	Out of Service	5,502	3,686	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW43	Unknown	Unknown	Out of Service	5,502	3,686	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW44	Unknown	Unknown	Out of Service	5,515	3,695	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW45	Unknown	Unknown	Out of Service	5,540	3,712	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW46	Unknown	Unknown	Out of Service	11,642	7,800	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW47	Unknown	Unknown	Out of Service	11,600	7,772	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW48	Unknown	Unknown	Out of Service	11,642	7,800	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW49	Unknown	Unknown	Out of Service	11,677	7,824	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW5	-122.7432504	45.56534229	Out of Service	439,605	294,535	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW50	Unknown	Unknown	Out of Service	11,507	7,720	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW51	Unknown	Unknown	Out of Service	11,634	7,755	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW52	-122.743387	45.56582216	Jet A	3,229,800	2,163,966	1915	Vertical Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	1,081,983	2,163,966
4	Kinder Morgan South	KMW54	-122.7430861	45.56614789	Diesel	3,435,600	2,301,852	1929	Vertical Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	1,150,296	2,301,852
4	Kinder Morgan South	KMW56	Unknown	Unknown	Out of Service	19,867	13,311	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW57	Unknown	Unknown	Out of Service	19,800	13,266	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW58	Unknown	Unknown	Out of Service	19,800	13,266	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW59	Unknown	Unknown	Out of Service	19,855	13,303	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW6	-122.7431268	45.56515305	Out of Service	215,166	144,161	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW60	Unknown	Unknown	Out of Service	19,824	13,282	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW61	-122.7438671	45.56518029	Out of Service	25,200	16,884	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW62	-122.7437893	45.56515017	Out of Service	11,676	7,823	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW63	-122.7431296	45.56487495	Out of Service	24,766	16,593	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW65	Unknown	Unknown	Out of Service	861,336	577,095	1930	Vertical Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	288,548	577,095
4	Kinder Morgan South	KMW65	Unknown	Unknown	Out of Service	856,600	574,056	1930	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW69	-122.7423084	45.56526554	Jet A	3,431,400	2,299,038	1937	Vertical Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	1,149,519	2,299,038
4	Kinder Morgan South	KMW7	-122.7430954	45.56552925	Out of Service	440,538	295,160	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW70	-122.7425286	45.56489969	Jet A	1,461,600	979,272	1938	Vertical Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	489,636	979,272
4	Kinder Morgan South	KMW71	-122.7426722	45.56612458	Transmix	862,260	577,714	1937	Vertical Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	288,857	577,714
4	Kinder Morgan South	KMW72	Unknown	Unknown	Out of Service	549,024	367,846	1937	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW73	-122.7427748	45.56519298	Transmix	546,714	366,298	1937	Vertical Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	183,149	366,298
4	Kinder Morgan South	KMW74	-122.7427851	45.56545285	Out of Service	305,712	204,827	1937	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW75	-122.7431136	45.56492422	Out of Service	25,000	16,750	1938	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW76	-122.7434435	45.56499117	Out of Service	25,000	16,750	1938	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW77	Unknown	Unknown	Out of Service	25,741	17,246	1938	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW8	-122.7429629	45.56533084	Out of Service	216,804	145,259	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW82	Unknown	Unknown	Out of Service	11,642	7,800	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW83	Unknown	Unknown	Out of Service	19,867	13,311	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW84	-122.7444933	45.56604701	Gasoline	2,356,200	1,578,654	1948	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	789,327	1,578,654
4	Kinder Morgan South	KMW85	-122.7442008	45.56638834	Diesel	2,347,800	1,573,026	1948	Vertical Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	786,513	1,573,026
4	Kinder Morgan South	KMW86	-122.7445855	45.56569038	Out of Service	222,805	149,279	1948	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW87	-122.7447579	45.56573139	Out of Service	222,469	149,054	1948	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW88	-122.7446782	45.5655895	Out of Service	222,574	149,125	1948	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW89	-122.7448503	45.56562528	Out of Service	222,919	149,356	1948	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW9	Unknown	Unknown	Out of Service	22,722	15,224	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW90	Unknown	Unknown	Out of Service	2,982	1,998	1946	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	McCall Oil	MC1	-122.7355852	45.5646169	Asphalt	11,247,180	7,535,611	1976	Cone Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	3,767,805	7,535,611
4	McCall Oil	MC10	-122.7356888	45.56405291	Biodesel	469,392	314,493	1974	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	157,246	314,493
4	McCall Oil	MC11	-122.7339086	45.56372321	Oil and water	20,182	13,507	1974	Cone Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	6,754	13,507
4	McCall Oil	MC12	-122.734043	45.56387134	Oil and water	10,080	6,754	1974	Cone Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	3,377	6,754
4	McCall Oil	MC15	Unknown	Unknown	Flux	21,840	14,633	1986	Cone Roof	Group 3A	Unknown	Unknown	Potentially in Water	Tank Failure	50%	100%	7,316	14,633
4	McCall Oil	MC16	Unknown	Unknown	Flux	30,198	20,233	1989	Cone Roof	Group 3A	Unknown	Unknown	Potentially in Water	Tank Failure	50%	100%	10,116	20,233
4	McCall Oil	MC18	Unknown	Unknown	Anti-strip	4,914	3,292	1989	Cone Roof	Group 3A	Unknown	Unknown	Potentially in Water	Tank Failure	50%	100%	1,646	3,292
4	McCall Oil	MC19	-122.7356113	45.56250143	Asphalt	427,770	286,606	1954	Cone Roof	Group 3A	Category 1	Yes	Potentially in Water	Tank Failure	50%	100%	143,303	286,606
4	McCall Oil	MC20	-122.734734	45.56402897	Asphalt	11,787,300	7,897,491	1973	Cone Roof	Group 3A	Category 1	Yes	Potentially in Water	Tank Failure	50%	100%	3,948,746	7,897,491
4	McCall Oil	MC21	-122.7357784	45.56237886														

Area	Property	Tank ID ¹	Latitude	Longitude	Contents	Capacity (Gal)	Expected Fill (Gal) (%) ⁶	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost Min	Percent Lost Max	Volume Lost Min	Volume Lost Max
3	Northwest Natural Gas	NW/Tank 001	Unknown	Unknown	Liquefied Natural Gas	7,100,000	4,757,000	2005	NA	Group 3C	Category 1	Yes	On Land	No Tank Failure	0%	10%	0	475,700
2	Shore Terminals	NU10026	-122.7726379	45.58809999	Gasoline/Diesel ¹	4,200,000	2,814,000	2007	Internal Floating Roof	Group 3C	Category 1	Yes	Material in Water	No Tank Failure	0%	10%	0	281,400
2	Shore Terminals	NU10027	-122.7727619	45.58853083	Gasoline/Diesel ¹	4,200,000	2,814,000	2007	Internal Floating Roof	Group 3C	Category 1	Yes	Material in Water	No Tank Failure	0%	10%	0	281,400
2	Shore Terminals	NU10029	-122.7741313	45.58949818	Gasoline/Diesel ¹	392,887	263,234	1981	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	131,617	263,234
2	Shore Terminals	NU1010	-122.773869	45.58924206	Gasoline/Diesel ¹	393,264	263,487	1980	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	131,743	263,487
2	Shore Terminals	NU1011	-122.7736576	45.58905227	Ethanol/Gasoline ²	393,149	263,410	1980	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	131,705	263,410
2	Shore Terminals	NU1315	Unknown	Unknown	Out of Service	56,124	37,603	1938	Cone	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
2	Shore Terminals	NU1316	Unknown	Unknown	Out of Service	56,112	37,595	1938	Cone	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
2	Shore Terminals	NU181	Unknown	Unknown	Gasoline/Diesel Additive ⁴	7,685	5,149	NA	Cone	Group 3A	Category 2	Yes	Material in Water	Tank Failure	50%	100%	2,574	5,149
2	Shore Terminals	NU195	Unknown	Unknown	Unavailable	NA	NA	NA	NA	Group 1	Unknown	Unknown	Material in Water	Tank Failure	50%	100%	NA	NA
2	Shore Terminals	NU2020	-122.7766875	45.59125128	Gasoline	821,940	550,700	1935	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	275,350	550,700
2	Shore Terminals	NU2021	-122.7764639	45.59143329	Gasoline	832,032	557,461	1935	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	278,731	557,461
2	Shore Terminals	NU2022	-122.776409	45.59161904	Gasoline	832,032	557,461	1935	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	278,731	557,461
2	Shore Terminals	NU2113	-122.7783372	45.59310793	Biodiesel	865,857	580,124	1938	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	290,062	580,124
2	Shore Terminals	NU212	Unknown	Unknown	Unavailable	NA	NA	NA	NA	Group 1	Unknown	Unknown	Material in Water	Tank Failure	50%	100%	NA	NA
2	Shore Terminals	NU23	Unknown	Unknown	Gasoline/Diesel Additive ⁴	10,048	6,732	NA	Cone	Group 3A	Category 2	Yes	Material in Water	Tank Failure	50%	100%	3,366	6,732
2	Shore Terminals	NU24	Unknown	Unknown	Biodiesel Additive ⁷	NA	NA	NA	Horizontal Tank	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	NA	NA
2	Shore Terminals	NU2511	-122.7772244	45.59263216	Marine Fuel Oil	1,060,587	710,593	1925	Cone	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	355,297	710,593
2	Shore Terminals	NU2512	-122.7774697	45.59239859	Marine Fuel Oil	1,049,587	703,223	1925	Cone	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	351,612	703,223
2	Shore Terminals	NU2705	-122.7737092	45.58884477	Diesel	1,158,532	776,216	1980	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	388,108	776,216
2	Shore Terminals	NU2706	-122.7739516	45.58904652	Gasoline/Diesel ³	1,085,895	727,550	1980	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	363,775	727,550
2	Shore Terminals	NU30	Unknown	Unknown	Unavailable	NA	NA	NA	NA	Group 1	Unknown	Unknown	Material in Water	Tank Failure	50%	100%	NA	NA
2	Shore Terminals	NU3201	-122.7740642	45.58976931	Ethanol	1,264,793	847,411	1979	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	423,706	847,411
2	Shore Terminals	NU3203	-122.7735485	45.58932425	Gasoline/Diesel ¹	1,265,942	848,181	1979	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	424,091	848,181
2	Shore Terminals	NU3204	-122.7732816	45.5891061	Gasoline/Diesel ³	1,267,302	849,092	1979	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	424,546	849,092
2	Shore Terminals	NU3510	-122.7788207	45.5928867	Ethanol	1,456,019	975,533	1937	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	487,766	975,533
2	Shore Terminals	NU3605	-122.7781073	45.59288672	Marine Fuel Oil	1,442,470	966,455	1938	Cone	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	483,227	966,455
2	Shore Terminals	NU3614	-122.7773272	45.59172431	Gasoline/Diesel ¹	1,398,810	937,203	1958	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	468,601	937,203
2	Shore Terminals	NU4402	-122.7738333	45.58953782	Gasoline/Diesel ¹	1,761,801	1,180,407	1979	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	590,203	1,180,407
2	Shore Terminals	NU4507	-122.7742007	45.58926922	Out of Service	1,849,692	1,239,294	1980	Internal Floating Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
2	Shore Terminals	NU5209	Unknown	Unknown	Gasoline/Diesel ³	2,190,678	1,467,754	1971	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	733,877	1,467,754
2	Shore Terminals	NU5618	-122.7768358	45.59187153	Gasoline	2,220,204	1,487,537	1958	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	743,768	1,487,537
2	Shore Terminals	NU5901	-122.7779346	45.59221306	Gasoline	2,414,958	1,618,022	1929	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	809,011	1,618,022
2	Shore Terminals	NU5902	-122.7782457	45.59245726	Diesel	2,386,734	1,599,112	1929	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	799,556	1,599,112
2	Shore Terminals	NU5919	-122.7769585	45.59154822	Diesel	2,147,688	1,438,951	1935	Cone	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	719,475	1,438,951
2	Shore Terminals	NU6408	-122.7744878	45.58954172	Gasoline/Diesel ¹	2,649,782	1,775,354	1981	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	887,677	1,775,354
2	Shore Terminals	NU703	-122.7784691	45.59276671	Cutter	309,498	207,364	1938	Internal Floating Roof	Group 3A	Unknown	Unknown	Material in Water	Tank Failure	50%	100%	103,682	207,364
2	Shore Terminals	NU8006	-122.7758206	45.59059861	Gasoline/Diesel ¹	3,379,698	2,264,398	1953	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	1,132,199	2,264,398
2	Shore Terminals	NU8007	-122.7753257	45.59022907	Gasoline	3,338,748	2,236,961	1953	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	1,118,481	2,236,961
2	Shore Terminals	NU8308	-122.7774695	45.59022889	Gasoline/Diesel ¹	3,352,746	2,246,340	1969	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	1,123,170	2,246,340
3	Pacific Terminal Services	PA1	-122.760951	45.58009285	Residual Oil ⁶	60,000	40,200	1980	NA	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	20,100	40,200
3	Pacific Terminal Services	PA2	-122.7614372	45.5801335	Diesel Oil	60,000	40,200	1980	NA	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	20,100	40,200
3	Pacific Terminal Services	PA3	-122.7612778	45.57987482	Residual Oil ⁶	20,000	13,400	1980	NA	Group 3A	Category 1	Yes	Potentially in Water	Tank Failure	50%	100%	6,700	13,400
3	Pacific Terminal Services	PA4	-122.7593325	45.57970575	Residual Oil ⁶	80,000	53,600	1940	NA	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	26,800	53,600
3	Pacific Terminal Services	PA5	-122.7598176	45.57956533	Residual Oil ⁶	55,000	36,850	1940	NA	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	18,425	36,850
3	Pacific Terminal Services	PA6	Unknown	Unknown	Diesel Oil	12	8	1988	NA	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	4	8
3	Pacific Terminal Services	PA7	Unknown	Unknown	Residual Oil ⁶	475	318	1993	NA	Group 3B	Category 1	Yes	Material in Water	No Tank Failure ⁸	0%	10%	0	32
4	Conoco Phillips	PH1471	Unknown	Unknown	Hydraulic Tractor Oil	17,300	11,591	1921	Riveted Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	5,796	11,591
4	Conoco Phillips	PH2561	-122.7406622	45.56199187	Marine Fuel Oil	1,569,582	1,051,620	1929	Riveted Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	525,810	1,051,620
4	Conoco Phillips	PH2579	-122.7409117	45.56141165	Hydraulic Tractor Oil	1,800	1,206	1929	Riveted Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	603	1,206
4	Conoco Phillips	PH2669	-122.7408642	45.56177225	Marine Diesel	449,694	301,295	1931	Riveted Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	150,647	301,295
4	Conoco Phillips	PH2713	-122.7407984	45.56149485	Unix AW 46	109,000	73,030	1937	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	36,515	73,030
4	Conoco Phillips	PH2714	-122.7406992	45.56143945	Guard ¹⁰ 15W/40	109,000	73,030	1937	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	36,515	73,030
4	Conoco Phillips	PH2783	-122.7402992	45.56190648	Decant Oil	948,066	635,204	1937	Riveted Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	317,602	635,204
4	Conoco Phillips	PH2784	-122.7405757	45.56158066	Diesel #2	1,439,130	964,217	1937	Riveted Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	482,109	964,217
4	Conoco Phillips	PH2915	-122.7402777	45.5627496	Unleaded Gasoline	3,262,056	2,185,578	1938	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,092,789	2,185,578
4	Conoco Phillips	PH2916	-122.7398776	45.56312098	Diesel #2	1,652,196	1,106,971	1938	Welded Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	553,486	1,106,971
4	Conoco Phillips	PH2917	-122.7407079	45.56226216	RLOP 220 N	612,000	410,040	1938	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	205,020	410,040
4	Conoco Phillips	PH2982	-122.7402796	45.56314045	Diesel #1	416,262	278,896	1941	Welded Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	139,448	278,896
4	Conoco Phillips	PH2983	-122.7400919	45.5633032	RLOP 220 N	304,000	203,680	1941	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	101,840	203,680

Area	Property	Tank ID ¹	Latitude	Longitude	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ⁹	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost Min	Percent Lost Max	Volume Lost Min	Volume Lost Max
4	Conoco Phillips	PH4243	20.3925991	-122.7407215	HT4/10W	17,500	11,725	1968	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4244	20.3925991	-122.7395284	Mohawk 450	17,500	11,725	1968	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4245	20.3925991	-122.7394836	SUN 525	17,500	11,725	1968	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4252	27.0837994	-122.7396113	Residual Fuel Oil ⁸	458,640	307,289	1968	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	153,644	307,289
4	Conoco Phillips	PH4253	24.6357994	-122.7394345	Residual Fuel Oil ⁸	451,290	302,364	1968	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	151,182	302,364
4	Conoco Phillips	PH4254	25.1194992	-122.7392325	PS 300	459,312	307,739	1968	Welded Steel	Group 3A	Category 1	No	On Land	Tank Failure	50%	100%	153,870	307,739
4	Conoco Phillips	PH4255	22.1005993	-122.7390399	Biodiesel	404,250	270,848	1968	Welded Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	135,424	270,848
4	Conoco Phillips	PH4256	35.1484985	-122.7390611	Out of Service	195,408	130,923	1968	Welded Steel	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Conoco Phillips	PH4257	6.8944988	-122.7389296	Out of Service	38,367	25,706	1968	Welded Steel	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Conoco Phillips	PH4258	20.9752007	-122.7394522	Line Clippings	18,000	12,060	1968	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	6,030	12,060
4	Conoco Phillips	PH4259	22.4150009	-122.7403023	Transmix	205,506	137,689	1968	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	68,845	137,689
4	Conoco Phillips	PH4266	20.3925991	-122.7394953	Flush	17,500	11,725	1968	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4281	20.3925991	-122.7406945	Versa Tran ATF	17,500	11,725	1969	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4300	29.7148991	-122.7410065	RAMOR CLF 17E	25,500	17,085	1969	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,543	17,085
4	Conoco Phillips	PH4302	20.3925991	-122.7393842	RLOP 600N	17,500	11,725	1971	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4303	20.3925991	-122.7393433	RLOP 100N	17,500	11,725	1971	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4305	10.3711004	-122.7392923	Out of Service	8,900	5,963	1971	Welded Steel	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Conoco Phillips	PH4306	35.9230995	-122.7393363	RLOP 100N	200,000	134,000	1971	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	67,000	134,000
4	Conoco Phillips	PH4318	28.8628006	-122.7387696	Diesel #2	1,422,456	953,046	1973	Welded Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	476,523	953,046
4	Conoco Phillips	PH4320	24.1548004	-122.7390204	Sup Syn BL 10W/30	35,000	23,450	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	11,725	23,450
4	Conoco Phillips	PH4321	24.1548004	-122.7389672	Unigude II 100	35,000	23,450	1973	Welded Steel	Group 3A	Category 1	No	On Land	Tank Failure	50%	100%	11,725	23,450
4	Conoco Phillips	PH4322	18.7318001	-122.7389181	TSX HD 15W/40	35,000	23,450	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	11,725	23,450
4	Conoco Phillips	PH4323	24.6152992	-122.7388612	Super ATF	35,000	23,450	1973	Welded Steel	Group 3A	Category 2	No	On Land	Tank Failure	50%	100%	11,725	23,450
4	Conoco Phillips	PH4327	Unknown	Unknown	Gasoline Slops ⁸	10,080	6,754	1974	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	3,377	6,754
4	Conoco Phillips	PH4331	29.7148991	-122.7409103	Ethyl HITEC 5888E	25,500	17,085	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,543	17,085
4	Conoco Phillips	PH4332	20.3925991	-122.7406396	Super ATF	17,500	11,725	1973	Welded Steel	Group 3A	Category 2	No	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4333	20.3925991	-122.7406705	Point Premier 10W/30	17,500	11,725	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4334	20.3925991	-122.7406998	Super 5W/20	17,500	11,725	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4369	12.0774002	-122.7408036	RLOP 220 N	17,500	11,725	1979	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4388	15.7313995	-122.7410139	Utility	13,500	9,045	1984	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4389	15.7313995	-122.7410435	Utility	13,500	9,045	1984	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4390	15.7313995	-122.7410778	Bar & Chain 150	13,500	9,045	1985	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4391	15.7313995	-122.7411106	Utility	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4392	15.7313995	-122.7410505	Utility	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4393	15.7313995	-122.7410832	Utility	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4394	15.7313995	-122.7411133	Utility	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4395	15.7313995	-122.7411464	Utility	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4397	15.7313995	-122.7410945	Utility	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4398	15.7313995	-122.7411225	Lubrizol 9692A	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4399	15.7313995	-122.7411564	HITEC 1193A	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4400	15.7313995	-122.7411847	Firebird 15W/40	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4401	15.7313995	-122.7411847	Guardol 30	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4401	Unknown	Unknown	Mohawk 150	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4402	Unknown	Unknown	TSX HD10	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4403	15.7313995	-122.7411917	HT4/30W	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4404	15.7313995	-122.7412239	Fleet Sup EC 15W/40	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4405	15.7313995	-122.7411642	HITEC 3472	13,500	9,045	1987	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4406	15.7313995	-122.7411196	Lubrizol 9990A	13,500	9,045	1987	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4407	15.7313995	-122.7412283	Ethyl HITEC 388	13,500	9,045	1987	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4408	15.7313995	-122.7412161	Ethyl HITEC 5756	13,500	9,045	1987	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4441	12.9697004	-122.7410332	Castor 9056	18,648	12,494	1993	Welded Steel	Group 3B	Unknown	Yes	On Land	No Tank Failure	50%	100%	0	4,249
4	Conoco Phillips	PHF103	Unknown	Unknown	ULTRA 58	25,500	17,085	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,543	17,085
4	Conoco Phillips	PHF104	Unknown	Unknown	ULTRA 59	17,500	11,725	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Zenith Energy	Tank 129	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 128	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 127	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 70	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 125	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 124	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 123	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 122	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 121	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 120	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 112	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 110	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 101	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 126	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 003	Unknown	Unknown	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 71	Unknown	Unknown	Avgas	NA	1,402,380	NA	Internal Floating Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	701,190	1,402,380
4	Zenith Energy	Tank 184	Unknown	Unknown	Biodiesel	NA	222,000	NA	NA	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	111,000	222,000
4	Zenith Energy	Tank 307	Unknown	Unknown	Caustic	NA	NA	NA	NA	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 74	Unknown	Unknown	Charge Stock	NA	NA	NA	NA	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 100																

Area	Property	Tank ID ¹	Latitude	Longitude	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ⁹	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost Min	Percent Lost Max	Volume Lost Min	Volume Lost Max
4	Zenith Energy	Tank 114	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 302	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 162	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 166	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 167	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 168	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 169	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 170	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 171	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 172	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 20	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 173	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 174	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 180	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 179	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 206	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 210	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 177	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 176	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 178	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 161	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 200	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 201	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	N2	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 317	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	BAS #2	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	KO #5	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	BAS #3	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	BAS #4	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 160	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 161	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 314	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 002	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	KO #2	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	CAS #5	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	BAS #1	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 305	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	KO #1	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 163	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 164	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 165	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 152	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 151	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 158	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 157	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 156	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 148	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 149	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 150	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 142	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 143	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 144	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 147	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 146	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 145	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 140	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 141	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 300	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	K-23	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	TW-2	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 207	Unknown	Unknown	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 66	Unknown	Unknown	Universal Low-Sulfur Diesel	NA	3,188,598	NA	NA	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	1,594,299	3,188,598
4	Zenith Energy	Tank 111	Unknown	Unknown	Wastewater	NA	NA	NA	NA	Group 3A	Not Flammable	No	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 113	Unknown	Unknown	Wastewater	NA	NA	NA	NA	Group 3A	Not Flammable	No	On Land	Tank Failure	50%	100%	NA	NA

Notes:

- ¹Tanks noted in satellite images, but not listed in available GIS data, are given the designation based on property ID and count, and are italicized. Example: Kinder Morgan North = *KML Tank 1 *
- ²Tank contents were listed as both gasoline and ethanol; flammability and hazard category are for gasoline.
- ³Tank contents were listed as both gasoline and diesel; flammability and hazard category are for gasoline.
- ⁴Tank contents were listed as both gasoline and diesel additives; flammability and hazard category are for gasoline.
- ⁵Tank contents were listed as gasoline slops; flammability and hazard category are for gasoline.
- ⁶Residual Oil and Residual Fuel Oil is a general classification for heavier oils that remain after the distillate fuel oil and lighter hydrocarbons are removed. The type of lighter hydrocarbon is unknown and therefore defaulted to the most flammable category.
- ⁷Tank contents were listed as biodiesel additive; flammability and hazard category are for biodiesel.
- ⁸Tank data provided by COP without geographic location; failure assumption made from satellite imagery.
- ⁹Zenith Energy tank fill provided directly from Portland Fire and Rescue.
 - Category 1 - Liquids with flashpoints below 73.4°F (23°C) and boiling points at or below 95°F (35°C).
 - Category 2 - Liquids with flashpoints below 73.4°F (23°C) and boiling points at or above 95°F (35°C).
 - Category 3 - Liquids with flashpoints at or above 73.4°F (23°C) and at or below 140°F (60°C).
 - Category 4 - Liquids having flashpoints above 140°F (60°C) and at or below 199.4°F (93°C).
- NA - Data not available
- No - Tank substance is not hazardous.
- None - Flammability category and/or hazard category is not applicable due to tank status of Out of Service.
- Not Flammable - Tank contents are not flammable and do not fall into Category 1-4.
- Unknown - Flammability category or hazard category unknown due to unknown tank contents, or tank contents not defined in a suitable way to ascertain flammability or hazard categories.
- Yes - Tank substance is hazardous.

APPENDIX B
Tanks with Potential to Release to Willamette River



Appendix B: Tanks with Potential to Release to Willamette River

Area	Property	Tank ID ^a	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ^b	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures		Percent Lost Min	Percent Lost Max	Volume Lost Min	Volume Lost Max
												0%	100%				
2	BP	BP1	Gasoline	3,808,434	2,551,651	1940	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	1,275,825	2,551,651	
2	BP	BP10	Diesel	1,008,840	675,923	1941	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	375,923	675,923	
2	BP	BP11	Gasoline	1,354,122	907,262	1940	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	453,631	907,262	
2	BP	BP12	Ethanol	605,346	405,582	1961	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	202,791	405,582	
2	BP	BP13	Ethanol	602,994	404,006	1961	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	202,003	404,006	
2	BP	BP14	Diesel	1,121,736	751,563	1942	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	375,782	751,563	
2	BP	BP15	Biodiesel	804,972	539,331	1943	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	269,666	539,331	
2	BP	BP17	Diesel	3,329,340	2,230,658	1940	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	1,115,329	2,230,658	
2	BP	BP18	Diesel	1,104,726	740,166	1945	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	370,083	740,166	
2	BP	BP19	Only Wastewater	198,828	133,215	1961	Internal Floating Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	66,607	133,215	
2	BP	BP2	Groundwater Remediation	1,231,000	824,770	1957	Internal Floating Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	412,385	824,770	
2	BP	BP21	Gasoline Additive	220,080	147,454	1961	Fixed Roof	Group 3A	Category 2	Yes	Material in Water	Tank Failure	50%	100%	73,727	147,454	
2	BP	BP23a	Diesel Additive	2,000	1,340	2005	Fixed Roof	Group 3C	Category 3	Yes	Material in Water	No Tank Failure	0%	10%	0	134	
2	BP	BP23b	Diesel Lubricity Additive	2,100	1,407	2005	Horizontal Tank	Group 3C	Category 3	Yes	Material in Water	No Tank Failure	0%	10%	0	141	
2	BP	BP24	Gasoline Additive	20,286	13,592	1970	Fixed Roof	Group 3A	Category 2	Yes	Material in Water	Tank Failure	50%	100%	6,796	13,592	
2	BP	BP25	Gasoline Additive	20,241	13,561	1966	Fixed Roof	Group 3A	Category 2	Yes	Material in Water	Tank Failure	50%	100%	6,781	13,561	
2	BP	BP3	Gasoline	1,584,366	1,061,525	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	530,763	1,061,525	
2	BP	BP4	Gasoline	1,105,860	740,926	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	370,463	740,926	
2	BP	BP40	Unavailable	0	0	1954	Fixed Roof	Group 1	Unknown	Unknown	Material in Water	Tank Failure	50%	100%	0	0	
2	BP	BP41	Out of Service	0	0	1954	Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
2	BP	BP42	Out of Service	0	0	1954	Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
2	BP	BP43	Out of Service	0	0	1954	Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
2	BP	BP44	Out of Service	0	0	1954	Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
2	BP	BP45	Unavailable	0	0	1954	Fixed Roof	Group 1	Unknown	Unknown	Material in Water	Tank Failure	50%	100%	0	0	
2	BP	BP46	Biodiesel	221,970	148,720	1954	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	74,360	148,720	
2	BP	BP5	Gasoline	895,314	599,860	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	299,930	599,860	
2	BP	BP6	Gasoline	1,014,384	679,637	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	339,819	679,637	
2	BP	BP7	Gasoline	648,018	434,172	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	217,086	434,172	
2	BP	BP8	Gasoline	790,272	529,482	1957	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	264,741	529,482	
2	BP	BP9	Diesel	2,295,636	1,538,076	1940	Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	789,038	1,538,076	
1	Kinder Morgan North	KML10007	Out of Service	418,278	179,196	1922	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML11017	Out of Service	469,938	179,196	1941	Internal Floating Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML11019	Out of Service	469,996	179,196	1941	Internal Floating Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML17018	Gasoline	735,714	179,196	1941	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	89,598	179,196	
1	Kinder Morgan North	KML17020	Gasoline	742,896	179,196	1941	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	89,598	179,196	
1	Kinder Morgan North	KML17027	Gasoline	739,074	179,196	1954	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	89,598	179,196	
1	Kinder Morgan North	KML20011	Diesel	856,506	179,196	1932	Vertical Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	89,598	179,196	
1	Kinder Morgan North	KML2024	Out of Service	92,896	179,196	1937	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML30016	Diesel	1,253,784	840,035	1941	Vertical Fixed Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	420,018	840,035	
1	Kinder Morgan North	KML3034	Storm Water	137,046	91,821	1925	Vertical Fixed Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	45,910	91,821	
1	Kinder Morgan North	KML305	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML306	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML309	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML310	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML312	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML313	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML314	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML315	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML326	Out of Service	12,600	8,442	NA	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML330	Out of Service	12,012	8,048	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML331	Out of Service	12,936	8,667	1926	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML45028	Gasoline	1,889,538	1,265,990	1955	Internal Floating Roof	Group 2A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	632,995	1,265,990	
1	Kinder Morgan North	KML532	Out of Service	29,908	20,038	1965	Vertical Fixed Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML55008	Out of Service	2,288,832	1,533,517	1933	Vertical Fixed Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML55022	Gasoline	2,309,286	1,547,222	1928	Vertical Fixed Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	773,611	1,547,222	
1	Kinder Morgan North	KML55023	Out of Service	2,312,016	1,549,051	1944	Internal Floating Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
1	Kinder Morgan North	KML59029	Gasoline	2,454,060	1,644,220	1955	Vertical Fixed Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	822,110	1,644,220	
1	Kinder Morgan North	KML72021	Diesel	2,842,297	1,904,339	2011	Vertical Fixed Roof	Group 3C	Category 3	Yes	Material in Water	No Tank Failure	0%	10%	0	190,434	
1	Kinder Morgan North	KMLSalt tower	Contact Water	22,890	15,336	NA	Vertical Fixed Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	7,668	15,336	
4	McCall Oil	MC1	Asphalt	11,247,180	7,535,611	1976	Cone Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	3,767,805	7,535,611	
4	McCall Oil	MC10	Biodiesel	469,392	314,493	1974	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	157,246	314,493	
4	McCall Oil	MC11	Oil and water	20,160	13,507	1974	Cone Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	6,754	13,507	
4	McCall Oil	MC12	Oil and water	10,080	6,754	1974	Cone Roof	Group 3A	Not Flammable	Unknown	Material in Water	Tank Failure	50%	100%	3,377	6,754	
4	McCall Oil	MC4	Bunker	9,357,936	6,269,817	1976	Cone Roof	Group 3A	Category 2	Yes	Material in Water	Tank Failure	50%	100%	3,134,909	6,269,817	
4	McCall Oil	MC5	Biodiesel	17,216	18,235	1974	Cone Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	9,117	18,235	
4	McCall Oil	MC6	Biodiesel	17,216	18,235	1974	Cone Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	9,117	18,235	
4	McCall Oil	MC7	Diesel	2,658,726	1,781,346	1978	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	890,673	1,781,346	
4	McCall Oil	MC8	Diesel	2,680,482	1,795,923	1977	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	897,961	1,795,923	
4	McCall Oil	MC9	Biodiesel	473,004	316,913	1979	Cone Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	158,456	316,913	
2	Shore Terminals	NU10026	Gasoline/Diesel ^b	4,200,000	2,814,000	2007	Internal Floating Roof	Group 3C	Category 1	Yes	Material in Water	No Tank Failure	0%	10%	0	281,400	
2	Shore Terminals	NU10027	Gasoline/Diesel ^b	4,200,000	2,814,000	2007	Internal Floating Roof	Group 3C	Category 1	Yes	Material in Water	No Tank Failure	0%	10%	0	281,400	
2	Shore Terminals	NU1009	Gasoline/Diesel ^b	392,887	263,234	1981	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	131,617	263,234	
2	Shore Terminals	NU1010	Gasoline/Diesel ^b	393,264	263,487	1980	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	131,743	263,487	
2	Shore Terminals	NU1011	Ethanol/Gasoline ^b	393,149	263,410	1980	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	131,705	263,410	
2	Shore Terminals	NU1315	Out of Service	56,124	37,603	1938	Cone	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
2	Shore Terminals	NU1316	Out of Service	56,112	37,595	1938	Cone	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA	
2	Shore Terminals	NU181	Gasoline/Diesel Additive ^b	7,685	5,149	NA	Cone	Group 3A	Category 2	Yes	Material in Water	Tank Failure	50%	100%	2,574	5,149	
2	Shore Terminals	NU195	Unavailable	NA	NA	NA	NA	Group 1	Unknown	Unknown	Material in Water	Tank Failure	50%	100%	NA	NA	
2	Shore Terminals	NU200	Gasoline	821,940	550,700	1935	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	275,350	550,700	
2	Shore Terminals	NU2021	Gasoline	832,032	557,461	1935	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	278,731	557,461	
2	Shore Terminals	NU2022	Gasoline	832,032	557,461	1935	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	278,731	557,461	
2	Shore Terminals	NU2113	Biodiesel	865,857	580,124	1938	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	290,062	580,124	
2	Shore Terminals	NU212	Unavailable	NA	NA	NA	NA	Group 1									

Area	Property	Tank ID ¹	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ²	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost		Volume Lost	
													Min	Max	Min	Max
2	Shore Terminals	NU2705	Diesel	1,158,532	776,216	1980	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	388,108	776,216
2	Shore Terminals	NU2706	Gasoline/Diesel ³	1,085,895	727,550	1980	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	363,775	727,550
2	Shore Terminals	NU30	Unavailable	NA	NA	NA	NA	Group 1	Unknown	Unknown	Material in Water	Tank Failure	50%	100%	NA	NA
2	Shore Terminals	NU3201	Ethanol	1,264,793	847,411	1979	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	423,706	847,411
2	Shore Terminals	NU3203	Gasoline/Diesel ³	1,265,942	848,181	1979	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	424,091	848,181
2	Shore Terminals	NU3204	Gasoline/Diesel ³	1,267,302	849,092	1979	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	424,546	849,092
2	Shore Terminals	NU3510	Ethanol	1,456,019	975,533	1937	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	487,766	975,533
2	Shore Terminals	NU3605	Marine Fuel Oil	1,442,470	966,455	1938	Cone	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	483,227	966,455
2	Shore Terminals	NU3614	Gasoline/Diesel ³	1,398,810	937,203	1958	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	468,601	937,203
2	Shore Terminals	NU4402	Gasoline/Diesel ³	1,761,801	1,180,407	1979	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	590,203	1,180,407
2	Shore Terminals	NU4507	Out of Service	1,849,692	1,239,294	1980	Internal Floating Roof	Group 2	None	None	Material in Water	Tank Failure	50%	100%	NA	NA
2	Shore Terminals	NU5209	Gasoline/Diesel ³	2,190,678	1,467,754	1971	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	733,877	1,467,754
2	Shore Terminals	NU5618	Gasoline	2,220,204	1,487,537	1958	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	743,768	1,487,537
2	Shore Terminals	NU5901	Gasoline	2,414,958	1,618,022	1929	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	809,011	1,618,022
2	Shore Terminals	NU5902	Diesel	2,386,734	1,599,112	1929	Internal Floating Roof	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	799,556	1,599,112
2	Shore Terminals	NU5919	Diesel	2,147,688	1,438,951	1935	Cone	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	719,475	1,438,951
2	Shore Terminals	NU6408	Gasoline/Diesel ³	2,649,782	1,775,354	1981	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	887,677	1,775,354
2	Shore Terminals	NU703	Cutter	309,498	207,364	1938	Internal Floating Roof	Group 3A	Unknown	Unknown	Material in Water	Tank Failure	50%	100%	103,682	207,364
2	Shore Terminals	NU8006	Gasoline/Diesel ³	3,379,698	2,264,398	1953	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	1,132,199	2,264,398
2	Shore Terminals	NU8007	Gasoline	3,338,748	2,236,961	1953	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	1,116,481	2,236,961
2	Shore Terminals	NU8308	Gasoline/Diesel ³	3,352,746	2,246,340	1969	Internal Floating Roof	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	1,123,170	2,246,340
3	Pacific Terminal Services	PA1	Residual Oil ⁴	60,000	40,200	1980	NA	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	20,100	40,200
3	Pacific Terminal Services	PA2	Diesel Oil	60,000	40,200	1980	NA	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	20,100	40,200
3	Pacific Terminal Services	PA4	Residual Oil ⁴	80,000	53,600	1940	NA	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	26,800	53,600
3	Pacific Terminal Services	PA5	Residual Oil ⁴	55,000	36,850	1940	NA	Group 3A	Category 1	Yes	Material in Water	Tank Failure	50%	100%	18,425	36,850
3	Pacific Terminal Services	PA6	Diesel Oil	12	8	1988	NA	Group 3A	Category 3	Yes	Material in Water	Tank Failure	50%	100%	4	8
3	Pacific Terminal Services	PA7	Residual Oil ⁴	475	318	1993	NA	Group 3B	Category 1	Yes	Material in Water	No Tank Failure ⁸	0%	10%	0	32

Notes:

- ¹ Tanks noted in satellite images, but not listed in available GIS data, are given the designation based on property ID and count, and are *italicized*. Example: Kinder Morgan North = *KML-Tank 1*
 - ² Tank contents were listed as both gasoline and ethanol; flammability and hazard category are for gasoline.
 - ³ Tank contents were listed as both gasoline and diesel; flammability and hazard category are for gasoline.
 - ⁴ Tank contents were listed as both gasoline and diesel additives; flammability and hazard category are for gasoline.
 - ⁵ Tank contents were listed as gasoline slops; flammability and hazard category are for gasoline.
 - ⁶ Residual Oil and Residual Fuel Oil is a general classification for heavier oils that remain after the distillate fuel oil and lighter hydrocarbons are removed. The type of lighter hydrocarbon is unknown and therefore defaulted to the most flammable category.
 - ⁷ Tank contents were listed as biodiesel additive; flammability and hazard category are for biodiesel.
 - ⁸ Tank data provided by COP without geographic location; failure assumption made from satellite imagery.
 - ⁹ Zenith Energy tank fill provided directly from Portland Fire and Rescue.
- Category 1 - Liquids with flashpoints below 73.4°F (23°C) and boiling points at or below 95°F (35°C).
Category 2 - Liquids with flashpoints below 73.4°F (23°C) and boiling points at or above 95°F (35°C).
Category 3 - Liquids with flashpoints at or above 73.4°F (23°C) and at or below 140°F (60°C).
Category 4 - Liquids having flashpoints above 140°F (60°C) and at or below 199.4°F (93°C).
NA - Data not available
No - Tank substance is not hazardous.
None - Flammability category and/or hazard category is not applicable due to tank status of Out of Service.
Not Flammable - Tank contents are not flammable and do not fall into Category 1-4.
Unknown - Flammability category or hazard category unknown due to unknown tank contents, or tank contents not defined in a suitable way to ascertain flammability or hazard categories.
Yes - Tank substance is hazardous.

APPENDIX C
Tanks with Potential to Release and Flow to Willamette River



Appendix C: Tanks with Potential to Release and Flow to Willamette River

Area	Property	Tank ID ¹	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ²	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost Min	Percent Lost Max	Volume Lost Min	Volume Lost Max
4	Chevron	CH1	Unleaded Gasoline	3,412,315	2,286,251	1997	Internal Floating Roof	Group 3B	Category 1	Yes	Potentially in Water	Tank Failure	0%	10%	0	228,625
4	McCall Oil	MC15	Flux	21,840	14,633	1986	Cone Roof	Group 3A	Unknown	Unknown	Potentially in Water	Tank Failure	50%	100%	7,316	14,633
4	McCall Oil	MC16	Flux	30,198	20,233	1989	Cone Roof	Group 3A	Unknown	Unknown	Potentially in Water	Tank Failure	50%	100%	10,116	20,233
4	McCall Oil	MC18	Anti-strip	4,914	3,292	1989	Cone Roof	Group 3A	Unknown	Unknown	Potentially in Water	Tank Failure	50%	100%	1,646	3,292
4	McCall Oil	MC19	Asphalt	427,770	286,606	1954	Cone Roof	Group 3A	Category 1	Yes	Potentially in Water	Tank Failure	50%	100%	143,303	286,606
4	McCall Oil	MC2	Asphalt	11,787,300	7,897,491	1973	Cone Roof	Group 3A	Category 1	Yes	Potentially in Water	Tank Failure	50%	100%	3,948,746	7,897,491
4	McCall Oil	MC20	Asphalt	427,770	286,606	1954	Cone Roof	Group 3A	Category 1	Yes	Potentially in Water	Tank Failure	50%	100%	143,303	286,606
4	McCall Oil	MC21	Asphalt	428,064	286,803	1954	Cone Roof	Group 3A	Category 1	Yes	Potentially in Water	Tank Failure	50%	100%	143,401	286,803
4	McCall Oil	MC23	Asphalt	18,942	12,691	1954	Cone Roof	Group 3A	Category 1	Yes	Potentially in Water	Tank Failure	50%	100%	6,346	12,691
4	McCall Oil	MC24	Asphalt	19,068	12,776	2000	Cone Roof	Group 3B	Category 1	Yes	Potentially in Water	No Tank Failure ⁸	0%	10%	0	1,278
4	McCall Oil	MC25	Asphalt	79,800	53,466	2000	Cone Roof	Group 3B	Category 1	Yes	Potentially in Water	No Tank Failure ⁸	0%	10%	0	5,347
4	McCall Oil	MC26	Asphalt	79,800	53,466	2000	Cone Roof	Group 3B	Category 1	Yes	Potentially in Water	No Tank Failure ⁸	0%	10%	0	5,347
4	McCall Oil	MC27	Asphalt	79,800	53,466	2000	Cone Roof	Group 3B	Category 1	Yes	Potentially in Water	No Tank Failure ⁸	0%	10%	0	5,347
4	McCall Oil	MC28	Boiler Fuel	8,358	5,600	1954	Cone Roof	Group 3A	Category 1	Yes	Potentially in Water	Tank Failure	50%	100%	2,800	5,600
4	McCall Oil	MC29	Unichem	11,000	7,370	1974	Cone Roof	Group 3A	Unknown	Unknown	Potentially in Water	Tank Failure	50%	100%	3,685	7,370
4	McCall Oil	MC33	Polyphosphoric Acid	5,405	3,621	2005	Cone Roof	Group 3C	Not Flammable	Yes	Potentially in Water	No Tank Failure	0%	10%	0	362
3	Pacific Terminal Services	PA3	Residual Oil ⁶	20,000	13,400	1980	NA	Group 3A	Category 1	Yes	Potentially in Water	Tank Failure	50%	100%	6,700	13,400
4	Conoco Phillips	PH3407	Unleaded Gasoline	2,955,540	1,980,212	1949	Welded Steel	Group 3A	Category 1	Yes	Potentially in Water	Tank Failure	50%	100%	990,106	1,980,212

Notes:

- ¹Tanks noted in satellite images, but not listed in available GIS data, are given the designation based on property ID and count, and are *italicized*. Example: Kinder Morgan North = "KML-Tank 1"
- ²Tank contents were listed as both gasoline and ethanol; flammability and hazard category are for gasoline.
- ³Tank contents were listed as both gasoline and diesel; flammability and hazard category are for gasoline.
- ⁴Tank contents were listed as both gasoline and diesel additives; flammability and hazard category are for gasoline.
- ⁵Tank contents were listed as gasoline slops; flammability and hazard category are for gasoline.
- ⁶Residual Oil and Residual Fuel Oil is a general classification for heavier oils that remain after the distillate fuel oil and lighter hydrocarbons are removed. The type of lighter hydrocarbon is unknown and therefore defaulted to the most flammable category.
- ⁷Tank contents were listed as biodiesel additive; flammability and hazard category are for biodiesel.
- ⁸Tank data provided by COP without geographic location; failure assumption made from satellite imagery.
 Category 1 - Liquids with flashpoints below 73.4°F (23°C) and boiling points at or below 95°F (35°C).
 Category 2 - Liquids with flashpoints below 73.4°F (23°C) and boiling points at or above 95°F (35°C).
 Category 3 - Liquids with flashpoints at or above 73.4°F (23°C) and at or below 140°F (60°C).
 Category 4 - Liquids having flashpoints above 140°F (60°C) and at or below 199.4°F (93°C).
 NA - Data not available
 No - Tank substance is not hazardous.
 None - Flammability category and/or hazard category is not applicable due to tank status of Out of Service.
 Not Flammable - Tank contents are not flammable and do not fall into Category 1-4.
 Unknown - Flammability category or hazard category unknown due to unknown tank contents, or tank contents not defined in a suitable way to ascertain flammability or hazard categories.
 Yes - Tank substance is hazardous.

APPENDIX D
Tanks with Potential to Release to Ground Surface

Appendix D: Tanks with Potential to Release to Ground Surface

Area	Property	Tank ID ¹	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ²	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age	Failures	Percent Lost Min	Percent Lost Max	Volume Lost Min	Volume Lost Max
4	Chevron	CH10	Paratone 8451	169,616	113,643	1950	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	56,821	113,643	
4	Chevron	CH100	Gear Lube	17,624	11,808	1946	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	5,904	11,808	
4	Chevron	CH101	Compressor Oil	17,284	11,580	1958	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	5,790	11,580	
4	Chevron	CH102	Out of Service	12,954	NA	1978	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH103	Out of Service	13,006	NA	1978	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH104	Texaco Havoline 5S30	17,331	11,612	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,806	11,612	
4	Chevron	CH105	Empty	17,624	NA	1969	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH106	Delo G/L 80/90	17,818	11,938	1969	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,969	11,938	
4	Chevron	CH108	Techron Additive	208,425	139,645	1970	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	69,822	139,645	
4	Chevron	CH109	Delo GL 80/90	17,624	11,808	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,904	11,808	
4	Chevron	CH11	Lubrizol 4991D	211,915	141,983	1950	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	70,992	141,983	
4	Chevron	CH110	GST ISO 32	17,624	11,808	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,904	11,808	
4	Chevron	CH112	Oloa 6073EV	17,818	11,938	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,969	11,938	
4	Chevron	CH113	Hybase C414	17,378	11,643	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,822	11,643	
4	Chevron	CH114	Industrial EP 220	17,624	11,808	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,904	11,808	
4	Chevron	CH116	Empty	17,724	NA	1976	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH117	Raffene 2000L	17,624	11,808	1976	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,904	11,808	
4	Chevron	CH118	Blend Mix/ Line Wash	17,577	11,777	1976	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	5,888	11,777	
4	Chevron	CH119	Out of Service	19,593	NA	1977	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH12	ExxonMobil EM-100	586,302	392,822	1950	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	196,411	392,822	
4	Chevron	CH120	Out of Service	19,593	NA	1977	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH121	Out of Service	NA	NA	1978	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH122	1000 THF	61,864	41,449	NA	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	20,724	41,449	
4	Chevron	CH123	Delo 400-40	61,864	41,449	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	20,724	41,449	
4	Chevron	CH127	ATF dex 111	109,976	73,684	NA	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	36,842	73,684	
4	Chevron	CH128	Ryton Prem 32	74,586	49,973	NA	AST	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	24,986	49,973	
4	Chevron	CH129	Base Oil	642,935	430,766	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	215,383	430,766	
4	Chevron	CH13	Raffene 750L	45,682	30,607	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	15,303	30,607	
4	Chevron	CH130	Base Oil	255,112	170,925	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	85,463	170,925	
4	Chevron	CH131	Hybase C414	17,577	11,777	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,888	11,777	
4	Chevron	CH132	Empty	18,165	NA	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH133	CVX 3105	17,577	11,777	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,888	11,777	
4	Chevron	CH135	Out of Service	19,379	NA	1982	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH136	Out of Service	20,303	NA	1982	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH137	Oloa 2000	60,757	40,707	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	20,354	40,707	
4	Chevron	CH138	Drive Train Fluid HD 10	17,378	11,643	NA	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	5,822	11,643	
4	Chevron	CH139	Blend Mix/ Line Wash	25,591	17,146	NA	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	8,573	17,146	
4	Chevron	CH14	Delo 6170 CFO 20W40	190,343	127,530	1950	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	63,765	127,530	
4	Chevron	CH140	Out of Service	83,234	NA	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH141	Out of Service	140,308	NA	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH142	Base Oil	648,620	434,575	1984	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	217,288	434,575	
4	Chevron	CH143	Supreme 5W30	62,033	41,562	NA	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	20,781	41,562	
4	Chevron	CH144	Havoline 10W30	61,864	41,449	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	20,724	41,449	
4	Chevron	CH145	Out of Service	61,864	NA	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH146	Transmix	25,447	17,049	NA	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	8,525	17,049	
4	Chevron	CH147	Delo 100-40	25,523	17,100	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,550	17,100	
4	Chevron	CH148	RER 800 Mar 30	33,839	22,672	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	11,336	22,672	
4	Chevron	CH149	RPM HDMO 30	26,311	17,628	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,814	17,628	
4	Chevron	CH15	Ryton Prem 32	28,951	19,397	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	9,699	19,397	
4	Chevron	CH150	Delo 400-10	25,311	16,958	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,479	16,958	
4	Chevron	CH151	MAR EO 9250-40	17,724	11,875	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,938	11,875	
4	Chevron	CH152	Empty	17,624	NA	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH154	Map 100	83,422	55,893	NA	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	27,946	55,893	
4	Chevron	CH155	Delo 400-15W40	83,422	55,893	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	27,946	55,893	
4	Chevron	CH156	Delo 400-30	83,022	55,625	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	27,812	55,625	
4	Chevron	CH157	Turbine Oil	52,872	35,424	NA	AST	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	17,712	35,424	
4	Chevron	CH158	Out of Service	NA	NA	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH159	Out of Service	25,379	NA	1987	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH16	Clarity PM 220	29,447	19,729	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	9,865	19,729	
4	Chevron	CH160	Empty	25,447	NA	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH163	Swing Tank	6,354,155	4,257,284	2009	AST	Group 3C	Unknown	Unknown	On Land	No Tank Failure ⁸	0%	10%	0	425,728	
4	Chevron	CH164	Swing Tank	6,354,155	4,257,284	2009	AST	Group 3C	Unknown	Unknown	On Land	No Tank Failure ⁸	0%	10%	0	425,728	
4	Chevron	CH17	ExxonMobile EHC45	29,327	19,649	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	9,825	19,649	
4	Chevron	CH176	Blended Oil	2,632	1,763	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	882	1,763	
4	Chevron	CH177	Blended Oil	2,632	1,763	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	882	1,763	
4	Chevron	CH178	Blended Oil	2,632	1,763	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	882	1,763	
4	Chevron	CH179	Blended Oil	2,632	1,763	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	882	1,763	
4	Chevron	CH18	Oloa 550006L	29,583	19,821	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	9,910	19,821	
4	Chevron	CH180	Blended Oil	4,700	3,149	1993	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	315	
4	Chevron	CH181	Blended Oil	4,700	3,149	1993	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	315	
4	Chevron	CH182	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762	
4	Chevron	CH183	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762	
4	Chevron	CH184	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762	
4	Chevron	CH185	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762	
4	Chevron	CH186	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762	
4	Chevron	CH187	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762	
4	Chevron	CH188	Blended Oil	11,374	7,621	1994	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure ⁸	0%	10%	0	762	
4	Chevron	CH19	Empty	29,071	NA	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH20	Pennzoi 75HC	29,071	19,478	1914	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	9,739	19,478	
4	Chevron	CH21	Empty	29,583	NA	1992	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA	
4	Chevron	CH22	Clarity PM 220	13,982	9,368	1954	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,684	9,368	
4	Chevron	CH23	Empty	13,982	NA	1997	Fixed Roof	Group 3B	None	None	On Land	No Tank Failure ⁸	0%	10%	NA	NA	
4	Chevron	CH24	Empty	8,859	NA	1993	Fixed Roof	Group 3B	None	None	On Land	No Tank Failure ⁸	0%	10%	NA	NA	
4	Chevron	CH25	Clarity PM 150	8,665	5,806	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	2,903	5,806	
4	Chevron	CH26	Ryton Prem 32	29,447	19,729	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	9,865	19,729	
4	Chevron	CH27	Chevron 7075F	29,613	19,841	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	9,920	19,841	

Area	Property	Tank ID ¹	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ⁹	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost Min	Percent Lost Max	Volume Lost Min	Volume Lost Max
4	Chevron	CH28	Blend Mix/ Line Wash	29,071	19,478	1913	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	9,739	19,478
4	Chevron	CH28	Industrial EP 150	17,771	11,907	1949	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,953	11,907
4	Chevron	CH29	Empty	11,750	NA	1949	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH29	Undefined Petroleum	17,724	11,875	1949	Fixed Roof	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	5,938	11,875
4	Chevron	CH3	Unleaded Gasoline	2,392,178	1,602,759	1999	Fixed Roof	Group 3B	Category 1	Yes	On Land	No Tank Failure	0%	10%	0	160,276
4	Chevron	CH30	Empty	11,750	NA	1949	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH31	SynFluid \$, 4CST	8,712	5,837	1953	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	2,919	5,837
4	Chevron	CH32	Viscoplex 7-305	13,918	9,325	1950	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,663	9,325
4	Chevron	CH33	Viscoplex 1-604	13,997	9,378	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,689	9,378
4	Chevron	CH34	Empty	25,379	NA	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH35	FAMM Tara 30 DP 30	25,379	17,004	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,502	17,004
4	Chevron	CH36	Shell MV1 100	25,379	17,004	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,502	17,004
4	Chevron	CH37	Drive Train Fluid HD 10	17,378	11,643	1949	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	5,822	11,643
4	Chevron	CH4	Neutral 220R	435,761	291,960	1913	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	145,980	291,960
4	Chevron	CH40	Empty	18,018	NA	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH41	Clarity Saw Guide 46	17,331	11,612	1949	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,806	11,612
4	Chevron	CH42	Empty	29,583	NA	1913	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH43	Base Oil	837,085	560,847	1993	Fixed Roof	Group 3B	Unknown	Yes	On Land	No Tank Failure	0%	10%	0	56,085
4	Chevron	CH44	Base Oil	835,393	559,713	1920	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	279,857	559,713
4	Chevron	CH45	Ethanol	958,693	642,324	1999	Fixed Roof	Group 3B	Category 3	Yes	On Land	No Tank Failure	0%	10%	0	64,232
4	Chevron	CH46	Red Chain Bar 150	11,750	7,873	1924	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	3,936	7,873
4	Chevron	CH47	Unleaded Gasoline	3,609,743	2,418,528	1929	Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,209,264	2,418,528
4	Chevron	CH48	Water/Oil Slop	396,547	265,686	1979	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	132,843	265,686
4	Chevron	CH5	Neutral Oil	365,834	245,109	1913	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	122,554	245,109
4	Chevron	CH51	Unavailable	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH56	GST ISO 100	25,379	17,004	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,502	17,004
4	Chevron	CH57	Citgo Brt Stock 150	152,433	102,130	1921	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	51,065	102,130
4	Chevron	CH6	GEO HDAX LASH 40	100,277	67,186	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	33,593	67,186
4	Chevron	CH60	Unleaded Gasoline	4,999,697	3,349,797	2001	Fixed Roof	Group 3B	Category 1	Yes	On Land	No Tank Failure	0%	10%	0	334,980
4	Chevron	CH61	Neutral 600R	400,379	268,254	1941	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	134,127	268,254
4	Chevron	CH62	Unleaded Gasoline	6,812,135	4,564,130	2000	Fixed Roof	Group 3B	Category 1	Yes	On Land	No Tank Failure	0%	10%	0	456,413
4	Chevron	CH64	Diesel	844,275	565,664	1947	Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	282,832	565,664
4	Chevron	CH65	Lubrizol 4991	17,524	11,741	1938	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,871	11,741
4	Chevron	CH7	Famm Taro Sepcial 70	100,594	67,398	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	33,699	67,398
4	Chevron	CH72	Saw Guide 150	17,284	11,580	1959	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,790	11,580
4	Chevron	CH75	Jet Fuel	1,004,586	673,073	1952	Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	336,536	673,073
4	Chevron	CH76	Base Oil	498,258	333,833	1960	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	166,916	333,833
4	Chevron	CH77	RPM HDMO 15W40	128,511	86,102	1960	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	43,051	86,102
4	Chevron	CH78	Paratone 8451	311,722	208,854	1960	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	104,427	208,854
4	Chevron	CH79	Empty	17,378	NA	1960	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH8	Ryton Prem MV	104,897	70,281	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	35,140	70,281
4	Chevron	CH80	Out of Service	17,378	NA	NA	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH81	Empty	17,724	NA	1951	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH82	Infineum M7038	17,624	11,808	1951	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,904	11,808
4	Chevron	CH83	RPM HDMO 15W40	17,331	11,612	1951	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,806	11,612
4	Chevron	CH84	Empty	17,184	NA	1952	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH85	Oloa 44200	17,671	11,840	1952	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,920	11,840
4	Chevron	CH87	Lubrizol 4991	17,430	11,678	1913	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,839	11,678
4	Chevron	CH88	Empty	17,624	NA	1850	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH89	Oil Stop	19,431	13,019	1952	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	6,509	13,019
4	Chevron	CH9	Chevron 7075F	169,193	113,359	1949	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	56,680	113,359
4	Chevron	CH90	Delo 400-15W40	208,848	139,928	1954	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	69,964	139,928
4	Chevron	CH91	Oloa 9740C	17,671	11,840	1961	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,920	11,840
4	Chevron	CH92	Out of Service	17,577	NA	1961	Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Chevron	CH94	Ryton Oil 68	67,419	45,171	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	22,585	45,171
4	Chevron	CH96	Additive	17,624	11,808	1966	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	5,904	11,808
4	Chevron	CH97	Additive	17,624	11,808	1966	Fixed Roof	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	5,904	11,808
4	Chevron	CH98	Ryton Oil 46	91,364	61,214	1968	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	30,607	61,214
4	Chevron	CH99	RPM UGL 80W90	62,033	41,562	NA	Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	20,781	41,562
5	Equilon	T-13519	Diesel	560,112	375,275	NA	Cone Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	187,638	375,275
5	Equilon	T-13520	Diesel	558,852	374,431	NA	Cone Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	187,215	374,431
5	Equilon	T-13521	Diesel	559,986	375,191	NA	Cone Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	187,595	375,191
5	Equilon	T-13522	Diesel	558,432	374,149	NA	Cone Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	187,075	374,149
5	Equilon	T-13523	Out of Service	565,320	378,764	NA	Cone Roof	Group 3A	None	None	On Land	Tank Failure	50%	100%	189,382	378,764
5	Equilon	T-13524	Diesel	559,146	374,628	NA	Cone Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	187,314	374,628
5	Equilon	T-36002	Diesel	1,537,704	1,030,262	NA	Cone Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	515,131	1,030,262
5	Equilon	T-55000	Gasoline	1,986,264	1,330,797	NA	Internal Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	665,398	1,330,797
5	Equilon	T-55001	Ethanol	2,331,714	1,562,248	NA	Internal Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	781,124	1,562,248
5	Equilon	T-80103	Diesel	3,303,636	2,213,436	NA	Cone Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	1,106,718	2,213,436
5	Equilon	T-80104	Gasoline	3,348,912	2,243,771	NA	Internal Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	1,121,886	2,243,771
5	Equilon	T-80110	Gasoline	3,317,622	2,222,807	NA	Internal Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	1,111,403	2,222,807
5	Equilon	T-84200	Gasoline	3,528,756	2,364,267	NA	Internal Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	1,182,133	2,364,267
5	Equilon	T-7017	Water	267,456	179,196	NA	External Fixed Roof	Group 3A	Not Flammable	No	On Land	Tank Failure	50%	100%	89,598	179,196
4	Kinder Morgan South	KMW10	Out of Service	22,722	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW100	Diesel	3,381,000	2,265,270	1949	Vertical Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	1,132,635	2,265,270
4	Kinder Morgan South	KMW101	Gasoline	3,381,000	2,265,270	1949	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,132,635	2,265,270
4	Kinder Morgan South	KMW102	Out of Service	306,600	NA	1951	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW103	Out of Service	168,000	NA	1950	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW104	Lubricity Additive	168,000	112,560	1950	Vertical Fixed Roof	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	56,280	112,560
4	Kinder Morgan South	KMW105	Ethanol	168,000	112,560	1951	Internal Floating Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	56,280	112,560
4	Kinder Morgan South	KMW106	Out of Service	302,546	NA	1951	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW11	Out of service	22,722	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW116	Gasoline	3,385,200	2,268,084	1961	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,134,042	2,268,084
4	Kinder Morgan South	KMW117	Biodiesel	567,000	379,890	1951	Internal Floating Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	189,945	379,890
4	Kinder Morgan South	KMW118	Gasoline	2,												

Area	Property	Tank ID ¹	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ⁹	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost		Volume Lost	
													Min	Max	Min	Max
4	Kinder Morgan South	KMW12002	Diesel	5,040,000	3,376,800	2012	Internal Floating Roof	Group 3C	Category 3	Yes	On Land	No Tank Failure	0%	10%	0	337,680
4	Kinder Morgan South	KMW12003	Gasoline	5,040,000	3,376,800	2012	Internal Floating Roof	Group 3C	Category 1	Yes	On Land	No Tank Failure	0%	10%	0	337,680
4	Kinder Morgan South	KMW123	Gasoline	3,322,200	2,225,874	1952	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,112,937	2,225,874
4	Kinder Morgan South	KMW124	Gasoline	3,393,600	2,273,712	1952	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,136,856	2,273,712
4	Kinder Morgan South	KMW125	Out of service	12,525	NA	1946	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW126	Out of service	24,703	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW127	Out of service	24,703	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW128	Gasoline	2,347,800	1,573,026	1953	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	786,513	1,573,026
4	Kinder Morgan South	KMW129	Out of service	7,728	NA	1927	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW13	Out of service	2,856	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW131	Out of service	4,737	NA	1954	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW134	Gasoline	2,364,600	1,584,282	1955	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	792,141	1,584,282
4	Kinder Morgan South	KMW137	Out of Service	222,936	NA	1956	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW138	Avgas	571,830	383,126	1956	Internal Floating Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	191,563	383,126
4	Kinder Morgan South	KMW139	Out of Service	572,628	NA	1956	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW14	Out of service	2,856	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW140	Storm Water	630,000	422,100	1956	Vertical Fixed Roof	Group 3A	Not Flammable	Unknown	On Land	Tank Failure	50%	100%	211,050	422,100
4	Kinder Morgan South	KMW141	Out of Service	730,800	NA	1956	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW143	Out of Service	252,927	NA	1959	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW145	Out of service	7,980	NA	1960	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW146	Out of service	7,980	NA	1960	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW147	Out of service	7,980	NA	1961	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW148	Out of service	7,980	NA	1961	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW15	Out of service	2,856	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW152	Ethanol	47,800	32,026	1964	Internal Floating Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	16,013	32,026
4	Kinder Morgan South	KMW153	Out of service	7,637	NA	1965	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW154	Out of service	7,637	NA	1965	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW155	Out of Service	4,200	NA	1965	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW156	Out of Service	7,667	NA	1965	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW157	Out of Service	24,868	NA	1969	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW158	Out of Service	24,851	NA	1969	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW159	Out of Service	21,000	NA	1969	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW16	Out of service	2,814	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW160	Out of Service	24,860	NA	1969	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW161	Out of Service	24,863	NA	1969	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW162	Out of Service	24,850	NA	1969	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW163	Out of Service	24,856	NA	1969	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW166	Contact Water	33,600	22,512	1970	Vertical Fixed Roof	Group 3A	Not Flammable	Unknown	On Land	Tank Failure	50%	100%	11,256	22,512
4	Kinder Morgan South	KMW167	Contact Water	24,024	16,096	1928	Vertical Fixed Roof	Group 3A	Not Flammable	Unknown	On Land	Tank Failure	50%	100%	8,048	16,096
4	Kinder Morgan South	KMW169	Out of Service	24,990	NA	1928	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW17	Out of service	2,814	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW170	Out of Service	24,990	NA	1928	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW171	Out of Service	24,990	NA	NA	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW172	Out of Service	24,990	NA	NA	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW173	Jet A	49,980	33,487	1972	Vertical Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	16,743	33,487
4	Kinder Morgan South	KMW176	Out of Service	25,353	NA	NA	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW177	Out of Service	24,457	NA	NA	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW18	Out of Service	2,814	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW186	Out of Service	25,604	NA	NA	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW187	Out of Service	24,000	NA	NA	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW188	Out of Service	24,600	NA	NA	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW189	Out of Service	24,035	NA	NA	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW190	Additive	8,400	5,628	NA	Horizontal Tank	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	2,814	5,628
4	Kinder Morgan South	KMW192	Additive	8,064	5,403	NA	Horizontal Tank	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	2,701	5,403
4	Kinder Morgan South	KMW193	Additive	10,080	6,754	NA	Horizontal Tank	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	3,377	6,754
4	Kinder Morgan South	KMW194	Slop Water	6,300	4,221	NA	Horizontal Tank	Group 3A	Not Flammable	Unknown	On Land	Tank Failure	50%	100%	2,111	4,221
4	Kinder Morgan South	KMW2	Jet A	3,175,200	2,127,384	1915	Vertical Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	1,063,692	2,127,384
4	Kinder Morgan South	KMW22	Out of Service	11,760	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW23	Out of Service	11,718	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW25	Out of Service	11,760	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW26	Out of Service	22,806	NA	1916	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW3	Out of Service	553,350	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW30	Out of Service	11,718	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW31	Out of Service	11,760	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW32	Out of Service	11,472	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW33	Out of Service	17,472	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW34	Out of Service	17,481	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW35	Out of Service	4,397	NA	1924	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW36	Out of Service	4,368	NA	1924	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW37	Out of Service	4,368	NA	1924	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW38	Out of Service	4,368	NA	1924	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW39	Out of Service	4,397	NA	1924	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW4	Out of Service	215,754	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW40	Out of Service	5,544	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW41	Out of Service	5,502	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW42	Out of Service	5,502	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW43	Out of Service	5,502	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW44	Out of Service	5,515	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW45	Out of Service	5,540	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW46	Out of Service	11,642	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW47	Out of Service	11,600	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW48	Out of Service	11,642	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW49	Out of Service	11,677	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW5	Out of Service	439,605	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW50	Out of Service	11,507	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW51	Out of Service	11,634	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW52	Jet A	3,229,800	2,163,966	1923	Vertical Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	1,081,983	2,163,966

Area	Property	Tank ID ⁴	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ⁵	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost		Volume Lost	
													Min	Max	Min	Max
4	Kinder Morgan South	KMW54	Diesel	3,435,600	2,301,852	1929	Vertical Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	1,150,926	2,301,852
4	Kinder Morgan South	KMW56	Out of Service	19,867	NA	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW57	Out of Service	19,800	NA	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW58	Out of Service	19,800	NA	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW59	Out of Service	19,855	NA	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW6	Out of Service	215,166	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW60	Out of Service	19,824	NA	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW61	Out of Service	25,200	NA	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW62	Out of Service	11,676	NA	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW63	Out of Service	24,766	NA	1929	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW65	Jet A	861,336	577,095	1930	Vertical Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	288,548	577,095
4	Kinder Morgan South	KMW66	Out of Service	856,800	NA	1930	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW69	Jet A	3,431,400	2,299,038	1937	Vertical Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	1,149,519	2,299,038
4	Kinder Morgan South	KMW7	Out of Service	440,538	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW70	Jet A	1,461,600	979,272	1938	Vertical Fixed Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	489,636	979,272
4	Kinder Morgan South	KMW71	Transmix	862,260	577,714	1937	Vertical Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	288,857	577,714
4	Kinder Morgan South	KMW72	Out of Service	549,024	NA	1937	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW73	Transmix	546,714	366,298	1937	Vertical Fixed Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	183,149	366,298
4	Kinder Morgan South	KMW74	Out of Service	305,712	NA	1937	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW75	Out of Service	25,000	NA	1938	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW76	Out of Service	25,000	NA	1938	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW77	Out of Service	25,741	NA	1938	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW8	Out of Service	216,804	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW82	Out of Service	11,642	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW83	Out of Service	19,867	NA	1923	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW84	Gasoline	2,356,200	1,578,654	1948	Internal Floating Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	789,327	1,578,654
4	Kinder Morgan South	KMW85	Diesel	2,347,800	1,573,026	1948	Vertical Fixed Roof	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	786,513	1,573,026
4	Kinder Morgan South	KMW86	Out of Service	222,805	NA	1948	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW87	Out of Service	222,469	NA	1948	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW88	Out of Service	222,574	NA	1948	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW89	Out of Service	222,919	NA	1948	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW9	Out of Service	22,722	NA	1915	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Kinder Morgan South	KMW90	Out of Service	2,982	NA	1946	Vertical Fixed Roof	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	McCall Oil	MC22	Asphalt	18,942	12,691	1954	Cone Roof	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	6,346	12,691
3	Northwest Natural Gas	NWN-Tank 001	Liquefied Natural Gas	7,100,000	4,757,000	NA	NA	Group 3C	Category 1	Yes	On Land	No Tank Failure	0%	10%	0	475,700
4	Conoco Phillips	PH1471	Hydraulic Tractor Oil	17,300	11,591	1921	Riveted Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	5,796	11,591
4	Conoco Phillips	PH2561	Marine Fuel Oil	1,569,582	1,051,620	1929	Riveted Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	525,810	1,051,620
4	Conoco Phillips	PH2579	Hydraulic Tractor Oil	1,800	1,206	1929	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	603	1,206
4	Conoco Phillips	PH2669	Marine Diesel	449,694	301,295	1931	Riveted Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	150,647	301,295
4	Conoco Phillips	PH2713	Unax AW 46	109,000	73,030	1937	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	36,515	73,030
4	Conoco Phillips	PH2714	Guardol 15W/40	109,000	73,030	1937	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	36,515	73,030
4	Conoco Phillips	PH2783	Decant Oil	948,066	635,204	1937	Riveted Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	317,602	635,204
4	Conoco Phillips	PH2784	Diesel #2	1,439,130	964,217	1937	Riveted Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	482,109	964,217
4	Conoco Phillips	PH2915	Unleaded Gasoline	3,262,056	2,185,578	1938	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	1,092,789	2,185,578
4	Conoco Phillips	PH2916	Diesel #2	1,652,196	1,106,971	1938	Welded Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	553,486	1,106,971
4	Conoco Phillips	PH2917	RLOP 220 N	612,000	410,040	1938	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	205,020	410,040
4	Conoco Phillips	PH2982	Diesel #1	416,262	278,896	1941	Welded Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	139,448	278,896
4	Conoco Phillips	PH2983	RLOP 220 N	304,000	203,680	1941	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	101,840	203,680
4	Conoco Phillips	PH3408	Unleaded Gasoline	1,639,680	1,098,586	1949	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	549,293	1,098,586
4	Conoco Phillips	PH3409	Unleaded Gasoline	948,654	635,598	1949	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	317,799	635,598
4	Conoco Phillips	PH3410	Ethanol	278,964	186,906	1949	Welded Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	93,453	186,906
4	Conoco Phillips	PH3411	Unleaded Gasoline	259,350	173,765	1949	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	86,882	173,765
4	Conoco Phillips	PH3412	Diesel #1	279,426	187,215	1949	Welded Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	93,608	187,215
4	Conoco Phillips	PH3413	Unleaded Gasoline	259,560	173,905	1949	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	86,953	173,905
4	Conoco Phillips	PH3414	RLOP 220 N	200,000	134,000	1949	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	67,000	134,000
4	Conoco Phillips	PH3415	SUN 525	200,000	134,000	1949	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	67,000	134,000
4	Conoco Phillips	PH3416	RLOP 100N	200,000	134,000	1949	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	67,000	134,000
4	Conoco Phillips	PH3417	ULTRA S-4	200,000	134,000	1949	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	67,000	134,000
4	Conoco Phillips	PH3579	Industrial Fuel Oil	3,307,668	2,216,138	1950	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	1,108,069	2,216,138
4	Conoco Phillips	PH36	Stop Oil	20,496	13,732	1907	Riveted Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	6,886	13,732
4	Conoco Phillips	PH3623	HiTech 6576	18,228	12,213	1950	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	6,106	12,213
4	Conoco Phillips	PH3639	SUP SYN BL 5W/30	120,000	80,400	1951	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	40,200	80,400
4	Conoco Phillips	PH3739	SUN 150 B/S	200,000	134,000	1954	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	67,000	134,000
4	Conoco Phillips	PH3740	RLOP 600 N	277,000	185,590	1954	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	92,795	185,590
4	Conoco Phillips	PH3741	Ramar CLF 17E	17,500	11,725	1954	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH3742	MP Gear Lube 80/90	17,500	11,725	1954	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH3743	Utility	18,600	12,462	1954	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	6,231	12,462
4	Conoco Phillips	PH3744	HYNAP N100	17,500	11,725	1954	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH3745	HITEC 5751	17,500	11,725	1954	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH3746	Lubrizol 4998C	17,500	11,725	1954	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH3747	Lubrizol 4990CH	17,500	11,725	1954	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH3757	HITEC 1193	17,500	11,725	1954	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH3760	Raffene 750L	17,500	11,725	1954	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH3761	Diesel #2	3,240,342	2,171,029	1954	Welded Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	1,085,515	2,171,029
4	Conoco Phillips	PH4191	Lubrizol 48254	17,500	11,725	1964	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4192	Lubrizol 7075F	17,500	11,725	1964	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4223	Slop Oil	18,690	12,522	1968	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	6,261	12,522
4	Conoco Phillips	PH4241	UNAX AW 68	17,500	11,725	1968	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4242	UNAX AW 68	17,500	11,725	1968	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4243	HT4/10W	17,500	11,725	1968	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4244	Mohawk 450	17,500	11,725	1968	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH425	SUN 525	17,500	11,725	1968	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4252	Residual Fuel Oil ⁶	458,640	307,289	196										

Area	Property	Tank ID ¹	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ²	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost		Volume Lost	
													Min	Max	Min	Max
4	Conoco Phillips	PH4257	Out of Service	38,367	NA	1968	Welded Steel	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Conoco Phillips	PH4258	Line Clippings	18,000	12,060	1968	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	6,030	12,060
4	Conoco Phillips	PH4259	Transmix	205,506	137,689	1968	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	68,845	137,689
4	Conoco Phillips	PH4266	Flush	17,500	11,725	1968	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4281	Versa Tran ATF	17,500	11,725	1969	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4300	Ramar CLF 17E	25,500	17,085	1969	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,543	17,085
4	Conoco Phillips	PH4302	RLOP 600N	17,500	11,725	1971	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4303	RLOP 100N	17,500	11,725	1971	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4305	Out of Service	8,900	NA	1971	Welded Steel	Group 2	None	None	On Land	Tank Failure	50%	100%	NA	NA
4	Conoco Phillips	PH4306	RLOP 100N	200,000	134,000	1971	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	67,000	134,000
4	Conoco Phillips	PH4318	Diesel #2	1,422,456	953,046	1973	Welded Steel	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	476,523	953,046
4	Conoco Phillips	PH4320	Sup Syn BL 10W/30	35,000	23,450	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	11,725	23,450
4	Conoco Phillips	PH4321	Uniguide II 100	35,000	23,450	1973	Welded Steel	Group 3A	Category 1	No	On Land	Tank Failure	50%	100%	11,725	23,450
4	Conoco Phillips	PH4322	TSX HD 15W/40	35,000	23,450	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	11,725	23,450
4	Conoco Phillips	PH4323	Super ATF	35,000	23,450	1973	Welded Steel	Group 3A	Category 2	No	On Land	Tank Failure	50%	100%	11,725	23,450
4	Conoco Phillips	PH4327	Gasoline Slops ⁵	10,080	6,754	1974	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	3,377	6,754
4	Conoco Phillips	PH4331	Ethyl HITEC 6888E	25,500	17,085	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	17,085
4	Conoco Phillips	PH4332	Super ATF	17,500	11,725	1973	Welded Steel	Group 3A	Category 2	No	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4333	Point Premier 10W/30	17,500	11,725	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4334	Super 5W/20	17,500	11,725	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4369	RLOP 220 N	17,500	11,725	1979	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Conoco Phillips	PH4388	Utility	13,500	9,045	1984	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4389	Utility	13,500	9,045	1984	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4390	Bar & Chain 150	13,500	9,045	1985	Welded Steel	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4391	Utility	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4392	Utility	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4393	Utility	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4394	Utility	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4395	Utility	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4397	Lubrizol 9692A	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4398	HITEC 1193A	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4399	Firebird 15W/40	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4400	Guardol 30	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4401	Mohawk 150	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4402	TSX HD10	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4403	HT4/30W	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4404	Fleet Sup EC 15W/40	13,500	9,045	1985	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4405	HITEC 3472	13,500	9,045	1987	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4406	Lubrizol 9990A	13,500	9,045	1987	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4407	Ethyl HITEC 388	13,500	9,045	1987	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4408	Ethyl HITEC 5756	13,500	9,045	1987	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	4,523	9,045
4	Conoco Phillips	PH4441	Octel 9056	18,648	12,494	1993	Welded Steel	Group 3B	Unknown	Yes	On Land	No Tank Failure	0%	10%	0	1,249
4	Conoco Phillips	PHF103	UTRA 58	25,500	17,085	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	8,543	17,085
4	Conoco Phillips	PHF104	UTRA 59	17,500	11,725	1973	Welded Steel	Group 3A	Unknown	Yes	On Land	Tank Failure	50%	100%	5,863	11,725
4	Zenith Energy	Tank 129	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 128	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 127	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 70	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 125	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 124	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 123	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 122	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 121	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 120	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 112	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 110	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 101	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 126	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 003	Asphalt	NA	NA	NA	NA	Group 3A	Category 1	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 71	Avgas	NA	1,402,380	NA	Internal Floating Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	701,190	1,402,380
4	Zenith Energy	Tank 184	Biodiesel	NA	222,000	NA	NA	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	111,000	222,000
4	Zenith Energy	Tank 307	Caustic	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 74	Charge Stock	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 100	Charge Stock	NA	NA	NA	NA	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 102	Charge Stock	NA	NA	NA	NA	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 106	Crude Oil	NA	5,611,788	NA	External Floating Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	2,805,894	5,611,788
4	Zenith Energy	Tank 67	Crude Oil	NA	3,234,000	NA	NA	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	1,617,000	3,234,000
4	Zenith Energy	Tank 93	Crude Oil	NA	2,829,918	NA	NA	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	1,414,959	2,829,918
4	Zenith Energy	Tank 69	Crude Oil	NA	NA	NA	NA	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 130	Crude Oil	NA	3,200,000	NA	Internal Floating Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	1,600,000	3,200,000
4	Zenith Energy	Tank 68	Crude Oil	NA	2,900,000	NA	NA	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	1,450,000	2,900,000
4	Zenith Energy	Tank 63	Crude Oil	NA	4,763,472	NA	Internal Floating Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	2,381,736	4,763,472
4	Zenith Energy	Tank 104	Crude Oil	NA	NA	NA	NA	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 105	Crude Oil	NA	5,241,684	NA	External Floating Roof	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	2,620,842	5,241,684
4	Zenith Energy	Tank 001	Crude Oil	NA	NA	NA	NA	Group 3A	Category 2	Yes	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 308	Muroil	NA	NA	NA	NA	Group 3A	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 182	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 183	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 185	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 202	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 203	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 209	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 213	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 208	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 211	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 306	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tanks 95	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA

Area	Property	Tank ID ¹	Contents	Capacity (Gal)	Expected Fill (Gal) (67% of Capacity) ⁹	Year	Type	Tank Group	Flammability Category	Hazardous Category	Damage Zone	Tank Age Failures	Percent Lost	Percent Lost	Volume Lost	Volume Lost
													Min	Max	Min	Max
4	Zenith Energy	Tank 114	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 302	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 162	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 166	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 167	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 168	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 169	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 170	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 171	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 172	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 20	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 173	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 174	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 180	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 179	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 206	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 210	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 177	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 176	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 178	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 181	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 200	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 201	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	N2	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 317	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	BAS #2	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	KO T#5	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	BAS #3	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	BAS #4	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 160	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 161	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 314	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 002	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	KO T#2	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	CAS #5	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	BAS #1	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 305	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	KO T#1	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 163	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 164	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 165	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 152	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 151	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 158	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 157	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 156	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 148	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 149	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 150	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 142	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 143	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 144	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 147	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 146	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 145	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 140	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 141	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 300	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	K-23	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	TW-2	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 207	NA	NA	NA	NA	NA	Group 1	Unknown	Unknown	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 66	Universal Low-Sulfur Diesel	NA	3,188,598	NA	NA	Group 3A	Category 3	Yes	On Land	Tank Failure	50%	100%	1,594,299	3,188,598
4	Zenith Energy	Tank 111	Wastewater	NA	NA	NA	NA	Group 3A	Not Flammable	No	On Land	Tank Failure	50%	100%	NA	NA
4	Zenith Energy	Tank 113	Wastewater	NA	NA	NA	NA	Group 3A	Not Flammable	No	On Land	Tank Failure	50%	100%	NA	NA

Notes:

- ¹Tanks noted in satellite images, but not listed in available GIS data, are given the designation based on property ID and count, and are *italicized*. Example: Kinder Morgan North = *KML-Tank 1*
 - ²Tank contents were listed as both gasoline and ethanol; flammability and hazard category are for gasoline.
 - ³Tank contents were listed as both gasoline and diesel; flammability and hazard category are for gasoline.
 - ⁴Tank contents were listed as both gasoline and diesel additives; flammability and hazard category are for gasoline.
 - ⁵Tank contents were listed as gasoline slops; flammability and hazard category are for gasoline.
 - ⁶Residual Oil and Residual Fuel Oil is a general classification for heavier oils that remain after the distillate fuel oil and lighter hydrocarbons are removed. The type of lighter hydrocarbon is unknown and therefore defaulted to the most flammable category.
 - ⁷Tank contents were listed as biodiesel additive; flammability and hazard category are for biodiesel.
 - ⁸Tank data provided by COP without geographic location; failure assumption made from satellite imagery.
 - ⁹Zenith Energy tank fill provided directly from Portland Fire and Rescue.
- Category 1 - Liquids with flashpoints below 73.4°F (23°C) and boiling points at or below 95°F (35°C).
Category 2 - Liquids with flashpoints below 73.4°F (23°C) and boiling points at or above 95°F (35°C).
Category 3 - Liquids with flashpoints at or above 73.4°F (23°C) and at or below 140°F (60°C).
Category 4 - Liquids having flashpoints above 140°F (60°C) and at or below 199.4°F (93°C).
- NA - Data not available
No - Tank substance is not hazardous.
None - Flammability category and/or hazard category is not applicable due to tank status of Out of Service.
Not Flammable - Tank contents are not flammable and do not fall into Category 1-4.
Unknown - Flammability category or hazard category unknown due to unknown tank contents, or tank contents not defined in a suitable way to ascertain flammability or hazard categories.
Yes - Tank substance is hazardous.

APPENDIX E
Tanks with Potential to Release to Unknown Locations



FID	TANK ID	Owner	Facility	Facility_S	Container	Substance	Average FI	Capacity	Contains	Year Built	Area ft 2	Radius ft	Perimeter	Height ft	Longitude	Latitude	Flammabil	Hazardous	Year_cat	Damagezone	Fail	Concern			
135	CH42	Chevron	Chevron Willbridge	CH	42	Empty	0	29583	Fx	1924	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure			
139	CH46	Chevron	Chevron Willbridge	CH	46	Rt Chain Bar 150	Varies	11750	Fx	1924	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure			
141	CH48	Chevron	Chevron Willbridge	CH	48	Water/Oil Stop	384175	396547	Fixed Roof	1979	2030.3	25.421699	159.72925	26.1098	-122.7417	45.564276	NA	NA	Pre-1993	On Land	Tank Failure				
142	CH5	Chevron	Chevron Willbridge	CH	5	Neutral Oil	336997	365834	Fx	1913	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure			
144	CH56	Chevron	Chevron Willbridge	CH	56	CS1 ISO 100	Varies	25239	Fx	Unknown	0	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure		
144	CH57	Chevron	Chevron Willbridge	CH	57	Crigo Bt Stock 150	Varies	15	Fx	1921	0	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure		
146	CH6	Chevron	Chevron Willbridge	CH	6	GEO HDXL 1ASH 40	88565	100277	Fx	1913	0	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure		
148	CH61	Chevron	Chevron Willbridge	CH	61	Neutral 600R	Varies	400379	Fx	1941	0	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure		
151	CH65	Chevron	Chevron Willbridge	CH	65	Lubrizol 4991	Varies	17524	Fx	1998	0	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure		
152	CH7	Chevron	Chevron Willbridge	CH	7	Famm Taro Sepcial 70	89107	100594	Fx	1913	0	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure		
153	CH72	Chevron	Chevron Willbridge	CH	72	Saw Guide 150	Varies	17284	Fx	1959	0	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure		
156	CH77	Chevron	Chevron Willbridge	CH	77	RPM HDMO 15W40	Varies	128511	Fx	1960	0	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure		
157	CH78	Chevron	Chevron Willbridge	CH	78	Paratone 8451	Varies	311722	Fx	1960	0	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure		
158	CH79	Chevron	Chevron Willbridge	CH	79	Empty	0	17378	Fx	1960	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure		
159	CH8	Chevron	Chevron Willbridge	CH	8	Bykon Prem MV	91510	104897	Fx	1913	0	0	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure	
160	CH80	Chevron	Chevron Willbridge	CH	80	Out of Service	Out of Service	17378	Fx	Unknown	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
161	CH81	Chevron	Chevron Willbridge	CH	81	Empty	0	17724	Fx	1951	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
162	CH82	Chevron	Chevron Willbridge	CH	82	Infineum M7038	18000	17624	Fx	1951	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
163	CH83	Chevron	Chevron Willbridge	CH	83	RPM HDMO 15W40	18100	17331	Fx	1951	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
164	CH84	Chevron	Chevron Willbridge	CH	84	Empty	0	17184	Fx	1952	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
165	CH85	Chevron	Chevron Willbridge	CH	85	Oloa 44200	18000	17671	Fx	1952	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
166	CH87	Chevron	Chevron Willbridge	CH	87	Lubrizol 4991	18100	17430	Fx	1913	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
167	CH88	Chevron	Chevron Willbridge	CH	88	Empty	0	17624	Fx	1850	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
168	CH89	Chevron	Chevron Willbridge	CH	89	Oil Stop	17459	19424	Fx	1952	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
169	CH9	Chevron	Chevron Willbridge	CH	9	Chevron 7075F	169137	169193	Fx	1949	0	0	0	0	0	0	0	0	0	NA	NA	Pre-1993	No Data	Tank Failure	
170	CH90	Chevron	Chevron Willbridge	CH	90	Delo 400-15W40	190000	208848	Fx	1954	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
171	CH91	Chevron	Chevron Willbridge	CH	91	Oloa 9740C	16758	17671	Fx	1961	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
172	CH92	Chevron	Chevron Willbridge	CH	92	Out of Service	Out of Service	17577	Fx	1961	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
174	CH96	Chevron	Chevron Willbridge	CH	96	Additive	17624	Fixed Roof	1966	1426.89	21.3118	133.90599	1.65114	-122.7427	45.564294	NA	NA	Pre-1993	On Land	Tank Failure					
175	CH97	Chevron	Chevron Willbridge	CH	97	Additive	17624	Fixed Roof	1966	0	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
176	CH98	Chevron	Chevron Willbridge	CH	98	Bykon Oil 46	469140	91364	Fx	1968	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
177	CH99	Chevron	Chevron Willbridge	CH	99	RPM UGI 80W90	55656	62033	Fx	Unknown	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
178	KML10007	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	10007	Out of service	250967	418278	Vertical fixe	1922	3078.0801	31.3015	196.67313	18.1658	-122.7875	45.603921	None	NA	Pre-1993	Material in Water	Tank Failure				
179	KML11017	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	11017	Out of service	281963	469938	Internal floa	1941	1784.79	23.835199	149.76097	35.198399	-122.7863	45.603122	None	NA	Pre-1993	Material in Water	Tank Failure				
180	KML11019	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	11019	Out of service	281938	469938	Internal floa	1941	1784.79	23.835199	149.76097	35.195301	-122.7864	45.603258	None	NA	Pre-1993	Material in Water	Tank Failure				
181	KML12024	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	2024	Out of service	65138	0	Vertical fixe	1937	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
186	KML2501	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	2501	Out of service	61841	103068	Internal floa	1958	1141.61	19.0627	119.77448	12.0691	-122.7877	45.603684	None	NA	Pre-1993	Material in Water	Tank Failure				
187	KML2502	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	2502	Out of service	62546	104224	Vertical fixe	1914	1141.61	19.0627	119.77448	12.206801	-122.7877	45.603813	None	NA	Pre-1993	Material in Water	Tank Failure				
188	KML2503	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	2503	Out of service	63202	105336	Vertical fixe	1915	1141.61	19.0627	119.77448	12.3347	-122.7879	45.603818	None	NA	Pre-1993	Material in Water	Tank Failure				
190	KML3034	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	3034	Storm water	82228	137046	Vertical fixe	1925	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
191	KML305	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	305	Out of service	7762	12936	Vertical fixe	1926	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
192	KML306	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	306	Out of service	7762	12936	Vertical fixe	1926	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
193	KML309	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	309	Out of service	7762	12936	Vertical fixe	1926	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
194	KML310	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	310	Out of service	7762	12936	Vertical fixe	1926	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
195	KML312	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	312	Out of service	7762	12936	Vertical fixe	1926	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
196	KML313	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	313	Out of service	7762	12936	Vertical fixe	1926	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
197	KML314	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	314	Out of service	7762	12936	Vertical fixe	1926	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
198	KML315	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	315	Out of service	7762	12936	Vertical fixe	1926	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
199	KML326	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	326	Out of service	7560	12600	Vertical fixe	Unknown	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
200	KML330	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	330	Out of service	7207	12012	Vertical fixe	1926	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
201	KML331	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	331	Out of service	7762	12936	Vertical fixe	1926	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
203	KML5004	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	5004	Out of service	126580	210966	Vertical fixe	1916	1784.79	23.835199	149.76097	15.8014	-122.7879	45.603683	None	NA	Pre-1993	Material in Water	Tank Failure				
204	KML532	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	532	Out of service	11945	29908	Vertical fixe	1965	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
205	KML55008	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	55008	Out of service	1373299	2288322	Vertical fixe	1933	10371.9	57.4585	361.0224	29.5002	-122.7868	45.603011	None	NA	Pre-1993	Material in Water	Tank Failure				
207	KML55023	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	55023	Out of service	1387210	2312016	Internal floa	1944	10371.9	57.4585	361.0224	29.799	-122.7872	45.603675	None	NA	Pre-1993	Material in Water	Tank Failure				
211	KML51102	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	51102	Contact water	13734	0	Vertical fixe	Unknown	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
211	KMW10	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	10	Out of service	0	22722	Vertical fixe	1915	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
212	KMW102	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	102	Out of service	0	306600	Vertical fixe	1951	1133.92	18.9984	119.37047	36.145901	-122.7449	45.565812	None	NA	Pre-1993	On Land	Tank Failure				
215	KMW103	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	103	Out of service	0	168000	Vertical fixe	1950	579.185	13.5779	85.312461	38.775902	-122.7451	45.565895	None	NA	Pre-1993	On Land	Tank Failure				
216	KMW104	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	104	Lubricity additive	100800	168000	Vertical fixe	1950	625.34198	14.1086	88.646946	35.913799	-122.7452	45.565895	None	NA	Pre-1993	On Land	Tank Failure				
218	KMW106	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	106	Out of service	302546	Vertical fixe	1951	1353.04	20.753	130.39495	29.891701	-122.745	45.565695	None	NA	Pre-1993	On Land	Tank Failure					
219	KMW11	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	11	Out of service	0	22722	Vertical fixe	1915	0	0	0	0	0	0	0	0	0	None	NA	Pre-1993	No Data	Tank Failure	
223	KMW12	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	12	Out of service	0	22722	Vertical fixe	1915															

FID	TANK ID	Owner	Facility	Facility_S	Container	Substance	Average FI	Capacity	Containm	Year Built	Area ft 2	Radius ft	Perimeter	Height ft	Longitude	Latitude	Flammabil	Hazardous	Year_cat	damagezone	Fail	Concern
265	KMW17	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	17	Out of service	0	2814	Vertical	1915	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
266	KMW170	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	170	Out of service	0	24990	Vertical	1928	128.702	6.4005599	40.215904	25.956801	-122.7429	45.564766	None	NA	Pre-1993 of	On Land	Tank Failure	
267	KMW171	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	171	Out of service	0	24990	Vertical	1928	81.9217	5.1065202	32.085213	40.778999	-122.7428	45.564804	None	NA	Pre-1993 of	On Land	Tank Failure	
268	KMW172	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	172	Out of service	0	24990	Vertical	1928	105.765	5.8022499	36.456611	31.586	-122.7429	45.564824	None	NA	Pre-1993 of	On Land	Tank Failure	
269	KMW176	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	176	Out of service	0	23593	Vertical	1928	106.921	5.8338699	36.655286	31.692299	-122.7428	45.564781	None	NA	Pre-1993 of	On Land	Tank Failure	
271	KMW177	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	177	Out of service	0	24377	Vertical	1928	98.250503	5.59221	35.137646	33.276501	-122.7428	45.564776	None	NA	Pre-1993 of	On Land	Tank Failure	
272	KMW18	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	18	Out of service	0	2814	Vertical	1915	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
273	KMW186	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	186	Out of service	0	25604	Vertical	1928	112.875	5.9941001	37.662042	30.3235	-122.7428	45.564746	None	NA	Pre-1993 of	On Land	Tank Failure	
274	KMW187	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	187	Out of service	0	24000	Vertical	1928	114.719	6.04287	37.968472	27.966999	-122.7428	45.564709	None	NA	Pre-1993 of	On Land	Tank Failure	
275	KMW188	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	188	Out of service	0	24600	Vertical	1928	113.765	6.0176902	37.810263	28.9065	-122.7427	45.564724	None	NA	Pre-1993 of	On Land	Tank Failure	
276	KMW189	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	189	Out of service	0	24035	Vertical	1928	99.280998	5.6215801	35.321429	32.3629	-122.7427	45.564688	None	NA	Pre-1993 of	On Land	Tank Failure	
277	KMW190	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	190	Additive	5040	8400	Horizontal	Unknown	0	0	0	0	0	0	0	NA	NA	Pre-1993 of	No Data	Tank Failure
278	KMW192	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	192	Additive	4838	8064	Horizontal	Unknown	0	0	0	0	0	0	0	NA	NA	Pre-1993 of	No Data	Tank Failure
279	KMW193	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	193	Additive	6048	10080	Horizontal	Unknown	0	0	0	0	0	0	0	NA	NA	Pre-1993 of	No Data	Tank Failure
280	KMW194	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	194	Slop water	3780	6300	Horizontal	Unknown	0	0	0	0	0	0	0	NA	NA	Pre-1993 of	No Data	Tank Failure
282	KMW22	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	22	Out of service	0	11760	Vertical	1915	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
283	KMW23	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	23	Out of service	0	11718	Vertical	1915	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
284	KMW25	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	25	Out of service	0	11760	Vertical	1915	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
285	KMW26	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	26	Out of service	0	22806	Vertical	1916	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
286	KMW3	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	3	Out of service	0	55350	Vertical	1915	2835.3601	30.042	188.75945	26.089199	-122.7434	45.565155	None	NA	Pre-1993 of	On Land	Tank Failure	
287	KMW30	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	30	Out of service	0	11718	Vertical	1915	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
288	KMW31	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	31	Out of service	0	11760	Vertical	1915	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
289	KMW32	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	32	Out of service	0	11472	Vertical	1915	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
290	KMW33	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	33	Out of service	0	17472	Vertical	1915	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
291	KMW34	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	34	Out of service	0	17481	Vertical	1915	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
292	KMW35	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	35	Out of service	0	4397	Vertical	1924	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
293	KMW36	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	36	Out of service	0	4368	Vertical	1924	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
294	KMW37	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	37	Out of service	0	4368	Vertical	1924	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
295	KMW38	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	38	Out of service	0	4368	Vertical	1924	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
296	KMW39	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	39	Out of service	0	4397	Vertical	1924	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
297	KMW4	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	4	Out of service	0	215754	Vertical	1915	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
298	KMW40	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	40	Out of service	0	5544	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
299	KMW41	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	41	Out of service	0	5502	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
300	KMW42	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	42	Out of service	0	5502	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
301	KMW43	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	43	Out of service	0	5502	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
302	KMW44	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	44	Out of service	0	5515	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
303	KMW45	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	45	Out of service	0	5540	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
304	KMW46	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	46	Out of service	0	11642	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
305	KMW47	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	47	Out of service	0	11600	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
306	KMW48	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	48	Out of service	0	11642	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
307	KMW49	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	49	Out of service	0	11677	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
308	KMW5	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	5	Out of service	0	439605	Vertical	1915	1745.9	23.574101	148.12044	33.659901	-122.7433	45.565342	None	NA	Pre-1993 of	On Land	Tank Failure	
309	KMW50	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	50	Out of service	0	11507	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
310	KMW51	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	51	Out of service	0	11634	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
313	KMW56	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	56	Out of service	0	12987	Vertical	1928	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
314	KMW57	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	57	Out of service	0	13800	Vertical	1928	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
315	KMW58	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	58	Out of service	0	13800	Vertical	1928	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
316	KMW59	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	59	Out of service	0	13855	Vertical	1928	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
317	KMW6	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	6	Out of service	0	215166	Vertical	1915	1092.09	18.644699	117.1481	26.3381	-122.7431	45.565153	None	NA	Pre-1993 of	On Land	Tank Failure	
318	KMW60	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	60	Out of service	0	19824	Vertical	1929	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
319	KMW61	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	61	Out of service	0	25200	Vertical	1929	147.17101	6.84442	43.004759	22.8901	-122.7439	45.56518	None	NA	Pre-1993 of	On Land	Tank Failure	
320	KMW62	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	62	Out of service	0	11676	Vertical	1929	73.015503	4.82095	30.290922	21.3771	-122.7438	45.56515	None	NA	Pre-1993 of	On Land	Tank Failure	
321	KMW63	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	63	Out of service	0	24766	Vertical	1929	99.280998	5.6215801	35.321429	33.347198	-122.7431	45.564875	None	NA	Pre-1993 of	On Land	Tank Failure	
323	KMW66	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	66	Out of service	0	85680	Vertical	1930	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
325	KMW7	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	7	Out of service	0	440538	Vertical	1915	2565.3799	28.576	179.5483	22.956301	-122.7431	45.565529	None	NA	Pre-1993 of	On Land	Tank Failure	
326	KMW72	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	72	Out of service	0	59034	Vertical	1927	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
330	KMW74	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	74	Out of service	0	305712	Vertical	1937	1092.09	18.644699	117.1481	37.4217	-122.7428	45.565453	None	NA	Pre-1993 of	On Land	Tank Failure	
331	KMW75	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	75	Out of service	0	25000	Vertical	1938	119.016	6.1550002	38.673007	28.8005	-122.7431	45.564924	None	NA	Pre-1993 of	On Land	Tank Failure	
332	KMW76	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	76	Out of service	0	25000	Vertical	1938	147.17101	6.84442	43.004759	22.708401	-122.7434	45.564991	None	NA	Pre-1993 of	On Land	Tank Failure	
333	KMW77	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	77	Out of service	0	25741	Vertical	1938	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
334	KMW8	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	8	Out of service	0	216804	Vertical	1915	1092.09	18.644699	117.1481	26.538601	-122.743	45.565331	None	NA	Pre-1993 of	On Land	Tank Failure	
335	KMW82	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	82	Out of service	0	11642	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
336	KMW83	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	83	Out of service	0	19867	Vertical	1923	0	0	0	0	0	0	0	None	NA	Pre-1993 of	No Data	Tank Failure
339	KMW86	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	86	Out of service	0	227805	Vertical	1948	843.57397	16.386499	102.95941	35.307899	-122.7446	45.565659	None	NA	Pre-1993 of	On Land	Tank Failure	
340	KMW87	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	87	Out of service	0	222469	Vertical	1948	843.54401	16.3862	102.95753	35.255901	-122.7448	45.565731	None	NA	Pre-1993 of	On Land	Tank Failure	
341	KMW88	Kinder Morgan	Kinder Morgan Willibridge Terminal	KMW	88	Out of service	0	222574	Vertical	1948	962.85602	17.5068	109.99847	30.901699	-122.7447	45.56559	None	NA	Pre-1993 of	On Land	Tank Failure	

FID	TANK ID	Owner	Facility	Facility_S	Container	Substance	Average FI	Capacity	Contains	Year Built	Area ft 2	Radius ft	Perimeter	Height ft	Longitude	Latitude	Flammabil	Hazardous	Year cat	damagezone	Fail	Concern
394	NU3204	NuStar	Nustar Portland Terminal	NU	3204	Gasoline/Diesel	1249542	1267302	Internal floa	1979	4629.21	38.386501	241.1895	36.596802	-122.7733	45.589106	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
396	NU3605	NuStar	Nustar Portland Terminal	NU	3605	MFO	4620.8398	1442470	Conc	1938	4620.8398	38.351799	240.97146	41.730701	-122.7781	45.592887	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
397	NU3614	NuStar	Nustar Portland Terminal	NU	3614	Gasoline/Diesel	5336.3398	1398100	Internal floa	1958	5336.3398	41.214199	258.95645	35.041699	-122.7773	45.591724	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
398	NU4402	NuStar	Nustar Portland Terminal	NU	4402	Gasoline/Diesel	1738800	1761801	Internal floa	1979	6412.9399	45.180801	283.87935	36.725601	-122.7738	45.589538	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
399	NU4507	NuStar	Nustar Portland Terminal	NU	4507	Out of Service	1827400	1849600	Internal floa	1980	6499.3799	45.484299	285.78628	38.044998	-122.7742	45.589269	None	NA	Pre-1993 or	Material in Water	Tank Failure	
400	NU5209	NuStar	Nustar Portland Terminal	NU	5209	Gasoline/Diesel	1997100	2190678	Internal floa	1971	0	0	0	0	-122.7773	45.589106	NA	NA	Pre-1993 or	No Data	Tank Failure	
401	NU6408	NuStar	Nustar Portland Terminal	NU	6408	Gasoline/Diesel	2594466	2648782	Internal floa	1981	8075.1699	50.6992	318.55247	43.860001	-122.7745	45.589542	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
406	NU703	NuStar	Nustar Portland Terminal	NU	703	Cutter	242718	309498	Internal floa	1938	1247.26	19.9252	125.19372	33.171902	-122.7785	45.592767	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
407	NU8006	NuStar	Nustar Portland Terminal	NU	8006	Gasoline/Diesel	3004722	3373968	Internal floa	1953	9108.3098	53.844799	338.31685	49.603199	-122.7758	45.590599	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
409	NU8308	NuStar	Nustar Portland Terminal	NU	8308	Gasoline/Diesel	3061632	3352746	Internal floa	1969	8486.1201	51.973202	326.55726	52.815498	-122.7747	45.590229	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
410	PA1	Pacific Terminal Se	Pacific Terminal Services Portland Termina	PA	1	Residual oil	10000	60000		1980	6915.0498	46.916199	294.78317	1.15991	-122.761	45.580093	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
411	PA2	Pacific Terminal Se	Pacific Terminal Services Portland Termina	PA	2	Diesel oil	10000	60000		1980	7594.0898	49.165798	308.91782	1.0562	-122.7614	45.580134	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
412	PA3	Pacific Terminal Se	Pacific Terminal Services Portland Termina	PA	3	Residual oil	10000	20000		1980	2769.5701	29.6915	186.55719	0.96356	-122.7613	45.579875	NA	NA	Pre-1993 or	Potentially in Water	Tank Failure	
413	PA4	Pacific Terminal Se	Pacific Terminal Services Portland Termina	PA	4	Residual oil	40000	80000		1940	11006.4	59.189899	371.90111	0.9716	-122.7593	45.579706	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
414	PA5	Pacific Terminal Se	Pacific Terminal Services Portland Termina	PA	5	Residual oil	8000	50000		1940	1081.17	58.664101	368.59741	0.680046	-122.7598	45.579565	NA	NA	Pre-1993 or	Material in Water	Tank Failure	
415	PA6	Pacific Terminal Se	Pacific Terminal Services Portland Termina	PA	6	Diesel oil	6	12		1988	0	0	0	0	-122.7613	45.579875	NA	NA	Pre-1993 or	No Data	Tank Failure	
421	PH2713	Phillips 66	Phillips 66	PH	2713	UNAX AW 46	Not listed	109000	Welded Stee	1937	603.45099	13.8595	87.081806	24.1465	-122.7408	45.561495	NA	NA	Pre-1993 or	On Land	Tank Failure	
422	PH2714	Phillips 66	Phillips 66	PH	2714	Guardol 15W/40	Not listed	109000	Welded Stee	1937	603.45099	13.8595	87.081806	24.1465	-122.7407	45.561439	NA	NA	Pre-1993 or	On Land	Tank Failure	
423	PH2783	Phillips 66	Phillips 66	PH	2783	Decant Oil	Not listed	948066	Riveted Stee	1937	3357.1899	32.689899	205.3967	37.751301	-122.7403	45.561906	NA	NA	Pre-1993 or	On Land	Tank Failure	
427	PH2917	Phillips 66	Phillips 66	PH	2917	RLOP 220 N	Not listed	612000	Welded Stee	1938	2487.24	28.1374	176.7925	32.893002	-122.7407	45.562262	NA	NA	Pre-1993 or	On Land	Tank Failure	
429	PH2983	Phillips 66	Phillips 66	PH	2983	RLOP 220 N	Not listed	304000	Welded Stee	1941	1120.48	18.885401	118.66047	36.269299	-122.7401	45.563303	NA	NA	Pre-1993 or	On Land	Tank Failure	
437	PH3414	Phillips 66	Phillips 66	PH	3414	RLOP 220 N	Not listed	200000	Welded Stee	1949	782.82501	15.7855	99.183219	34.1535	-122.7397	45.561346	NA	NA	Pre-1993 or	On Land	Tank Failure	
438	PH3415	Phillips 66	Phillips 66	PH	3415	SUN 525	Not listed	200000	Welded Stee	1949	772.41000	15.6802	98.5126	34.613602	-122.7396	45.561452	NA	NA	Pre-1993 or	On Land	Tank Failure	
439	PH3416	Phillips 66	Phillips 66	PH	3416	RLOP 100N	Not listed	200000	Welded Stee	1949	588.65399	13.6885	86.007385	45.419201	-122.7395	45.561285	NA	NA	Pre-1993 or	On Land	Tank Failure	
441	PH3417	Phillips 66	Phillips 66	PH	3417	UL TRA S 4	Not listed	200500	Welded Stee	1949	821.435	16.00989	101.59973	32.548195	-122.7394	45.561389	NA	NA	Pre-1993 or	On Land	Tank Failure	
442	PH3579	Phillips 66	Phillips 66	PH	3579	Industrial Fuel Oil	Not listed	3307668	Welded Stee	1950	1291.67	64.121101	402.88476	34.232601	-122.7392	45.560994	NA	NA	Pre-1993 or	On Land	Tank Failure	
443	PH36	Phillips 66	Phillips 66	PH	36	Stop Oil	Not listed	20496	Riveted Stee	1907	193.702	7.8522201	49.336954	14.1451	-122.7411	45.561994	NA	NA	Pre-1993 or	On Land	Tank Failure	
443	PH3623	Phillips 66	Phillips 66	PH	3623	HiTec 6576	Not listed	18228	Welded Stee	1950	193.702	7.8522201	49.336954	12.5798	-122.741	45.562595	NA	NA	Pre-1993 or	On Land	Tank Failure	
444	PH3639	Phillips 66	Phillips 66	PH	3639	SUP SYN BL 5W/30	Not listed	120000	Welded Stee	1951	598.82501	13.8062	86.746913	26.7887	-122.7406	45.561377	NA	NA	Pre-1993 or	On Land	Tank Failure	
445	PH3739	Phillips 66	Phillips 66	PH	3739	SUN 150 B/S	Not listed	200000	Welded Stee	1954	757.995	15.5331	97.597346	35.272301	-122.7398	45.56123	NA	NA	Pre-1993 or	On Land	Tank Failure	
446	PH3740	Phillips 66	Phillips 66	PH	3740	RLOP 600N	Not listed	277000	Welded Stee	1954	935.18402	17.253401	108.40631	39.5961	-122.7396	45.56116	NA	NA	Pre-1993 or	On Land	Tank Failure	
447	PH3741	Phillips 66	Phillips 66	PH	3741	Ramar CLF 17E	Not listed	17500	Welded Stee	1954	114.719	6.04287	37.968472	20.392599	-122.7409	45.560559	NA	NA	Pre-1993 or	On Land	Tank Failure	
449	PH3743	Phillips 66	Phillips 66	PH	3743	Utility	Not listed	18600	Welded Stee	1954	114.719	6.04287	37.968472	21.6744	-122.7409	45.560625	NA	NA	Pre-1993 or	On Land	Tank Failure	
450	PH3744	Phillips 66	Phillips 66	PH	3744	HYNAP N100	Not listed	17500	Welded Stee	1954	114.719	6.04287	37.968472	20.392599	-122.7409	45.560537	NA	NA	Pre-1993 or	On Land	Tank Failure	
451	PH3745	Phillips 66	Phillips 66	PH	3745	HiTEC 5751	Not listed	17500	Welded Stee	1954	114.719	6.04287	37.968472	20.392599	-122.7409	45.560569	NA	NA	Pre-1993 or	On Land	Tank Failure	
452	PH3746	Phillips 66	Phillips 66	PH	3746	Lubricol 4998C	Not listed	17500	Welded Stee	1954	114.719	6.04287	37.968472	20.392599	-122.7408	45.560648	NA	NA	Pre-1993 or	On Land	Tank Failure	
453	PH3747	Phillips 66	Phillips 66	PH	3747	Lubricol 4990HC	Not listed	17500	Welded Stee	1954	114.719	6.04287	37.968472	20.392599	-122.7408	45.560577	NA	NA	Pre-1993 or	On Land	Tank Failure	
454	PH3757	Phillips 66	Phillips 66	PH	3757	HiTEC 1193	Not listed	17500	Welded Stee	1954	114.719	6.04287	37.968472	20.392599	-122.7408	45.560546	NA	NA	Pre-1993 or	On Land	Tank Failure	
455	PH3760	Phillips 66	Phillips 66	PH	3760	Raffene 750L	Not listed	17500	Welded Stee	1954	114.719	6.04287	37.968472	20.392599	-122.7408	45.560512	NA	NA	Pre-1993 or	On Land	Tank Failure	
457	PH4191	Phillips 66	Phillips 66	PH	4191	Lubricol 48254	Not listed	17500	Welded Stee	1964	114.719	6.04287	37.968472	20.392599	-122.7407	45.560555	NA	NA	Pre-1993 or	On Land	Tank Failure	
458	PH4192	Phillips 66	Phillips 66	PH	4192	Lubricol 7075F	Not listed	17500	Welded Stee	1964	114.719	6.04287	37.968472	20.392599	-122.7408	45.560522	NA	NA	Pre-1993 or	On Land	Tank Failure	
459	PH4223	Phillips 66	Phillips 66	PH	4223	Slop Oil	Not listed	18690	Welded Stee	1968	0	0	0	0	-122.7408	45.560522	NA	NA	Pre-1993 or	No Data	Tank Failure	
460	PH4241	Phillips 66	Phillips 66	PH	4241	UNAX AW 68	Not listed	17500	Welded Stee	1968	114.719	6.04287	37.968472	20.392599	-122.7408	45.56049	NA	NA	Pre-1993 or	On Land	Tank Failure	
461	PH4242	Phillips 66	Phillips 66	PH	4242	UNAX AW 68	Not listed	17500	Welded Stee	1968	114.719	6.04287	37.968472	20.392599	-122.7407	45.560469	NA	NA	Pre-1993 or	On Land	Tank Failure	
462	PH4243	Phillips 66	Phillips 66	PH	4243	Ramar CLF 17E	Not listed	17500	Welded Stee	1968	114.719	6.04287	37.968472	20.392599	-122.7407	45.560504	NA	NA	Pre-1993 or	On Land	Tank Failure	
463	PH4244	Phillips 66	Phillips 66	PH	4244	Mohawk 450	Not listed	17500	Welded Stee	1968	114.719	6.04287	37.968472	20.392599	-122.7395	45.561506	NA	NA	Pre-1993 or	On Land	Tank Failure	
464	PH4245	Phillips 66	Phillips 66	PH	4245	SUN 525	Not listed	17500	Welded Stee	1968	114.719	6.04287	37.968472	20.392599	-122.7395	45.561479	NA	NA	Pre-1993 or	On Land	Tank Failure	
465	PH4252	Phillips 66	Phillips 66	PH	4252	Residual Fuel Oil	Not listed	458640	Welded Stee	1968	2263.77	26.843599	168.66331	27.083799	-122.7396	45.560726	NA	NA	Pre-1993 or	On Land	Tank Failure	
466	PH4253	Phillips 66	Phillips 66	PH	4253	Residual Fuel Oil	Not listed	451290	Welded Stee	1968	2448.8301	27.9193	175.42214	24.635799	-122.7394	45.560553	NA	NA	Pre-1993 or			

FID	TANK ID	Owner	Facility	Facility_S	Container	Substance	Average FI	Capacity	Contains	Year Built	Area ft 2	Radius ft	Perimeter	Height ft	Longitude	Latitude	Flammabil	Hazardous	Year cat	damagzone	Fail	Concern
371	NU10026	NuStar	Nustar Portland Terminal	NU	10026	Gasoline/diesel	4200000	4200000	Internal floa	2007	12047.4	61.9258	389.09128	46.604301	-122.7726	45.5881	NA	NA	Post 2004	Material in Water	No Tank Failure	
372	NU10027	NuStar	Nustar Portland Terminal	NU	10027	Gasoline/diesel	4200000	4200000	Internal floa	2007	12047.4	61.9258	389.09128	46.604301	-122.7728	45.588531	NA	NA	Post 2004	Material in Water	No Tank Failure	
102	CH181	Chevron	Chevron Willbridge	CH	181	Blended Oil	5000	4700	Fx	1993	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
103	CH182	Chevron	Chevron Willbridge	CH	182	Blended Oil	10000	11374	Fx	1994	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
104	CH183	Chevron	Chevron Willbridge	CH	183	Blended Oil	10000	11374	Fx	1994	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
105	CH184	Chevron	Chevron Willbridge	CH	184	Blended Oil	10000	11374	Fx	1994	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
106	CH185	Chevron	Chevron Willbridge	CH	185	Blended Oil	10000	11374	Fx	1994	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
107	CH186	Chevron	Chevron Willbridge	CH	186	Blended Oil	10000	11374	Fx	1994	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
108	CH187	Chevron	Chevron Willbridge	CH	187	Blended Oil	10000	11374	Fx	1994	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
109	CH188	Chevron	Chevron Willbridge	CH	188	Blended Oil	10000	11374	Fx	1994	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
114	CH23	Chevron	Chevron Willbridge	CH	23	Empty	0	13982	Fx	1997	0	0	0	0	0	0	None	NA	1993 - 2004	No Data	Uncertain Location	
115	CH24	Chevron	Chevron Willbridge	CH	24	Empty	0	8859	Fx	1993	0	0	0	0	0	0	None	NA	1993 - 2004	No Data	Uncertain Location	
358	MC24	McCall	McCall Portland Terminal	MC	24	Asphalt	28336	19068	Cone roof	2000	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
359	MC25	McCall	McCall Portland Terminal	MC	25	Asphalt	28252	79800	Cone roof	2000	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
360	MC26	McCall	McCall Portland Terminal	MC	26	Asphalt	28336	79800	Cone roof	2000	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
361	MC27	McCall	McCall Portland Terminal	MC	27	Asphalt	27552	79800	Cone roof	2000	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
416	PA7	Pacific Terminal Services	Pacific Terminal Services Portland Terminal	PA	7	Residual oil	250	475	Fx	1993	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
101	CH180	Chevron	Chevron Willbridge	CH	180	Blended Oil	5000	4700	Fx	1993	0	0	0	0	0	0	NA	NA	1993 - 2004	No Data	Uncertain Location	
0	BP1	BP	British Petroleum North Tank Farm	BP	1	Gasoline	3641610	3808434	Internal Floa	1940	17351.4	74.317703	466.9519	29.341499	-122.7807	45.59495	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
1	BP10	BP	British Petroleum South Tank Farm	BP	10	Diesel	931980	1000840	Fixed Roof	1941	4362.7798	37.265499	234.14604	30.9121	-122.7788	45.593866	Category 3	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
2	BP11	BP	British Petroleum North Tank Farm	BP	11	Gasoline	1129926	1354122	Internal Floa	1940	4632.2002	38.998899	241.2674	39.078701	-122.78	45.594442	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
3	BP12	BP	British Petroleum North Tank Farm	BP	12	Ethanol	561204	563466	Internal Floa	1961	1678.34	23.113501	145.22641	48.216301	-122.7802	45.594962	Category 2	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
4	BP13	BP	British Petroleum North Tank Farm	BP	13	Ethanol	559482	563499	Internal Floa	1961	1944.0699	24.875999	156.30051	41.464001	-122.7804	45.59251	Category 2	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
5	BP14	BP	British Petroleum South Tank Farm	BP	14	Diesel	1046388	1121736	Fixed Roof	1942	3466.8301	33.219998	208.72364	43.2542	-122.7794	45.593616	Category 3	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
6	BP17	BP	British Petroleum South Tank Farm	BP	17	Diesel	3225472	3225472	Fixed Roof	1940	11533.18	69.588999	380.67493	38.565001	-122.7787	45.593233	Category 3	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
6	BP18	BP	British Petroleum South Tank Farm	BP	18	Diesel	1046262	1104776	Fixed Roof	1945	3610.9099	33.902599	213.01631	40.898499	-122.7797	45.593508	Category 3	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
7	BP3	BP	British Petroleum North Tank Farm	BP	3	Gasoline	1505448	1584366	Internal Floa	1957	4845.5	39.272999	246.75953	43.710602	-122.7813	45.59483	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
8	BP4	BP	British Petroleum North Tank Farm	BP	4	Gasoline	939918	1105860	Internal Floa	1957	2970.8601	30.751499	193.21737	49.760799	-122.7811	45.594575	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
25	BP46	BP	British Petroleum BtoDiesel Tanks	BP	46	Biodeisel	125571	221970	Fixed Roof	1954	1006.89	17.902599	112.48535	29.4701	-122.7793	45.594005	Category 3	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
26	BP5	BP	British Petroleum North Tank Farm	BP	5	Gasoline	741300	895314	Internal Floa	1957	2557.47	28.5319	179.27122	46.798801	-122.7808	45.594341	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
27	BP6	BP	British Petroleum North Tank Farm	BP	6	Gasoline	803040	1014384	Internal Floa	1957	2937.49	30.578301	192.12913	46.1632	-122.7804	45.594515	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
28	BP7	BP	British Petroleum North Tank Farm	BP	7	Gasoline	450492	648018	Internal Floa	1957	1851.48	24.2764	152.53312	46.7883	-122.7803	45.594769	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
29	BP8	BP	British Petroleum North Tank Farm	BP	8	Gasoline	616938	790272	Internal Floa	1957	2404.8501	27.6675	173.84003	43.926999	-122.7804	45.594271	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
30	BP9	BP	British Petroleum South Tank Farm	BP	9	Diesel	2161404	2295366	Fixed Roof	1940	10673.9	58.289001	366.2466	28.750799	-122.7793	45.592425	Category 3	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
35	CH101	Chevron	Chevron Willbridge	CH	101	Compressor Oil	171128	17284	Fixed Roof	1958	114.719	6.04287	37.968472	20.1409	-122.7474	45.564228	Category 1	Yes	Pre-1993 of	On Land	Tank Failure	Flammable
68	CH138	Chevron	Drive Train Fluid HD 10	CH	138	Oil	18008	18008	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0
77	CH146	Chevron	Chevron Willbridge	CH	146	Transmix	22715	25447	Fx	Unknown	0	0	0	0	0	0	0	0	0	0	0	0
140	CH47	Chevron	Chevron Willbridge	CH	47	Unleaded Gasoline	3237046	3609743	Fixed Roof	1929	11940.8	61.651299	387.36653	40.412201	-122.7427	45.563923	Category 2	Yes	Pre-1993 of	On Land	Tank Failure	Flammable
150	CH64	Chevron	Chevron Willbridge	CH	64	Diesel	754034	842275	Fixed Roof	1947	2902.78	30.3971	190.99061	38.81199	-122.7408	45.564509	Category 3	Yes	Pre-1993 of	On Land	Tank Failure	Flammable
154	CH75	Chevron	Chevron Willbridge	CH	75	Jet Fuel	861104	1004586	Fixed Roof	1952	3238.1399	32.104999	201.72166	41.472599	-122.7423	45.56401	Category 3	Yes	Pre-1993 of	On Land	Tank Failure	Flammable
173	CH94	Chevron	Chevron Willbridge	CH	94	Rykon Oil 68	63000	67419	Fx	Unknown	0	0	0	0	0	0	0	0	0	0	0	0
181	KML17018	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	17018	Gasoline	441428	735714	Internal floa	1941	3078.0801	31.3015	196.67313	31.952101	-122.7859	45.603147	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
182	KML17020	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	17020	Gasoline	445738	742986	Internal floa	1941	3078.0801	31.3015	196.67313	32.264	-122.786	45.603335	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
183	KML17027	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	17027	Gasoline	443444	739074	Internal floa	1954	2884.6599	30.302099	190.3937	34.250198	-122.7858	45.602936	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
184	KML20011	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	20011	Diesel	355596	455906	Vertical fixe	1932	3956.53	62.52884	223.32162	38.873501	-122.7862	45.602706	Category 3	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
189	KML20016	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	20016	Diesel	752770	1253474	Vertical fixe	1941	6522.73	45.585899	266.28899	35.6959	-122.7882	45.602855	Category 3	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
202	KML45028	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	45028	Gasoline	1133723	1853484	External floa	1955	5517.6699	41.9086	263.3195	45.779301	-122.7858	45.602662	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
206	KML55022	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	55022	Gasoline	1385572	2309286	Vertical fixe	1928	10374.19	57.4585	361.0224	29.7638	-122.787	45.60332	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
208	KML59029	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	59029	Gasoline	1472456	2454060	Vertical fixe	1955	9125.6504	53.896099	338.63918	35.949299	-122.7863	45.602507	Category 1	Yes	Pre-1993 of	Material in Water	Tank Failure	Flammable
212	KMW100	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	100	Diesel	2028600	3381000	Vertical fixe	1949	11039.6	59.279099	372.46156	40.941299	-122.7451	45.566303	Category 3	Yes	Pre-1993 of	On Land	Tank Failure	Flammable
213	KMW101	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	101	Gasoline	2028600	3381000	Vertical fixe	1949	10881.1	58.8521	369.77865	41.537701	-122.7447	45.56672	Category 1	Yes	Pre-1993 of	On Land	Tank Failure	Flammable
217	KMW105	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	105	Ethanol	100800	168000	Internal floa	1951	477.6001	12.3307	77.476027	47.016602	-122.7451	45.5658	Category 2	Yes	Pre-1993 of	On Land	Tank Failure	Flammable
220	KMW116	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	116	Gasoline	2031120	3385200	Internal floa	1961	12590.2	63.3055	397.76019	35.9								

FID	TANK ID	Owner	Facility	Facility_S	Container	Substance	Average FI	Capacity	Contain	Year Built	Area ft 2	Radius ft	Perimeter	Height ft	Longitude	Latitude	Flammabil	Hazardous	Year cat	damagezone	fail	Concern
432	PH3409	Phillips 66	Phillips 66	PH	3409	Unleaded Gasoline	Not listed	948654	Welded Ste	1949	4178.0601	36.468102	229.13584	30.3531	-122.7396	45.56344	Category 2	Yes	Pre-1993 or	On Land	Tank Failure	Flammable
433	PH3410	Phillips 66	Phillips 66	PH	3410	Ethanol	Not listed	278964	Welded Ste	1949	1225.84	19.753401	124.11428	30.421699	-122.7402	45.563495	Category 2	Yes	Pre-1993 or	On Land	Tank Failure	Flammable
434	PH3411	Phillips 66	Phillips 66	PH	3411	Unleaded Gasoline	Not listed	259350	Welded Ste	1949	1155.14	19.175301	120.48197	30.0138	-122.7401	45.563515	Category 2	Yes	Pre-1993 or	On Land	Tank Failure	Flammable
435	PH3412	Phillips 66	Phillips 66	PH	3412	Diesel #1	Not listed	279426	Welded Ste	1949	1410.63	21.190001	133.1407	26.480301	-122.74	45.563405	Category 3	Yes	Pre-1993 or	On Land	Tank Failure	Flammable
436	PH3413	Phillips 66	Phillips 66	PH	3413	Unleaded Gasoline	Not listed	259560	Welded Ste	1949	979.86503	17.6616	110.97111	35.4076	-122.7399	45.563518	Category 2	Yes	Pre-1993 or	On Land	Tank Failure	Flammable
448	PH3742	Phillips 66	Phillips 66	PH	3742	MP Gear Lube 80/90	Not listed	17500	Welded Ste	1954	114.719	6.04287	37.968472	20.392599	-122.7409	45.560593	Category 1	Yes	Pre-1993 or	On Land	Tank Failure	Flammable
456	PH3761	Phillips 66	Phillips 66	PH	3761	Diesel #2	Not listed	3240342	Welded Ste	1954	12915.1	64.117104	402.85964	33.540001	-122.7385	45.560404	Category 3	Yes	Pre-1993 or	On Land	Tank Failure	Flammable
472	PH4259	Phillips 66	Phillips 66	PH	4259	Transmix	Not listed	205506	Welded Ste	1968	1225.62	19.7516	124.10296	22.415001	-122.7403	45.5637	Category 2	Yes	Pre-1993 or	On Land	Tank Failure	Flammable
480	PH4318	Phillips 66	Phillips 66	PH	4318	Diesel #2	Not listed	1422456	Welded Ste	1973	6588.2402	45.794102	287.73283	28.862801	-122.7388	45.560751	Category 3	Yes	Pre-1993 or	On Land	Tank Failure	Flammable
32	CH1	Chevron	Chevron Willbridge	CH	1	Unleaded Gasoline	3265616	3412315	Internal floa	1997	12260	62.469898	392.50995	37.207298	-122.7414	45.565257	Category 2	Yes	1993 - 2004	Potentially in Water	Tank Failure	Flammable
123	CH3	Chevron	Chevron Willbridge	CH	3	Unleaded Gasoline	2056421	2392178	Fixed Roof	1999	8141.1099	50.9058	319.85057	39.280701	-122.7418	45.564876	Category 2	Yes	1993 - 2004	On Land	No Tank Failure	Flammable
138	CH45	Chevron	Chevron Willbridge	CH	45	Ethanol	803510	958693	Fixed Roof	1999	3441.5701	33.098999	207.96149	37.238499	-122.7414	45.564484	Category 2	Yes	1993 - 2004	On Land	No Tank Failure	Flammable
143	CH51	Chevron	Chevron Willbridge	CH	51	Ethanol	2366078	2613405	Fixed Roof	2000	7943.1401	50.283001	315.93741	43.982899	-122.7411	45.564223	Category 2	Yes	1993 - 2004	On Land	No Tank Failure	Flammable
147	CH60	Chevron	Chevron Willbridge	CH	60	Unleaded Gasoline	4625739	4999697	Fixed Roof	2001	12515.9	63.118401	396.58461	53.401199	-122.742	45.563315	Category 2	Yes	1993 - 2004	On Land	No Tank Failure	Flammable
149	CH62	Chevron	Chevron Willbridge	CH	62	Unleaded Gasoline	6054327	6812135	Fixed Roof	2000	19337	78.454803	493.94607	47.0938	-122.7415	45.563859	Category 2	Yes	1993 - 2004	On Land	No Tank Failure	Flammable
209	KML72021	Kinder Morgan	Kinder Morgan Linnton Terminal	KML	72021	Diesel	1705378	2842297	Vertical fixe	2011	10371.9	57.4585	361.0224	36.633701	-122.7875	45.603365	Category 3	Yes	Post 2004	Material in Water	No Tank Failure	Flammable
224	KMW12001	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	12001	Jet A	3024000	5040000	Internal floa	2012	19337	78.454803	492.94607	34.842602	-122.7421	45.565693	Category 3	Yes	Post 2004	On Land	No Tank Failure	Flammable
225	KMW12002	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	12002	Diesel	3024000	5040000	Internal floa	2012	8141.1099	50.9058	319.85057	39.280701	-122.7428	45.565734	Category 3	Yes	Post 2004	On Land	No Tank Failure	Flammable
226	KMW12003	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	12003	Gasoline	3024000	5040000	Internal floa	2012	10881.1	58.8521	369.77865	61.919498	-122.7439	45.566713	Category 1	Yes	Post 2004	On Land	No Tank Failure	Flammable
349	MC15	McCall	McCall Portland Terminal	MC	15	Flux	14560	21840	Cone roof	1986	0	0	0	0	0	0	NA	Yes	Pre-1993 or	No Data	Tank Failure	Hazardous but not Flammable
350	MC16	McCall	McCall Portland Terminal	MC	16	Flux	20132	30198	Cone roof	1989	0	0	0	0	0	0	NA	Yes	Pre-1993 or	No Data	Tank Failure	Hazardous but not Flammable
375	NU1011	NuStar	NuStar Portland Terminal	NU	1011	Ethanol/Gasoline	348510	393149	Internal floa	1980	1332	20.591	129.37707	39.456902	-122.7737	45.589052	NA	Yes	Pre-1993 or	Material in Water	Tank Failure	Hazardous but not Flammable
364	MC33	McCall	McCall Portland Terminal	MC	33	Poly phosphoric acid	4054	5405	Cone roof	2005	0	0	0	0	0	0	NA	Yes	Post 2004	No Data	No Tank Failure	Hazardous but not Flammable
6	BP15	BP	British Petroleum South Tank Farm	BP	15	Biodiesel	743400	80497	Fixed Roof	1943	3310.75	32.463001	203.97105	32.502998	-122.7792	45.593738	Category 3	No	Pre-1993 or	Material in Water	Tank Failure	Flammable Not Hazardous
59	CH129	Chevron	Chevron Willbridge	CH	129	Base Oil	601107	647935	Fixed Roof	1943	1919.3101	24.7174	155.30212	44.7808	-122.7426	45.563557	Category 1	No	Pre-1993 or	On Land	Tank Failure	Flammable Not Hazardous
61	CH130	Chevron	Chevron Willbridge	CH	130	Base Oil	239477	251112	Fixed Roof	1943	860.79203	16.5529	104.00494	39.618801	-122.7424	45.563673	Category 1	No	Pre-1993 or	On Land	Tank Failure	Flammable Not Hazardous
73	CH142	Chevron	Chevron Willbridge	CH	142	Base Oil	607148	648620	Ex	1984	1965.16	25.010599	157.14623	44.1227	-122.742	45.563989	Category 1	No	Pre-1993 or	On Land	Tank Failure	Flammable Not Hazardous
137	CH44	Chevron	Chevron Willbridge	CH	44	Base Oil	771264	835393	Fixed Roof	1920	2612.55	28.8375	181.19135	42.745998	-122.7423	45.563518	Category 1	No	Pre-1993 or	On Land	Tank Failure	Flammable Not Hazardous
155	CH76	Chevron	Chevron Willbridge	CH	76	Base Oil	467832	498258	Fixed Roof	1960	1426.89	21.3118	133.90599	46.680302	-122.7415	45.564182	Category 1	No	Pre-1993 or	On Land	Tank Failure	Flammable Not Hazardous
221	KMW117	Kinder Morgan	Kinder Morgan Willbridge Terminal	KMW	117	Biodiesel	340200	567000	Internal floa	1951	2115.3501	25.9487	163.04049	35.832001	-122.7457	45.566373	Category 3	No	Pre-1993 or	On Land	Tank Failure	Flammable Not Hazardous
346	MC10	McCall	McCall Portland Terminal	MC	10	Biodiesel	157248	469392	Internal floa	1974	1780.05	23.803499	149.5618	35.251099	-122.7357	45.564053	Category 3	No	Pre-1993 or	Material in Water	Tank Failure	Flammable Not Hazardous
366	MC5	McCall	McCall Portland Terminal	MC	5	Biodiesel	5000	27216	Cone roof	1974	402.138	11.3139	71.08733	9.0473003	-122.7339	45.563564	Category 3	No	Pre-1993 or	Material in Water	Tank Failure	Flammable Not Hazardous
367	MC6	McCall	McCall Portland Terminal	MC	6	Biodiesel	5000	27216	Cone roof	1974	402.138	11.3139	71.08733	9.0473003	-122.7339	45.563564	Category 3	No	Pre-1993 or	Material in Water	Tank Failure	Flammable Not Hazardous
370	MC9	McCall	McCall Portland Terminal	MC	9	Biodiesel	140658	473004	Cone roof	1979	1604.5699	22.5998	141.99873	39.4072	-122.7341	45.563637	Category 3	No	Pre-1993 or	Material in Water	Tank Failure	Flammable Not Hazardous
383	NU2113	NuStar	NuStar Portland Terminal	NU	2113	Biodiesel	698322	865857	Internal floa	1938	2293.6799	27.020399	169.77417	50.464195	-122.7783	45.593108	Category 3	No	Pre-1993 or	Material in Water	Tank Failure	Flammable Not Hazardous
467	PH4254	Phillips 66	Phillips 66	PH	4254	PS 300	Not listed	459312	Welded Ste	1968	2444.3701	27.8939	175.26254	25.119499	-122.7392	45.560289	Category 1	No	Pre-1993 or	On Land	Tank Failure	Flammable Not Hazardous
468	PH4255	Phillips 66	Phillips 66	PH	4255	Biodiesel	Not listed	404250	Welded Ste	1968	2445.21	27.898701	175.29271	22.100599	-122.739	45.560238	Category 3	No	Pre-1993 or	On Land	Tank Failure	Flammable Not Hazardous
487	PH4332	Phillips 66	Phillips 66	PH	4332	Super ATF	Not listed	17500	Welded Ste	1973	114.719	6.04287	37.968472	20.392599	-122.7406	45.560507	Category 1	No	Pre-1993 or	On Land	Tank Failure	Flammable Not Hazardous
136	CH43	Chevron	Chevron Willbridge	CH	43	Base Oil	770334	837085	Fixed Roof	1993	2761.1101	29.646099	186.27193	40.528	-122.7421	45.563801	Category 1	No	1993 - 2004	On Land	No Tank Failure	Flammable Not Hazardous