Third Quarter 2024 Monitoring Report
Former Johnson Oil
280 E Columbia River Highway
Clatskanie, Oregon

Prepared for:
Oregon Department of Environmental Quality
Task Order No. 066-23-20

November 27, 2024
32-24008422/Task 3

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1.0 Introduction

This *Third Quarter 2024 Monitoring Report* describes the field activities and presents the results of a groundwater monitoring event completed in July 2024 at the Former Johnson Oil property and the adjacent property currently occupied by Turning Point Community Service Center (the Site; Figures 1 and 2) located at 280 East Columbia River Highway, Clatskanie, Oregon. The Site is located adjacent to the Clatskanie River in Columbia County. The monitoring event was conducted for the Oregon Department of Environmental Quality (DEQ) under Task 2 of Task Order No. 066-23-20, and this report was prepared under Task 3. The Site is listed in DEQ's Leaking Underground Storage Tank (LUST) database as LUST ID 05-87-0033.

1.1 Scope of Work

The scope of work was completed in accordance with the *Supplemental Site Investigation Work Plan* (Work Plan; Apex Companies, LLC [Apex], 2022). The scope of work for this monitoring event includes collection and analysis of groundwater samples from 10 existing monitoring wells, soil vapor from four monitoring locations, and ambient air from four monitoring locations.

2.0 Background

This section presents a description of the Site, its geology and hydrogeology, and previous work that has been done at the Site.

2.1 Site Location and Description

The Site is located on an approximately 0.26-acre parcel (Figures 1 and 2) near the center of the City of Clatskanie on the south bank of the Clatskanie River and is bounded to the south by the Columbia River Highway (Hwy 30). The Site includes the former service station property and the adjacent property occupied by Turning Point Community Service Center (Turning Point). The former Johnson Oil property is improved with a vacant former service station with a canopy. Turning Point is located adjoining to the north and west, and the property to the east is currently vacant (formerly a produce market that burned down). The Site and surrounding properties are zoned commercial, but the zoning rules allow for residential use in conjunction with commercial use.

2.2 Geology and Hydrogeology

The Site is located approximately 18 feet above mean sea level, and topography is generally level but slopes steeply down to the Clatskanie River along the north side of the Site. The Site is located within the Oregon Coast Range and is underlain by unconsolidated Quaternary alluvial deposits of silt and interbedded sand lenses to a depth of approximately 50 feet below ground surface (bgs). Sandstone and siltstone of the Astoria

Formation underlie the alluvial deposits (Orr, 1999). Based on boring logs associated with Site investigations, near surface geology generally consists of gravelly fill material to a depth of 1 to 5 feet bgs overlying sand.

Shallow groundwater is present beneath the Site at depths ranging from approximately 1 foot bgs on the northwestern portion of the Site to 10 feet bgs adjacent to the river and on the southwestern side of the Site. Groundwater generally flows toward the Clatskanie River with a less pronounced southwesterly component and may be tidally influenced. Some of the groundwater monitoring wells at the Site exhibit slow recovery based on data collected in 2019 through 2024.

2.3 Summary of Prior Work

Petroleum product in the form of light non-aqueous phase liquid (LNAPL) was encountered during underground storage tank (UST) decommissioning activities at the Site in July 1987. The release of an unknown quantity of petroleum was reported to DEQ, and the Site was assigned LUST number 05-87-0033. Prior removal/remedial actions have included decommissioning of the former Johnson Oil dispensers, piping, and USTs (by removal, except for one tank decommissioned in place) and an Interim Removal Action Measure (IRAM) conducted in 2022 to excavate contaminated soil near the riverbank (see Figure 2). Access to areas of contaminated soil during the 2022 IRAM was limited due to underground utilities and existing building foundations. Therefore, contaminated soil and groundwater remain onsite. However, petroleum contaminants are monitored quarterly to ensure conditions are protective for current occupants and uses.

3.0 Field Activities

3.1 Pre-Investigation Activities

Site Health and Safety Plan. A Site-specific health and safety plan (HASP) was prepared for the field activities and included in Appendix B of the Work Plan. The HASP was prepared in general accordance with the Occupational Safety and Health Administration (OSHA) and the Oregon Administrative Rules (OAR). A copy of the HASP was maintained onsite during the field activities.

Property Access. DEQ obtained access agreements with Columbia County (the Former Johnson Oil property owner) and Turning Point for access to the Site for monitoring activities.

3.2 Groundwater Monitoring

Groundwater Levels. On July 22, 2024, groundwater levels were measured using an electronic water level indicator for monitoring wells MW-4 through MW-9 and MW-12 through MW-15. Wells were opened and the water level was allowed to equilibrate before the measurements were taken. The depth to groundwater was measured in each well to the nearest 0.01 foot. The depth to groundwater and groundwater elevations (to an

arbitrary assumed datum) are presented in Table 1. Water level documentation is included in Appendix A, and historical elevations are presented in Appendix B.

Groundwater Sampling. Samples were collected using a peristaltic pump and low-flow protocols. New tubing was used on each monitoring well. Field parameters collected during sampling included temperature, pH, conductivity, dissolved oxygen concentration (DO), and oxidation-reduction potential (ORP). Field parameters are summarized in Table 1. Groundwater monitoring documentation is included in Appendix A.

Groundwater samples were submitted to Pace Analytical National located in Mount Juliet, Tennessee for analysis. Sample analysis was conducted on a standard turnaround time. Groundwater samples were analyzed for gasoline-range total petroleum hydrocarbons (TPH-G) by Northwest Method NWTPH-Gx and for volatile organic compounds (VOCs) by Environmental Protection Agency (EPA) Method 8260D.

3.3 Soil Vapor Sampling

Soil vapor samples were collected on July 22, 2024, from sub-slab vapor points SG-7, SG-8 (located within the Turning Point building), and SG-10 (located within the former service station building). The locations of the soil vapor points are shown on Figure 2. Each soil vapor sample was collected in a 1-Liter Summa canister equipped with 200 cubic centimeters per minute (cc/min) flow controllers in accordance with the standard operating procedure in Appendix A of the Work Plan.

Soil vapor samples were submitted to Pace Analytical National for analysis on a standard turnaround time. Soil vapor samples were analyzed for VOCs, including low fraction TPH, by EPA Method TO-15.

3.4 Ambient Air Sampling

Radiello® RAD 130 passive ambient air samplers were used to collect four indoor ambient air samples (samples AMB-1 and AMB-2 within the Turning Point building, AMB-4 within the former service station building, and an outdoor ambient air sample, AMB-3). The locations of the ambient air samples are shown on Figure 2. The ambient air samplers were positioned approximately 6 feet above the ground surface (approximate to the breathing zone). The ambient air samplers were deployed for a period of eight days (July 22 through 30, 2024).

At the conclusion of the deployment period, the adsorbent cartridges were placed back into their original tubes and the sample end time was added to the labels. The samples were submitted to Eurofins Environment Testing in Folsom, California and analyzed on a standard turnaround time. Ambient air samples were analyzed by for selected VOCs by EPA Method TO-17.

3.5 Handling of Investigation-Derived Waste

Investigation-derived waste (IDW) consisted of purge water and decontamination water. IDW water was placed in a 55-gallon drum and temporarily stored inside the former service station building, pending characterization, disposal profiling, and removal from the Site. The container was labeled with the project name, general contents, and date. Disposable items, such as sample tubing, gloves, paper towels, etc., were placed in plastic bags after use and deposited in trash receptacles for disposal.

4.0 Results

4.1 Groundwater Levels

The groundwater elevations and elevation contours are presented on Figure 3. In general, the July 2024 groundwater elevation data suggest a significantly variable groundwater flow across the Site with relatively higher groundwater levels in the central portion of the Site and radially outward flow (to the north, east, and south) with hydraulic gradients ranging from 0.07 toward the south to 0.2 toward the north (toward the Clatskanie River). Groundwater nearer the Clatskanie River may be tidally influenced. The groundwater flow direction and gradients observed during the July 2024 monitoring event are consistent with previous events.

4.2 Field Parameters

Consistent with prior monitoring events, Site monitoring wells (except for MW-9) have low DO and negative ORP measurements, suggesting an anaerobic and reducing environment. These values are consistent with groundwater in the vicinity of a hydrocarbon plume influenced by microbial degradation (as the available oxygen is being used by the microorganisms). The lack of measurable DO in eight of the 10 wells limits the amount of continued degradation that can occur.

In MW-9, DO and ORP values are higher than other Site wells, indicative of an aerobic and oxidizing environment. This suggests that groundwater in the vicinity of MW-9 may not be influenced by the microbial degradation process. Furthermore, the combination of the higher DO and ORP, the low concentrations of detected analytes (discussed below), and the lower groundwater elevation observed in MW-9 suggests that the well may be influenced by groundwater-surface water interaction with the adjacent Clatskanie River. However, there isn't enough data available to distinguish any specific relationship between the aquifer and the river or to compare results to the local aquifer outside of the influence of the petroleum plume. In addition, the field parameters observed in monitoring wells MW-14 and MW-15, which are approximately equidistant from the river as monitoring well MW-9, do not exhibit the same variation as the field parameters observed in MW-9, although the groundwater elevation is higher in these monitoring wells.

4.3 Chemical Analysis

The analytical results and risk screening of the groundwater, soil vapor, and ambient air samples collected in July 2024 are summarized below. The concentrations were screened against the risk-based concentrations (RBCs) that correspond to the potentially complete exposure pathways published in *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* (DEQ, updated June 2023) including:

- Groundwater to indoor air occupational receptor (RBC_{wi});
- Groundwater in excavations for the construction and excavation worker receptor (RBC_{we});
- Soil vapor intrusion (RBC_{sv}); and
- Ambient air (RBC_{air}).

Copies of the analytical laboratory reports are included in Appendix C along with a quality assurance/quality control (QA/QC) review of the data. The results of the data quality review indicate that the data are of acceptable quality and are suitable for their intended purpose.

4.3.1 Groundwater

Groundwater analytical results are presented in Table 2 and summarized on Figure 4 for the July 2024 groundwater monitoring event. Historical groundwater analytical results are presented in Appendix B.

Total Petroleum Hydrocarbons. TPH-G was detected in all 10 of the groundwater samples collected during the July 2024 monitoring event. Detected TPH-G concentrations ranged from 2.34 micrograms per liter (µg/L; MW-8) to 82,600 µg/L (MW-12). TPH-G detections exceeded the acute groundwater to indoor air RBC of 520 µg/L in six of the 10 samples. The TPH-G concentration in the sample collected from MW-12 also exceeded the RBC for groundwater in excavations for construction and excavation workers of 14,000 µg/L.

The TPH-G concentration in the sample collected from monitoring well MW-12 is lower than that of the second quarter 2024 monitoring event (by 31 percent), but still exceeds concentrations observed in other monitoring wells by at least one order of magnitude. The TPH-G concentration in MW-15 also decreased as compared to the prior monitoring event. Concentrations in the remaining Site wells are similar to those of the previous monitoring event.

Volatile Organic Compounds. One or more petroleum VOCs (benzene, ethylbenzene, xylenes, naphthalene, and 1,2,4-trimethylbenzene) were detected at concentrations that exceed the RBCs in eight of the 10 groundwater samples collected in July 2024. The exceedances are as follows:

- The benzene RBC for the acute groundwater to indoor air pathway (12 µg/L) was exceeded in seven groundwater samples and the chronic pathway (650 µg/L) was exceeded in two samples;

- The benzene RBC for groundwater in excavations (1,800 µg/L) was exceeded in one sample (MW-12);
- The ethylbenzene RBC for the acute groundwater to indoor air pathway (31 µg/L) was exceeded in four groundwater samples;
- The total xylenes RBC for the acute groundwater to indoor air pathway (3,300 µg/L) was exceeded in one groundwater sample (MW-12);
- The naphthalene RBC for the acute groundwater to indoor air pathway (50 µg/L) was exceeded in three groundwater samples; and
- The 1,2,4-trimethylbenzene RBC for the acute groundwater to indoor air pathway (1,700 µg/L) was exceeded in one groundwater sample (MW-12).

The detected benzene and ethylbenzene concentrations in samples collected from monitoring wells MW-8, MW-9, and MW-15 are relatively consistent with previous monitoring events (negligible VOCs detected). Relative to the prior monitoring event (April 2024), concentrations generally decreased in samples collected from monitoring wells MW-4, MW-5, MW-7, and MW-13 and increased in samples collected from monitoring wells MW-6 and MW-14. In the sample collected from MW-12, the benzene and 1,2,4-trimethylbenzene concentrations increased significantly compared to the April 2024 monitoring event and are the highest concentrations of these parameters that have been detected in this well.

4.3.2 Soil Vapor

To evaluate if the groundwater to indoor air pathway is impacting indoor air within the former Johnson Oil and Turning Point buildings, soil vapor and ambient air samples were also collected during this monitoring event. Soil vapor results are presented in Table 3 and summarized on Figure 5. None of the VOCs or TPH-G detections in the soil vapor samples collected in the July 2024 monitoring event contain concentrations in excess of RBCs for chronic or acute exposure in a commercial setting.

TPH-G was detected in SG-7 and SG-10. Benzene, ethylbenzene, and xylenes were detected only in SG-7 while toluene was detected in all three samples. Tetrachloroethylene (PCE) was detected in SG-7 and SG-10.

During the February 2024 sampling event, four VOCs (cyclohexane, heptane, n-hexane, and 2,2,4-trimethylpentane) were detected in SG-10 at concentrations approximately three orders of magnitude greater than those of previous sampling events at this location. These compounds were not detected above the method reporting limits (MRLs) during the July 2024 monitoring event. The reason for the increase in concentrations in February 2024 is unknown and not evident based on the available data. Groundwater concentrations in wells near SG-10 (MW-4, MW-7, MW-12) did not have similarly elevated concentrations during the same event, and concentrations of all four of these analytes dropped to non-detect concentrations

in the July 2024 sampling event, indicating that the higher concentration in February is not a persistent condition or long-term trend. There was also no corresponding increase in benzene concentrations during the February event (while the laboratory reporting limit was elevated, an increase of three orders of magnitude would have been detected). Similarly, there was no correlation with ambient air concentrations so the higher soil-gas concentrations during the one monitoring event are not necessarily reflective of an actual risk exceedance. The February 2024 data do not appear to be influenced by a seasonal variation, as the data from the April 2023 event (still during the wet season) were similar to or lower than other historical results. Continued monitoring will be needed to further assess if the elevated February concentrations were an anomaly or reflective of an identifiable trend.

4.3.3 Ambient Air

Ambient air sample results are presented in Table 4 and summarized on Figure 5. VOCs were detected in all four collected samples, including both petroleum and non-petroleum VOCs. None of the detected VOCs exceeded applicable RBCs. TPH analysis is not included in the passive RAD130 TO-17 analyte list, but TPH has not been detected previously in ambient air at the Site using other analytical methods, and a detected TPH concentration would not be expected to exceed its respective RBC without one or more VOCs also exceeding their RBCs. Therefore, the absence of TPH on the TO-17 reporting list does not present a concern.

Concentrations of VOCs slightly decreased in AMB-2 and AMB-3 and were consistent in AMB-1 as compared to the February 2024 sampling event. AMB-4 was not collected during the February 2024 sampling event.

4.3.4 Site Data Screening Summary

The observed exceedances of Site-related contaminants for each exposure pathway are summarized below. While the observed vapor intrusion RBC exceedances in groundwater indicate the potential for an unacceptable exposure to commercial site users, these exceedances are not reflected in the actual soil vapor or ambient air concentrations. Therefore, there is currently no risk for occupational exposure at the Site.

Contaminant	Observed RBC Exceedances			
	Groundwater Pathways		Soil Vapor	Ambient Air
	Commercial Vapor Intrusion	Groundwater in Excavations	Commercial Vapor Intrusion	Commercial Vapor Intrusion
TPH-G	6	1	--	--
Benzene	7	1	--	--
Ethylbenzene	4	--	--	--
Xylenes	1	--	--	--
Naphthalene	3	1	--	--
1,2,4-Trimethylbenzene	1	--	--	--

Notes: -- = No exceedances of RBCs

5.0 Conclusions

Based on the third quarter 2024 groundwater, soil vapor, and ambient air monitoring event and previous events, impacts from gasoline-range hydrocarbons and petroleum-related VOCs continue to be present at the Site and extend beneath the former Johnson Oil and Turning Point buildings.

Elevated concentrations of TPH-G and VOCs (benzene, ethylbenzene, total xylenes, naphthalene, and 1,2,4-trimethylbenzene) above the commercial vapor intrusion RBCs in groundwater suggest that the impacts to indoor air could be associated with the Site groundwater contamination in the vicinity of MW-12 (east of the Turning Point building), but additional data is needed to fully assess this relationship.

Although petroleum and VOC concentrations have shown some variability between quarterly events, the overall groundwater concentrations appear to be relatively stable over the previous year of monitoring, likely due to the low DO and reducing conditions limiting the attenuation rate of petroleum concentrations in groundwater.

The mobility of petroleum in the subsurface may be influenced by impacts to the local hydrogeology from the underground storage tank removals and subsequent soil excavation projects, which may be associated with higher-conductivity backfill materials. A comparison of groundwater elevations observed in 2018 with current conditions suggests that a groundwater mound has formed in the vicinity of the historical interim removal action measure which has in turn resulted in increased groundwater flow to the south, away from the river. Additional data is necessary to fully assess potential mobility across the Site and the subsequent influence on groundwater and vapor concentrations across the Site.

Concentrations of VOCs in ambient air were consistent with previous monitoring events. Concentrations of cyclohexane, heptane, n-hexane, and 2,2,4-trimethylpentane in the soil vapor sample collected from SG-10 were below MRLs during this monitoring event but have been detected at elevated concentrations at this and other locations during previous events. The reason for the elevated concentrations of these analytes during the February 2024 monitoring event is unknown, but based on the available data, it does not appear to be consistent with seasonal variability or an increasing trend.

For the July monitoring event, risk screening indicated that human health risks were acceptable based on current Site use. Detected soil vapor and ambient air concentrations were below applicable RBCs. Concentrations in groundwater indicate the potential for future unacceptable risks associated with vapor intrusion from groundwater if, for example, site buildings were reconfigured, uses of site buildings change, or construction activities resulted in contact with groundwater. Based on these elevated groundwater concentrations, continued monitoring is needed to ensure human health risks remain acceptable.

Due to funding limitations, cleanup activities through at least spring of 2025 will be limited to groundwater, soil gas, and ambient air monitoring. The continued evaluation of potential remedial actions at the Site will help determine future activities.

6.0 References

Apex Companies, LLC, 2022. *Supplemental Site Investigation Work Plan, Former Johnson Oil.* December 8, 2022.

Oregon Department of Environmental Quality, 2003. *Risk-Based Decision Making for the Remediation of Contaminated Sites*. September 22, 2003. Updated June 2023.

Orr, Elizabeth L. and Willian N. Orr, 1999. *Geology of Oregon*. January 1, 1999.

Table 1
Groundwater Elevations and Field Parameters
Former Johnson Oil
Clatskanie, Oregon

Monitoring Well	Date	TOC Elevation (ft[1])	Depth to Groundwater (ft BTOC)	Depth to Product (ft BTOC)	Product Thickness (ft)	Groundwater Elevation (ft[1])	pH	Temperature (°C)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)
MW-4	11/7/2023	94.43	0.9	--	--	93.53	6.43	15.82	585	0.23	-98.1
	2/26/2024		1.04	--	--	93.39	6.27	11.77	532	0.36	-39.9
	4/8/2024		1.30	--	--	93.13	6.75	12.64	566	1.40	-120.3
	7/22/2024		2.74	--	--	91.69	6.87	17.00	635	0.00	-215.5
MW-5	11/7/2023	94.30	2.56	--	--	91.74	6.24	15.35	417	0.18	-104
	2/26/2024		2.97	--	--	91.33	5.94	11.60	469	0.32	48.8
	4/8/2024		3.44	--	--	90.86	6.53	12.19	461	1.11	-125.3
	7/22/2024		4.50	--	--	89.80	8.95	15.40	542	0.00	-230.1
MW-6	11/7/2023	95.57	4.93	--	--	90.64	6.13	17.28	432	0.21	-78.8
	2/26/2024		4.88	--	--	90.69	5.99	12.50	469	0.58	-33.8
	4/8/2024		4.55	--	--	91.02	6.52	13.24	484	1.08	-108.4
	7/22/2024		5.69	--	--	89.88	6.59	16.10	580	0.00	-208.8
MW-7	11/7/2023	95.04	7.71	--	--	87.33	5.96	17.00	383	0.23	-32.0
	2/26/2024		8.07	--	--	86.97	5.93	13.81	578	0.77	-31.2
	4/8/2024		9.23	--	--	85.81	6.23	14.03	446	1.37	-52.5
	7/22/2024		6.26	--	--	88.78	6.50	16.90	623	0.00	-174.2
MW-8	11/7/2023	96.22	6.11	--	--	90.11	6.11	18.30	902	0.34	-127.1
	2/26/2024		5.09	--	--	91.13	6.07	12.18	953	0.75	-56.8
	4/8/2024		5.33	--	--	90.89	6.36	12.62	896	0.00	-106.3
	7/22/2024		5.92	--	--	90.30	6.49	17.80	940	0.00	-198.3
MW-9	11/7/2023	94.54	5.07	--	--	89.47	4.99	14.47	52	2.19	223.0
	2/26/2024		4.90	--	--	89.64	4.43	9.82	51	4.33	256.5
	4/8/2024		6.33	--	--	88.21	4.94	10.95	62	3.96	238.4
	7/22/2024		9.47	--	--	85.07	4.91	14.11	78	4.19	55.2
MW-12	11/7/2023	99.06	5.26	--	--	93.80	6.11	16.18	325	0.38	-67.8
	2/26/2024		4.61	--	--	94.45	5.90	11.68	355	0.27	-23.3
	4/8/2024		5.10	--	--	93.96	6.33	12.64	331	1.13	-86.8
	7/22/2024		6.10	--	--	92.96	6.29	18.00	343	0.00	-158.5
MW-13	11/7/2023	98.28	2.54	--	--	95.74	6.79	16.15	901	0.25	-65.3
	2/26/2024		2.67	--	--	95.61	6.85	9.59	352	0.56	-9.4
	4/8/2024		3.09	--	--	95.19	7.40	10.96	375	0.00	-125.2
	7/22/2024		4.43	--	--	93.85	7.33	16.30	609	0.00	-208.4
MW-14	11/7/2023	99.28	7.97	--	--	91.31	5.98	14.87	425	0.18	-90.5
	2/26/2024		8.05	--	--	91.23	5.9	11.78	335	0.65	-30.6
	4/8/2024		8.77	--	--	90.51	6.45	11.92	338	0.00	-106.8
	7/22/2024		9.43	--	--	89.85	6.71	14.50	505	0.37	-192.4
MW-15	11/7/2023	100.32	7.87	--	--	92.45	5.95	13.72	348	0.21	-59.4
	2/26/2024		8.31	--	--	92.01	5.77	9.08	320	0.54	-16.0
	4/8/2024		9.07	--	--	91.25	6.45	11.31	407	0.00	-134.6
	7/22/2024		9.66	--	--	90.66	6.56	13.43	567	0.00	-285.3

Notes:

1. Elevations are relative to an assumed reference datum of 100 feet (point located at the northwest corner of a concrete pad for a metal sign along Highway 30).
2. ft = feet
3. BTOC = Below Top of Casing.
4. NS = Not surveyed.
5. °C = Degrees Celsius.
6. µS/cm = MicroSiemens per centimeter
7. mg/L = Milligrams per liter.
8. ORP (mV) = Oxidation-reduction potential (millivolts).

Table 2
Groundwater Analytical Results
Former Johnson Oil
Clatskanie, Oregon

Monitoring Well Number	Sample Date	Concentrations in µg/L								
		TPH-G	Benzene	Toluene	Ethylbenzene	Total Xylenes	Methyl Tert-Butyl Ether	Naphthalene	1,2,4-Trimethyl-benzene	Trimethyl-benzene
MW-4	11/8/2023	**4,870**	**199.0**	<20.0	**354**	**9.63 J**	<20.0	**137**	<20.0	<20.0
	2/27/2024	**3,120**	**94.2**	<20.0	**104**	**7.88**	<20.0	**130**	**4.57**	<20.0
	04/09/2024	**3,450**	**117**	<20.0	**108**	<60.0	<20.0	**96.2**	**2.19**	<20.0
	7/23/2024	**3,370**	**102**	**2.94**	**95.0**	**3.71**	<1.00	**173**	<1.00	<1.00
MW-5	11/8/2023	**6,100**	**141**	**13.1**	**244**	**29.4 J**	<10.0	**220**	<10.0	**2.58 J**
	2/27/2024	**5,070**	**147**	**13.6**	**1,080**	**61.4**	<10.0	**331**	**24.2**	**3.07**
	04/09/2024	**7,910**	**155**	**11.1**	**970**	**51.0**	<10.0	**318**	**35.3**	**1.94**
	7/23/2024	**8,250**	**112**	**9.17**	**536**	**29.1**	**0.141 J**	**246**	**5.16**	**2.10**
MW-6	11/8/2023	**6,250**	**772**	**11.2**	**230**	74.3	<10.0	**28.0 J**	**6.60 J**	**5.36 J**
	2/27/2024	**4,060**	**668**	**13.1**	**215**	**55.7**	<10.0	**19.6**	**3.09**	**7.72**
	04/09/2024	**6,860**	**576**	**10.4**	**152**	**31.5**	<10.0	**28.5**	**2.52**	**3.66**
	7/23/2024	**7,040**	**838**	**13.4**	**288**	**84.3**	**0.217 J**	**24.6**	**19.3**	**9.49**
MW-7	11/8/2023	**1,640**	**166**	**0.981 J**	**163**	**92.2**	**12.4**	**17.1**	**22.6**	**4.7**
	2/27/2024	**1,310**	**131**	**2.19**	**123**	**236**	**17.4**	**10.3**	**19.4**	**11.8**
	04/09/2024	**2,350**	**112**	**2.42**	**87.8**	**294**	**14.9**	**4.15**	**11.8**	**14.5**
	7/23/2024	**1,610**	**53.4**	**2.06**	**29.3**	**51.6**	**26.7**	**5.37**	**10.0**	**3.27**
MW-8	11/7/2023	**35.5**	**0.125 J**	<1.00	**0.587 J**	**0.923 J**	<1.00	**1.33 J**	<1.00	<1.00
	2/26/2024	**52.0 B**	<1.00	<1.00	<1.00	**4.26**	**0.296**	<5.00	**0.400**	<1.00
	04/08/2024	**84.8**	<1.00	<1.00	**0.206**	**8.77**	**0.336**	<5.00	**0.83**	**0.77**
	7/22/2024	**234**	<1.00	<1.00	<1.00	**1.12 J**	**0.232 J**	<5.00	<1.00	<1.00
MW-9	11/7/2023	**55.7 J**	<1.00	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00
	2/26/2024	<100	<1.00	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00
	04/08/2024	<100	<1.00	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00
	7/23/2024	**31.7 JB**	**0.186 J**	**0.303 J**	**0.182 J**	**0.893 J**	<1.00	<5.00	<1.00	<1.00
MW-12	11/8/2023	**104,000**	**4,150**	**13,200**	**4,650**	**22,500**	<50.0	**288**	**2,380**	**649**
	2/27/2024	**125,000**	**1,650**	**19,300**	**4,990**	**23,400**	<100	**511**	**724**	**797**
	04/09/2024	**120,000**	**1,810**	**15,900**	**3,410**	**17,500**	<100	**340**	**533**	**603**
	7/23/2024	**82,600**	**5,130**	**4,590**	**4,000**	**13,800**	<25.0	**660**	**2,750**	**704**
MW-13	11/7/2023	**271**	**2.79**	<1.00	**10.4**	**1.47 J**	<1.00	<5.00	**1.96**	**0.177 J**
	2/26/2024	**98.3 B**	**1.45**	<1.00	**7.86**	**0.329**	<1.00	<5.00	<1.00	<1.00
	04/08/2024	**238**	**35.3**	**0.501**	**6.11**	<3.00	<1.00	<5.00	<1.00	**0.381**
	7/22/2024	**256**	**12.0**	<1.00	**2.68**	<3.00	<1.00	<5.00	<1.00	<1.00
MW-14	11/8/2023	**3,300**	**370**	**6.99 J**	<25.0	**21.5 J**	<25.0	<125	<25.0	<25.0
	2/27/2024	**3,440**	**554**	**4.94**	**34.9**	**15.8**	<5.00	<25.0	**9.57**	**4.87**
	04/08/2024	**3,790**	**334**	**4.30**	**19.4**	**13.8**	<5.00	<25.0	**8.35**	**3.48**
	7/22/2024	**3,660**	**387**	**8.59 J**	**29.8**	**43.6**	<10.0	**22.0 J**	**12.6**	**4.85 J**
MW-15	11/7/2023	**709**	**28.7**	**0.377 J**	**14.5**	2.69 J	<1.00	**3.84 J**	**0.727 J**	**0.157 J**
	2/26/2024	**940**	**27.6**	**0.518**	**33.2**	**6.20**	<1.00	**6.10**	**10.4**	<1.00
	04/08/2024	**1,010**	**35.1**	**0.895**	**28.5**	**3.26**	<1.00	**5.31**	**11.0**	<1.00
	7/22/2024	**344**	**8.93**	**0.706 J**	<1.00	**0.228 J**	<1.00	**1.98 J**	<1.00	<1.00
Groundwater to Indoor	Chronic	--	650	160,000	420,000	200,000	1,600,000	83,000	--	--
Air - Commercial	Acute	520	12	150,000	31	3,300	3,200	50	2,400	1,700
Groundwater in Excavation (RBC_{we})		14,000	1,800	220,000	4,500	23,000	63,000	500	6,300	7,500

Notes:

1. Volatile organic compounds by EPA Method 8260D.
2. GRO = Gasoline range organics by NWTPH-Gx Method.
3. µg/L = Micrograms per liter.
4. Only compounds of potential interest are present in table.
5. **Bold** values indicate concentration detected above the method detection limit.
6. < = Concentration was not detected above the shown minimum reporting limit.
7. B = Analyte concentration is less than 10 times greater than a detection in the method blank and the result may be biased.
8. J = Result is an estimated value.
9. J- = Result is an estimated value and may be biased low.
10. UJ = The analyte was not detected but the reporting limit may be inaccurate or imprecise.
11. DEQ Human Health RBC = Risk-Based Concentrations from the DEQ's *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* (updated June 2023).
12. Shaded values represent exceedances of applicable RBCs.

Table 3
Soil Vapor Analytical Results
Former Johnson Oil
Clatskanie, Oregon

Sample Location	SG-7				SG-8				SG-10				RBCs - Commercial Soil Vapor (RBC_{sv})	
Date	4/4/2023	11/7/2023	2/26/2024	7/22/2024	4/4/2023	11/7/2023	2/26/2024	7/22/2024	4/4/2023	11/7/2023	2/26/2024	7/22/2024	Chronic	Acute
Volatile Organic Compounds (VOCs) by EPA Method TO-15 in µg/m^3														
Acetone	<2.97	**8.72**	**32.1**	**28.5**	**14.1**	**11.9**	**3.26**	**7.91**	<2.97	**20.5**	**9.08**	**20.0**	--	6,300,000
Allyl Chloride	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	<0.626	68	--
Benzene	<0.639	<0.639	<0.639	**0.818**	**0.684**	<0.639	<0.639	<0.639	<0.639	**0.684**	*<63.9*	<0.639	52	2,900
Benzyl Chloride	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	<1.04	8.3	24,000
Bromodichloromethane	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<1.34	<134	<1.34	11	--
Bromoform	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	<6.21	370	--
Bromomethane	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	<0.776	730	400,000
1,3-Butadiene	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	<4.43	14	67,000
Carbon Disulfide	<0.622	<0.622	**3.70**	<1.24	**4.17**	<0.622	<0.622	**8.40**	<0.622	**0.890**	<0.622	<1.24	100,000	630,000
Carbon Tetrachloride	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	<1.26	**1.26**	68	190,000
Chlorobenzene	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<92.4	<0.924	7,300	--
Chloroethane	<0.528	<0.528	**1.01**	<0.528	<0.528	<0.528	<0.528	<0.528	**2.85**	<0.528	<0.528	<0.528	580,000	4,000,000
Chloroform	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	<0.973	18	50,000
Chloromethane	<0.413	**0.591**	**3.74**	<0.413	<0.413	**1.06**	<0.413	<0.413	**3.53**	**0.554**	<0.413	**0.845**	13,000	100,000
2-Chlorotoluene	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	<1.03	--	--
Cyclohexane	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	**1.69**	**8.16**	**1,540**	<0.689	880,000	--
Chlorodibromomethane	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<1.70	<170	<1.70	--	--
1,2-Dibromoethane	*<1.54*	*<1.54*	*<1.54*	<1.54	*<1.54*	*<1.54*	*<1.54*	<1.54	*<1.54*	*<1.54*	*<154*	<1.54	0.68	--
1,2-Dichlorobenzene	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	29,000	--
1,3-Dichlorobenzene	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	--	--
1,4-Dichlorobenzene	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	<1.20	37	1,200,000
1,2-Dichloroethane	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	*<81.0*	<0.810	16	--
1,1-Dichloroethane	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	260	--
1,1-Dichloroethene	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	29,000	20,000
cis-1,2-Dichloroethene	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	**2.14**	<0.793	<0.793	<0.793	5,800	--
trans-1,2-Dichloroethene	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	5,800	80,000

Please see notes at end of table.

Table 3
Soil Vapor Analytical Results
Former Johnson Oil
Clatskanie, Oregon

Sample Location	SG-7				SG-8				SG-10				RBCs - Commercial Soil Vapor (RBC_{sv})	
Date	4/4/2023	11/7/2023	2/26/2024	7/22/2024	4/4/2023	11/7/2023	2/26/2024	7/22/2024	4/4/2023	11/7/2023	2/26/2024	7/22/2024	Chronic	Acute
Volatile Organic Compounds (VOCs) by EPA Method TO-15 in µg/m^3														
1,2-Dichloropropane	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<0.924	<92.4	<0.924	110	23,000
cis-1,3-Dichloropropene	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<90.8	<0.908	100	3,700
trans-1,3-Dichloropropene	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<0.908	<90.8	<0.908	100	3,700
1,4-Dioxane	<0.721	<0.721	<2.27	<2.27	<0.721	<0.721	<2.27	<2.27	<0.721	<0.721	<227	<2.27	82	730,000
Ethanol	**35.3**	**14.9**	**78.6**	**51.1**	**54.3**	**31.1**	**4.98 B**	**6.00**	<4.71	**58.6**	**7.94**	**5.51**	--	--
Ethylbenzene	**2.37**	**2.44**	**1.03**	**1.19**	**5.20**	<0.867	<0.867	<0.867	<0.867	<0.867	<0.867	<0.867	160	2,200,000
4-Ethyltoluene	<0.982	**6.43**	**4.61**	**3.61**	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	--	--
Trichlorofluoromethane	<1.12	**1.48**	**1.61**	**1.66**	<1.12	**1.17**	**1.46**	**1.79**	**1.20**	<1.12	**1.20**	<1.12	--	--
Dichlorodifluoromethane	<0.989	**1.70**	**1.16**	**1.48**	**2.11**	**2.06**	**1.36**	**1.66**	**2.84**	**1.99**	**1.41**	**1.97**	15,000	--
1,1,2-Trichlorotrifluoroethane	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	<1.53	730,000	--
1,2-Dichlorotetrafluoroethane	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	<1.40	--	--
Heptane	<0.818	<0.818	**0.830**	**1.21**	<0.818	<0.818	<0.818	<0.818	**8.51**	**2.57**	**2,090**	<0.818	58,000	--
Hexachloro-1,3-butadiene	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	<6.73	19	--
n-Hexane	<2.22	<2.22	<2.22	**2.34**	<2.22	<2.22	<2.22	<2.22	**15.7**	<2.22	**2,240**	<2.22	100,000	--
Isopropylbenzene	**3.24**	**4.09**	<0.983	**2.09**	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	<0.983	**5.11**	58,000	--
Methylene Chloride	<0.694	**1.50**	<0.694	**2.92**	<0.694	**3.09**	<0.694	<0.694	<0.694	**5.17**	<0.694	<0.694	41,000	210,000
Methyl Butyl Ketone	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<511	<5.11	4,400	--
2-Butanone (MEK)	<3.69	<3.69	**3.98**	**11.1**	**9.94**	<3.69	<3.69	<3.69	<3.69	**12.7**	<3.69	**5.22**	730,000	500,000
4-Methyl-2-pentanone (MIBK)	<5.12	<5.12	<5.12	**5.73**	<5.12	<5.12	<5.12	<5.12	<5.12	<5.12	<512	<5.12	440,000	--
Methyl Methacrylate	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<0.819	<81.9	<0.819	100,000	--
Methyl Tert Butyl Ether (MTBE)	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	<0.721	1,600	800,000
Naphthalene	<3.30	**9.32**	**71.2**	**9.95**	<3.30	<3.30	<3.30	<3.30	<3.30	<3.30	<3.30	<3.30	12	20,000
2-Propanol	<3.07	**4.99**	**17.3**	**34.9**	**7.25**	**9.78**	**3.22**	<3.07	<3.07	**49.9**	**5.19**	<3.07	29,000	320,000
Propene	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	<2.15	440,000	--
n-Propylbenzene	**6.97**	**8.2**	<0.982	**4.02**	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	150,000	--
Styrene	<0.851	<0.851	<0.851	<1.70	<0.851	<0.851	<0.851	<1.70	<0.851	<0.851	<0.851	<1.70	150,000	2,100,000

Please see notes at end of table.

Table 3
Soil Vapor Analytical Results
Former Johnson Oil
Clatskanie, Oregon

Sample Location	SG-7				SG-8				SG-10				RBCs - Commercial Soil Vapor (RBC_{sv})	
Date	4/4/2023	11/7/2023	2/26/2024	7/22/2024	4/4/2023	11/7/2023	2/26/2024	7/22/2024	4/4/2023	11/7/2023	2/26/2024	7/22/2024	Chronic	Acute
Volatile Organic Compounds (VOCs) by EPA Method TO-15 in µg/m^3														
1,1,2,2-Tetrachloroethane	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	7.1	--
Tetrachloroethylene	<1.36	**2.96**	**1.84**	**5.27**	**6.22**	<1.36	<1.36	<1.36	<1.36	<1.36	<136	**1.57**	1,600	4,000
Tetrahydrofuran	<0.590	<0.590	<0.590	**1.54**	<0.590	<0.590	<0.590	<0.590	<0.590	**1.30**	<0.590	<0.590	290,000	--
Toluene	**4.44**	**3.35**	<1.88	**5.46**	**10.1**	**3.09**	<1.88	**1.88**	<1.88	**6.55**	<188	**2.46**	730,000	770,000
1,2,4-Trichlorobenzene	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	<4.66	290	--
1,1,1-Trichloroethane	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	730,000	1,100,000
1,1,2-Trichloroethane	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<109	<1.09	26	--
Trichloroethylene	<1.07	<1.07	<1.07	<1.07	<1.07	<1.07	**1.78**	<1.07	**163**	<1.07	*<107*	<1.07	100	210
1,2,4-Trimethylbenzene	**49.1**	**52.5**	**51.5**	**30.0**	**1.13**	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	8,800	--
1,3,5-Trimethylbenzene	**23.9**	**25.9**	**19.3**	**13.6**	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	8,800	--
2,2,4-Trimethylpentane	**1.45**	<1.07	<0.934	**0.976**	<0.934	<0.934	<0.934	<0.934	<0.934	<0.934	**2,210**	<0.934	--	--
Vinyl Chloride	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	**1.85**	<0.511	<0.511	<0.511	93	130,000
Vinyl Bromide	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	<0.875	27	--
Vinyl Acetate	<0.704	<0.704	<2.22	<2.22	<0.704	<0.704	<2.22	<2.22	<0.704	<0.704	<2.22	<2.22	29,000	20,000
m&p-Xylene	**12.0**	**12.1**	**6.07**	**5.51**	**10.0**	<1.73	<1.73	<1.73	<1.73	**1.82**	<1.73	<1.73	--	--
o-Xylene	**9.93**	**10.6**	**4.73**	**3.92**	**2.11**	<0.867	<0.867	<0.867	<0.867	<0.867	<0.867	<0.867	15,000	--
TPH (GC/MS) Low Fraction	**1,300 J+**	**1,400**	**967**	**843**	<826	<826	<826	<826	<826	**1,160**	<82,600	**1,320**	--	--

Notes:

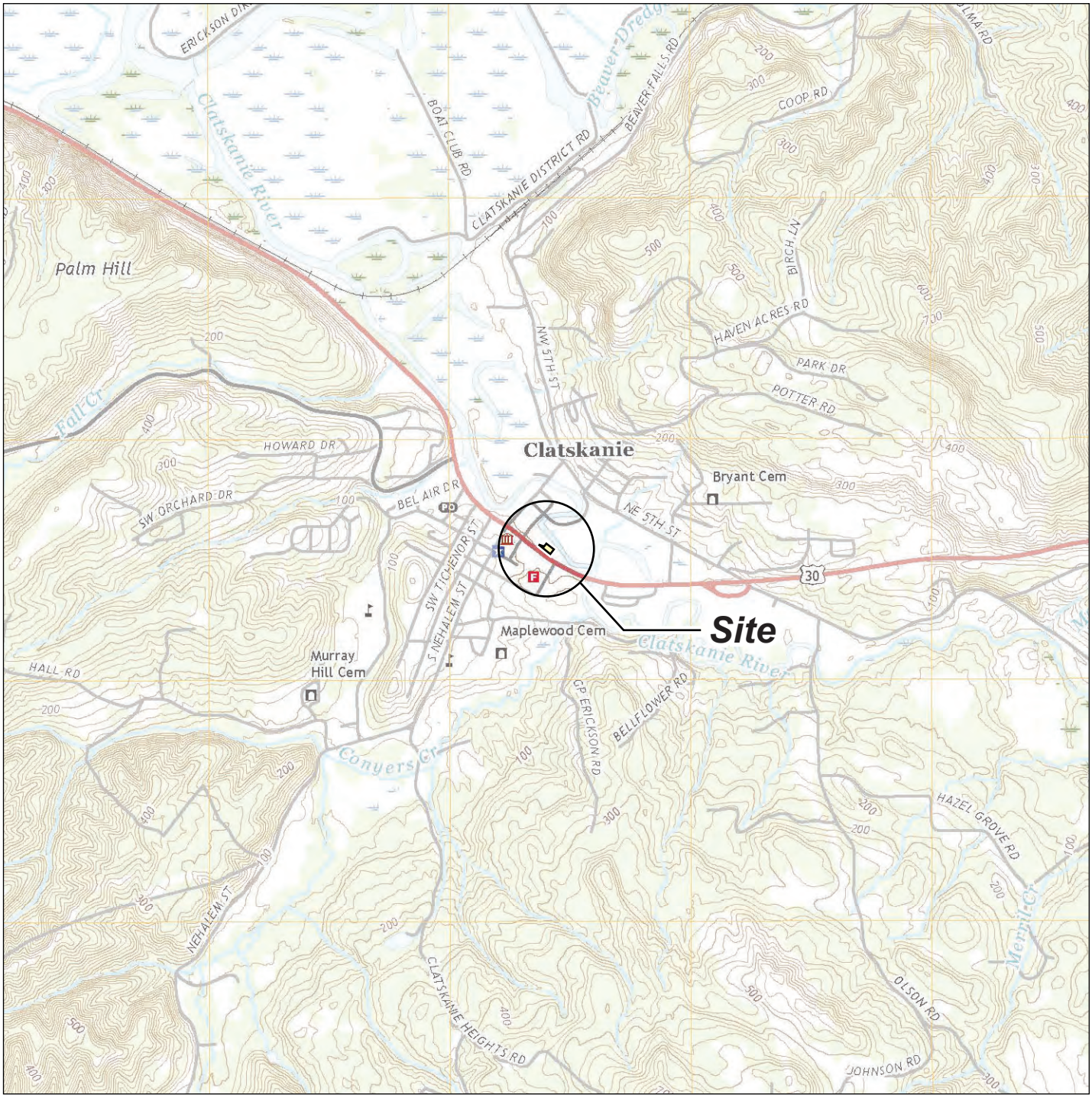
1. µg/m^3 = Micrograms per cubic meter.
2. **Bold** values indicate concentration detected above the minimum reporting limit.
3. Shaded values indicate concentrations detected above one or more applicable RBC.
4. *Italicized* values indicate a reporting limit above the applicable RBC
5. < = Concentration was not detected above the shown minimum reporting limit.
6. -- = Not available.
7. B = Analyte concentration is less than 10 times greater than a detection in the method blank and the result may be biased.
8. J+ = Estimated concentration that may be biased high.
9. RBCs = Risk-Based Concentrations from the DEQ's *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* (updated June 2023).

Table 4
Ambient Air Analytical Results
Former Johnson Oil
Clatskanie, Oregon

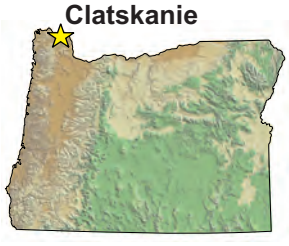
Sample Location	AMB-1 (Turning Point)			AMB-2 (Turning Point)			AMB-3 (Outdoors)			AMB-4 (Former Stations Building)			Ambient Air - Commercial (RBCair)	
Date	11/13/2023	2/26/2024	7/30/2024	11/13/2023	2/26/2024	7/30/2024	11/13/2023	2/26/2024	7/30/2024	11/13/2023	2/26/2024	7/30/2024	Chronic	Acute
Volatile Organic Compounds (VOCs) by EPA Method TO-17 Passive RAD145 in µg/m ^{3}														
Benzene	**2.1**	**1.0**	**1.6**	**1.8**	**1.2**	**0.90**	**1.1**	**0.67**	<0.50	**0.79**	--	<0.50	87	1.6
Cyclohexane	**0.91**	**0.72**	**1.0**	**0.73**	**0.67**	**0.68**	**0.19**	**0.86**	<0.18	**0.076**	--	<0.18	--	26,000
Ethylbenzene	**2.8**	**1.0**	**1.4**	**2.7**	**1.1**	**0.72**	**0.2**	**0.12**	<0.14	**0.16**	--	<0.14	66,000	4.9
Styrene	**0.62**	**0.36**	<0.16	**0.66**	**0.52**	<0.16	**0.25**	**0.085**	<0.16	**0.19**	--	<0.16	63,000	4,400
Tetrachloroethene	**0.079**	**0.053**	<0.17	**0.095**	**0.056**	<0.17	**0.065**	**0.044**	<0.17	**1.0**	--	**0.65**	120	47
Toluene	**18 E**	**6.7 E**	**12**	**18 E**	**>6.3 S**	**6.2**	**0.90**	**0.64**	**0.28**	**0.81**	--	**0.21**	23,000	22,000
1,1,1 Trichloroethane	<0.058	<0.05	<0.14	<0.058	<0.05	<0.14	<0.058	<0.05	<0.14	<0.058	--	<0.14	6.3	3
Trichloroethylene	<0.021	<0.018	<0.14	<0.021	<0.018	<0.14	<0.021	<0.018	<0.14	**0.042**	--	<0.14	6.3	3
m&p-Xylene	**11 E**	**3.8 E**	**6.0**	**0.55**	**3.9**	**2.9**	**0.55**	**0.34**	**0.16**	**0.45**	--	**0.16**	--	880
o-Xylene	**3.6**	**1.4**	**2.0**	**0.22**	**1.5**	**0.93**	**0.22**	**0.14**	<0.15	**0.19**	--	<0.15	--	440

Notes:

1. µg/m^3 = Micrograms per cubic meter.
2. Bold values indicate concentration detected above the minimum reporting limit.
3. Shaded values indicate concentrations detected above one or more applicable RBC.
4. -- = Not available.
5. E = Estimated concentration that may be biased high.
6. S = Saturated Peak; data reported as estimated
7. DEQ RBCs = Risk-Based Concentrations from the DEQ's *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* (updated June 2023).
8. TP = Turning Point building, OD = outdoor, FS = former station building



Note: Base map prepared from USGS 7.5-minute quadrangle of Clatskanie, OR, dated 2020 as provided by USGS.gov.



0 2,000 4,000

Approximate Scale in Feet

Site Location Map

Third Quarter Groundwater Monitoring - Former Johnson Oil Site
280 East Columbia River Highway
Clatskanie, Oregon

Apex Companies, LLC 15618 SW 72nd Avenue Tigard, Oregon 97224	Project Number: 32-24008422	Drawn: JP	Approved: TC/CW	Figure 1
	November 2024			

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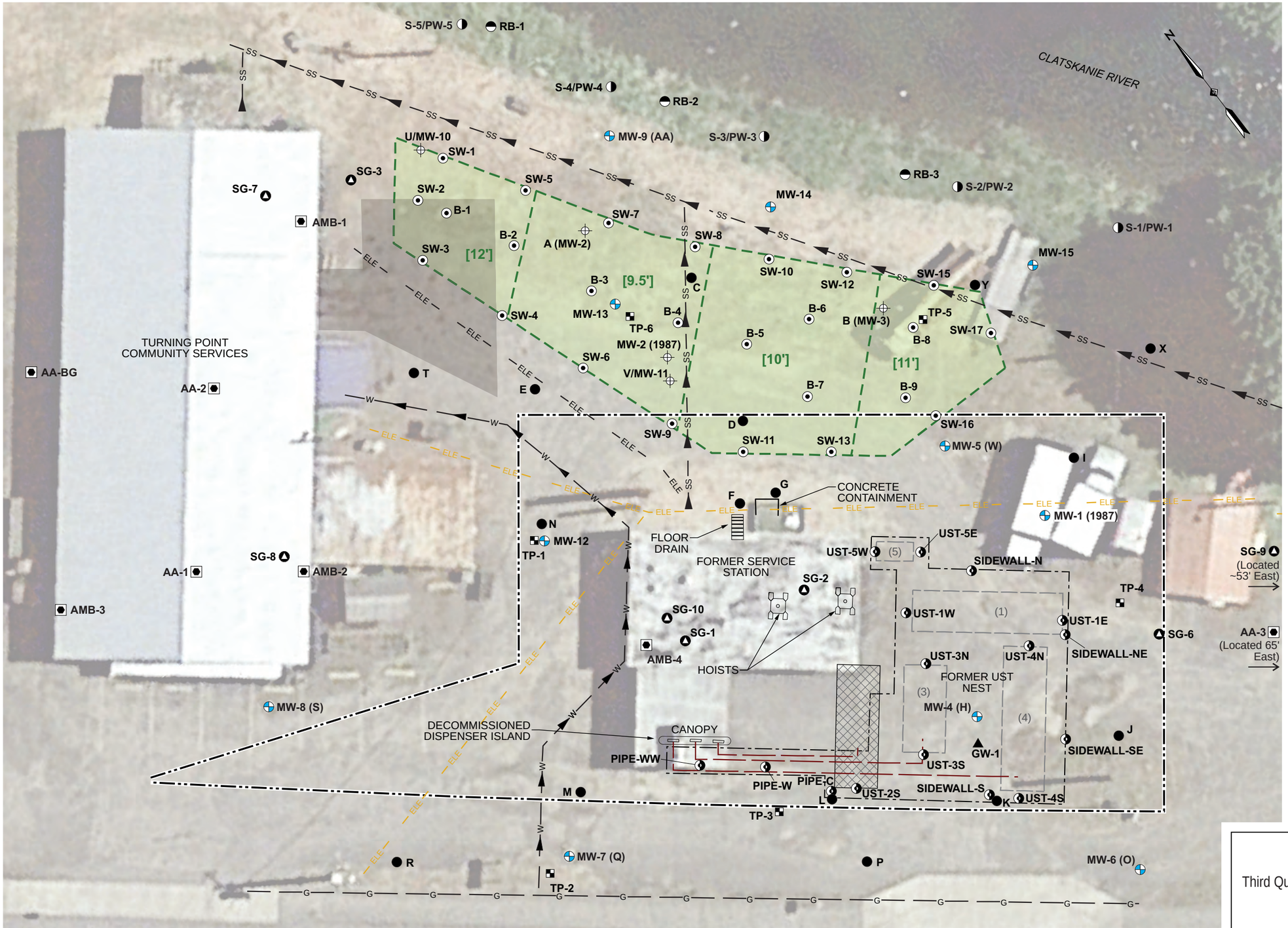

NOTE: Base map prepared from Haley Aldrich *Extent of Groundwater Contamination Exceeding Groundwater in Excavation RBCs* (August 2022) and Google Earth Pro Imagery. Aerial dated June 18, 2021.

Legend:

- Monitoring Well (Push-Probe Designation; If Applicable)
- Ambient Air Location
- Sediment/Porewater Sample
- Excavation Confirmation Sample
- Soil Gas Sample
- Push-Probe Exploration
- Decommissioned Monitoring Well
- Grab Groundwater Sample
- Porewater Sample
- Soil Sample
- Test Pit
- Gas Line
- Overhead Electrical Line
- Underground Electrical Line
- Sanitary Sewer Line
- Water Line
- Decommissioned Product Piping
- Asphalt Concrete Pad Installed June 22, 2022
- [10'] Extent Of Excavation and [Depth in Feet]
- Excavation Limits (2008)
- Underground Storage Tank (UST) Decommissioned in Place
- (4) Removed UST and Designation
- Property Boundary

0 20 40
Approximate Scale in Feet

Site Plan

Third Quarter Groundwater Monitoring - Former Johnson Oil Site
280 East Columbia River Highway
Clatskanie, Oregon

Apex Companies, LLC
15618 SW 72nd Avenue
Tigard, Oregon 97224

Project Number:	Drawn:	Approved:	Figure
32-24008422	--	TC/CW	2

November 2024

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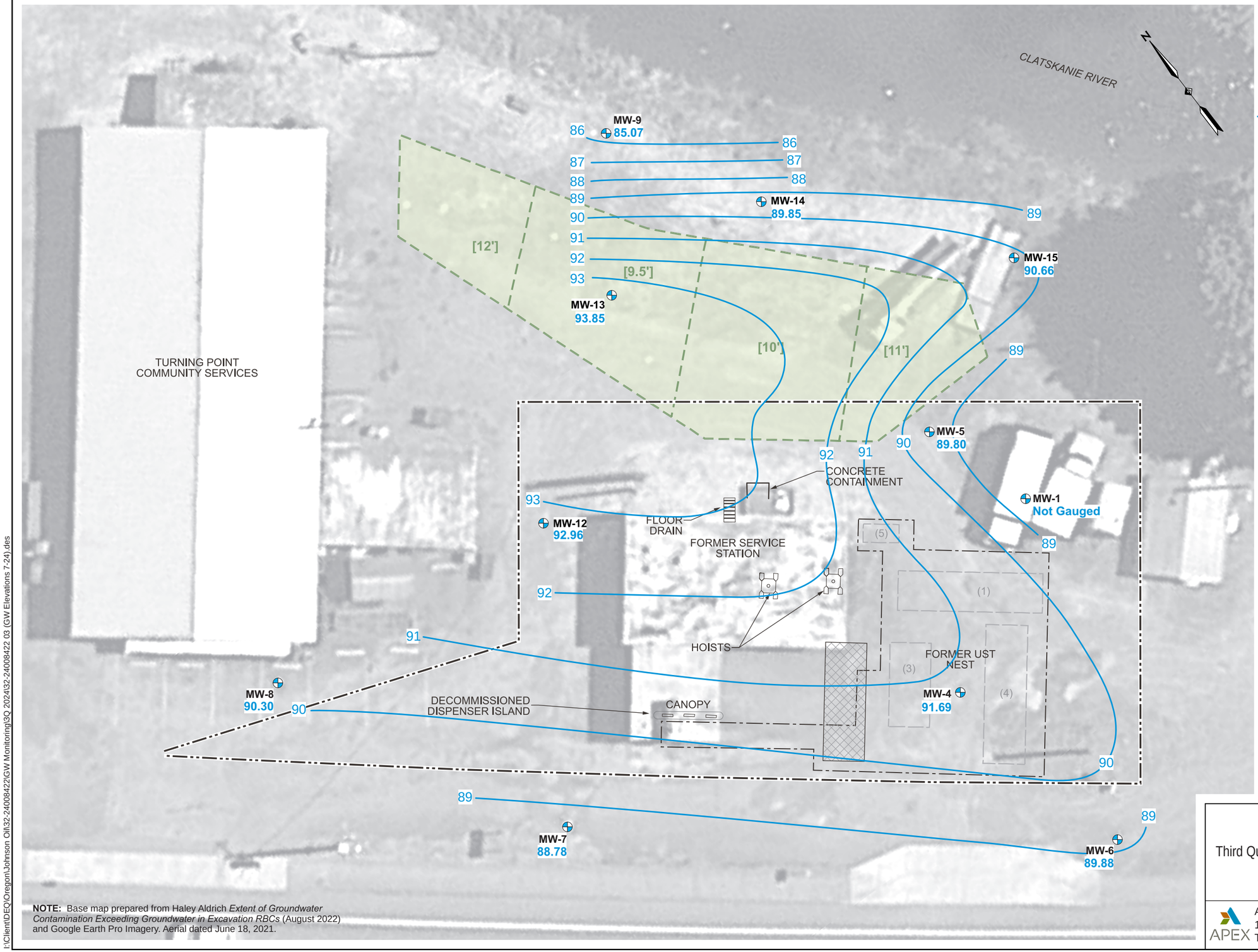

Legend:

- Monitoring Well
- 91.25 — Groundwater Elevation in Feet Relative to Mean Sea Level
- 89 — Groundwater Elevation Contour in Feet Relative to Mean Sea Level (Dashed Where Inferred)
- [10'] — Extent of Excavation and [Depth in Feet]
- Excavation Limits (2008)
- Underground Storage Tank (UST) Decommissioned in Place
- (4) — Removed UST and Designation
- Property Boundary

0 20 40
Approximate Scale in Feet

NOTE: Base map prepared from Haley Aldrich *Extent of Groundwater Contamination Exceeding Groundwater in Excavation RBCs* (August 2022) and Google Earth Pro Imagery. Aerial dated June 18, 2021.

Groundwater Elevations (July 2024)

Third Quarter Groundwater Monitoring - Former Johnson Oil Site
280 East Columbia River Highway
Clatskanie, Oregon

Apex Companies, LLC 15618 SW 72nd Avenue Tigard, Oregon 97224	Project Number: 32-24008422	Drawn: --	Approved: TC/CW	Figure 3
	November 2024			

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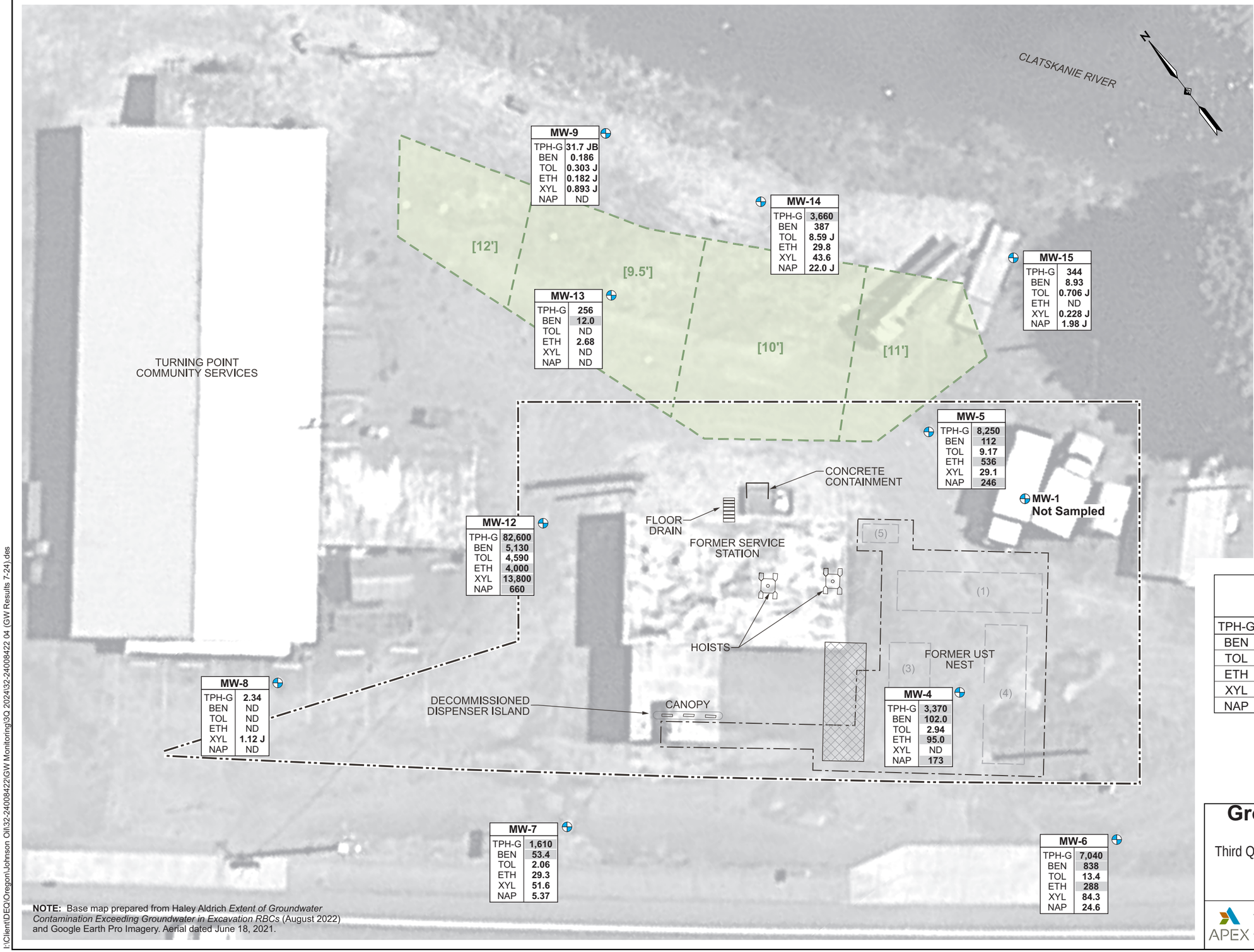

NOTE: Base map prepared from Haley Aldrich *Extent of Groundwater Contamination Exceeding Groundwater in Excavation RBCs* (August 2022) and Google Earth Pro Imagery. Aerial dated June 18, 2021.

Legend:

- Monitoring Well
- [10'] Extent of Excavation and [Depth in Feet]
- Excavation Limits (2008)
- Underground Storage Tank (UST) Decommissioned in Place
- (4) Removed UST and Designation
- Property Boundary

MW-14	
TPH-G	3,660
BEN	387
TOL	8.59 J
ETH	29.8
XYL	43.6
NAP	22.0 J

- MW-14 — Sample Identification
- Concentration in Micrograms Per Cubic Meter (µg/m^3)
- Analyte Sampled (See Table Below)

Highlight Exceeds Risk-Based Concentrations (RBCs) for Commercial Vapor Intrusion (RBCwi)

ND = Not Detected Above Laboratory Reporting Limit

J = Result is an estimated value.

B = Analyte concentration is less than 10 times greater than a detection in the method blank and the result may be biased.

Abbreviations		DEQ RBC for Commercial Vapor Intrusion (µg/m^3)
TPH-G	Gasoline-Range Organics	520
BEN	Benzene	12
TOL	Toluene	150,000
ETH	Ethylbenzene	31
XYL	Total Xylenes	3,300
NAP	Naphthalene	50

0 20 40
Approximate Scale in Feet

Groundwater Analytical Results (July 2024)

Third Quarter Groundwater Monitoring - Former Johnson Oil Site
280 East Columbia River Highway
Clatskanie, Oregon

Apex Companies, LLC
15618 SW 72nd Avenue
Tigard, Oregon 97224

Project Number:	Drawn:	Approved:	Figure
32-24008422	--	TC/CW	4
November 2024			

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NOTE: Base map prepared from Haley Aldrich *Extent of Groundwater Contamination Exceeding Groundwater in Excavation RBCs* (August 2022) and Google Earth Pro Imagery. Aerial dated June 18, 2021.

Legend:

- Ambient Air Location
- Porewater Sample
- Soil Gas Sample (From Existing Probe)
- Monitoring Well (Installed 2023)
- Historic Monitoring Well
- [10'] Extent of Excavation and [Depth in Feet]
- Excavation Limits (2008)
- Underground Storage Tank (UST) Decommissioned in Place
- (4) Removed UST and Designation
- Property Boundary

SG-7	
TPH-G	843
BEN	0.818
TOL	5.46
ETH	1.19
XYL	9.43

- Sample Identification
- Total Petroleum Hydrocarbons for Gasoline Range - Low Fraction Result in µg/m^3
- Benzene Result in Micrograms per Cubic Meter (µg/m^3)
- Toluene Result in µg/m^3
- Ethylbenzene Result in µg/m^3
- Total Xylenes Result in µg/m^3

ND = Not Detected Above Laboratory Reporting Limit

-- = Not Sampled

0 20 40

Approximate Scale in Feet

Soil Vapor and Ambient Air Results (July 2024)

Third Quarter Groundwater Monitoring - Former Johnson Oil Site
280 East Columbia River Highway
Clatskanie, Oregon

Apex Companies, LLC
15618 SW 72nd Avenue
Tigard, Oregon 97224

Project Number:	Drawn:	Approved:	Figure
32-24008422	--	TC/CW	5

November 2024

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Appendix A

Sampling Documentation

WELL GAGING DATA SHEET

APEX	Apex Companies, LLC 15618 SW 72nd Ave. Portland, OR 97224	Job Number:	32-24008422
	Client: DEQ	Date:	7/22/2024
	Project: Johnson Oil	Sampler:	Chris Weer
	Weather: 66° mostly sunny	Time In/Out:	9:30

WATER LEVEL DATA

Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	Product Thickness (feet)	Water Column Height (feet)	Notes/Other Remarks
MW-4	12:16	-	2.74	20	-		
MW-5	12:08	-	4.50	20	-		
MW-6	12:10	-	5.69	20	-		odor
MW-7	12:14	-	6.26	20	-		
MW-8	12:12	-	5.92	15	-		
MW-9	11:58	-	9.47	15	-		
MW-12	12:18	-	6.10	15	-		
MW-13	12:04	-	4.43	17	-		
MW-14	12:06	-	9.43	20	-		
MW-15	12:02	-	9.66	20	-		

WELL MONITORING DATA SHEET

APEX	Apex Companies, LLC 15618 SW 72nd Ave. Portland, OR 97224	Well I.D.	MW-4	Job Number:	32-24008422
		Client:	DEQ	Date:	7/23/2024
		Project:	Johnson Oil	Sampler:	Chris Weer
		Weather:	70° Sunny	Time In/Out:	12:23/1248

WELL DATA

Well Depth:	20'		Well Diameter:	2 inch		Water Height	
Depth to Water:	2.78'		Screened Interval:			x Multiplier	
Water Column Length:	17.22'		Depth to Free Product:			x Casing Volumes	
Purge Volume:			Free Product Thickness:			= Purge Volume	
Water Height Multipliers (gal)		1-inch = 0.041	2-inch = 0.162		4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:				Pump Intake Depth:						Comments	
Sampling Method:				Tubing Type:							
Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO ~~(ppm)~~ mg/L	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-3%	+/-3%	+/-10%	+/-10mV	+/-10%	<-- Stabilization Criteria
12:30			2.78	0.25	6.86	17.00	638	0.00	-208.6		C odor
12:33			2.78	0.25	6.87	17.00	637	0.00	-212.5		C odor
12:36			2.78	0.25	6.87	17.00	635	0.00	-215.5		C odor

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-4	Sampling Flow Rate	0.25	Analytical Laboratory:	Pace Analytical	
Sample Time:	12:42	Final Depth to Water:	2.78'	Did Well Dewater?	NO	
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCl	TPH-Gx, VOCs	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX	Apex Companies, LLC 15618 SW 72nd Ave. Portland, OR 97224	Well I.D.	MW-5	Job Number:	32-24008422
		Client:	DEQ	Date:	7/23/24
		Project:	Johnson Oil	Sampler:	Chris Weer
		Weather:	63° Sunny	Time In/Out:	10:23/10:59

WELL DATA

Well Depth:	20'		Well Diameter:	2 inch		Water Height	
Depth to Water:	4.50'		Screened Interval:			x Multiplier	
Water Column Length:	15.50'		Depth to Free Product:			x Casing Volumes	
Purge Volume:			Free Product Thickness:			= Purge Volume	
Water Height Multipliers (gal)		1-inch = 0.041	2-inch = 0.162		4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:					Pump Intake Depth:					Comments	
Sampling Method:					Tubing Type:						
Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO ~~(ppm)~~ mg/L	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-3%	+/-3%	+/- 10%	+/-10mV	+/-10%	<-- Stabilization Criteria
10:35			6.13	0.25	6.50	15.20	516	0.09	-210.5		C
1038			7.21	0.25	6.52	15.00	545	0.00	-221.6		C
1041			7.96	0.25	6.53	15.05	542	0.00	-226.3		C
1044			8.95	0.25	6.52	15.40	542	0.00	-230.1		C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-5	Sampling Flow Rate	0.25	Analytical Laboratory:	Pace Analytical	
Sample Time:	10:52	Final Depth to Water:	9.21	Did Well Dewater?	NO	
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCl	TPH-Gx, VOCs	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX	Apex Companies, LLC 15618 SW 72nd Ave. Portland, OR 97224	Well I.D.	MW-6	Job Number:	32-24008422
		Client:	DEQ	Date:	7/23/2024
		Project:	Johnson Oil	Sampler:	Chris Weer
		Weather:	65° Sunny	Time In/Out:	1105/1135

WELL DATA

Well Depth:	20'		Well Diameter:	2 inch		Water Height	
Depth to Water:	5.29'		Screened Interval:			x Multiplier	
Water Column Length:	14.71'		Depth to Free Product:			x Casing Volumes	
Purge Volume:			Free Product Thickness:			= Purge Volume	
Water Height Multipliers (gal)		1-inch = 0.041	2-inch = 0.162		4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:				Pump Intake Depth:						Comments	
Sampling Method:				Tubing Type:							
Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-3%	+/-3%	+/- 10%	+/-10mV	+/-10%	<-- Stabilization Criteria
11:15			7.31	0.25	6.58	16.15	581	0.00	-199.6		C
11:18			8.50	0.25	6.59	15.90	585	0.00	-206.9		C
11:21			9.21	0.25	6.59	16.10	580	0.00	-208.8		C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-6	Sampling Flow Rate	0.25	Analytical Laboratory:	Pace Analytical	
Sample Time:	11:27	Final Depth to Water:	9.69	Did Well Dewater?	NO	
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCl	TPH-Gx, VOCs	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX	Apex Companies, LLC 15618 SW 72nd Ave. Portland, OR 97224	Well I.D.	MW-7	Job Number:	32-24008422
		Client:	DEQ	Date:	7/23/24
		Project:	Johnson Oil	Sampler:	Chris Weer
		Weather:	67° Sunny	Time In/Out:	11:40/12:12

WELL DATA

Well Depth:	20'		Well Diameter:	2 inch		Water Height	
Depth to Water:	6.36'		Screened Interval:			x Multiplier	
Water Column Length:	13.64		Depth to Free Product:			x Casing Volumes	
Purge Volume:			Free Product Thickness:			= Purge Volume	
Water Height Multipliers (gal)		1-inch = 0.041	2-inch = 0.162		4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:				Pump Intake Depth:						Comments	
Sampling Method:				Tubing Type:							
Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-3%	+/-3%	+/- 10%	+/-10mV	+/-10%	<-- Stabilization Criteria
11:50			8.62	0.25	6.50	16.28	621	0.00	-170.8		C
11:53			9.26	0.25	6.50	16.68	628	0.00	-172.1		C
11:56			9.88	0.25	6.50	16.80	624	0.00	-173.3		C
11:59			10.50	0.25	6.50	16.90	623	0.00	-174.2		C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-7	Sampling Flow Rate	0.25	Analytical Laboratory:	Pace Analytical	
Sample Time:	12:06	Final Depth to Water:	10.77'	Did Well Dewater?	NO	
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCl	TPH-Gx, VOCs	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX	Apex Companies, LLC 15618 SW 72nd Ave. Portland, OR 97224	Well I.D.	MW-8	Job Number:	32-24008422
		Client:	DEQ	Date:	7/22/24
		Project:	Johnson Oil	Sampler:	Chris Weer
		Weather:	67° mostly cloudy	Time In/Out:	1615 / ~~1642~~ 1642

WELL DATA

Well Depth:	15'		Well Diameter:	2 inch		Water Height	
Depth to Water:	5.91'		Screened Interval:			x Multiplier	
Water Column Length:	9.09'		Depth to Free Product:			x Casing Volumes	
Purge Volume:			Free Product Thickness:			= Purge Volume	
Water Height Multipliers (gal)		1-inch = 0.041	2-inch = 0.162		4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Peristaltic pump			Pump Intake Depth:						Comments	
Sampling Method:	Low flow			Tubing Type:							
Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-3%	+/-3%	+/- 10%	+/-10mV	+/-10%	<-- Stabilization Criteria
1625			7.23	0.25	6.50	17.90	961	0.00	-193.9		C
1628			7.90	0.25	6.49	17.80	943	0.00	-195.9		C
1631			8.55	0.25	6.49	17.80	940	0.00	-198.3		C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-8	Sampling Flow Rate	0.25	Analytical Laboratory:	Pace Analytical	
Sample Time:	1637	Final Depth to Water:	8.23'	Did Well Dewater?	NO	
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCl	TPH-Gx, VOCs	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX	Apex Companies, LLC 15618 SW 72nd Ave. Portland, OR 97224	Well I.D.	MW-9	Job Number:	32-24008422
		Client:	DEQ	Date:	7/22/2024
		Project:	Johnson Oil	Sampler:	Chris Weer
		Weather:		Time In/Out:	1243/1605

WELL DATA

Well Depth:	15'		Well Diameter:	2 inch		Water Height	
Depth to Water:	9.47'		Screened Interval:			x Multiplier	
Water Column Length:	5.53'		Depth to Free Product:	—		x Casing Volumes	
Purge Volume:			Free Product Thickness:	—		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041		2-inch = 0.162	4-inch = 0.653		1 gallon = 3.785 liters	

PURGING DATA

Purge Method:					Pump Intake Depth:						Comments
Sampling Method:					Tubing Type:						
Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO ~~(ppm)~~ mg/L	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-3%	+/-3%	+/- 10%	+/-10mV	+/-10%	<-- Stabilization Criteria
1252			11.62	0.25	4.92	14.00	91	5.02	87.1		AC
1255			12.58	0.25	4.85	13.90	82	4.63	70.0		C
1258			12.99	0.25	4.81	13.90	81	4.52	61.5		C
1301			13.69	0.25	4.78	14.10	77	4.25	57.9		C
1304			14.54	0.25	4.91	14.11	78	4.19	55.2		C
↳ DEWATERED											

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-9	Sampling Flow Rate	0.25	Analytical Laboratory:	Pace Analytical	
Sample Time:	16:03	Final Depth to Water:	14.50	Did Well Dewater?	YES	
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCl	TPH-Gx, VOCs	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX	Apex Companies, LLC 15618 SW 72nd Ave. Portland, OR 97224	Well I.D.	MW-12	Job Number:	32-24008422
		Client:	DEQ	Date:	7/23/2024
		Project:	Johnson Oil	Sampler:	Chris Weer
		Weather:	72° Sunny	Time In/Out:	12:52 / 13:40

WELL DATA

Well Depth:	15'	Well Diameter:	2 inch	Water Height	
Depth to Water:	6.10'	Screened Interval:		x Multiplier	
Water Column Length:	8.90'	Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:		Comments	
Sampling Method:		Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-3%	+/-3%	+/- 10%	+/-10mV	+/-10%	<-- Stabilization Criteria
1300			6.40	0.25	6.47	16.90	418	0.00	155.4		AC
1303			6.55	0.25	6.33	17.00	391	0.00	-157.3		AC
1306			6.67	0.25	6.33	16.90	387	0.00	-161.8		CI
1309			6.82	0.25	6.33	17.41	386	0.00	-204.1		VC
1317			7.05	0.25	6.32	18.00	355	0.00	-154.9		CI
1320			7.20	0.25	6.31	18.10	345	0.00	-158.0		AC
1323			7.31	0.25	6.29	18.00	343	0.00	-158.5		AC

Stopped →

Clarity: VC = very cloudy, CI = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-12	Sampling Flow Rate	0.25	Analytical Laboratory:	Pace Analytical
Sample Time:	13:30	Final Depth to Water:	7.21'	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCl	TPH-Gx, VOCs	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX	Apex Companies, LLC 15618 SW 72nd Ave. Portland, OR 97224	Well I.D.	MW-13	Job Number:	32-24008422
		Client:	DEQ	Date:	7/22/24
		Project:	Johnson Oil	Sampler:	Chris Weer
		Weather:	67° mostly Sunny	Time In/Out:	1645/1709

WELL DATA

Well Depth:	17'		Well Diameter:	2 inch		Water Height	
Depth to Water:	4.45'		Screened Interval:			x Multiplier	
Water Column Length:	12.55'		Depth to Free Product:			x Casing Volumes	
Purge Volume:			Free Product Thickness:			= Purge Volume	
Water Height Multipliers (gal)		1-inch = 0.041	2-inch = 0.162		4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:				Pump Intake Depth:						Comments	
Sampling Method:				Tubing Type:							
Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-3%	+/-3%	+/- 10%	+/-10mV	+/-10%	<-- Stabilization Criteria
1653			4.45	0.25	7.33	16.60	606	0.00	-202.9		C
16556			4.45	0.25	7.33	16.40	606	0.00	-206.9		C
1659			4.45	0.25	7.33	16.30	609	0.00	-208.4		C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-13	Sampling Flow Rate	0.25	Analytical Laboratory:	Pace Analytical	
Sample Time:	17:04	Final Depth to Water:	4.45	Did Well Dewater?	NO	
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCl	TPH-Gx, VOCs	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX	Apex Companies, LLC 15618 SW 72nd Ave. Portland, OR 97224	Well I.D.	MW-14	Job Number:	32-24008422
		Client:	DEQ	Date:	7/22/24
		Project:	Johnson Oil	Sampler:	Chris Weer
		Weather:	67° mostly Cloudy	Time In/Out:	1450/1551

WELL DATA

Well Depth:	20'	Well Diameter:	2 inch	Water Height	
Depth to Water:	9.74'	Screened Interval:		x Multiplier	
Water Column Length:	10.26'	Depth to Free Product:	—	x Casing Volumes	
Purge Volume:		Free Product Thickness:	—	= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	Peri pump	Pump Intake Depth:		Comments	
Sampling Method:	low flow	Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-3%	+/-3%	+/- 10%	+/-10mV	+/-10%	<-- Stabilization Criteria
1508			10.54	0.25	6.71	15.30	498	0.00	-212.1		C
1511			10.54	0.25	6.71	14.90	500	0.00	-220.7		C
1514			10.63	0.25	6.71	14.80	502	0.00	-224.5		C
1517			10.65	0.25	6.72	14.60	509	0.50	-189.4		C
1520			10.92	0.25	6.71	14.50	509	0.44	-189.8		C
1523			10.99	0.25	6.71	14.50	505	0.37	-192.4		C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-14, Dup	Sampling Flow Rate	0.25	Analytical Laboratory:	Pace Analytical
Sample Time:	1535, 1545	Final Depth to Water:	11.00	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCl	TPH-Gx, VOCs	yes (no)			Dup
6	HCl	TPH-Gx, VOCs	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX	Apex Companies, LLC 15618 SW 72nd Ave. Portland, OR 97224	Well I.D.	MW-15	Job Number:	32-24008422
		Client:	DEQ	Date:	7/22/2024
		Project:	Johnson Oil	Sampler:	Chris Weer
		Weather:	67° Cloudy	Time In/Out:	1350/1445

WELL DATA

Well Depth:	20'	Well Diameter:	2 inch	Water Height	
Depth to Water:	9.66	Screened Interval:		x Multiplier	
Water Column Length:	10.34	Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:					Pump Intake Depth:						Comments	
Sampling Method:					Tubing Type:							
Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO ~~(ppm)~~ mg/L	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks	
					+/-0.1	+/-3%	+/-3%	+/- 10%	+/-10mV	+/-10%	<-- Stabilization Criteria	
1415			10.44	0.25	6.57	13.80	581	0.00	-339.1		C	
1418			10.44	0.25	6.57	13.60	581	0.00	-343.2		C	
1421			10.44	0.25	6.56	13.40	562	0.00	-309.1		C	
1424			10.44	0.25	6.55	13.30	557	0.00	-289.1		C	
1427			10.44	0.25	6.56	13.50	563	0.00	-289.7		C	
1430			10.54	0.25	6.56	13.43	567	0.00	-285.3		C	

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-15	Sampling Flow Rate	0.25	Analytical Laboratory:	Pace Analytical	
Sample Time:	1435	Final Depth to Water:	10.20	Did Well Dewater?	NO	
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
6	HCl	TPH-Gx, VOCs	yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

Appendix B

Historical Data

Table B-1
Groundwater Elevations and Field Parameters
Former Johnson Oil
Clatskanie, Oregon

Monitoring Well	Date	TOC Elevation (ft[1])	Depth to Groundwater (ft BTOC)	Depth to Product (ft BTOC)	Product Thickness (ft)	Groundwater Elevation (ft[1])	pH	Temperature (°C)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)
MW-1 (1987)	6/2/2008	NS	3.5	--	--	--	--	--	--	--	--
MW-2	5/10/2018	94.36	7.30	--	--	87.06	6.76	12.73	754	0.87	-52.9
	6/13/2018		8.00	--	--	86.36	--	--	--	--	--
	5/24/2019		8.15	7.61	0.54	86.62	5.48	13.93	1		98.3
	7/10/2019		9.65	--	--	84.71	--	--	--	--	--
	9/16/2019		9.88	9.83	0.05	84.52	--	--	--	--	--
	1/17/2019		9.78	--	--	84.58	--	--	--	--	--
	4/1/2022		8.80	8.35	0.45	85.90	--	--	--	--	--
Decommissioned on 4/1/2022											
MW-3	5/10/2018	93.98	7.18	--	--	86.80	6.78	12.89	342	0.56	-53.5
	6/13/2018		8.31	--	--	85.67	--	--	--	--	--
	5/24/2019		5.43	--	--	88.55	6.33	13.12	0		43.5
	7/10/2019		9.47	--	--	84.51	--	--	--	--	--
	9/16/2019		10.07	--	--	83.91	--	--	--	--	--
	1-/17/2019		9.33	--	--	84.65	--	--	--	--	--
	5/12/2022		9.04	--	--	84.94	--	--	--	--	--
Decommissioned on 5/12/2022											
MW-4	5/10/2018	94.43	1.12	--	--	93.31	6.71	13.57	290	0.27	-67.4
	6/13/2018		1.30	--	--	93.13	--	--	--	--	--
	5/23/2019		0.97	--	--	93.46	6.44	13.34	283	--	-84.7
	7/10/2023		2.43	--	--	92.00	--	--	--	--	--
	9/16/2019		2.61	--	--	91.82	--	--	--	--	--
	10/17/2019		1.38	--	--	93.05	--	--	--	--	--
	5/12/2022		0.95	--	--	93.48	--	--	--	--	--
	3/29/2023		1.00	--	--	93.43	7.14	11.90	466	0.17	-136.1
	5/22/2023		1.77	--	--	92.66	6.92	13.50	460	0.28	-106.6
	9/21/2023		4.27	--	--	90.16	5.73	17.74	464	0.68	-115.4
	11/7/2023		0.9	--	--	93.53	6.43	15.82	585	0.23	-98.1
	2/26/2024		1.04	--	--	93.39	6.27	11.77	532	0.36	-39.9
	4/8/2024		1.30	--	--	93.13	6.75	12.64	566	1.40	-120.3
	7/22/2024		2.74	--	--	91.69	6.87	17.00	635	0.00	-215.5
MW-5	5/23/2019	94.30	4.65	--	--	89.65	6.06	13.70	189	--	30.6
	7/10/2019		4.86	--	--	89.44	--	--	--	--	--
	9/16/2019		5.79	--	--	88.51	--	--	--	--	--
	10/17/2019		4.59	--	--	89.71	--	--	--	--	--
	5/12/2022		6.60	--	--	87.70	--	--	--	--	--
	3/29/2023		3.76	--	--	90.54	6.92	11.50	448	0.50	-137.5
	5/22/2023		3.94	--	--	90.36	6.64	13.00	339	0.80	-120.7
	9/21/2023		6.79	--	--	87.51	5.37	16.51	324	0.66	-98.5
	11/7/2023		2.56	--	--	91.74	6.24	15.35	417	0.18	-104
	2/26/2024		2.97	--	--	91.33	5.94	11.60	469	0.32	48.8
	4/8/2024		3.44	--	--	90.86	6.53	12.19	461	1.11	-125.3
	7/22/2024		4.50	--	--	89.80	8.95	15.40	542	0.00	-230.1
MW-6	5/23/2019	95.57	4.57	--	--	91.00	5.95	13.76	181.000	--	3.00
	7/10/2019		6.55	--	--	89.02	--	--	--	--	--
	9/16/2019		7.31	--	--	88.26	--	--	--	--	--
	10/17/2019		7.48	--	--	88.09	--	--	--	--	--
	5/12/2022		7.75	--	--	87.82	--	--	--	--	--
	3/29/2023		4.61	--	--	90.96	6.94	12.30	576	0.30	-118.6
	5/22/2023		6.66	--	--	88.91	6.62	13.50	479	0.28	-84.8
	9/21/2023		7.68	--	--	87.89	5.64	17.73	452	0.62	-117.5
	11/7/2023		4.93	--	--	90.64	6.13	17.28	432	0.21	-78.8
	2/26/2024		4.88	--	--	90.69	5.99	12.50	469	0.58	-33.8
	4/8/2024		4.55	--	--	91.02	6.52	13.24	484	1.08	-108.4
	7/22/2024		5.69	--	--	89.88	6.59	16.10	580	0.00	-208.8

Please see notes at end of table.

Table B-1
Groundwater Elevations and Field Parameters
Former Johnson Oil
Clatskanie, Oregon

Monitoring Well	Date	TOC Elevation (ft[1])	Depth to Groundwater (ft BTOC)	Depth to Product (ft BTOC)	Product Thickness (ft)	Groundwater Elevation (ft[1])	pH	Temperature (°C)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)
MW-7	3/23/2019	95.04	8.02	--	--	87.02	5.64	15.12	644	2.65	45.8
	7/10/2019		6.23	--	--	88.81	--	--	--	--	--
	9/16/2019		7.33	--	--	87.71	--	--	--	--	--
	10/17/2019		10.39	--	--	84.65	--	--	--	--	--
	5/12/2022		9.21	--	--	85.83	--	--	--	--	--
	3/29/2023		5.37	--	--	89.67	6.79	13.60	673	0.07	-111.0
	5/22/2023		10.62	--	--	84.42	6.53	14.80	708	1.28	-73.2
	9/20/2023		6.20	--	--	88.84	5.35	19.00	491	0.61	-92.6
	11/7/2023		7.71	--	--	87.33	5.96	17.00	383	0.23	-32.0
	2/26/2024		8.07	--	--	86.97	5.93	13.81	578	0.77	-31.2
	4/8/2024		9.23	--	--	85.81	6.23	14.03	446	1.37	-52.5
	7/22/2024		6.26	--	--	88.78	6.5	16.90	623	0.00	-174.2
MW-8	5/24/2019	96.22	5.43	--	--	90.79	6.25	14.55	886	--	-72.4
	7/10/2019		6.01	--	--	90.21	--	--	--	--	--
	9/16/2019		6.32	--	--	89.90	--	--	--	--	--
	10/17/2019		6.43	--	--	89.79	--	--	--	--	--
	3/29/2023		5.17	--	--	91.05	6.65	12.30	946	0.68	-99.6
	5/22/2023		5.74	--	--	90.48	6.41	14.20	827	0.23	-76.0
	9/20/2023		6.80	--	--	89.42	5.44	19.53	868	0.07	-130.4
	11/7/2023		6.11	--	--	90.11	6.11	18.30	902	0.34	-127.1
	2/26/2024		5.09	--	--	91.13	6.07	12.18	953	0.75	-56.8
	4/8/2024		5.33	--	--	90.89	6.36	12.62	896	0.00	-106.3
	7/22/2024		5.92	--	--	90.30	6.49	17.80	940	0.00	-198.3
MW-9	5/23/2019	94.54	10.41	--	--	84.13	4.62	12.90	610	2.88	34.1
	7/10/2019		10.28	--	--	84.26	--	--	--	--	--
	9/16/2019		8.21	--	--	86.33	--	--	--	--	--
	10/17/2019		4.68	--	--	89.86	--	--	--	--	--
	9/20/2023		9.09	--	--	85.45	3.71	15.44	146	3.77	256.0
	11/7/2023		5.07	--	--	89.47	4.99	14.47	52	2.19	223.0
MW-9	5/23/2029	94.54	10.41	--	--	84.13	--	--	--	--	--
	7/10/2019		10.28	--	--	84.26	--	--	--	--	--
	9/16/2019		8.21	--	--	86.33	--	--	--	--	--
	10/17/2019		4.68	--	--	89.86	--	--	--	--	--
	2/26/2024		4.90	--	--	89.64	4.43	9.82	51	4.33	256.5
	4/8/2024		6.33	--	--	88.21	4.94	10.95	62	3.96	238.4
	7/22/2024		9.47	--	--	85.07	4.91	14.11	78	4.19	55.2
MW-10	5/23/2019	94.50	12.91	--	--	81.59	--	--	--	--	--
	7/10/2019		7.35	--	--	87.15	--	--	--	--	--
	9/16/2019		8.22	--	--	86.28	--	--	--	--	--
	10/17/2019		8.39	--	--	86.11	--	--	--	--	--
	4/1/2022		6.13	--	--	88.37	--	--	--	--	--
Decommissioned on 4/1/2022											
MW-11	5/24/2019	94.62	5.93	--	--	88.69	--	--	--	--	--
	7/10/2019		6.84	--	--	87.78	--	--	--	--	--
	9/16/2019		7.68	--	--	86.94	--	--	--	--	--
	10/17/2019		7.44	--	--	87.18	--	--	--	--	--
	4/1/2022		6.15	--	--	88.47	--	--	--	--	--
Decommissioned on 4/1/2022											
MW-12	3/29/2023	99.06	4.41	--	--	94.65	6.51	11.80	389	1.36	71.5
	5/22/2023		4.78	--	--	94.28	6.47	13.20	371	0.32	-59.1
	9/21/2023		7.50	--	--	91.56	5.33	18.73	544	0.58	-103.8
	11/7/2023		5.26	--	--	93.80	6.11	16.18	325	0.38	-67.8
	2/26/2024		4.61	--	--	94.45	5.90	11.68	355	0.27	-23.3
	4/8/2024		5.10	--	--	93.96	6.33	12.64	331	1.13	-86.8
	7/22/2024		6.10	--	--	92.96	6.29	18.00	343	0.00	-158.5

Please see notes at end of table.

Table B-1
Groundwater Elevations and Field Parameters
Former Johnson Oil
Clatskanie, Oregon

Monitoring Well	Date	TOC Elevation (ft[1])	Depth to Groundwater (ft BTOC)	Depth to Product (ft BTOC)	Product Thickness (ft)	Groundwater Elevation (ft[1])	pH	Temperature (°C)	Conductivity (µS/cm)	Dissolved Oxygen (mg/L)	ORP (mV)
MW-13	3/29/2023	98.28	2.75	--	--	95.53	7.95	10.60	670	0.00	-103.2
	5/22/2023		3.40	--	--	94.88	7.27	12.70	541	0.42	-87.9
	9/20/2023		5.67	--	--	92.61	6.03	18.42	912	0.60	-116.3
	11/7/2023		2.54	--	--	95.74	6.79	16.15	901	0.25	-65.3
	2/26/2024		2.67	--	--	95.61	6.85	9.59	352	0.56	-9.4
	4/8/2024		3.09	--	--	95.19	7.40	10.96	375	0.00	-125.2
	7/22/2024		4.43	--	--	93.85	7.33	16.30	609	0.00	-208.4
MW-14	3/29/2023	99.28	7.95	--	--	91.33	6.51	11.40	507	0.08	-31.6
	5/22/2023		6.83	--	--	92.45	6.58	12.00	594	0.46	-38.6
	9/20/2023		10.00	--	--	89.28	5.69	15.44	705	0.58	-131.6
	11/7/2023		7.97	--	--	91.31	5.98	14.87	425	0.18	-90.5
	2/26/2024		8.05	--	--	91.23	5.9	11.78	335	0.65	-30.6
	4/8/2024		8.77	--	--	90.51	6.45	11.92	338	0.00	-106.8
	7/22/2024		9.43	--	--	89.85	6.71	14.50	505	0.37	-192.4
MW-15	3/29/2023	100.32	8.30	--	--	92.02	6.46	11.90	699	4.83	51.6
	5/22/2023		6.78	--	--	93.54	6.63	12.00	445	0.30	-86.7
	9/20/2023		9.67	--	--	90.65	5.2	14.18	577	0.73	-72.9
	11/7/2023		7.87	--	--	92.45	5.95	13.72	348	0.21	-59.4
	2/26/2024		8.31	--	--	92.01	5.77	9.08	320	0.54	-16.0
	4/8/2024		9.07	--	--	91.25	6.45	11.31	407	0.00	-134.6
	7/22/2024		9.66	--	--	90.66	6.71	14.50	505	0.37	-192.4

Notes:

1. Elevations are relative to an assumed reference datum of 100 feet (point located at the northwest corner of a concrete pad for a metal sign along Highway 30).
2. ft = feet
3. BTOC = Below Top of Casing.
4. NS = Not surveyed.
5. °C = Degrees Celsius.
6. µS/cm = MicroSiemens per centimeter
7. mg/L = Milligrams per liter.
8. ORP (mV) = Oxidation-reduction potential (millivolts).

Table B-2
Groundwater Analytical Results
Former Johnson Oil
Clatskanie, Oregon

Monitoring Well Number	Sample Date	Concentrations in µg/L								
		TPH-G	Benzene	Toluene	Ethylbenzene	Total Xylenes	Methyl tert-butyl ether	Naphthalene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene
MW-4	5/10/2018	14,400	18.5	10.9 J	619	1,720	<0.367	283 J	1,190	404
	5/23/2019	7,340	117	2.07	436	43.2	<0.0367	284	58.3	22.9
	3/29/2023	5,720	84.5	1.83	196	3.43	<0.101	213	1.05	0.934 J
	5/22/2023	4,660	87.6	<10.0	188	<30.0	<10.0	117 J-	<10.0	<10.0
	9/21/2023	4,950	60.8	1.29	287	2.69 J	<1.00	363	0.412 J	0.292 J
	11/8/2023	4,870	199.0	<20.0	354	9.63 J	<20.0	137	<20.0	<20.0
	2/27/2024	3,120	94.2	<20.0	104	7.88	<20.0	130	4.57	<20.0
	04/09/2024	3,450	117	<20.0	108	<60.0	<20.0	96.2	2.19	<20.0
	7/23/2024	3,370	102	2.94	95.0	3.71	<1.00	173	<1.00	<1.00
MW-5	5/23/2019	3,590	46.2	5.82	428	45.8	<0.367	151	48.6	22.7
	3/30/2023	6,270	68.4	4.24	380	14.3	<0.101	178	0.561 J	1.99
	5/23/2023	4,790	56.3	3.2 J	208	7.81 J	<10.0	54.9 J-	<10.0	<10.0
	9/21/2023	3,430	32.0	2.13	200	9.57	<1.00	120	0.341 J	0.975 J
	11/8/2023	6,100	141	13.1	244	29.4 J	<10.0	220	<10.0	2.58 J
	2/27/2024	5,070	147	13.6	1,080	61.4	<10.0	331	24.2	3.07
	04/09/2024	7,910	155	11.1	970	51.0	<10.0	318	35.3	1.94
	7/23/2024	8,250	112	9.17	536	29.1	0.141 J	246	5.16	2.10
MW-6	5/23/2019	28,100	1,690	1,500	2,250	4,180	<18.4	241 J	809	206
	3/29/2023	1,490	609	8.50	240	194	<0.101	45.1	42.9	10.3
	5/22/2023	4,720	665	14.2 J	297	88.9 J	<50.0	<250 UJ	<50.0	11.1 J
	9/21/2023	2,450	379	6.25	92.7	41.1	<1.00	9.88	<1.00	2.57
	11/8/2023	6,250	772	11.2	230	74.3	<10.0	28.0 J	6.60 J	5.36 J
	2/27/2024	4,060	668	13.1	215	55.7	<10.0	19.6	3.09	7.72
	04/09/2024	6,860	576	10.4	152	31.5	<10.0	28.5	2.52	3.66
	7/23/2024	7,040	838	13.4	288	84.3	0.217 J	24.6	19.3	9.49
MW-7	5/23/2019	5,610	524	<8.24	396	1,020	45.7	37.4 J	269	49.3
	3/29/2023	42.7 J	96.6	1.93	70.5	138	24.3	12.8	28.2	7.53
	5/22/2023	4,910	518	4.15	410	411	36.9	71.5 J-	148	39.0
	9/21/2023	876	49.6	1.44	35.6	99.3	14.6	2.66 J	18.0	5.3
	11/8/2023	1,640	166	0.981 J	163	92.2	12.4	17.1	22.6	4.7
	2/27/2024	1,310	131	2.19	123	236	17.4	10.3	19.4	11.8

Please see notes at end of table.

Table B-2
Groundwater Analytical Results
Former Johnson Oil
Clatskanie, Oregon

Monitoring Well Number	Sample Date	Concentrations in µg/L								
		TPH-G	Benzene	Toluene	Ethylbenzene	Total Xylenes	Methyl tert-butyl ether	Naphthalene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene
MW-7	04/09/2024	2,350	112	2.42	87.8	294	14.9	4.15	11.8	14.5
	7/23/2024	1,610	53.4	2.06	29.3	51.6	26.7	5.37	10.0	3.27
MW-8	5/24/2019	88.0	2.16	<0.412	<0.384	26.0	<0.367	<1.00	4.53	1.43
	3/29/2023	4,550	<0.0941	<0.278	<0.137	3.21	0.331 J	<1.00	0.486 J	0.258 J
	5/22/2023	189 J+	<1.00	<1.00	<1.00	11.5	0.273 J	<5.00 UJ	3.64	1.15
	9/20/2023	54.5 J	<1.00	<1.00	0.231 J	1.47 J	0.297 J	<5.00	<1.00	0.137 J
	11/7/2023	35.5	0.125 J	<1.00	0.587 J	0.923 J	<1.00	1.33 J	<1.00	<1.00
	2/26/2024	52.0 B	<1.00	<1.00	<1.00	4.26	0.296	<5.00	0.400	<1.00
	04/08/2024	84.8	<1.00	<1.00	0.206	8.77	0.336	<5.00	0.83	0.77
	7/22/2024	234	<1.00	<1.00	<1.00	1.12 J	0.232 J	<5.00	<1.00	<1.00
MW-9	5/23/2019	3,760	1,320	15.0	40.7	563.0	<0.376	3.31 J	141	44.3
	9/20/2023	<100	<1.00	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00
	11/7/2023	55.7 J	<1.00	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00
	2/26/2024	<100	<1.00	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00
	04/08/2024	<100	<1.00	<1.00	<1.00	<3.00	<1.00	<5.00	<1.00	<1.00
	7/23/2024	31.7 JB	0.186 J	0.303 J	0.182 J	0.893 J	<1.00	<5.00	<1.00	<1.00
MW-12	3/30/2023	49,600	1,510	12,600	2,720	11,800	<2.02	508	1,980	519
	5/23/2023	82,400	2,930	13,600	3,090	14,300	<500	<2,500 UJ	1,910	621
	9/21/2023	31,000	4,540	145	1,490	3,870	15.3	193 J	1,120	297
	11/8/2023	104,000	4,150	13,200	4,650	22,500	<50.0	288	2,380	649
	2/27/2024	125,000	1,650	19,300	4,990	23,400	<100	511	724	797
	04/09/2024	120,000	1,810	15,900	3,410	17,500	<100	340	533	603
	7/23/2024	82,600	5,130	4,590	4,000	13,800	<25.0	660	2,750	704
MW-13	3/30/2023	2,300	59.7	5.48	217	264	<0.101	53.5	205	117
	5/23/2023	2,550	123	<10.0	226	50.2	<10.0	18.8 J-	46.3	57.1
	9/20/2023	3,170	166	<20.0	279	16.1 J	<1.00	14.3	114	36.5
	11/7/2023	271	2.79	<1.00	10.4	1.47 J	<1.00	<5.00	1.96	0.177 J
	2/26/2024	98.3 B	1.45	<1.00	7.86	0.329	<1.00	<5.00	<1.00	<1.00

Please see notes at end of table.

Table B-2
Groundwater Analytical Results
Former Johnson Oil
Clatskanie, Oregon

Monitoring Well Number	Sample Date	Concentrations in µg/L								
		TPH-G	Benzene	Toluene	Ethylbenzene	Total Xylenes	Methyl tert-butyl ether	Naphthalene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene
MW-13	04/08/2024	**238**	**35.3**	**0.501**	**6.11**	<3.00	<1.00	<5.00	<1.00	**0.381**
	7/22/2024	**256**	**12.0**	<1.00	**2.68**	<3.00	<1.00	<5.00	<1.00	<1.00
MW-14	3/30/2023	**4,190**	**107**	**1.64**	**58.7**	**18.1**	<0.101	**15.3**	**9.54**	**1.68**
	5/23/2023	**6,080**	**1,230**	**8.69**	**34.6**	**15.6**	<1.00	**6.45 J-**	**38.0**	**23.8**
	9/20/2023	**4,570**	**703**	**4.08**	**46.7**	**7.73 J**	<1.01	**7.83**	<25.0	**22.4**
	11/8/2023	**3,300**	**370**	**6.99 J**	<25.0	**21.5 J**	<25.0	<125	<25.0	<25.0
	2/27/2024	**3,440**	**554**	**4.94**	**34.9**	**15.8**	<5.00	<25.0	**9.57**	**4.87**
	04/08/2024	**3,790**	**334**	**4.30**	**19.4**	**13.8**	<5.00	<25.0	**8.35**	**3.48**
	7/22/2024	**3,660**	**387**	**8.59 J**	**29.8**	**43.6**	<10.0	**22.0 J**	**12.6**	**4.85 J**
MW-15	3/30/2023	**2,160**	**990**	**16.6**	**35.6**	**19.8**	**10.6**	**3.80 J**	**8.70**	**10.2**
	5/23/2023	**2,340**	**92.8**	<10.0	**45.1**	**11.2 J**	<10.0	<50 UJ	<10.0	<10.0
	9/20/2023	**2,590**	**250**	**2.96**	**20.9**	**2.98 J**	**6.43**	**1.84 J**	<10.0	<10.0
.	11/7/2023	**709**	**28.7**	**0.377 J**	**14.5**	**2.69 J**	<1.00	**3.84 J**	**0.727 J**	**0.157 J**
	2/26/2024	**940**	**27.6**	**0.518**	**33.2**	**6.20**	<1.00	**6.10**	**10.4**	<1.00
	04/08/2024	**1,010**	**35.1**	**0.895**	**28.5**	**3.26**	<1.00	**5.31**	**11.0**	<1.00
	7/22/2024	**344**	**8.93**	**0.706 J**	<1.00	**0.228 J**	<1.00	**1.98 J**	<1.00	<1.00
Groundwater to Indoor	Chronic	--	650	160,000	420,000	200,000	1,600,000	83,000	--	--
Air - Commercial	Acute	520	12	150,000	31	3,300	3,200	50	2,400	1,700
Groundwater in Excavation (RBC_{we})		14,000	1,800	220,000	4,500	23,000	63,000	500	6,300	7,500

Notes:

1. Volatile organic compounds by EPA Method 8260D.
2. GRO = Gasoline range organics by NWTPH-Gx Method.
3. µg/L = Micrograms per liter.
4. Only compounds of potential interest are present in table.
5. **Bold** values indicate concentration detected above the method detection limit.
6. < = Concentration was not detected above the shown minimum reporting limit.
7. B = Analyte concentration is less than 10 times greater than a detection in the method blank and the result may be biased.
8. J = Result is an estimated value.
9. J- = Result is an estimated value and may be biased low.
10. UJ = The analyte was not detected but the reporting limit may be inaccurate or imprecise.
11. DEQ Human Health RBC = Risk-Based Concentrations from the DEQ's *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* (updated June 2023).
12. Shaded values represent exceedances of applicable RBCs:

Table B-3
Soil Vapor Analytical Results
Former Johnson Oil
Clatskanie, Oregon

Sample Location	Former Produce Market	Former Service Station Building							Turning Point Building										Outdoor Samples		RBC_{sv} - Commercial	
Sample ID	SG-9	SG 1	SG 2	SG-10					SG-7					SG-8					SG 3	SG 6		
Date	5/23/2019	5/9/2018	5/10/2018	5/23/2019	4/4/2023	11/7/2023	2/26/2024	7/22/2024	5/23/2019	4/4/2023	11/7/2023	2/26/2024	7/22/2024	5/23/2019	4/4/2023	11/7/2023	2/26/2024	7/22/2024	5/10/2018	5/10/2018	Chronic	Acute
Volatile Organic Compounds (VOCs) by EPA Method TO-15 in µg/m³																						
Acetone	**38.3**	**27.6**	**9.98 J**	**212**	<2.97	**20.5**	**9.08**	**20.0**	**1,360**	<2.97	**8.72**	**32.1**	**28.5**	**73.7**	**14.1**	**11.9**	**3.26**	**7.91**	**1,180**	**5,680**	--	6,300,000
Allyl Chloride	--	--	--	--	<0.626	<0.626	<0.626	<0.626	--	<0.626	<0.626	<0.626	<0.626	--	<0.626	<0.626	<0.626	<0.626	--	--	68	--
Benzene	**3.26**	<1.28	<1.28 J	**2.24**	<0.639	**0.684**	*<63.9*	<0.639	<12.5	<0.639	<0.639	<0.639	**0.818**	<1.28	**0.684**	<0.639	<0.639	<0.639	**11,400**	**33.8**	52	2,900
Benzyl Chloride	--	--	--	--	<1.04	<1.04	<1.04	<1.04	--	<1.04	<1.04	<1.04	<1.04	--	<1.04	<1.04	<1.04	<1.04	--	--	8.3	24,000
Bromodichloromethane	--	--	--	--	<1.34	<1.34	<134	<1.34	--	<1.34	<1.34	<1.34	<1.34	--	<1.34	<1.34	<1.34	<1.34	--	--	11	--
Bromoform	--	--	--	--	<6.21	<6.21	<6.21	<6.21	--	<6.21	<6.21	<6.21	<6.21	--	<6.21	<6.21	<6.21	<6.21	--	--	370	--
Bromomethane	--	--	--	--	<0.776	<0.776	<0.776	<0.776	--	<0.776	<0.776	<0.776	<0.776	--	<0.776	<0.776	<0.776	<0.776	--	--	730	400,000
1,3-Butadiene	--	--	--	--	<4.43	<4.43	<4.43	<4.43	--	<4.43	<4.43	<4.43	<4.43	--	<4.43	<4.43	<4.43	<4.43	--	--	14	67,000
Carbon Disulfide	<1.24	**3.1**	**2.8**	**3.46**	<0.622	**0.890**	<0.622	<1.24	<12.4	<0.622	<0.622	**3.70**	<1.24	<1.24	**4.17**	<0.622	<0.622	**8.40**	**25.7**	**7.77**	100,000	630,000
Carbon Tetrachloride	--	--	--	--	<1.26	<1.26	<1.26	**1.26**	--	<1.26	<1.26	<1.26	<1.26	--	<1.26	<1.26	<1.26	<1.26	--	--	68	190,000
Chlorobenzene	--	--	--	--	<0.924	<0.924	<92.4	<0.924	--	<0.924	<0.924	<0.924	<0.924	--	<0.924	<0.924	<0.924	<0.924	--	--	7,300	--
Chloroethane	--	--	--	--	**2.85**	<0.528	<0.528	<0.528	--	<0.528	<0.528	**1.01**	<0.528	--	<0.528	<0.528	<0.528	<0.528	--	--	580,000	4,000,000
Chloroform	--	--	--	--	<0.973	<0.973	<0.973	<0.973	--	<0.973	<0.973	<0.973	<0.973	--	<0.973	<0.973	<0.973	<0.973	--	--	18	50,000
Chloromethane	--	--	--	--	**3.53**	**0.554**	<0.413	**0.845**	--	<0.413	**0.591**	**3.74**	<0.413	--	<0.413	**1.06**	<0.413	<0.413	--	--	13,000	100,000
2-Chlorotoluene	--	--	--	--	<1.03	<1.03	<1.03	<1.03	--	<1.03	<1.03	<1.03	<1.03	--	<1.03	<1.03	<1.03	<1.03	--	--	--	--
Cyclohexane	<1.38	<1.38	<1.38	<1.38	**1.69**	**8.16**	**1,540**	<0.689	<13.8	<0.689	<0.689	<0.689	<0.689	<1.38	<0.689	<0.689	<0.689	<0.689	<1.38	5,390	880,000	--
Chlorodibromomethane	--	--	--	--	<1.70	<1.70	<170	<1.70	--	<1.70	<1.70	<1.70	<1.70	--	<1.70	<1.70	<1.70	<1.70	--	--	--	--
1,2-Dibromoethane	<3.08	*<3.08*	*<3.08*	*<3.08*	*<1.54*	*<1.54*	*<154*	<1.54	*<30.8*	*<1.54*	*<1.54*	*<1.54*	<1.54	*<3.08*	*<1.54*	*<1.54*	*<1.54*	<1.54	*<3.08*	*<3.08*	0.68	--
1,2-Dichlorobenzene	--	--	--	--	<1.20	<1.20	<1.20	<1.20	--	<1.20	<1.20	<1.20	<1.20	--	<1.20	<1.20	<1.20	<1.20	--	--	29,000	--
1,3-Dichlorobenzene	--	--	--	--	<1.20	<1.20	<1.20	<1.20	--	<1.20	<1.20	<1.20	<1.20	--	<1.20	<1.20	<1.20	<1.20	--	--	--	--
1,4-Dichlorobenzene	--	--	--	--	<1.20	<1.20	<1.20	<1.20	--	<1.20	<1.20	<1.20	<1.20	--	<1.20	<1.20	<1.20	<1.20	--	--	37	1,200,000
1,2-Dichloroethane	<1.62	<1.62	<1.62	<1.62	<0.810	<0.810	*<81.0*	<0.810	<16.2	<0.810	<0.810	<0.810	<0.810	<1.62	<0.810	<0.810	<0.810	<0.810	<1.62	<1.62	16	--
1,1-Dichloroethane	--	--	--	--	<0.802	<0.802	<0.802	<0.802	--	<0.802	<0.802	<0.802	<0.802	--	<0.802	<0.802	<0.802	<0.802	--	--	260	--
1,1-Dichloroethene	--	--	--	--	<0.793	<0.793	<0.793	<0.793	--	<0.793	<0.793	<0.793	<0.793	--	<0.793	<0.793	<0.793	<0.793	--	--	29,000	20,000
cis-1,2-Dichloroethene	--	--	--	--	**2.14**	<0.793	<0.793	<0.793	--	<0.793	<0.793	<0.793	<0.793	--	<0.793	<0.793	<0.793	<0.793	--	--	5,800	--
trans-1,2-Dichloroethene	--	--	--	--	<0.793	<0.793	<0.793	<0.793	--	<0.793	<0.793	<0.793	<0.793	--	<0.793	<0.793	<0.793	<0.793	--	--	5,800	80,000
1,2-Dichloropropane	--	--	--	--	<0.924	<0.924	<92.4	<0.924	--	<0.924	<0.924	<0.924	<0.924	--	<0.924	<0.924	<0.924	<0.924	--	--	110	23,000
cis-1,3-Dichloropropene	--	--	--	--	<0.908	<0.908	<90.8	<0.908	--	<0.908	<0.908	<0.908	<0.908	--	<0.908	<0.908	<0.908	<0.908	--	--	100	3,700
trans-1,3-Dichloropropene	--	--	--	--	<0.908	<0.908	<90.8	<0.908	--	<0.908	<0.908	<0.908	<0.908	--	<0.908	<0.908	<0.908	<0.908	--	--	100	3,700
1,4-Dioxane	<1.44	--	--	<1.44	<0.721	<0.721	*<227*	<2.27	<14.4	<0.721	<0.721	<2.27	<2.27	**3.52**	<0.721	<0.721	<2.27	<2.27	--	--	82	730,000
Ethanol	**98.9**	**70.5**	**17.9 J**	**259**	<4.71	**58.6**	**7.94**	**5.51**	**1,380**	**35.3**	**14.9**	**78.6**	**51.1**	**43.7**	**54.3**	**31.1**	**4.98 B**	**6.00**	**22.5**	**23.3**	--	--
Ethylbenzene	**17.5**	**4.84**	<1.73	<1.73	<0.867	<0.867	<0.867	<0.867	**45.1**	**2.37**	**2.44**	**1.03**	**1.19**	<1.73	**5.20**	<0.867	<0.867	<0.867	**320**	**4.52**	160	2,200,000
4-Ethyltoluene	**10.4**	**3.7**	<1.96	<1.96	<0.982	<0.982	<0.982	<0.982	**516**	<0.982	**6.43**	**4.61**	**3.61**	**3.75**	<0.982	<0.982	<0.982	<0.982	**43.5**	**2.2**	--	--
Trichlorofluoromethane	**3.49**	<2.25	<2.25	<3.07	**1.20**	<1.12	**1.20**	<1.12	<22.5	<1.12	**1.48**	**1.61**	**1.66**	**3.46**	<1.12	**1.17**	**1.46**	**1.79**	**2.26**	<2.25	--	--
Dichlorodifluoromethane	**2.45**	--	--	**2.08**	**2.84**	**1.99**	**1.41**	**1.97**	<34.0	<0.989	**1.70**	**1.16**	**1.48**	**2.27**	**2.11**	**2.06**	**1.36**	**1.66**	--	--	15,000	--
1,1,2-Trichlorotrifluoroethane	--	--	--	--	<1.53	<1.53	<1.53	<1.53	--	<1.53	<1.53	<1.53	<1.53	--	<1.53	<1.53	<1.53	<1.53	--	--	730,000	--
1,2-Dichlorotetrafluoroethane	--	--	--	--	<1.40	<1.40	<1.40	<1.40	--	<1.40	<1.40	<1.40	<1.40	--	<1.40	<1.40	<1.40	<1.40	--	--	--	--

Please see notes at end of table.

Table B-3
Soil Vapor Analytical Results
Former Johnson Oil
Clatskanie, Oregon

Sample Location	Former Produce Market	Former Service Station Building							Turning Point Building										Outdoor Samples		RBC_{sv} - Commercial	
Sample ID	SG-9	SG 1	SG 2	SG-10					SG-7					SG-8					SG 3	SG 6		
Date	5/23/2019	5/9/2018	5/10/2018	5/23/2019	4/4/2023	11/7/2023	2/26/2024	7/22/2024	5/23/2019	4/4/2023	11/7/2023	2/26/2024	7/22/2024	5/23/2019	4/4/2023	11/7/2023	2/26/2024	7/22/2024	5/10/2018	5/10/2018	Chronic	Acute
Volatile Organic Compounds (VOCs) by EPA Method TO-15 in µg/m ^{3}																						
Heptane	**7.86**	**10.6**	<1.64	<1.64	**8.51**	**2.57**	**2,090**	<0.818	<16.4	<0.818	<0.818	**0.830**	**1.21**	<1.64	<0.818	<0.818	<0.818	<0.818	<1.64	**409**	58,000	--
Hexachloro-1,3-butadiene	--	--	--	--	<6.73	<6.73	<6.73	<6.73	--	<6.73	<6.73	<6.73	<6.73	--	<6.73	<6.73	<6.73	<6.73	--	--	19	--
n-Hexane	**3.32**	**4.32**	<1.41	**1.58**	**15.7**	<2.22	**2,240**	<2.22	<14.1	<2.22	<2.22	<2.22	**2.34**	<1.41	<2.22	<2.22	<2.22	<2.22	**40,100**	**3,020**	100,000	--
Isopropylbenzene	<1.97	<1.97	<1.97	<1.97	<0.983	<0.983	<0.983	**5.11**	**60.6**	**3.24**	**4.09**	<0.983	**2.09**	<1.97	<0.983	<0.983	<0.983	<0.983	**18.5**	**4.34**	58,000	--
Methylene Chloride	**3.99**	**3.51**	<1.39	**2.89**	<0.694	**5.17**	<0.694	<0.694	<13.9	<0.694	**1.50**	<0.694	**2.92**	**1.43**	<0.694	**3.09**	<0.694	<0.694	<1.39	<1.39	41,000	210,000
Methyl Butyl Ketone	--	--	--	--	<5.11	<5.11	<511	<5.11	--	<5.11	<5.11	<5.11	<5.11	--	<5.11	<5.11	<5.11	<5.11	--	--	4,400	--
2-Butanone (MEK)	<7.73	<7.37	<7.37	**20.6**	<3.69	**12.7**	<3.69	**5.22**	**403**	<3.69	<3.69	**3.98**	**11.1**	**16.1**	**9.94**	<3.69	<3.69	<3.69	<7.37	<7.37	730,000	500,000
4-Methyl-2-pentanone (MIBK)	--	--	--	--	<5.12	<5.12	<512	<5.12	--	<5.12	<5.12	<5.12	**5.73**	--	<5.12	<5.12	<5.12	<5.12	--	--	440,000	--
Methyl Methacrylate	--	--	--	--	<0.819	<0.819	<81.9	<0.819	--	<0.819	<0.819	<0.819	<0.819	--	<0.819	<0.819	<0.819	<0.819	--	--	100,000	--
Methyl Tert Butyl Ether (MTBE)	<1.44	<1.44	<1.44	<1.44	<0.721	<0.721	<0.721	<0.721	<14.4	<0.721	<0.721	<0.721	<0.721	<1.44	<0.721	<0.721	<0.721	<0.721	<1.44	<1.44	1,600	800,000
Naphthalene	<6.60	<6.60	<6.60	<6.60	<3.30	<3.30	<3.30	<3.30	**146**	<3.30	**9.32**	**71.2**	**9.95**	<6.60	<3.30	<3.30	<3.30	<3.30	<6.60	<6.60	12	20,000
2-Propanol	**11.9**	**8.29**	<6.15	**19.4**	<3.07	**49.9**	**5.19**	<3.07	**263**	<3.07	**4.99**	**17.3**	**34.9**	**102**	**7.25**	**9.78**	**3.22**	<3.07	<6.15	<6.15	29,000	320,000
Propene	<1.38	<1.38	**4.22**	**2.71**	<2.15	<2.15	<2.15	<2.15	<13.8	<2.15	<2.15	<2.15	<2.15	**1.43**	<2.15	<2.15	<2.15	<2.15	**422**	**2,090**	440,000	--
n-Propylbenzene	**2.36**	<1.96	<1.96	<1.96	<0.982	<0.982	<0.982	<0.982	**134**	**6.97**	**8.2**	<0.982	**4.02**	<1.96	<0.982	<0.982	<0.982	<0.982	<1.96	<1.96	150,000	--
Styrene	<1.70	<1.70	<1.70	<1.70	<0.851	<0.851	<0.851	<1.70	<17.0	<0.851	<0.851	<0.851	<1.70	<1.70	<0.851	<0.851	<0.851	<1.70	**15**	<1.70	150,000	2,100,000
1,1,2,2-Tetrachloroethane	--	--	--	--	<1.37	<1.37	<1.37	<1.37	--	<1.37	<1.37	<1.37	<1.37	--	<1.37	<1.37	<1.37	<1.37	--	--	7.1	--
Tetrachloroethylene	<2.72	**5.69**	**4.55**	**3.14**	<1.36	<1.36	<136	**1.57**	<27.2	<1.36	**2.96**	**1.84**	**5.27**	**5.31**	**6.22**	<1.36	<1.36	<1.36	<2.72	<2.72	1,600	4,000
Tetrahydrofuran	<1.18	<1.18	<1.18	<1.18	<0.590	**1.30**	<0.590	<0.590	<11.8	<0.590	<0.590	<0.590	**1.54**	**3.88**	<0.590	<0.590	<0.590	<0.590	<1.18	<1.18	290,000	--
Toluene	**75.6**	**15.8**	**4.69 J**	**6.13**	<1.88	**6.55**	<188	**2.46**	**25.6**	**4.44**	**3.35**	<1.88	**5.46**	**3.04**	**10.1**	**3.09**	<1.88	**1.88**	**1,060**	**21**	730,000	770,000
1,2,4-Trichlorobenzene	--	--	--	--	<4.66	<4.66	<4.66	<4.66	--	<4.66	<4.66	<4.66	<4.66	--	<4.66	<4.66	<4.66	<4.66	--	--	290	--
1,1,1-Trichloroethane	--	--	--	--	<1.09	<1.09	<1.09	<1.09	--	<1.09	<1.09	<1.09	<1.09	--	<1.09	<1.09	<1.09	<1.09	--	--	730,000	1,100,000
1,1,2-Trichloroethane	--	--	--	--	<1.09	<1.09	<109	<1.09	--	<1.09	<1.09	<1.09	<1.09	--	<1.09	<1.09	<1.09	<1.09	--	--	26	--
Trichloroethylene	--	--	--	--	**163**	<1.07	*<107*	<1.07	--	<1.07	<1.07	<1.07	<1.07	--	<1.07	<1.07	**1.78**	<1.07	--	--	100	210
1,2,4-Trimethylbenzene	**8.58**	**15.3**	**2.5**	<1.96	<0.982	<0.982	<0.982	<0.982	**844**	**49.1**	**52.5**	**51.5**	**30.0**	**6.77**	**1.13**	<0.982	<0.982	<0.982	**10.5**	**4.3**	8,800	--
1,3,5-Trimethylbenzene	**3.31**	**4.87**	<1.96	<1.96	<0.982	<0.982	<0.982	<0.982	**320**	**23.9**	**25.9**	**19.3**	**13.6**	<1.96	<0.982	<0.982	<0.982	<0.982	**7.23**	<1.96	8,800	--
2,2,4-Trimethylpentane	**14.5**	--	--	<1.87	<0.934	<0.934	**2,210**	<0.934	<18.7	**1.45**	<1.07	<0.934	**0.976**	<1.87	<0.934	<0.934	<0.934	<0.934	--	--	--	--
Vinyl Chloride	--	--	--	--	**1.85**	<0.511	<0.511	<0.511	--	<0.511	<0.511	<0.511	<0.511	--	<0.511	<0.511	<0.511	<0.511	--	--	93	130,000
Vinyl Bromide	--	--	--	--	<0.875	<0.875	<0.875	<0.875	--	<0.875	<0.875	<0.875	<0.875	--	<0.875	<0.875	<0.875	<0.875	--	--	27	--
Vinyl Acetate	<1.41	<1.41	<1.41	<1.41	<0.704	<0.704	<2.22	<2.22	<14.1	<0.704	<0.704	<2.22	<2.22	<1.41	<0.704	<0.704	<2.22	<2.22	<1.41	**18.9**	29,000	20,000
m&p-Xylene	--	--	--	--	<1.73	**1.82**	<1.73	<1.73	--	**12.0**	**12.1**	**6.07**	**5.51**	--	**10.0**	<1.73	<1.73	<1.73	--	--	--	--
o-Xylene	--	--	--	--	<0.867	<0.867	<0.867	<0.867	--	**9.93**	**10.6**	**4.73**	**3.92**	--	**2.11**	<0.867	<0.867	<0.867	--	--	15,000	--
TPH (GC/MS) Low Fraction	**953**	**2,300**	**479**	<413	<826	**1,160**	<82,600	**1,320**	**39,200**	**1,300 J+**	**1,400**	**967**	**843**	**531**	<826	<826	<826	<826	**358,000**	**256,000**	--	--
Dichlorodifluoromethane	--	2.12	<1.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<1.98	<1.98	--	--
Total Xylenes	**89.4**	**23.85**	**7.32**	**3.81**	--	--	--	--	**377**	--	--	--	--	**7.67**	--	--	--	--	**1,470**	**41.7**	15,000	870,000

Notes:

1. µg/m^3 = Micrograms per cubic meter.
2. **Bold** values indicate concentration detected above the minimum reporting limit.
3. Shaded values indicate concentrations detected above one or more applicable RBC.
4. *Italicized* values indicate a reporting limit above the applicable RBC
5. < = Concentration was not detected above the shown minimum reporting limit.
6. -- = Not available.
7. RBCsv = Soil Vapor Risk-Based Concentrations from the DEQ's *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* (updated June 2023).

Table B-4
Ambient Air Analytical Results
Former Johnson Oil
Clatskanie, Oregon

Sample Location	Produce Market	Former Service Station Building			Turning Point Building								Outdoor Samples				RBC_{air} - Commercial	
Sample ID	AA-3	AMB-4			AA-1	AA-2	AMB-1			AMB-2			AA-BG	AMB-3				
Date	6/13/2018	11/13/2023	2/26/2024	7/30/2024	6/13/2018	6/13/2018	11/13/2023	2/26/2024	7/30/2024	11/13/2023	2/26/2024	7/30/2024	6/13/2018	11/13/2023	2/26/2024	7/30/2024	Chronic	Acute
Volatile Organic Compounds (VOCs) by EPA Method TO-17 Passive RAD145 in µg/m ^{3}																		
Acetone	**4.66**	--	--	--	**32**	**23.4**	--	--	--	--	--	--	<2.97	--	--	--	--	--
Benzene	**0.281**	**0.79**	--	<0.50	**1.29**	**0.663**	**2.1**	**1.0**	**1.3**	**1.8**	**1.2**	**0.73**	**0.157**	**1.1**	**0.67**	<0.50	1.6	87
2 Butanone (MEK)	<3.69	--	--	--	**4.82**	**3.95**	--	--	--	--	--	--	<3.69	--	--	--	--	--
Carbon tetrachloride	**0.522**	--	--	--	**0.499**	**0.5**	--	--	--	--	--	--	**0.48**	--	--	--	--	--
Chloroethane	<0.106	--	--	--	**0.256**	<0.106	--	--	--	--	--	--	<0.107	--	--	--	--	--
Chloromethane	**1.24**	--	--	--	**2.54**	**1.28**	--	--	--	--	--	--	**1.16**	--	--	--	--	--
Cyclohexane	--	**0.076**	--	<0.18	--	--	**0.91**	**0.72**	**0.56**	**0.73**	**0.67**	**0.37**	--	**0.19**	**0.86**	<0.18	26,000	--
1,2 Dibromoethane (EDB)	<0.154	--	--	--	<0.154	<0.154	--	--	--	--	--	--	<0.154	--	--	--	--	--
1,2 Dichloroethane (EDC)	**0.113**	--	--	--	**0.292**	**0.118**	--	--	--	--	--	--	**0.097**	--	--	--	--	--
Dichlorodifluoromethane	**2.13**	--	--	--	**1.99**	**2.43**	--	--	--	--	--	--	**1.97**	--	--	--	--	--
Ethanol	**8.1**	--	--	--	**172**	**136**	--	--	--	--	--	--	**1.84**	--	--	--	--	--
Ethylbenzene	**1.14**	**0.16**	--	<0.14	**2.96**	**2.6**	**2.8**	**1.00**	**0.98**	**2.7**	**1.1**	**0.49**	<0.130	**0.2**	**0.12**	<0.14	4.9	66,000
4 Ethyltoluene	<0.982	--	--	--	**1.27**	<0.982	--	--	--	--	--	--	<0.982	--	--	--	--	--
Heptane	<0.818	--	--	--	**1.42**	**0.858**	--	--	--	--	--	--	<0.818	--	--	--	--	--
n Hexane	<0.705	--	--	--	**1.18**	**1.1**	--	--	--	--	--	--	<0.705	--	--	--	--	--
Isopropylbenzene	<0.983	--	--	--	<0.983	<0.983	--	--	--	--	--	--	<0.983	--	--	--	--	--
Methyl tert butyl ether	<0.721	--	--	--	<0.721	<0.721	--	--	--	--	--	--	<0.721	--	--	--	--	--
Methylene Chloride	**1.67**	--	--	--	**1.38**	**1.9**	--	--	--	--	--	--	<0.694	--	--	--	--	--
Naphthalene	<3.3	--	--	--	<3.3	<3.3	--	--	--	--	--	--	<3.3	--	--	--	--	--
2 Propanol	<3.07	--	--	--	**8.56**	**4.55**	--	--	--	--	--	--	<3.07	--	--	--	--	--
n Propylbenzene	<0.982	--	--	--	<0.982	<0.982	--	--	--	--	--	--	<0.982	--	--	--	--	--
Styrene	<0.851	**0.19**	--	<0.16	**0.87**	<0.851	**0.62**	**0.36**	<0.16	**0.66**	**0.52**	<0.16	<0.851	**0.25**	**0.085**	<0.16	4,400	63,000
Tetrachloroethene	<0.136	**1.000**	--	**0.38**	**0.29**	**0.175**	**0.079**	**0.053**	<0.17	**0.095**	**0.056**	<0.17	<0.136	**0.065**	**0.044**	<0.17	47	120
Tetrahydrofuran	<0.590	--	--	--	**4.02**	**3.58**	--	--	--	--	--	--	<0.590	--	--	--	--	--
Toluene	**1.52**	**0.81**	--	**0.16**	**8.56**	**6.85**	**18 E**	**6.7 E**	**9.1**	**18 E**	**>6.3 S**	**4.6**	<0.753	**0.90**	**0.64**	**0.21**	22,000	23,000
1,1,1 Trichloroethane	<0.109	<0.058	--	<0.14	**0.672**	**0.503**	<0.058	<0.05	<0.14	<0.058	<0.05	<0.14	<0.109	<0.058	<0.05	<0.14	3	6.3
Trichloroethylene	--	**0.042**	--	<0.14	--	--	<0.021	<0.018	<0.14	<0.021	<0.018	<0.14	--	<0.021	<0.018	<0.14	3	6.3

Please see notes at end of table.

Table B-4
Ambient Air Analytical Results
Former Johnson Oil
Clatskanie, Oregon

Sample Location	Produce Market	Former Service Station Building			Turning Point Building								Outdoor Samples				RBC_{air} - Commercial	
Sample ID	AA-3	AMB-4			AA-1	AA-2	AMB-1			AMB-2			AA-BG	AMB-3				
Date	6/13/2018	11/13/2023	2/26/2024	7/30/2024	6/13/2018	6/13/2018	11/13/2023	2/26/2024	7/30/2024	11/13/2023	2/26/2024	7/30/2024	6/13/2018	11/13/2023	2/26/2024	7/30/2024	Chronic	Acute
Volatile Organic Compounds (VOCs) by EPA Method TO-17 Passive RAD145 in µg/m ^{3}																		
Trichlorofluoromethane	**1.44**	--	--	--	**2.73**	**2.26**	--	--	--	--	--	--	**1.30**	--	--	--	--	--
1,2,4 Trimethylbenzene	<0.982	--	--	--	**1.6**	**1.5**	--	--	--	--	--	--	<0.982	--	--	--	--	--
1,3,5 Trimethylbenzene	<0.982	--	--	--	<0.982	<0.982	--	--	--	--	--	--	<0.982	--	--	--	--	--
2,2,4 Trimethylpentane	<0.934	--	--	--	**1.12**	**1.25**	--	--	--	--	--	--	<0.934	--	--	--	--	--
Vinyl Acetate	<0.070	--	--	--	**0.143**	**0.167**	--	--	--	--	--	--	<0.070	--	--	--	--	--
m&p-Xylene	--	**0.5**	--	**0.11**	--	--	**11 E**	**3.8 E**	**4.3**	**3.600**	**3.900**	**2.00**	--	**0.55**	**0.34**	**0.11**	880	--
o-Xylene	--	**0.19**	--	<0.15	--	--	**3.6**	**1.4**	**1.3**	**0.66**	**1.5**	**0.61**	--	**0.22**	**0.14**	<0.15	440	--
Total Xylenes	**2.09**	--	--	--	**14.31**	**14.36**	--	--	--	--	--	--	<1.73	--	--	--	--	--
TPH-Low Fraction	<207	--	--	--	<207	<207	--	--	--	--	--	--	<207	--	--	--	--	--

Notes:

1. µg/m^3 = Micrograms per cubic meter.
2. Bold values indicate concentration detected above the minimum reporting limit.
3. Shaded values indicate concentrations detected above one or more applicable RBC.
4. -- = Not available.
5. E = Estimated concentration that may be biased high.
6. S = Saturated Peak; data reported as estimated
7. RBCair = Ambient Air Risk-Based Concentrations from the DEQ's *Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites* (updated June 2023).
8. TP = Turning Point building, OD = outdoor, FS = former station building

Appendix C

Laboratory Analytical Reports and Data Quality Review

Appendix C – QA/QC Review

This appendix documents the results of a quality assurance/quality control (QA/QC) review of the analytical data for the third quarter 2024 monitoring event at the former Johnson Oil Site in Clatskanie, Oregon. The groundwater and soil vapor samples were submitted to Pace Analytical Services, LLC (Pace) in Mt. Juliet, Tennessee under their Price Agreement with the Oregon Department of Environmental Quality (DEQ). The ambient air (Radiello) samples were submitted to Eurofins Air Toxics of Folsom, California. Copies of the analytical laboratory reports are included in this appendix.

Laboratory Report	Date Reported
L1759795	July 29, 2024
L1759747	August 2, 2024
2408090	August 14, 2024

1.0 Analytical Methods

Chemical analyses of groundwater samples included in this QA/QC Review consisted of the following:

- Total petroleum hydrocarbons as gasoline (TPH-Gx) by Northwest Method NWTPH-Gx; and
- Volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260D.

Chemical analyses of soil vapor samples included in this QA/QC review consisted of the following:

- TPH (low fraction) and VOCs by EPA Method TO-15.

Chemical analyses of ambient air samples included in this QA/QC review consisted of the following:

- VOCs by EPA Method TO-17 using Radiello 130 sorbent tubes.

2.0 Data Validation

The QA/QC review included examination and validation of the laboratory data packages for the following:

- Analytical preparation and quantitation methods;
- Analytical method holding times;
- Sample handling;
- Chain of custody procedures;
- Detection and reporting limits;
- Method blank detections;
- Laboratory control samples, matrix spikes, and surrogates to assess accuracy; and

- Laboratory control sample duplicates and matrix spike duplicates.

The QA/QC review did not include a review of raw data.

This QA/QC review documents the relationship between analytical findings and data quality objectives based on precision and accuracy. It also summarizes possible error or bias and the effect on data quality and usability.

The laboratory QC samples provided in data packages were used to evaluate laboratory contamination or background interferences, sample preparation efficiency and instrumentation performance. The QC samples provided by the analytical laboratory include method blanks, laboratory control samples (LCS/LCSD), and matrix spikes (MS/MSD). Surrogates are also required for VOC and TPH-Gx analysis to assess sample preparation efficiency and matrix interferences.

2.1 Data Qualifiers

Any data that is found to have possible bias or error was qualified and flagged. The following are definitions of qualifiers used in this data quality report and data tables.

J	Result is an estimated value.

3.0 Data Quality Assurance Review

The general QA objectives for this project were to develop and implement procedures for obtaining, evaluating, and confirming the usability of data of a specified quality. To collect such information, analytical data must have an appropriate degree of accuracy and reproducibility, samples collected must be representative of actual field conditions, and samples must be collected and analyzed using unbroken chain of custody procedures.

Reporting limits and analytical results were compared to cleanup and screening levels for each parameter in the matrix of concern. Precision, accuracy, completeness, and comparability parameters used to indicate data quality are discussed below.

3.1 Reporting Limits

Reporting limits are the lowest concentration an instrument is capable of accurately detecting an analyte. Reporting limits are determined by the laboratory and are based on instrumentation capabilities, the matrix of field samples, sample preparation procedures, and EPA suggested reporting limits.

The reporting limits were consistent with method standards and were generally below applicable screening level values. Several analytes were identified by the laboratory at concentrations that were between the laboratory minimum reporting limit (MRL) and the method detection limit (MDL). These concentrations are estimated values and have been 'J' flagged accordingly.

3.2 Holding Times and Sample Receipt

The holding time is the minimum amount of time the sample can be stored before analytes start to degrade and are not representative of initial sampling concentrations. Holding times are defined by analytical methods and samples were analyzed within the method specified holding time.

The integrity of the groundwater and soil vapor samples received was documented by the Pace Analytical *Sample Receipt Checklist* or *Cooler Receipt Form,* which ensures that samples are representative of the field and were not compromised during shipment. Confirmation of receipt of Radiello passive ambient monitors was documented by Eurofins on the chain of custody and indicated that the samples arrived in good condition.

The chain of custody followed an unbroken procedure and was relinquished by the Apex Companies sampler and received by the analytical laboratory as indicated by signatures. The sample ID, collection time and requested analyses were all clearly and properly filled in by the Apex Companies sampler.

3.3 Method Blanks

A method – or laboratory – blank is a sample prepared in the laboratory along with the actual samples and analyzed for the same parameters at the same time. It is used to assess if detected compounds may have been the result of contamination or background levels in the laboratory.

TPH-Gx was detected in the method blank of analytical batch WG2331998 at a concentration of 79.8 ug/L. The associated groundwater concentrations of TPH-Gx for the third quarter 2024 event were generally greater than ten times the method blank concentration with the exception of groundwater samples from MW-8, MW-9, MW-13, MW-15. The TPH-Gx results for well MW-9 (31.7 ug/L) may have had significant contribution from laboratory contamination and result is 'J' and 'B' flagged.

3.4 Accuracy

Accuracy is assessed through the comparison of analytes of known concentration to concentrations determined analytically. A percent recovery is calculated from the analytical concentration to the known concentration of analyte, which must be within control limits established by methods. If the percent recovery is outside of control limits, then data might be compromised. The analytical laboratory will provide quality control samples and surrogates to help determine the accuracy of the data provided. These quality control samples and surrogates are discussed below.

3.4.1 Laboratory Control Samples

Laboratory control samples (LCS) and laboratory control duplicate samples (LCSD) were analyzed by the laboratory to assess the analytical methods. One set of LCS and LCSDs were analyzed per analytical batch. The samples were prepared from an analyte-free matrix that is then spiked with known levels of constituents of interest (COI; i.e. a standard). The concentrations were measured, and the results compared to the known spiked levels. This comparison is expressed as a percent recovery.

The LCS associated with batch WG2331518 observed concentrations outside of recovery limits for acrolein and 4-methyl-2-pentanone. Detections of this compound in MW-4, MW-5, MW-6 and MW-7, if present, are J-flagged as estimated values.

3.4.2 Matrix Samples

A matrix spike QC sample is used to assess the performance of the analytical method by determining potential matrix interferences. Matrix spike (MS) and matrix spike duplicate (MSD) analyses are performed on one environmental sample per analytical batch. A matrix spike sample uses an environmental sample that is spiked with known concentrations of analytes of interest. The matrix spike is then prepared and analyzed with the same analytical procedures as environmental samples in the analytical batch. The resulting concentration of the matrix spike is then compared to the known – or true – values added to the non-spiked environmental sample concentration. This comparison is expressed as a percent recovery. No matrix samples (MS/MSD) were included in this laboratory data set.

3.4.3 Surrogates

Surrogates are organic compounds that are similar in chemical composition to the analytes of interest but are not likely to be found in the environment. They are spiked into environmental and batch QC samples prior to sample preparation and analysis. Surrogate recoveries for environmental samples are used to evaluate matrix interference and sample preparation and analysis efficiency on a sample-specific basis. Surrogates were recovered within control limits.

3.5 Precision

Precision is measured by how close concentrations of duplicate analyses are to each other. These duplicate analyses are of separate aliquots of the same sample that are prepared or analyzed at the same (or similar) time. Precision in the field ensures that samples taken are representative of field concentrations. Field precision is demonstrated by field duplicates. Analytical precision is measured by the laboratory through duplicate analysis of samples and quality control samples. Precision is estimated by the relative percent difference (RPD) between the original analysis and the duplicate analysis.

3.5.1 Laboratory Control Samples

LCSD analyte concentrations were compared to LCS analyte concentrations to assess the precision of the analytical method. This comparison can be expressed by the relative percent difference (RPD) between the LCS and LCSD samples. RPD values for LCS/LCSDs were within control limits.

3.5.2 Matrix Spike Duplicate

Similar to the LCS/LCSD, the analytical batch MS/MSD analyte concentrations are also compared to each other and expressed as an RPD. RPD values for MS/MSDs were within control limits.

4.0 Conclusion

In conclusion, the QA objectives have been met and the data are of sufficient quality for use in this project.

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8/14/2024
Ms. Carmen Owens
Apex Companies, LLC (formerly Ash Creek Associates)
15618 SW 72nd Ave

Tigard OR 97224

Project Name: Johnson Oil
Project #: 32-24008422
Workorder #: 2408090

Dear Ms. Carmen Owens

The following report includes the data for the above referenced project for sample(s) received on 8/1/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Passive S.E. RAD130/SKC are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

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WORK ORDER #: 2408090

Work Order Summary

CLIENT:	Ms. Carmen Owens Apex Companies, LLC 15618 SW 72nd Ave Tigard, OR 97224	**BILL TO:**	Accounts Payable Apex Companies, LLC 15618 SW 72nd Ave Tigard, OR 97224
PHONE:	503-924-4704	**P.O. #**	23005297
FAX:	503-924-4707	**PROJECT #**	32-24008422 Johnson Oil
DATE RECEIVED:	08/01/2024	**CONTACT:**	Monica Tran
DATE COMPLETED:	08/14/2024		

FRACTION #	NAME	TEST
01A	AMB-1	Passive S.E. RAD130/SKC
02A	AMB-2	Passive S.E. RAD130/SKC
03A	AMB-3	Passive S.E. RAD130/SKC
04A	AMB-4	Passive S.E. RAD130/SKC
05A	Lab Blank	Passive S.E. RAD130/SKC
06A	CCV	Passive S.E. RAD130/SKC
07A	LCS	Passive S.E. RAD130/SKC
07AA	LCSD	Passive S.E. RAD130/SKC

CERTIFIED BY: Heidi Hayes DATE: 08/14/24

Technical Director

Cert. No.: AZ Licensure-AZ0775, FL NELAP-E87680, LA NELAP–02089, MN NELAP-2703122, NH NELAP–209223-B, NJ NELAP-CA016, NY NELAP-11291, TX NELAP-T104704434, UT NELAP-CA009332023-16, VA NELAP-12695, WA NELAP-C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-20
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

LABORATORY NARRATIVE
RAD130 Passive SE by Mod EPA TO-17
Apex Companies, LLC (formerly Ash Creek Associates)
Workorder# 2408090

Four Radiello 130 (Solvent) samples were received on August 01, 2024. The laboratory analyzed the charcoal sorbent bed of the passive sampler following modified method EPA TO-17. The VOCs were chemically extracted using carbon disulfide and an aliquot of the extract was injected into a GC/MS for identification and quantification of volatile organic compounds (VOCs).

The mass of each target compound adsorbed by the sampler was converted to units of concentration using the sample deployment time and the sampling rate for each VOC. If sampling rates were calculated by the lab or the manufacturer, the concentration result has been flagged as an estimated value. Results are not corrected for desorption efficiency.

The reference method used for this procedure is EPA TO-17, which describes the collection of VOCs in ambient air using sorbents and analysis by GC/MS. Because TO-17 describes active sample collection using a pump and thermal desorption as the preparation step, several modifications are required. Modifications to TO-17 are listed in the table below:

Requirement	***TO-17***	***ATL Modifications***
Sample Collection	Pump pulls measured air volume through sorbent tube	VOCs in air adsorbed onto sorbent bed passively through diffusion
Sample Preparation	Thermal extraction	Solvent extraction
Sorbent tube conditioning	Condition newly packed tubes prior to use	Charcoal-based sorbent is a single use media and conditioning is conducted by vendor.
Instrumentation	Thermal desorption introduction system	Liquid injection introduction system
Internal Standard	Gas-phase internal standard introduced on the tube or focusing trap during analysis	Liquid-phase internal standard introduced on the tube at the time of extraction
Media and sample storage	<4 deg C, 30 days	Media shelf life is determined by vendor; sample hold-time is 6 months for the RAD130 and WMS. Sample preservation requirements are storage in a cool, solvent-free refrigerator and optional use of ice during shipping.
Internal Standard Recovery	+/-40% of daily CCV area	-50% to +100% of daily CCV area

Receiving Notes

The Chain of Custody contained incorrect method information. The laboratory proceeded with the analysis as per the original contract.

Analytical Notes

The uptake rates were corrected based on average field temperatures if provided. In the absence of

field temperatures, the uptake rates determined at 25 deg C were used.

To calculate ug/m3 concentrations in the Lab Blank, a sampling duration of 10090 minutes was applied. The assumed temperature used for the uptake rate is listed on the data page. If the field temperatures were provided, the rate was adjusted in the same manner as the field samples.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated concentration due to calculated sampling rate

CN - See case narrative explanation.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: AMB-1

Lab ID#: 2408090-01A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Ethanol	1.0	0.97	3.2	3.1
Hexane	0.10	0.15	1.7	2.6
2-Butanone (Methyl Ethyl Ketone)	0.20	0.25	0.31	0.39
Cyclohexane	0.10	0.18	0.56	1.0
Carbon Tetrachloride	0.10	0.15	0.13	0.19
Benzene	0.40	0.50	1.3	1.6
Heptane	0.10	0.17	0.87	1.5
4-Methyl-2-pentanone	0.20	0.30	0.24	0.36
Toluene	0.10	0.13	9.1	12
Ethyl Benzene	0.10	0.14	0.98	1.4
m,p-Xylene	0.10	0.14	4.3	6.0
o-Xylene	0.10	0.15	1.3	2.0
Propylbenzene	0.10	0.17	0.15	0.27
1,2,4-Trimethylbenzene	0.10	0.20	0.83	1.6

Client Sample ID: AMB-2

Lab ID#: 2408090-02A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Ethanol	1.0	0.97	13	12
Hexane	0.10	0.15	0.94	1.4
Ethyl Acetate	0.40	0.51	0.61	0.77
2-Butanone (Methyl Ethyl Ketone)	0.20	0.25	0.54	0.68
Chloroform	0.10	0.13	0.16	0.21
Cyclohexane	0.10	0.18	0.37	0.68
Carbon Tetrachloride	0.10	0.15	0.14	0.20
Benzene	0.40	0.50	0.73	0.90
1,2-Dichloroethane	0.10	0.13	0.14	0.18
Heptane	0.10	0.17	0.51	0.88
4-Methyl-2-pentanone	0.20	0.30	0.20	0.30
Toluene	0.10	0.13	4.6	6.2
Ethyl Benzene	0.10	0.14	0.49	0.72
m,p-Xylene	0.10	0.14	2.0	2.9

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Summary of Detected Compounds
VOCS BY PASSIVE SAMPLER - GC/MS

Client Sample ID: AMB-2

Lab ID#: 2408090-02A

o-Xylene	0.10	0.15	0.61	0.93
1,2,4-Trimethylbenzene	0.10	0.20	0.44	0.87

Client Sample ID: AMB-3

Lab ID#: 2408090-03A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Carbon Tetrachloride	0.10	0.15	0.18	0.27
Toluene	0.10	0.13	0.21	0.28
m,p-Xylene	0.10	0.14	0.11	0.16

Client Sample ID: AMB-4

Lab ID#: 2408090-04A

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Carbon Tetrachloride	0.10	0.15	0.15	0.22
Toluene	0.10	0.13	0.16	0.21
Tetrachloroethene	0.10	0.17	0.38	0.65
m,p-Xylene	0.10	0.14	0.11	0.16

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Client Sample ID: AMB-1

Lab ID#: 2408090-01A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18080621sim**	**Date of Collection: 7/30/24 10:03:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/6/24 05:04 PM**	
		Date of Extraction: 8/6/24	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Ethanol	1.0	0.97	3.2	3.1
Methyl tert-butyl ether	0.10	0.15	Not Detected	Not Detected
Hexane	0.10	0.15	1.7	2.6
Ethyl Acetate	0.40	0.51	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.20	0.25	0.31	0.39
Chloroform	0.10	0.13	Not Detected	Not Detected
1,1,1-Trichloroethane	0.10	0.16	Not Detected	Not Detected
Cyclohexane	0.10	0.18	0.56	1.0
Carbon Tetrachloride	0.10	0.15	0.13	0.19
Benzene	0.40	0.50	1.3	1.6
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected
Heptane	0.10	0.17	0.87	1.5
Trichloroethene	0.10	0.14	Not Detected	Not Detected
4-Methyl-2-pentanone	0.20	0.30	0.24	0.36
Toluene	0.10	0.13	9.1	12
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected
Chlorobenzene	0.10	0.14	Not Detected	Not Detected
Ethyl Benzene	0.10	0.14	0.98	1.4
m,p-Xylene	0.10	0.14	4.3	6.0
o-Xylene	0.10	0.15	1.3	2.0
Styrene	0.10	0.16	Not Detected	Not Detected
Propylbenzene	0.10	0.17	0.15	0.27
1,2,4-Trimethylbenzene	0.10	0.20	0.83	1.6
1,4-Dichlorobenzene	0.10	0.19	Not Detected	Not Detected
Naphthalene	0.10	0.40	Not Detected	Not Detected

Temperature = 77.0F , duration time = 10087 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	95	70-130

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Client Sample ID: AMB-2

Lab ID#: 2408090-02A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18080622sim**	**Date of Collection: 7/30/24 10:05:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/6/24 05:32 PM**	
		Date of Extraction: 8/6/24	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Ethanol	1.0	0.97	13	12
Methyl tert-butyl ether	0.10	0.15	Not Detected	Not Detected
Hexane	0.10	0.15	0.94	1.4
Ethyl Acetate	0.40	0.51	0.61	0.77
2-Butanone (Methyl Ethyl Ketone)	0.20	0.25	0.54	0.68
Chloroform	0.10	0.13	0.16	0.21
1,1,1-Trichloroethane	0.10	0.16	Not Detected	Not Detected
Cyclohexane	0.10	0.18	0.37	0.68
Carbon Tetrachloride	0.10	0.15	0.14	0.20
Benzene	0.40	0.50	0.73	0.90
1,2-Dichloroethane	0.10	0.13	0.14	0.18
Heptane	0.10	0.17	0.51	0.88
Trichloroethene	0.10	0.14	Not Detected	Not Detected
4-Methyl-2-pentanone	0.20	0.30	0.20	0.30
Toluene	0.10	0.13	4.6	6.2
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected
Chlorobenzene	0.10	0.14	Not Detected	Not Detected
Ethyl Benzene	0.10	0.14	0.49	0.72
m,p-Xylene	0.10	0.14	2.0	2.9
o-Xylene	0.10	0.15	0.61	0.93
Styrene	0.10	0.16	Not Detected	Not Detected
Propylbenzene	0.10	0.17	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.20	0.44	0.87
1,4-Dichlorobenzene	0.10	0.19	Not Detected	Not Detected
Naphthalene	0.10	0.40	Not Detected	Not Detected

Temperature = 77.0F , duration time = 10087 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

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Client Sample ID: AMB-3

Lab ID#: 2408090-03A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18080623sim**	**Date of Collection: 7/30/24 10:07:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/6/24 06:00 PM**	
		Date of Extraction: 8/6/24	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Ethanol	1.0	0.97	Not Detected	Not Detected
Methyl tert-butyl ether	0.10	0.15	Not Detected	Not Detected
Hexane	0.10	0.15	Not Detected	Not Detected
Ethyl Acetate	0.40	0.51	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.20	0.25	Not Detected	Not Detected
Chloroform	0.10	0.13	Not Detected	Not Detected
1,1,1-Trichloroethane	0.10	0.16	Not Detected	Not Detected
Cyclohexane	0.10	0.18	Not Detected	Not Detected
Carbon Tetrachloride	0.10	0.15	0.18	0.27
Benzene	0.40	0.50	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected
Heptane	0.10	0.17	Not Detected	Not Detected
Trichloroethene	0.10	0.14	Not Detected	Not Detected
4-Methyl-2-pentanone	0.20	0.30	Not Detected	Not Detected
Toluene	0.10	0.13	0.21	0.28
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected
Chlorobenzene	0.10	0.14	Not Detected	Not Detected
Ethyl Benzene	0.10	0.14	Not Detected	Not Detected
m,p-Xylene	0.10	0.14	0.11	0.16
o-Xylene	0.10	0.15	Not Detected	Not Detected
Styrene	0.10	0.16	Not Detected	Not Detected
Propylbenzene	0.10	0.17	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.20	Not Detected	Not Detected
1,4-Dichlorobenzene	0.10	0.19	Not Detected	Not Detected
Naphthalene	0.10	0.40	Not Detected	Not Detected

Temperature = 77.0F , duration time = 10086 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130

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Client Sample ID: AMB-4

Lab ID#: 2408090-04A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18080624sim**	**Date of Collection: 7/30/24 10:14:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/6/24 06:28 PM**	
		Date of Extraction: 8/6/24	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Ethanol	1.0	0.97	Not Detected	Not Detected
Methyl tert-butyl ether	0.10	0.15	Not Detected	Not Detected
Hexane	0.10	0.15	Not Detected	Not Detected
Ethyl Acetate	0.40	0.51	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.20	0.25	Not Detected	Not Detected
Chloroform	0.10	0.13	Not Detected	Not Detected
1,1,1-Trichloroethane	0.10	0.16	Not Detected	Not Detected
Cyclohexane	0.10	0.18	Not Detected	Not Detected
Carbon Tetrachloride	0.10	0.15	0.15	0.22
Benzene	0.40	0.50	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected
Heptane	0.10	0.17	Not Detected	Not Detected
Trichloroethene	0.10	0.14	Not Detected	Not Detected
4-Methyl-2-pentanone	0.20	0.30	Not Detected	Not Detected
Toluene	0.10	0.13	0.16	0.21
Tetrachloroethene	0.10	0.17	0.38	0.65
Chlorobenzene	0.10	0.14	Not Detected	Not Detected
Ethyl Benzene	0.10	0.14	Not Detected	Not Detected
m,p-Xylene	0.10	0.14	0.11	0.16
o-Xylene	0.10	0.15	Not Detected	Not Detected
Styrene	0.10	0.16	Not Detected	Not Detected
Propylbenzene	0.10	0.17	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.20	Not Detected	Not Detected
1,4-Dichlorobenzene	0.10	0.19	Not Detected	Not Detected
Naphthalene	0.10	0.40	Not Detected	Not Detected

Temperature = 77.0F , duration time = 10090 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2408090-05A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18080607sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/6/24 10:39 AM**	
		Date of Extraction: 8/6/24	

Compound	Rpt. Limit (ug)	Rpt. Limit (ug/m3)	Amount (ug)	Amount (ug/m3)
Ethanol	1.0	0.97	Not Detected	Not Detected
Methyl tert-butyl ether	0.10	0.15	Not Detected	Not Detected
Hexane	0.10	0.15	Not Detected	Not Detected
Ethyl Acetate	0.40	0.51	Not Detected	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.20	0.25	Not Detected	Not Detected
Chloroform	0.10	0.13	Not Detected	Not Detected
1,1,1-Trichloroethane	0.10	0.16	Not Detected	Not Detected
Cyclohexane	0.10	0.18	Not Detected	Not Detected
Carbon Tetrachloride	0.10	0.15	Not Detected	Not Detected
Benzene	0.40	0.50	Not Detected	Not Detected
1,2-Dichloroethane	0.10	0.13	Not Detected	Not Detected
Heptane	0.10	0.17	Not Detected	Not Detected
Trichloroethene	0.10	0.14	Not Detected	Not Detected
4-Methyl-2-pentanone	0.20	0.30	Not Detected	Not Detected
Toluene	0.10	0.13	Not Detected	Not Detected
Tetrachloroethene	0.10	0.17	Not Detected	Not Detected
Chlorobenzene	0.10	0.14	Not Detected	Not Detected
Ethyl Benzene	0.10	0.14	Not Detected	Not Detected
m,p-Xylene	0.10	0.14	Not Detected	Not Detected
o-Xylene	0.10	0.15	Not Detected	Not Detected
Styrene	0.10	0.16	Not Detected	Not Detected
Propylbenzene	0.10	0.17	Not Detected	Not Detected
1,2,4-Trimethylbenzene	0.10	0.20	Not Detected	Not Detected
1,4-Dichlorobenzene	0.10	0.19	Not Detected	Not Detected
Naphthalene	0.10	0.40	Not Detected	Not Detected

Temperature = 77.0F , duration time = 10090 minutes.

Container Type: Radiello 130 (Solvent)

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

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Client Sample ID: CCV

Lab ID#: 2408090-06A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18080602sim**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 8/6/24 08:25 AM**
		Date of Extraction: NA

Compound	%Recovery
Ethanol	78
Methyl tert-butyl ether	121
Hexane	105
Ethyl Acetate	112
2-Butanone (Methyl Ethyl Ketone)	115
Chloroform	119
1,1,1-Trichloroethane	111
Cyclohexane	104
Carbon Tetrachloride	110
Benzene	109
1,2-Dichloroethane	115
Heptane	100
Trichloroethene	107
4-Methyl-2-pentanone	100
Toluene	102
Tetrachloroethene	102
Chlorobenzene	100
Ethyl Benzene	99
m,p-Xylene	100
o-Xylene	98
Styrene	97
Propylbenzene	96
1,2,4-Trimethylbenzene	97
1,4-Dichlorobenzene	96
Naphthalene	97

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130

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Client Sample ID: LCS

Lab ID#: 2408090-07A

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18080605sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/6/24 09:46 AM**	
		Date of Extraction: 8/6/24	

Compound	%Recovery	Method Limits
Ethanol	69	50-130
Methyl tert-butyl ether	97	70-130
Hexane	86	70-130
Ethyl Acetate	91	70-130
2-Butanone (Methyl Ethyl Ketone)	89	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	88	70-130
Cyclohexane	88	70-130
Carbon Tetrachloride	87	70-130
Benzene	84	70-130
1,2-Dichloroethane	89	70-130
Heptane	81	70-130
Trichloroethene	86	70-130
4-Methyl-2-pentanone	80	70-130
Toluene	81	70-130
Tetrachloroethene	82	70-130
Chlorobenzene	79	70-130
Ethyl Benzene	79	70-130
m,p-Xylene	78	70-130
o-Xylene	76	70-130
Styrene	57	20-100
Propylbenzene	79	70-130
1,2,4-Trimethylbenzene	74	70-130
1,4-Dichlorobenzene	68	50-110
Naphthalene	25	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

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Client Sample ID: LCSD

Lab ID#: 2408090-07AA

VOCS BY PASSIVE SAMPLER - GC/MS

File Name:	**18080606sim**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 8/6/24 10:13 AM**	
		Date of Extraction: 8/6/24	

Compound	%Recovery	Method Limits
Ethanol	64	50-130
Methyl tert-butyl ether	96	70-130
Hexane	86	70-130
Ethyl Acetate	90	70-130
2-Butanone (Methyl Ethyl Ketone)	88	70-130
Chloroform	96	70-130
1,1,1-Trichloroethane	88	70-130
Cyclohexane	88	70-130
Carbon Tetrachloride	87	70-130
Benzene	85	70-130
1,2-Dichloroethane	89	70-130
Heptane	82	70-130
Trichloroethene	86	70-130
4-Methyl-2-pentanone	79	70-130
Toluene	81	70-130
Tetrachloroethene	82	70-130
Chlorobenzene	79	70-130
Ethyl Benzene	80	70-130
m,p-Xylene	78	70-130
o-Xylene	76	70-130
Styrene	57	20-100
Propylbenzene	79	70-130
1,2,4-Trimethylbenzene	74	70-130
1,4-Dichlorobenzene	69	50-110
Naphthalene	25	5-80

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130

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Method : Passive SE GC/MS - Full 130 (rev 2023)

CAS Number	Compound	Rpt. Limit (ug)
64-17-5	Ethanol	1.0
1634-04-4	Methyl tert-butyl ether	0.10
110-54-3	Hexane	0.10
141-78-6	Ethyl Acetate	0.40
78-93-3	2-Butanone (Methyl Ethyl Ketone)	0.20
67-66-3	Chloroform	0.10
71-55-6	1,1,1-Trichloroethane	0.10
110-82-7	Cyclohexane	0.10
56-23-5	Carbon Tetrachloride	0.10
71-43-2	Benzene	0.40
107-06-2	1,2-Dichloroethane	0.10
142-82-5	Heptane	0.10
79-01-6	**Trichloroethene**	**0.10**
108-10-1	4-Methyl-2-pentanone	0.20
108-88-3	Toluene	0.10
127-18-4	Tetrachloroethene	0.10
108-90-7	Chlorobenzene	0.10
100-41-4	Ethyl Benzene	0.10
108-38-3	m,p-Xylene	0.10
95-47-6	o-Xylene	0.10
100-42-5	Styrene	0.10
103-65-1	Propylbenzene	0.10
95-63-6	1,2,4-Trimethylbenzene	0.10
106-46-7	1,4-Dichlorobenzene	0.10
91-20-3	Naphthalene	0.10

	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130

ANALYTICAL REPORT

August 02, 2024

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group:	L1759747
Samples Received:	07/24/2024
Project Number:	32-24008422
Description:	Johnson Oil
Report To:	Kara Master

Entire Report Reviewed By:

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

MW-4 L1759747-01 GW

Collected by	Collected date/time	Received date/time
	07/23/24 12:42	07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2331998	5	07/29/24 18:52	07/29/24 18:52	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2331518	1	07/28/24 23:54	07/28/24 23:54	DYW	Mt. Juliet, TN

MW-5 L1759747-02 GW

Collected by	Collected date/time	Received date/time
	07/23/24 10:52	07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2331998	1	07/29/24 15:50	07/29/24 15:50	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2331518	1	07/29/24 00:15	07/29/24 00:15	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2333072	20	08/01/24 00:12	08/01/24 00:12	JBE	Mt. Juliet, TN

MW-6 L1759747-03 GW

Collected by	Collected date/time	Received date/time
	07/23/24 11:27	07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2331998	1	07/29/24 16:13	07/29/24 16:13	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2331518	1	07/29/24 00:37	07/29/24 00:37	DYW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2333072	20	08/01/24 00:32	08/01/24 00:32	JBE	Mt. Juliet, TN

MW-7 L1759747-04 GW

Collected by	Collected date/time	Received date/time
	07/23/24 12:06	07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2331998	5	07/29/24 19:15	07/29/24 19:15	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2331518	1	07/29/24 00:58	07/29/24 00:58	DYW	Mt. Juliet, TN

MW-8 L1759747-05 GW

Collected by	Collected date/time	Received date/time
	07/22/24 16:37	07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2331998	5	07/29/24 19:37	07/29/24 19:37	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2331831	1	07/29/24 09:42	07/29/24 09:42	ADM	Mt. Juliet, TN

MW-9 L1759747-06 GW

Collected by	Collected date/time	Received date/time
	07/22/24 16:03	07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2334525	1	08/01/24 17:03	08/01/24 17:03	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2331831	1	07/29/24 10:03	07/29/24 10:03	ADM	Mt. Juliet, TN

MW-12 L1759747-07 GW

Collected by	Collected date/time	Received date/time
	07/23/24 13:30	07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2332301	25	07/30/24 04:37	07/30/24 04:37	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2331831	25	07/29/24 13:40	07/29/24 13:40	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2334624	250	08/01/24 23:30	08/01/24 23:30	DYW	Mt. Juliet, TN

MW-13 L1759747-08 GW

Collected by	Collected date/time	Received date/time
	07/22/24 17:04	07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2332301	1	07/30/24 00:27	07/30/24 00:27	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2331831	1	07/29/24 10:25	07/29/24 10:25	ADM	Mt. Juliet, TN

MW-14 L1759747-09 GW

Collected by	Collected date/time	Received date/time
	07/22/24 15:35	07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2332301	10	07/30/24 05:00	07/30/24 05:00	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2331831	10	07/29/24 14:01	07/29/24 14:01	ADM	Mt. Juliet, TN

MW-15 L1759747-10 GW

Collected by	Collected date/time	Received date/time
	07/22/24 14:35	07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2332301	1	07/30/24 00:49	07/30/24 00:49	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2331831	1	07/29/24 10:46	07/29/24 10:46	ADM	Mt. Juliet, TN

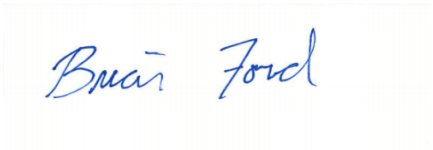
DUP L1759747-11 GW

Collected by	Collected date/time	Received date/time
	07/22/24 15:45	07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2332301	10	07/30/24 05:22	07/30/24 05:22	NCD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2331831	10	07/29/24 14:23	07/29/24 14:23	ADM	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	3370	B	158	500	5	07/29/2024 18:52	WG2331998
(S) a,a,a-Trifluorotoluene(FID)	*102*			*78.0-120*		*07/29/2024 18:52*	WG2331998

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	07/28/2024 23:54	WG2331518
Acrolein	U	J4	2.54	50.0	1	07/28/2024 23:54	WG2331518
Acrylonitrile	U		0.671	10.0	1	07/28/2024 23:54	WG2331518
Benzene	102		0.0941	1.00	1	07/28/2024 23:54	WG2331518
Bromobenzene	U		0.118	1.00	1	07/28/2024 23:54	WG2331518
Bromodichloromethane	U		0.136	1.00	1	07/28/2024 23:54	WG2331518
Bromoform	U		0.129	1.00	1	07/28/2024 23:54	WG2331518
Bromomethane	U		0.605	5.00	1	07/28/2024 23:54	WG2331518
n-Butylbenzene	21.4		0.157	1.00	1	07/28/2024 23:54	WG2331518
sec-Butylbenzene	19.2		0.125	1.00	1	07/28/2024 23:54	WG2331518
tert-Butylbenzene	0.170	J	0.127	1.00	1	07/28/2024 23:54	WG2331518
Carbon disulfide	U		0.0962	1.00	1	07/28/2024 23:54	WG2331518
Carbon tetrachloride	U		0.128	1.00	1	07/28/2024 23:54	WG2331518
Chlorobenzene	U		0.116	1.00	1	07/28/2024 23:54	WG2331518
Chlorodibromomethane	U		0.140	1.00	1	07/28/2024 23:54	WG2331518
Chloroethane	U		0.192	5.00	1	07/28/2024 23:54	WG2331518
Chloroform	U		0.111	5.00	1	07/28/2024 23:54	WG2331518
Chloromethane	U		0.960	2.50	1	07/28/2024 23:54	WG2331518
2-Chlorotoluene	U		0.106	1.00	1	07/28/2024 23:54	WG2331518
4-Chlorotoluene	U		0.114	1.00	1	07/28/2024 23:54	WG2331518
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/28/2024 23:54	WG2331518
1,2-Dibromoethane	U		0.126	1.00	1	07/28/2024 23:54	WG2331518
Dibromomethane	U		0.122	1.00	1	07/28/2024 23:54	WG2331518
1,2-Dichlorobenzene	U		0.107	1.00	1	07/28/2024 23:54	WG2331518
1,3-Dichlorobenzene	U		0.110	1.00	1	07/28/2024 23:54	WG2331518
1,4-Dichlorobenzene	U		0.120	1.00	1	07/28/2024 23:54	WG2331518
Dichlorodifluoromethane	U		0.374	5.00	1	07/28/2024 23:54	WG2331518
1,1-Dichloroethane	U		0.100	1.00	1	07/28/2024 23:54	WG2331518
1,2-Dichloroethane	U		0.0819	1.00	1	07/28/2024 23:54	WG2331518
1,1-Dichloroethene	U		0.188	1.00	1	07/28/2024 23:54	WG2331518
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/28/2024 23:54	WG2331518
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/28/2024 23:54	WG2331518
1,2-Dichloropropane	U		0.149	1.00	1	07/28/2024 23:54	WG2331518
1,1-Dichloropropene	U		0.142	1.00	1	07/28/2024 23:54	WG2331518
1,3-Dichloropropane	U		0.110	1.00	1	07/28/2024 23:54	WG2331518
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/28/2024 23:54	WG2331518
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/28/2024 23:54	WG2331518
2,2-Dichloropropane	U		0.161	1.00	1	07/28/2024 23:54	WG2331518
Di-isopropyl ether	U		0.105	1.00	1	07/28/2024 23:54	WG2331518
Ethylbenzene	95.0		0.137	1.00	1	07/28/2024 23:54	WG2331518
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/28/2024 23:54	WG2331518
Isopropylbenzene	66.7		0.105	1.00	1	07/28/2024 23:54	WG2331518
p-Isopropyltoluene	U		0.120	1.00	1	07/28/2024 23:54	WG2331518
2-Butanone (MEK)	U		1.19	10.0	1	07/28/2024 23:54	WG2331518
Methylene Chloride	U		0.430	5.00	1	07/28/2024 23:54	WG2331518
4-Methyl-2-pentanone (MIBK)	U	J4	0.478	10.0	1	07/28/2024 23:54	WG2331518
Methyl tert-butyl ether	U		0.101	1.00	1	07/28/2024 23:54	WG2331518
Naphthalene	173		1.00	5.00	1	07/28/2024 23:54	WG2331518

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Propylbenzene	194		0.0993	1.00	1	07/28/2024 23:54	WG2331518
Styrene	U		0.118	1.00	1	07/28/2024 23:54	WG2331518
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/28/2024 23:54	WG2331518
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/28/2024 23:54	WG2331518
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/28/2024 23:54	WG2331518
Tetrachloroethene	U		0.300	1.00	1	07/28/2024 23:54	WG2331518
Toluene	2.94		0.278	1.00	1	07/28/2024 23:54	WG2331518
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/28/2024 23:54	WG2331518
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/28/2024 23:54	WG2331518
1,1,1-Trichloroethane	U		0.149	1.00	1	07/28/2024 23:54	WG2331518
1,1,2-Trichloroethane	U		0.158	1.00	1	07/28/2024 23:54	WG2331518
Trichloroethene	U		0.190	1.00	1	07/28/2024 23:54	WG2331518
Trichlorofluoromethane	U		0.160	5.00	1	07/28/2024 23:54	WG2331518
1,2,3-Trichloropropane	U		0.237	2.50	1	07/28/2024 23:54	WG2331518
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/28/2024 23:54	WG2331518
1,2,3-Trimethylbenzene	3.51		0.104	1.00	1	07/28/2024 23:54	WG2331518
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/28/2024 23:54	WG2331518
Vinyl chloride	U		0.234	1.00	1	07/28/2024 23:54	WG2331518
Xylenes, Total	3.71		0.174	3.00	1	07/28/2024 23:54	WG2331518
(S) Toluene-d8	*106*			*80.0-120*		*07/28/2024 23:54*	WG2331518
(S) 4-Bromofluorobenzene	*108*			*77.0-126*		*07/28/2024 23:54*	WG2331518
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*07/28/2024 23:54*	WG2331518

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	8250		31.6	100	1	07/29/2024 15:50	WG2331998
(S) a,a,a-Trifluorotoluene(FID)	*114*			*78.0-120*		*07/29/2024 15:50*	WG2331998

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	07/29/2024 00:15	WG2331518
Acrolein	U	J4	2.54	50.0	1	07/29/2024 00:15	WG2331518
Acrylonitrile	U		0.671	10.0	1	07/29/2024 00:15	WG2331518
Benzene	112		0.0941	1.00	1	07/29/2024 00:15	WG2331518
Bromobenzene	U		0.118	1.00	1	07/29/2024 00:15	WG2331518
Bromodichloromethane	U		0.136	1.00	1	07/29/2024 00:15	WG2331518
Bromoform	U		0.129	1.00	1	07/29/2024 00:15	WG2331518
Bromomethane	U		0.605	5.00	1	07/29/2024 00:15	WG2331518
n-Butylbenzene	18.3		0.157	1.00	1	07/29/2024 00:15	WG2331518
sec-Butylbenzene	14.7		0.125	1.00	1	07/29/2024 00:15	WG2331518
tert-Butylbenzene	U		0.127	1.00	1	07/29/2024 00:15	WG2331518
Carbon disulfide	U		0.0962	1.00	1	07/29/2024 00:15	WG2331518
Carbon tetrachloride	U		0.128	1.00	1	07/29/2024 00:15	WG2331518
Chlorobenzene	U		0.116	1.00	1	07/29/2024 00:15	WG2331518
Chlorodibromomethane	U		0.140	1.00	1	07/29/2024 00:15	WG2331518
Chloroethane	U		0.192	5.00	1	07/29/2024 00:15	WG2331518
Chloroform	U		0.111	5.00	1	07/29/2024 00:15	WG2331518
Chloromethane	U		0.960	2.50	1	07/29/2024 00:15	WG2331518
2-Chlorotoluene	U		0.106	1.00	1	07/29/2024 00:15	WG2331518
4-Chlorotoluene	U		0.114	1.00	1	07/29/2024 00:15	WG2331518
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/29/2024 00:15	WG2331518
1,2-Dibromoethane	U		0.126	1.00	1	07/29/2024 00:15	WG2331518
Dibromomethane	U		0.122	1.00	1	07/29/2024 00:15	WG2331518
1,2-Dichlorobenzene	U		0.107	1.00	1	07/29/2024 00:15	WG2331518
1,3-Dichlorobenzene	U		0.110	1.00	1	07/29/2024 00:15	WG2331518
1,4-Dichlorobenzene	U		0.120	1.00	1	07/29/2024 00:15	WG2331518
Dichlorodifluoromethane	U		0.374	5.00	1	07/29/2024 00:15	WG2331518
1,1-Dichloroethane	U		0.100	1.00	1	07/29/2024 00:15	WG2331518
1,2-Dichloroethane	U		0.0819	1.00	1	07/29/2024 00:15	WG2331518
1,1-Dichloroethene	U		0.188	1.00	1	07/29/2024 00:15	WG2331518
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/29/2024 00:15	WG2331518
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/29/2024 00:15	WG2331518
1,2-Dichloropropane	U		0.149	1.00	1	07/29/2024 00:15	WG2331518
1,1-Dichloropropene	U		0.142	1.00	1	07/29/2024 00:15	WG2331518
1,3-Dichloropropane	U		0.110	1.00	1	07/29/2024 00:15	WG2331518
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/29/2024 00:15	WG2331518
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/29/2024 00:15	WG2331518
2,2-Dichloropropane	U		0.161	1.00	1	07/29/2024 00:15	WG2331518
Di-isopropyl ether	U		0.105	1.00	1	07/29/2024 00:15	WG2331518
Ethylbenzene	536		2.74	20.0	20	08/01/2024 00:12	WG2333072
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/29/2024 00:15	WG2331518
Isopropylbenzene	119		0.105	1.00	1	07/29/2024 00:15	WG2331518
p-Isopropyltoluene	U		0.120	1.00	1	07/29/2024 00:15	WG2331518
2-Butanone (MEK)	U		1.19	10.0	1	07/29/2024 00:15	WG2331518
Methylene Chloride	U		0.430	5.00	1	07/29/2024 00:15	WG2331518
4-Methyl-2-pentanone (MIBK)	U	J4	0.478	10.0	1	07/29/2024 00:15	WG2331518
Methyl tert-butyl ether	0.141	J	0.101	1.00	1	07/29/2024 00:15	WG2331518
Naphthalene	246		20.0	100	20	08/01/2024 00:12	WG2333072

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Propylbenzene	465		1.99	20.0	20	08/01/2024 00:12	WG2333072
Styrene	U		0.118	1.00	1	07/29/2024 00:15	WG2331518
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/29/2024 00:15	WG2331518
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/29/2024 00:15	WG2331518
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/29/2024 00:15	WG2331518
Tetrachloroethene	U		0.300	1.00	1	07/29/2024 00:15	WG2331518
Toluene	9.17		0.278	1.00	1	07/29/2024 00:15	WG2331518
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/29/2024 00:15	WG2331518
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/29/2024 00:15	WG2331518
1,1,1-Trichloroethane	U		0.149	1.00	1	07/29/2024 00:15	WG2331518
1,1,2-Trichloroethane	U		0.158	1.00	1	07/29/2024 00:15	WG2331518
Trichloroethene	U		0.190	1.00	1	07/29/2024 00:15	WG2331518
Trichlorofluoromethane	U		0.160	5.00	1	07/29/2024 00:15	WG2331518
1,2,3-Trichloropropane	U		0.237	2.50	1	07/29/2024 00:15	WG2331518
1,2,4-Trimethylbenzene	5.16		0.322	1.00	1	07/29/2024 00:15	WG2331518
1,2,3-Trimethylbenzene	16.0		0.104	1.00	1	07/29/2024 00:15	WG2331518
1,3,5-Trimethylbenzene	2.10		0.104	1.00	1	07/29/2024 00:15	WG2331518
Vinyl chloride	U		0.234	1.00	1	07/29/2024 00:15	WG2331518
Xylenes, Total	29.1		0.174	3.00	1	07/29/2024 00:15	WG2331518
(S) Toluene-d8	*111*			*80.0-120*		*07/29/2024 00:15*	WG2331518
(S) Toluene-d8	*111*			*80.0-120*		*08/01/2024 00:12*	WG2333072
(S) 4-Bromofluorobenzene	*115*			*77.0-126*		*07/29/2024 00:15*	WG2331518
(S) 4-Bromofluorobenzene	*104*			*77.0-126*		*08/01/2024 00:12*	WG2333072
(S) 1,2-Dichloroethane-d4	*117*			*70.0-130*		*07/29/2024 00:15*	WG2331518
(S) 1,2-Dichloroethane-d4	*94.1*			*70.0-130*		*08/01/2024 00:12*	WG2333072

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	7040		31.6	100	1	07/29/2024 16:13	WG2331998
(S) a,a,a-Trifluorotoluene(FID)	*103*			*78.0-120*		*07/29/2024 16:13*	WG2331998

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	07/29/2024 00:37	WG2331518
Acrolein	U	J4	2.54	50.0	1	07/29/2024 00:37	WG2331518
Acrylonitrile	U		0.671	10.0	1	07/29/2024 00:37	WG2331518
Benzene	838		1.88	20.0	20	08/01/2024 00:32	WG2333072
Bromobenzene	U		0.118	1.00	1	07/29/2024 00:37	WG2331518
Bromodichloromethane	U		0.136	1.00	1	07/29/2024 00:37	WG2331518
Bromoform	U		0.129	1.00	1	07/29/2024 00:37	WG2331518
Bromomethane	U		0.605	5.00	1	07/29/2024 00:37	WG2331518
n-Butylbenzene	23.6		0.157	1.00	1	07/29/2024 00:37	WG2331518
sec-Butylbenzene	21.0		0.125	1.00	1	07/29/2024 00:37	WG2331518
tert-Butylbenzene	0.268	J	0.127	1.00	1	07/29/2024 00:37	WG2331518
Carbon disulfide	U		0.0962	1.00	1	07/29/2024 00:37	WG2331518
Carbon tetrachloride	U		0.128	1.00	1	07/29/2024 00:37	WG2331518
Chlorobenzene	U		0.116	1.00	1	07/29/2024 00:37	WG2331518
Chlorodibromomethane	U		0.140	1.00	1	07/29/2024 00:37	WG2331518
Chloroethane	U		0.192	5.00	1	07/29/2024 00:37	WG2331518
Chloroform	U		0.111	5.00	1	07/29/2024 00:37	WG2331518
Chloromethane	U		0.960	2.50	1	07/29/2024 00:37	WG2331518
2-Chlorotoluene	U		0.106	1.00	1	07/29/2024 00:37	WG2331518
4-Chlorotoluene	U		0.114	1.00	1	07/29/2024 00:37	WG2331518
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/29/2024 00:37	WG2331518
1,2-Dibromoethane	U		0.126	1.00	1	07/29/2024 00:37	WG2331518
Dibromomethane	U		0.122	1.00	1	07/29/2024 00:37	WG2331518
1,2-Dichlorobenzene	U		0.107	1.00	1	07/29/2024 00:37	WG2331518
1,3-Dichlorobenzene	U		0.110	1.00	1	07/29/2024 00:37	WG2331518
1,4-Dichlorobenzene	U		0.120	1.00	1	07/29/2024 00:37	WG2331518
Dichlorodifluoromethane	U		0.374	5.00	1	07/29/2024 00:37	WG2331518
1,1-Dichloroethane	U		0.100	1.00	1	07/29/2024 00:37	WG2331518
1,2-Dichloroethane	U		0.0819	1.00	1	07/29/2024 00:37	WG2331518
1,1-Dichloroethene	U		0.188	1.00	1	07/29/2024 00:37	WG2331518
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/29/2024 00:37	WG2331518
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/29/2024 00:37	WG2331518
1,2-Dichloropropane	U		0.149	1.00	1	07/29/2024 00:37	WG2331518
1,1-Dichloropropene	U		0.142	1.00	1	07/29/2024 00:37	WG2331518
1,3-Dichloropropane	U		0.110	1.00	1	07/29/2024 00:37	WG2331518
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/29/2024 00:37	WG2331518
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/29/2024 00:37	WG2331518
2,2-Dichloropropane	U		0.161	1.00	1	07/29/2024 00:37	WG2331518
Di-isopropyl ether	U		0.105	1.00	1	07/29/2024 00:37	WG2331518
Ethylbenzene	288		2.74	20.0	20	08/01/2024 00:32	WG2333072
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/29/2024 00:37	WG2331518
Isopropylbenzene	165		0.105	1.00	1	07/29/2024 00:37	WG2331518
p-Isopropyltoluene	0.293	J	0.120	1.00	1	07/29/2024 00:37	WG2331518
2-Butanone (MEK)	U		1.19	10.0	1	07/29/2024 00:37	WG2331518
Methylene Chloride	U		0.430	5.00	1	07/29/2024 00:37	WG2331518
4-Methyl-2-pentanone (MIBK)	U	J4	0.478	10.0	1	07/29/2024 00:37	WG2331518
Methyl tert-butyl ether	0.217	J	0.101	1.00	1	07/29/2024 00:37	WG2331518
Naphthalene	24.6		1.00	5.00	1	07/29/2024 00:37	WG2331518

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
n-Propylbenzene	535		1.99	20.0	20	08/01/2024 00:32	WG2333072
Styrene	U		0.118	1.00	1	07/29/2024 00:37	WG2331518
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/29/2024 00:37	WG2331518
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/29/2024 00:37	WG2331518
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/29/2024 00:37	WG2331518
Tetrachloroethene	U		0.300	1.00	1	07/29/2024 00:37	WG2331518
Toluene	13.4		0.278	1.00	1	07/29/2024 00:37	WG2331518
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/29/2024 00:37	WG2331518
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/29/2024 00:37	WG2331518
1,1,1-Trichloroethane	U		0.149	1.00	1	07/29/2024 00:37	WG2331518
1,1,2-Trichloroethane	U		0.158	1.00	1	07/29/2024 00:37	WG2331518
Trichloroethene	U		0.190	1.00	1	07/29/2024 00:37	WG2331518
Trichlorofluoromethane	U		0.160	5.00	1	07/29/2024 00:37	WG2331518
1,2,3-Trichloropropane	U		0.237	2.50	1	07/29/2024 00:37	WG2331518
1,2,4-Trimethylbenzene	19.3		0.322	1.00	1	07/29/2024 00:37	WG2331518
1,2,3-Trimethylbenzene	4.08		0.104	1.00	1	07/29/2024 00:37	WG2331518
1,3,5-Trimethylbenzene	9.49		0.104	1.00	1	07/29/2024 00:37	WG2331518
Vinyl chloride	U		0.234	1.00	1	07/29/2024 00:37	WG2331518
Xylenes, Total	84.3		0.174	3.00	1	07/29/2024 00:37	WG2331518
(S) Toluene-d8	*113*			*80.0-120*		*07/29/2024 00:37*	WG2331518
(S) Toluene-d8	*113*			*80.0-120*		*08/01/2024 00:32*	WG2333072
(S) 4-Bromofluorobenzene	*118*			*77.0-126*		*07/29/2024 00:37*	WG2331518
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*08/01/2024 00:32*	WG2333072
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*07/29/2024 00:37*	WG2331518
(S) 1,2-Dichloroethane-d4	*90.4*			*70.0-130*		*08/01/2024 00:32*	WG2333072

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	1610	B	158	500	5	07/29/2024 19:15	WG2331998
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*		*07/29/2024 19:15*	WG2331998

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	07/29/2024 00:58	WG2331518
Acrolein	U	J4	2.54	50.0	1	07/29/2024 00:58	WG2331518
Acrylonitrile	U		0.671	10.0	1	07/29/2024 00:58	WG2331518
Benzene	53.4		0.0941	1.00	1	07/29/2024 00:58	WG2331518
Bromobenzene	U		0.118	1.00	1	07/29/2024 00:58	WG2331518
Bromodichloromethane	U		0.136	1.00	1	07/29/2024 00:58	WG2331518
Bromoform	U		0.129	1.00	1	07/29/2024 00:58	WG2331518
Bromomethane	U		0.605	5.00	1	07/29/2024 00:58	WG2331518
n-Butylbenzene	U		0.157	1.00	1	07/29/2024 00:58	WG2331518
sec-Butylbenzene	0.582	J	0.125	1.00	1	07/29/2024 00:58	WG2331518
tert-Butylbenzene	0.168	J	0.127	1.00	1	07/29/2024 00:58	WG2331518
Carbon disulfide	U		0.0962	1.00	1	07/29/2024 00:58	WG2331518
Carbon tetrachloride	U		0.128	1.00	1	07/29/2024 00:58	WG2331518
Chlorobenzene	U		0.116	1.00	1	07/29/2024 00:58	WG2331518
Chlorodibromomethane	U		0.140	1.00	1	07/29/2024 00:58	WG2331518
Chloroethane	U		0.192	5.00	1	07/29/2024 00:58	WG2331518
Chloroform	U		0.111	5.00	1	07/29/2024 00:58	WG2331518
Chloromethane	1.59	J	0.960	2.50	1	07/29/2024 00:58	WG2331518
2-Chlorotoluene	U		0.106	1.00	1	07/29/2024 00:58	WG2331518
4-Chlorotoluene	U		0.114	1.00	1	07/29/2024 00:58	WG2331518
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/29/2024 00:58	WG2331518
1,2-Dibromoethane	U		0.126	1.00	1	07/29/2024 00:58	WG2331518
Dibromomethane	U		0.122	1.00	1	07/29/2024 00:58	WG2331518
1,2-Dichlorobenzene	U		0.107	1.00	1	07/29/2024 00:58	WG2331518
1,3-Dichlorobenzene	U		0.110	1.00	1	07/29/2024 00:58	WG2331518
1,4-Dichlorobenzene	U		0.120	1.00	1	07/29/2024 00:58	WG2331518
Dichlorodifluoromethane	U		0.374	5.00	1	07/29/2024 00:58	WG2331518
1,1-Dichloroethane	U		0.100	1.00	1	07/29/2024 00:58	WG2331518
1,2-Dichloroethane	U		0.0819	1.00	1	07/29/2024 00:58	WG2331518
1,1-Dichloroethene	U		0.188	1.00	1	07/29/2024 00:58	WG2331518
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/29/2024 00:58	WG2331518
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/29/2024 00:58	WG2331518
1,2-Dichloropropane	U		0.149	1.00	1	07/29/2024 00:58	WG2331518
1,1-Dichloropropene	U		0.142	1.00	1	07/29/2024 00:58	WG2331518
1,3-Dichloropropane	U		0.110	1.00	1	07/29/2024 00:58	WG2331518
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/29/2024 00:58	WG2331518
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/29/2024 00:58	WG2331518
2,2-Dichloropropane	U		0.161	1.00	1	07/29/2024 00:58	WG2331518
Di-isopropyl ether	U		0.105	1.00	1	07/29/2024 00:58	WG2331518
Ethylbenzene	29.3		0.137	1.00	1	07/29/2024 00:58	WG2331518
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/29/2024 00:58	WG2331518
Isopropylbenzene	6.06		0.105	1.00	1	07/29/2024 00:58	WG2331518
p-Isopropyltoluene	U		0.120	1.00	1	07/29/2024 00:58	WG2331518
2-Butanone (MEK)	U		1.19	10.0	1	07/29/2024 00:58	WG2331518
Methylene Chloride	U		0.430	5.00	1	07/29/2024 00:58	WG2331518
4-Methyl-2-pentanone (MIBK)	U	J4	0.478	10.0	1	07/29/2024 00:58	WG2331518
Methyl tert-butyl ether	26.7		0.101	1.00	1	07/29/2024 00:58	WG2331518
Naphthalene	5.37		1.00	5.00	1	07/29/2024 00:58	WG2331518

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Propylbenzene	10.8		0.0993	1.00	1	07/29/2024 00:58	WG2331518
Styrene	U		0.118	1.00	1	07/29/2024 00:58	WG2331518
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/29/2024 00:58	WG2331518
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/29/2024 00:58	WG2331518
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/29/2024 00:58	WG2331518
Tetrachloroethene	U		0.300	1.00	1	07/29/2024 00:58	WG2331518
Toluene	2.06		0.278	1.00	1	07/29/2024 00:58	WG2331518
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/29/2024 00:58	WG2331518
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/29/2024 00:58	WG2331518
1,1,1-Trichloroethane	U		0.149	1.00	1	07/29/2024 00:58	WG2331518
1,1,2-Trichloroethane	U		0.158	1.00	1	07/29/2024 00:58	WG2331518
Trichloroethene	U		0.190	1.00	1	07/29/2024 00:58	WG2331518
Trichlorofluoromethane	U		0.160	5.00	1	07/29/2024 00:58	WG2331518
1,2,3-Trichloropropane	U		0.237	2.50	1	07/29/2024 00:58	WG2331518
1,2,4-Trimethylbenzene	10.0		0.322	1.00	1	07/29/2024 00:58	WG2331518
1,2,3-Trimethylbenzene	6.21		0.104	1.00	1	07/29/2024 00:58	WG2331518
1,3,5-Trimethylbenzene	3.27		0.104	1.00	1	07/29/2024 00:58	WG2331518
Vinyl chloride	U		0.234	1.00	1	07/29/2024 00:58	WG2331518
Xylenes, Total	51.6		0.174	3.00	1	07/29/2024 00:58	WG2331518
(S) Toluene-d8	*105*			*80.0-120*		*07/29/2024 00:58*	WG2331518
(S) 4-Bromofluorobenzene	*107*			*77.0-126*		*07/29/2024 00:58*	WG2331518
(S) 1,2-Dichloroethane-d4	*117*			*70.0-130*		*07/29/2024 00:58*	WG2331518

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	234	B J	158	500	5	07/29/2024 19:37	WG2331998
(S) a,a,a-Trifluorotoluene(FID)	*103*			*78.0-120*		*07/29/2024 19:37*	WG2331998

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	11.3	50.0	1	07/29/2024 09:42	WG2331831
Acrolein	U		2.54	50.0	1	07/29/2024 09:42	WG2331831
Acrylonitrile	U		0.671	10.0	1	07/29/2024 09:42	WG2331831
Benzene	U		0.0941	1.00	1	07/29/2024 09:42	WG2331831
Bromobenzene	U		0.118	1.00	1	07/29/2024 09:42	WG2331831
Bromodichloromethane	U		0.136	1.00	1	07/29/2024 09:42	WG2331831
Bromoform	U		0.129	1.00	1	07/29/2024 09:42	WG2331831
Bromomethane	U		0.605	5.00	1	07/29/2024 09:42	WG2331831
n-Butylbenzene	U		0.157	1.00	1	07/29/2024 09:42	WG2331831
sec-Butylbenzene	U		0.125	1.00	1	07/29/2024 09:42	WG2331831
tert-Butylbenzene	U		0.127	1.00	1	07/29/2024 09:42	WG2331831
Carbon disulfide	U	C3	0.0962	1.00	1	07/29/2024 09:42	WG2331831
Carbon tetrachloride	U		0.128	1.00	1	07/29/2024 09:42	WG2331831
Chlorobenzene	U		0.116	1.00	1	07/29/2024 09:42	WG2331831
Chlorodibromomethane	U		0.140	1.00	1	07/29/2024 09:42	WG2331831
Chloroethane	U		0.192	5.00	1	07/29/2024 09:42	WG2331831
Chloroform	U		0.111	5.00	1	07/29/2024 09:42	WG2331831
Chloromethane	U		0.960	2.50	1	07/29/2024 09:42	WG2331831
2-Chlorotoluene	U		0.106	1.00	1	07/29/2024 09:42	WG2331831
4-Chlorotoluene	U		0.114	1.00	1	07/29/2024 09:42	WG2331831
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/29/2024 09:42	WG2331831
1,2-Dibromoethane	U		0.126	1.00	1	07/29/2024 09:42	WG2331831
Dibromomethane	U		0.122	1.00	1	07/29/2024 09:42	WG2331831
1,2-Dichlorobenzene	U		0.107	1.00	1	07/29/2024 09:42	WG2331831
1,3-Dichlorobenzene	U		0.110	1.00	1	07/29/2024 09:42	WG2331831
1,4-Dichlorobenzene	U		0.120	1.00	1	07/29/2024 09:42	WG2331831
Dichlorodifluoromethane	U		0.374	5.00	1	07/29/2024 09:42	WG2331831
1,1-Dichloroethane	U		0.100	1.00	1	07/29/2024 09:42	WG2331831
1,2-Dichloroethane	U		0.0819	1.00	1	07/29/2024 09:42	WG2331831
1,1-Dichloroethene	U	C3	0.188	1.00	1	07/29/2024 09:42	WG2331831
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/29/2024 09:42	WG2331831
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/29/2024 09:42	WG2331831
1,2-Dichloropropane	U		0.149	1.00	1	07/29/2024 09:42	WG2331831
1,1-Dichloropropene	U		0.142	1.00	1	07/29/2024 09:42	WG2331831
1,3-Dichloropropane	U		0.110	1.00	1	07/29/2024 09:42	WG2331831
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/29/2024 09:42	WG2331831
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/29/2024 09:42	WG2331831
2,2-Dichloropropane	U		0.161	1.00	1	07/29/2024 09:42	WG2331831
Di-isopropyl ether	U		0.105	1.00	1	07/29/2024 09:42	WG2331831
Ethylbenzene	U		0.137	1.00	1	07/29/2024 09:42	WG2331831
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/29/2024 09:42	WG2331831
Isopropylbenzene	0.112	J	0.105	1.00	1	07/29/2024 09:42	WG2331831
p-Isopropyltoluene	U		0.120	1.00	1	07/29/2024 09:42	WG2331831
2-Butanone (MEK)	U		1.19	10.0	1	07/29/2024 09:42	WG2331831
Methylene Chloride	U		0.430	5.00	1	07/29/2024 09:42	WG2331831
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/29/2024 09:42	WG2331831
Methyl tert-butyl ether	0.232	J	0.101	1.00	1	07/29/2024 09:42	WG2331831
Naphthalene	U		1.00	5.00	1	07/29/2024 09:42	WG2331831

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Propylbenzene	U		0.0993	1.00	1	07/29/2024 09:42	WG2331831
Styrene	U	C3	0.118	1.00	1	07/29/2024 09:42	WG2331831
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/29/2024 09:42	WG2331831
1,1,2,2-Tetrachloroethane	U	C3	0.133	1.00	1	07/29/2024 09:42	WG2331831
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/29/2024 09:42	WG2331831
Tetrachloroethene	U		0.300	1.00	1	07/29/2024 09:42	WG2331831
Toluene	U		0.278	1.00	1	07/29/2024 09:42	WG2331831
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/29/2024 09:42	WG2331831
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/29/2024 09:42	WG2331831
1,1,1-Trichloroethane	U		0.149	1.00	1	07/29/2024 09:42	WG2331831
1,1,2-Trichloroethane	U		0.158	1.00	1	07/29/2024 09:42	WG2331831
Trichloroethene	U		0.190	1.00	1	07/29/2024 09:42	WG2331831
Trichlorofluoromethane	U		0.160	5.00	1	07/29/2024 09:42	WG2331831
1,2,3-Trichloropropane	U		0.237	2.50	1	07/29/2024 09:42	WG2331831
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/29/2024 09:42	WG2331831
1,2,3-Trimethylbenzene	U		0.104	1.00	1	07/29/2024 09:42	WG2331831
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/29/2024 09:42	WG2331831
Vinyl chloride	U	C3	0.234	1.00	1	07/29/2024 09:42	WG2331831
Xylenes, Total	1.12	J	0.174	3.00	1	07/29/2024 09:42	WG2331831
(S) Toluene-d8	*111*			*80.0-120*		*07/29/2024 09:42*	WG2331831
(S) 4-Bromofluorobenzene	*110*			*77.0-126*		*07/29/2024 09:42*	WG2331831
(S) 1,2-Dichloroethane-d4	*128*			*70.0-130*		*07/29/2024 09:42*	WG2331831

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	31.7	B J	31.6	100	1	08/01/2024 17:03	WG2334525
(S) a,a,a-Trifluorotoluene(FID)	*98.2*			*78.0-120*		*08/01/2024 17:03*	WG2334525

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	11.3	50.0	1	07/29/2024 10:03	WG2331831
Acrolein	U		2.54	50.0	1	07/29/2024 10:03	WG2331831
Acrylonitrile	U		0.671	10.0	1	07/29/2024 10:03	WG2331831
Benzene	0.186	J	0.0941	1.00	1	07/29/2024 10:03	WG2331831
Bromobenzene	U		0.118	1.00	1	07/29/2024 10:03	WG2331831
Bromodichloromethane	U		0.136	1.00	1	07/29/2024 10:03	WG2331831
Bromoform	U		0.129	1.00	1	07/29/2024 10:03	WG2331831
Bromomethane	U		0.605	5.00	1	07/29/2024 10:03	WG2331831
n-Butylbenzene	U		0.157	1.00	1	07/29/2024 10:03	WG2331831
sec-Butylbenzene	U		0.125	1.00	1	07/29/2024 10:03	WG2331831
tert-Butylbenzene	U		0.127	1.00	1	07/29/2024 10:03	WG2331831
Carbon disulfide	U	C3	0.0962	1.00	1	07/29/2024 10:03	WG2331831
Carbon tetrachloride	U		0.128	1.00	1	07/29/2024 10:03	WG2331831
Chlorobenzene	U		0.116	1.00	1	07/29/2024 10:03	WG2331831
Chlorodibromomethane	U		0.140	1.00	1	07/29/2024 10:03	WG2331831
Chloroethane	U		0.192	5.00	1	07/29/2024 10:03	WG2331831
Chloroform	U		0.111	5.00	1	07/29/2024 10:03	WG2331831
Chloromethane	U		0.960	2.50	1	07/29/2024 10:03	WG2331831
2-Chlorotoluene	U		0.106	1.00	1	07/29/2024 10:03	WG2331831
4-Chlorotoluene	U		0.114	1.00	1	07/29/2024 10:03	WG2331831
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/29/2024 10:03	WG2331831
1,2-Dibromoethane	U		0.126	1.00	1	07/29/2024 10:03	WG2331831
Dibromomethane	U		0.122	1.00	1	07/29/2024 10:03	WG2331831
1,2-Dichlorobenzene	U		0.107	1.00	1	07/29/2024 10:03	WG2331831
1,3-Dichlorobenzene	U		0.110	1.00	1	07/29/2024 10:03	WG2331831
1,4-Dichlorobenzene	U		0.120	1.00	1	07/29/2024 10:03	WG2331831
Dichlorodifluoromethane	U		0.374	5.00	1	07/29/2024 10:03	WG2331831
1,1-Dichloroethane	U		0.100	1.00	1	07/29/2024 10:03	WG2331831
1,2-Dichloroethane	U		0.0819	1.00	1	07/29/2024 10:03	WG2331831
1,1-Dichloroethene	U	C3	0.188	1.00	1	07/29/2024 10:03	WG2331831
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/29/2024 10:03	WG2331831
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/29/2024 10:03	WG2331831
1,2-Dichloropropane	U		0.149	1.00	1	07/29/2024 10:03	WG2331831
1,1-Dichloropropene	U		0.142	1.00	1	07/29/2024 10:03	WG2331831
1,3-Dichloropropane	U		0.110	1.00	1	07/29/2024 10:03	WG2331831
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/29/2024 10:03	WG2331831
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/29/2024 10:03	WG2331831
2,2-Dichloropropane	U		0.161	1.00	1	07/29/2024 10:03	WG2331831
Di-isopropyl ether	U		0.105	1.00	1	07/29/2024 10:03	WG2331831
Ethylbenzene	0.182	J	0.137	1.00	1	07/29/2024 10:03	WG2331831
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/29/2024 10:03	WG2331831
Isopropylbenzene	U		0.105	1.00	1	07/29/2024 10:03	WG2331831
p-Isopropyltoluene	U		0.120	1.00	1	07/29/2024 10:03	WG2331831
2-Butanone (MEK)	U		1.19	10.0	1	07/29/2024 10:03	WG2331831
Methylene Chloride	U		0.430	5.00	1	07/29/2024 10:03	WG2331831
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/29/2024 10:03	WG2331831
Methyl tert-butyl ether	U		0.101	1.00	1	07/29/2024 10:03	WG2331831
Naphthalene	U		1.00	5.00	1	07/29/2024 10:03	WG2331831

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Propylbenzene	U		0.0993	1.00	1	07/29/2024 10:03	WG2331831
Styrene	U	C3	0.118	1.00	1	07/29/2024 10:03	WG2331831
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/29/2024 10:03	WG2331831
1,1,2,2-Tetrachloroethane	U	C3	0.133	1.00	1	07/29/2024 10:03	WG2331831
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/29/2024 10:03	WG2331831
Tetrachloroethene	U		0.300	1.00	1	07/29/2024 10:03	WG2331831
Toluene	0.303	J	0.278	1.00	1	07/29/2024 10:03	WG2331831
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/29/2024 10:03	WG2331831
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/29/2024 10:03	WG2331831
1,1,1-Trichloroethane	U		0.149	1.00	1	07/29/2024 10:03	WG2331831
1,1,2-Trichloroethane	U		0.158	1.00	1	07/29/2024 10:03	WG2331831
Trichloroethene	U		0.190	1.00	1	07/29/2024 10:03	WG2331831
Trichlorofluoromethane	U		0.160	5.00	1	07/29/2024 10:03	WG2331831
1,2,3-Trichloropropane	U		0.237	2.50	1	07/29/2024 10:03	WG2331831
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/29/2024 10:03	WG2331831
1,2,3-Trimethylbenzene	U		0.104	1.00	1	07/29/2024 10:03	WG2331831
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/29/2024 10:03	WG2331831
Vinyl chloride	U	C3	0.234	1.00	1	07/29/2024 10:03	WG2331831
Xylenes, Total	0.893	J	0.174	3.00	1	07/29/2024 10:03	WG2331831
(S) Toluene-d8	*113*			*80.0-120*		*07/29/2024 10:03*	WG2331831
(S) 4-Bromofluorobenzene	*108*			*77.0-126*		*07/29/2024 10:03*	WG2331831
(S) 1,2-Dichloroethane-d4	*123*			*70.0-130*		*07/29/2024 10:03*	WG2331831

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	82600		790	2500	25	07/30/2024 04:37	WG2332301
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*		*07/30/2024 04:37*	WG2332301

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	282	1250	25	07/29/2024 13:40	WG2331831
Acrolein	U		63.5	1250	25	07/29/2024 13:40	WG2331831
Acrylonitrile	U		16.8	250	25	07/29/2024 13:40	WG2331831
Benzene	5130		23.5	250	250	08/01/2024 23:30	WG2334624
Bromobenzene	U		2.95	25.0	25	07/29/2024 13:40	WG2331831
Bromodichloromethane	U		3.40	25.0	25	07/29/2024 13:40	WG2331831
Bromoform	U		3.22	25.0	25	07/29/2024 13:40	WG2331831
Bromomethane	U		15.1	125	25	07/29/2024 13:40	WG2331831
n-Butylbenzene	U		3.93	25.0	25	07/29/2024 13:40	WG2331831
sec-Butylbenzene	24.6	J	3.13	25.0	25	07/29/2024 13:40	WG2331831
tert-Butylbenzene	U		3.18	25.0	25	07/29/2024 13:40	WG2331831
Carbon disulfide	U	C3	2.41	25.0	25	07/29/2024 13:40	WG2331831
Carbon tetrachloride	U		3.20	25.0	25	07/29/2024 13:40	WG2331831
Chlorobenzene	U		2.90	25.0	25	07/29/2024 13:40	WG2331831
Chlorodibromomethane	U		3.50	25.0	25	07/29/2024 13:40	WG2331831
Chloroethane	U		4.80	125	25	07/29/2024 13:40	WG2331831
Chloroform	U		2.78	125	25	07/29/2024 13:40	WG2331831
Chloromethane	U		24.0	62.5	25	07/29/2024 13:40	WG2331831
2-Chlorotoluene	U		2.65	25.0	25	07/29/2024 13:40	WG2331831
4-Chlorotoluene	U		2.85	25.0	25	07/29/2024 13:40	WG2331831
1,2-Dibromo-3-Chloropropane	U		6.90	125	25	07/29/2024 13:40	WG2331831
1,2-Dibromoethane	U		3.15	25.0	25	07/29/2024 13:40	WG2331831
Dibromomethane	U		3.05	25.0	25	07/29/2024 13:40	WG2331831
1,2-Dichlorobenzene	U		2.68	25.0	25	07/29/2024 13:40	WG2331831
1,3-Dichlorobenzene	U		2.75	25.0	25	07/29/2024 13:40	WG2331831
1,4-Dichlorobenzene	U		3.00	25.0	25	07/29/2024 13:40	WG2331831
Dichlorodifluoromethane	U		9.35	125	25	07/29/2024 13:40	WG2331831
1,1-Dichloroethane	U		2.50	25.0	25	07/29/2024 13:40	WG2331831
1,2-Dichloroethane	U		2.05	25.0	25	07/29/2024 13:40	WG2331831
1,1-Dichloroethene	U	C3	4.70	25.0	25	07/29/2024 13:40	WG2331831
cis-1,2-Dichloroethene	U		3.15	25.0	25	07/29/2024 13:40	WG2331831
trans-1,2-Dichloroethene	U		3.73	25.0	25	07/29/2024 13:40	WG2331831
1,2-Dichloropropane	U		3.73	25.0	25	07/29/2024 13:40	WG2331831
1,1-Dichloropropene	U		3.55	25.0	25	07/29/2024 13:40	WG2331831
1,3-Dichloropropane	U		2.75	25.0	25	07/29/2024 13:40	WG2331831
cis-1,3-Dichloropropene	U		2.78	25.0	25	07/29/2024 13:40	WG2331831
trans-1,3-Dichloropropene	U		2.95	25.0	25	07/29/2024 13:40	WG2331831
2,2-Dichloropropane	U		4.03	25.0	25	07/29/2024 13:40	WG2331831
Di-isopropyl ether	U		2.63	25.0	25	07/29/2024 13:40	WG2331831
Ethylbenzene	4000		3.43	25.0	25	07/29/2024 13:40	WG2331831
Hexachloro-1,3-butadiene	U		8.43	25.0	25	07/29/2024 13:40	WG2331831
Isopropylbenzene	156		2.63	25.0	25	07/29/2024 13:40	WG2331831
p-Isopropyltoluene	28.9		3.00	25.0	25	07/29/2024 13:40	WG2331831
2-Butanone (MEK)	U		29.8	250	25	07/29/2024 13:40	WG2331831
Methylene Chloride	U		10.7	125	25	07/29/2024 13:40	WG2331831
4-Methyl-2-pentanone (MIBK)	U		12.0	250	25	07/29/2024 13:40	WG2331831
Methyl tert-butyl ether	U		2.53	25.0	25	07/29/2024 13:40	WG2331831
Naphthalene	660		25.0	125	25	07/29/2024 13:40	WG2331831

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Propylbenzene	496		2.48	25.0	25	07/29/2024 13:40	WG2331831
Styrene	U	C3	2.95	25.0	25	07/29/2024 13:40	WG2331831
1,1,1,2-Tetrachloroethane	U		3.68	25.0	25	07/29/2024 13:40	WG2331831
1,1,2,2-Tetrachloroethane	U	C3	3.33	25.0	25	07/29/2024 13:40	WG2331831
1,1,2-Trichlorotrifluoroethane	U		4.50	25.0	25	07/29/2024 13:40	WG2331831
Tetrachloroethene	U		7.50	25.0	25	07/29/2024 13:40	WG2331831
Toluene	4590		6.95	25.0	25	07/29/2024 13:40	WG2331831
1,2,3-Trichlorobenzene	U		5.75	25.0	25	07/29/2024 13:40	WG2331831
1,2,4-Trichlorobenzene	U		12.0	25.0	25	07/29/2024 13:40	WG2331831
1,1,1-Trichloroethane	U		3.73	25.0	25	07/29/2024 13:40	WG2331831
1,1,2-Trichloroethane	U		3.95	25.0	25	07/29/2024 13:40	WG2331831
Trichloroethene	U		4.75	25.0	25	07/29/2024 13:40	WG2331831
Trichlorofluoromethane	U		4.00	125	25	07/29/2024 13:40	WG2331831
1,2,3-Trichloropropane	U		5.93	62.5	25	07/29/2024 13:40	WG2331831
1,2,4-Trimethylbenzene	2750		8.05	25.0	25	07/29/2024 13:40	WG2331831
1,2,3-Trimethylbenzene	757		2.60	25.0	25	07/29/2024 13:40	WG2331831
1,3,5-Trimethylbenzene	704		2.60	25.0	25	07/29/2024 13:40	WG2331831
Vinyl chloride	U	C3	5.85	25.0	25	07/29/2024 13:40	WG2331831
Xylenes, Total	13800		43.5	750	250	08/01/2024 23:30	WG2334624
(S) Toluene-d8	*112*			*80.0-120*		*07/29/2024 13:40*	WG2331831
(S) Toluene-d8	*103*			*80.0-120*		*08/01/2024 23:30*	WG2334624
(S) 4-Bromofluorobenzene	*111*			*77.0-126*		*07/29/2024 13:40*	WG2331831
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*08/01/2024 23:30*	WG2334624
(S) 1,2-Dichloroethane-d4	*118*			*70.0-130*		*07/29/2024 13:40*	WG2331831
(S) 1,2-Dichloroethane-d4	*92.4*			*70.0-130*		*08/01/2024 23:30*	WG2334624

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	256	B	31.6	100	1	07/30/2024 00:27	WG2332301
(S) a,a,a-Trifluorotoluene(FID)	*103*			*78.0-120*		*07/30/2024 00:27*	WG2332301

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	11.3	50.0	1	07/29/2024 10:25	WG2331831
Acrolein	U		2.54	50.0	1	07/29/2024 10:25	WG2331831
Acrylonitrile	U		0.671	10.0	1	07/29/2024 10:25	WG2331831
Benzene	12.0		0.0941	1.00	1	07/29/2024 10:25	WG2331831
Bromobenzene	U		0.118	1.00	1	07/29/2024 10:25	WG2331831
Bromodichloromethane	U		0.136	1.00	1	07/29/2024 10:25	WG2331831
Bromoform	U		0.129	1.00	1	07/29/2024 10:25	WG2331831
Bromomethane	U		0.605	5.00	1	07/29/2024 10:25	WG2331831
n-Butylbenzene	U		0.157	1.00	1	07/29/2024 10:25	WG2331831
sec-Butylbenzene	0.390	J	0.125	1.00	1	07/29/2024 10:25	WG2331831
tert-Butylbenzene	U		0.127	1.00	1	07/29/2024 10:25	WG2331831
Carbon disulfide	U	C3	0.0962	1.00	1	07/29/2024 10:25	WG2331831
Carbon tetrachloride	U		0.128	1.00	1	07/29/2024 10:25	WG2331831
Chlorobenzene	U		0.116	1.00	1	07/29/2024 10:25	WG2331831
Chlorodibromomethane	U		0.140	1.00	1	07/29/2024 10:25	WG2331831
Chloroethane	U		0.192	5.00	1	07/29/2024 10:25	WG2331831
Chloroform	U		0.111	5.00	1	07/29/2024 10:25	WG2331831
Chloromethane	U		0.960	2.50	1	07/29/2024 10:25	WG2331831
2-Chlorotoluene	U		0.106	1.00	1	07/29/2024 10:25	WG2331831
4-Chlorotoluene	U		0.114	1.00	1	07/29/2024 10:25	WG2331831
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/29/2024 10:25	WG2331831
1,2-Dibromoethane	U		0.126	1.00	1	07/29/2024 10:25	WG2331831
Dibromomethane	U		0.122	1.00	1	07/29/2024 10:25	WG2331831
1,2-Dichlorobenzene	U		0.107	1.00	1	07/29/2024 10:25	WG2331831
1,3-Dichlorobenzene	U		0.110	1.00	1	07/29/2024 10:25	WG2331831
1,4-Dichlorobenzene	U		0.120	1.00	1	07/29/2024 10:25	WG2331831
Dichlorodifluoromethane	U		0.374	5.00	1	07/29/2024 10:25	WG2331831
1,1-Dichloroethane	U		0.100	1.00	1	07/29/2024 10:25	WG2331831
1,2-Dichloroethane	U		0.0819	1.00	1	07/29/2024 10:25	WG2331831
1,1-Dichloroethene	U	C3	0.188	1.00	1	07/29/2024 10:25	WG2331831
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/29/2024 10:25	WG2331831
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/29/2024 10:25	WG2331831
1,2-Dichloropropane	U		0.149	1.00	1	07/29/2024 10:25	WG2331831
1,1-Dichloropropene	U		0.142	1.00	1	07/29/2024 10:25	WG2331831
1,3-Dichloropropane	U		0.110	1.00	1	07/29/2024 10:25	WG2331831
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/29/2024 10:25	WG2331831
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/29/2024 10:25	WG2331831
2,2-Dichloropropane	U		0.161	1.00	1	07/29/2024 10:25	WG2331831
Di-isopropyl ether	U		0.105	1.00	1	07/29/2024 10:25	WG2331831
Ethylbenzene	2.68		0.137	1.00	1	07/29/2024 10:25	WG2331831
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/29/2024 10:25	WG2331831
Isopropylbenzene	0.321	J	0.105	1.00	1	07/29/2024 10:25	WG2331831
p-Isopropyltoluene	0.367	J	0.120	1.00	1	07/29/2024 10:25	WG2331831
2-Butanone (MEK)	U		1.19	10.0	1	07/29/2024 10:25	WG2331831
Methylene Chloride	U		0.430	5.00	1	07/29/2024 10:25	WG2331831
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/29/2024 10:25	WG2331831
Methyl tert-butyl ether	U		0.101	1.00	1	07/29/2024 10:25	WG2331831
Naphthalene	U		1.00	5.00	1	07/29/2024 10:25	WG2331831

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Propylbenzene	0.517	J	0.0993	1.00	1	07/29/2024 10:25	WG2331831
Styrene	U	C3	0.118	1.00	1	07/29/2024 10:25	WG2331831
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/29/2024 10:25	WG2331831
1,1,2,2-Tetrachloroethane	U	C3	0.133	1.00	1	07/29/2024 10:25	WG2331831
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/29/2024 10:25	WG2331831
Tetrachloroethene	U		0.300	1.00	1	07/29/2024 10:25	WG2331831
Toluene	U		0.278	1.00	1	07/29/2024 10:25	WG2331831
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/29/2024 10:25	WG2331831
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/29/2024 10:25	WG2331831
1,1,1-Trichloroethane	U		0.149	1.00	1	07/29/2024 10:25	WG2331831
1,1,2-Trichloroethane	U		0.158	1.00	1	07/29/2024 10:25	WG2331831
Trichloroethene	U		0.190	1.00	1	07/29/2024 10:25	WG2331831
Trichlorofluoromethane	U		0.160	5.00	1	07/29/2024 10:25	WG2331831
1,2,3-Trichloropropane	U		0.237	2.50	1	07/29/2024 10:25	WG2331831
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/29/2024 10:25	WG2331831
1,2,3-Trimethylbenzene	U		0.104	1.00	1	07/29/2024 10:25	WG2331831
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/29/2024 10:25	WG2331831
Vinyl chloride	U	C3	0.234	1.00	1	07/29/2024 10:25	WG2331831
Xylenes, Total	U		0.174	3.00	1	07/29/2024 10:25	WG2331831
(S) Toluene-d8	*107*			*80.0-120*		*07/29/2024 10:25*	WG2331831
(S) 4-Bromofluorobenzene	*108*			*77.0-126*		*07/29/2024 10:25*	WG2331831
(S) 1,2-Dichloroethane-d4	*119*			*70.0-130*		*07/29/2024 10:25*	WG2331831

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	3660		316	1000	10	07/30/2024 05:00	WG2332301
(S) a,a,a-Trifluorotoluene(FID)	*101*			*78.0-120*		*07/30/2024 05:00*	WG2332301

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	113	500	10	07/29/2024 14:01	WG2331831
Acrolein	U		25.4	500	10	07/29/2024 14:01	WG2331831
Acrylonitrile	U		6.71	100	10	07/29/2024 14:01	WG2331831
Benzene	387		0.941	10.0	10	07/29/2024 14:01	WG2331831
Bromobenzene	U		1.18	10.0	10	07/29/2024 14:01	WG2331831
Bromodichloromethane	U		1.36	10.0	10	07/29/2024 14:01	WG2331831
Bromoform	U		1.29	10.0	10	07/29/2024 14:01	WG2331831
Bromomethane	U		6.05	50.0	10	07/29/2024 14:01	WG2331831
n-Butylbenzene	U		1.57	10.0	10	07/29/2024 14:01	WG2331831
sec-Butylbenzene	5.35	J	1.25	10.0	10	07/29/2024 14:01	WG2331831
tert-Butylbenzene	U		1.27	10.0	10	07/29/2024 14:01	WG2331831
Carbon disulfide	U	C3	0.962	10.0	10	07/29/2024 14:01	WG2331831
Carbon tetrachloride	U		1.28	10.0	10	07/29/2024 14:01	WG2331831
Chlorobenzene	U		1.16	10.0	10	07/29/2024 14:01	WG2331831
Chlorodibromomethane	U		1.40	10.0	10	07/29/2024 14:01	WG2331831
Chloroethane	U		1.92	50.0	10	07/29/2024 14:01	WG2331831
Chloroform	U		1.11	50.0	10	07/29/2024 14:01	WG2331831
Chloromethane	U		9.60	25.0	10	07/29/2024 14:01	WG2331831
2-Chlorotoluene	U		1.06	10.0	10	07/29/2024 14:01	WG2331831
4-Chlorotoluene	U		1.14	10.0	10	07/29/2024 14:01	WG2331831
1,2-Dibromo-3-Chloropropane	U		2.76	50.0	10	07/29/2024 14:01	WG2331831
1,2-Dibromoethane	U		1.26	10.0	10	07/29/2024 14:01	WG2331831
Dibromomethane	U		1.22	10.0	10	07/29/2024 14:01	WG2331831
1,2-Dichlorobenzene	U		1.07	10.0	10	07/29/2024 14:01	WG2331831
1,3-Dichlorobenzene	U		1.10	10.0	10	07/29/2024 14:01	WG2331831
1,4-Dichlorobenzene	U		1.20	10.0	10	07/29/2024 14:01	WG2331831
Dichlorodifluoromethane	U		3.74	50.0	10	07/29/2024 14:01	WG2331831
1,1-Dichloroethane	U		1.00	10.0	10	07/29/2024 14:01	WG2331831
1,2-Dichloroethane	U		0.819	10.0	10	07/29/2024 14:01	WG2331831
1,1-Dichloroethene	U	C3	1.88	10.0	10	07/29/2024 14:01	WG2331831
cis-1,2-Dichloroethene	U		1.26	10.0	10	07/29/2024 14:01	WG2331831
trans-1,2-Dichloroethene	U		1.49	10.0	10	07/29/2024 14:01	WG2331831
1,2-Dichloropropane	U		1.49	10.0	10	07/29/2024 14:01	WG2331831
1,1-Dichloropropene	U		1.42	10.0	10	07/29/2024 14:01	WG2331831
1,3-Dichloropropane	U		1.10	10.0	10	07/29/2024 14:01	WG2331831
cis-1,3-Dichloropropene	U		1.11	10.0	10	07/29/2024 14:01	WG2331831
trans-1,3-Dichloropropene	U		1.18	10.0	10	07/29/2024 14:01	WG2331831
2,2-Dichloropropane	U		1.61	10.0	10	07/29/2024 14:01	WG2331831
Di-isopropyl ether	U		1.05	10.0	10	07/29/2024 14:01	WG2331831
Ethylbenzene	29.8		1.37	10.0	10	07/29/2024 14:01	WG2331831
Hexachloro-1,3-butadiene	U		3.37	10.0	10	07/29/2024 14:01	WG2331831
Isopropylbenzene	19.9		1.05	10.0	10	07/29/2024 14:01	WG2331831
p-Isopropyltoluene	U		1.20	10.0	10	07/29/2024 14:01	WG2331831
2-Butanone (MEK)	U		11.9	100	10	07/29/2024 14:01	WG2331831
Methylene Chloride	U		4.30	50.0	10	07/29/2024 14:01	WG2331831
4-Methyl-2-pentanone (MIBK)	U		4.78	100	10	07/29/2024 14:01	WG2331831
Methyl tert-butyl ether	U		1.01	10.0	10	07/29/2024 14:01	WG2331831
Naphthalene	22.0	J	10.0	50.0	10	07/29/2024 14:01	WG2331831

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Propylbenzene	65.6		0.993	10.0	10	07/29/2024 14:01	WG2331831
Styrene	U	C3	1.18	10.0	10	07/29/2024 14:01	WG2331831
1,1,1,2-Tetrachloroethane	U		1.47	10.0	10	07/29/2024 14:01	WG2331831
1,1,2,2-Tetrachloroethane	U	C3	1.33	10.0	10	07/29/2024 14:01	WG2331831
1,1,2-Trichlorotrifluoroethane	U		1.80	10.0	10	07/29/2024 14:01	WG2331831
Tetrachloroethene	U		3.00	10.0	10	07/29/2024 14:01	WG2331831
Toluene	8.59	J	2.78	10.0	10	07/29/2024 14:01	WG2331831
1,2,3-Trichlorobenzene	U		2.30	10.0	10	07/29/2024 14:01	WG2331831
1,2,4-Trichlorobenzene	U		4.81	10.0	10	07/29/2024 14:01	WG2331831
1,1,1-Trichloroethane	U		1.49	10.0	10	07/29/2024 14:01	WG2331831
1,1,2-Trichloroethane	U		1.58	10.0	10	07/29/2024 14:01	WG2331831
Trichloroethene	U		1.90	10.0	10	07/29/2024 14:01	WG2331831
Trichlorofluoromethane	U		1.60	50.0	10	07/29/2024 14:01	WG2331831
1,2,3-Trichloropropane	U		2.37	25.0	10	07/29/2024 14:01	WG2331831
1,2,4-Trimethylbenzene	12.6		3.22	10.0	10	07/29/2024 14:01	WG2331831
1,2,3-Trimethylbenzene	11.4		1.04	10.0	10	07/29/2024 14:01	WG2331831
1,3,5-Trimethylbenzene	4.85	J	1.04	10.0	10	07/29/2024 14:01	WG2331831
Vinyl chloride	U	C3	2.34	10.0	10	07/29/2024 14:01	WG2331831
Xylenes, Total	43.6		1.74	30.0	10	07/29/2024 14:01	WG2331831
(S) Toluene-d8	*108*			*80.0-120*		*07/29/2024 14:01*	WG2331831
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*07/29/2024 14:01*	WG2331831
(S) 1,2-Dichloroethane-d4	*120*			*70.0-130*		*07/29/2024 14:01*	WG2331831

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	344	B	31.6	100	1	07/30/2024 00:49	WG2332301
(S) a,a,a-Trifluorotoluene(FID)	*98.8*			*78.0-120*		*07/30/2024 00:49*	WG2332301

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	11.3	50.0	1	07/29/2024 10:46	WG2331831
Acrolein	U		2.54	50.0	1	07/29/2024 10:46	WG2331831
Acrylonitrile	U		0.671	10.0	1	07/29/2024 10:46	WG2331831
Benzene	8.93		0.0941	1.00	1	07/29/2024 10:46	WG2331831
Bromobenzene	U		0.118	1.00	1	07/29/2024 10:46	WG2331831
Bromodichloromethane	U		0.136	1.00	1	07/29/2024 10:46	WG2331831
Bromoform	U		0.129	1.00	1	07/29/2024 10:46	WG2331831
Bromomethane	U		0.605	5.00	1	07/29/2024 10:46	WG2331831
n-Butylbenzene	1.23		0.157	1.00	1	07/29/2024 10:46	WG2331831
sec-Butylbenzene	2.50		0.125	1.00	1	07/29/2024 10:46	WG2331831
tert-Butylbenzene	U		0.127	1.00	1	07/29/2024 10:46	WG2331831
Carbon disulfide	U	C3	0.0962	1.00	1	07/29/2024 10:46	WG2331831
Carbon tetrachloride	U		0.128	1.00	1	07/29/2024 10:46	WG2331831
Chlorobenzene	U		0.116	1.00	1	07/29/2024 10:46	WG2331831
Chlorodibromomethane	U		0.140	1.00	1	07/29/2024 10:46	WG2331831
Chloroethane	U		0.192	5.00	1	07/29/2024 10:46	WG2331831
Chloroform	U		0.111	5.00	1	07/29/2024 10:46	WG2331831
Chloromethane	U		0.960	2.50	1	07/29/2024 10:46	WG2331831
2-Chlorotoluene	U		0.106	1.00	1	07/29/2024 10:46	WG2331831
4-Chlorotoluene	U		0.114	1.00	1	07/29/2024 10:46	WG2331831
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/29/2024 10:46	WG2331831
1,2-Dibromoethane	U		0.126	1.00	1	07/29/2024 10:46	WG2331831
Dibromomethane	U		0.122	1.00	1	07/29/2024 10:46	WG2331831
1,2-Dichlorobenzene	U		0.107	1.00	1	07/29/2024 10:46	WG2331831
1,3-Dichlorobenzene	U		0.110	1.00	1	07/29/2024 10:46	WG2331831
1,4-Dichlorobenzene	U		0.120	1.00	1	07/29/2024 10:46	WG2331831
Dichlorodifluoromethane	U		0.374	5.00	1	07/29/2024 10:46	WG2331831
1,1-Dichloroethane	U		0.100	1.00	1	07/29/2024 10:46	WG2331831
1,2-Dichloroethane	U		0.0819	1.00	1	07/29/2024 10:46	WG2331831
1,1-Dichloroethene	U	C3	0.188	1.00	1	07/29/2024 10:46	WG2331831
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/29/2024 10:46	WG2331831
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/29/2024 10:46	WG2331831
1,2-Dichloropropane	U		0.149	1.00	1	07/29/2024 10:46	WG2331831
1,1-Dichloropropene	U		0.142	1.00	1	07/29/2024 10:46	WG2331831
1,3-Dichloropropane	U		0.110	1.00	1	07/29/2024 10:46	WG2331831
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/29/2024 10:46	WG2331831
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/29/2024 10:46	WG2331831
2,2-Dichloropropane	U		0.161	1.00	1	07/29/2024 10:46	WG2331831
Di-isopropyl ether	U		0.105	1.00	1	07/29/2024 10:46	WG2331831
Ethylbenzene	U		0.137	1.00	1	07/29/2024 10:46	WG2331831
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/29/2024 10:46	WG2331831
Isopropylbenzene	8.81		0.105	1.00	1	07/29/2024 10:46	WG2331831
p-Isopropyltoluene	0.313	J	0.120	1.00	1	07/29/2024 10:46	WG2331831
2-Butanone (MEK)	U		1.19	10.0	1	07/29/2024 10:46	WG2331831
Methylene Chloride	U		0.430	5.00	1	07/29/2024 10:46	WG2331831
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/29/2024 10:46	WG2331831
Methyl tert-butyl ether	U		0.101	1.00	1	07/29/2024 10:46	WG2331831
Naphthalene	1.98	J	1.00	5.00	1	07/29/2024 10:46	WG2331831

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Propylbenzene	16.2		0.0993	1.00	1	07/29/2024 10:46	WG2331831
Styrene	U	C3	0.118	1.00	1	07/29/2024 10:46	WG2331831
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/29/2024 10:46	WG2331831
1,1,2,2-Tetrachloroethane	U	C3	0.133	1.00	1	07/29/2024 10:46	WG2331831
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/29/2024 10:46	WG2331831
Tetrachloroethene	U		0.300	1.00	1	07/29/2024 10:46	WG2331831
Toluene	0.706	J	0.278	1.00	1	07/29/2024 10:46	WG2331831
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/29/2024 10:46	WG2331831
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/29/2024 10:46	WG2331831
1,1,1-Trichloroethane	U		0.149	1.00	1	07/29/2024 10:46	WG2331831
1,1,2-Trichloroethane	U		0.158	1.00	1	07/29/2024 10:46	WG2331831
Trichloroethene	U		0.190	1.00	1	07/29/2024 10:46	WG2331831
Trichlorofluoromethane	U		0.160	5.00	1	07/29/2024 10:46	WG2331831
1,2,3-Trichloropropane	U		0.237	2.50	1	07/29/2024 10:46	WG2331831
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/29/2024 10:46	WG2331831
1,2,3-Trimethylbenzene	2.61		0.104	1.00	1	07/29/2024 10:46	WG2331831
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/29/2024 10:46	WG2331831
Vinyl chloride	U	C3	0.234	1.00	1	07/29/2024 10:46	WG2331831
Xylenes, Total	0.228	J	0.174	3.00	1	07/29/2024 10:46	WG2331831
(S) Toluene-d8	*114*			*80.0-120*		*07/29/2024 10:46*	WG2331831
(S) 4-Bromofluorobenzene	*116*			*77.0-126*		*07/29/2024 10:46*	WG2331831
(S) 1,2-Dichloroethane-d4	*119*			*70.0-130*		*07/29/2024 10:46*	WG2331831

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Gasoline Range Organics-NWTPH	3240		316	1000	10	07/30/2024 05:22	WG2332301
(S) a,a,a-Trifluorotoluene(FID)	*102*			*78.0-120*		*07/30/2024 05:22*	WG2332301

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	C3	113	500	10	07/29/2024 14:23	WG2331831
Acrolein	U		25.4	500	10	07/29/2024 14:23	WG2331831
Acrylonitrile	U		6.71	100	10	07/29/2024 14:23	WG2331831
Benzene	405		0.941	10.0	10	07/29/2024 14:23	WG2331831
Bromobenzene	U		1.18	10.0	10	07/29/2024 14:23	WG2331831
Bromodichloromethane	U		1.36	10.0	10	07/29/2024 14:23	WG2331831
Bromoform	U		1.29	10.0	10	07/29/2024 14:23	WG2331831
Bromomethane	U		6.05	50.0	10	07/29/2024 14:23	WG2331831
n-Butylbenzene	U		1.57	10.0	10	07/29/2024 14:23	WG2331831
sec-Butylbenzene	5.50	J	1.25	10.0	10	07/29/2024 14:23	WG2331831
tert-Butylbenzene	U		1.27	10.0	10	07/29/2024 14:23	WG2331831
Carbon disulfide	U	C3	0.962	10.0	10	07/29/2024 14:23	WG2331831
Carbon tetrachloride	U		1.28	10.0	10	07/29/2024 14:23	WG2331831
Chlorobenzene	U		1.16	10.0	10	07/29/2024 14:23	WG2331831
Chlorodibromomethane	U		1.40	10.0	10	07/29/2024 14:23	WG2331831
Chloroethane	U		1.92	50.0	10	07/29/2024 14:23	WG2331831
Chloroform	U		1.11	50.0	10	07/29/2024 14:23	WG2331831
Chloromethane	U		9.60	25.0	10	07/29/2024 14:23	WG2331831
2-Chlorotoluene	U		1.06	10.0	10	07/29/2024 14:23	WG2331831
4-Chlorotoluene	U		1.14	10.0	10	07/29/2024 14:23	WG2331831
1,2-Dibromo-3-Chloropropane	U		2.76	50.0	10	07/29/2024 14:23	WG2331831
1,2-Dibromoethane	U		1.26	10.0	10	07/29/2024 14:23	WG2331831
Dibromomethane	U		1.22	10.0	10	07/29/2024 14:23	WG2331831
1,2-Dichlorobenzene	U		1.07	10.0	10	07/29/2024 14:23	WG2331831
1,3-Dichlorobenzene	U		1.10	10.0	10	07/29/2024 14:23	WG2331831
1,4-Dichlorobenzene	U		1.20	10.0	10	07/29/2024 14:23	WG2331831
Dichlorodifluoromethane	U		3.74	50.0	10	07/29/2024 14:23	WG2331831
1,1-Dichloroethane	U		1.00	10.0	10	07/29/2024 14:23	WG2331831
1,2-Dichloroethane	U		0.819	10.0	10	07/29/2024 14:23	WG2331831
1,1-Dichloroethene	U	C3	1.88	10.0	10	07/29/2024 14:23	WG2331831
cis-1,2-Dichloroethene	U		1.26	10.0	10	07/29/2024 14:23	WG2331831
trans-1,2-Dichloroethene	U		1.49	10.0	10	07/29/2024 14:23	WG2331831
1,2-Dichloropropane	U		1.49	10.0	10	07/29/2024 14:23	WG2331831
1,1-Dichloropropene	U		1.42	10.0	10	07/29/2024 14:23	WG2331831
1,3-Dichloropropane	U		1.10	10.0	10	07/29/2024 14:23	WG2331831
cis-1,3-Dichloropropene	U		1.11	10.0	10	07/29/2024 14:23	WG2331831
trans-1,3-Dichloropropene	U		1.18	10.0	10	07/29/2024 14:23	WG2331831
2,2-Dichloropropane	U		1.61	10.0	10	07/29/2024 14:23	WG2331831
Di-isopropyl ether	U		1.05	10.0	10	07/29/2024 14:23	WG2331831
Ethylbenzene	31.1		1.37	10.0	10	07/29/2024 14:23	WG2331831
Hexachloro-1,3-butadiene	U		3.37	10.0	10	07/29/2024 14:23	WG2331831
Isopropylbenzene	24.9		1.05	10.0	10	07/29/2024 14:23	WG2331831
p-Isopropyltoluene	U		1.20	10.0	10	07/29/2024 14:23	WG2331831
2-Butanone (MEK)	U		11.9	100	10	07/29/2024 14:23	WG2331831
Methylene Chloride	U		4.30	50.0	10	07/29/2024 14:23	WG2331831
4-Methyl-2-pentanone (MIBK)	U		4.78	100	10	07/29/2024 14:23	WG2331831
Methyl tert-butyl ether	U		1.01	10.0	10	07/29/2024 14:23	WG2331831
Naphthalene	U		10.0	50.0	10	07/29/2024 14:23	WG2331831

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (GC/MS) by Method 8260D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Propylbenzene	82.1		0.993	10.0	10	07/29/2024 14:23	WG2331831
Styrene	U	C3	1.18	10.0	10	07/29/2024 14:23	WG2331831
1,1,1,2-Tetrachloroethane	U		1.47	10.0	10	07/29/2024 14:23	WG2331831
1,1,2,2-Tetrachloroethane	U	C3	1.33	10.0	10	07/29/2024 14:23	WG2331831
1,1,2-Trichlorotrifluoroethane	U		1.80	10.0	10	07/29/2024 14:23	WG2331831
Tetrachloroethene	U		3.00	10.0	10	07/29/2024 14:23	WG2331831
Toluene	5.89	J	2.78	10.0	10	07/29/2024 14:23	WG2331831
1,2,3-Trichlorobenzene	U		2.30	10.0	10	07/29/2024 14:23	WG2331831
1,2,4-Trichlorobenzene	U		4.81	10.0	10	07/29/2024 14:23	WG2331831
1,1,1-Trichloroethane	U		1.49	10.0	10	07/29/2024 14:23	WG2331831
1,1,2-Trichloroethane	U		1.58	10.0	10	07/29/2024 14:23	WG2331831
Trichloroethene	U		1.90	10.0	10	07/29/2024 14:23	WG2331831
Trichlorofluoromethane	U		1.60	50.0	10	07/29/2024 14:23	WG2331831
1,2,3-Trichloropropane	U		2.37	25.0	10	07/29/2024 14:23	WG2331831
1,2,4-Trimethylbenzene	4.89	J	3.22	10.0	10	07/29/2024 14:23	WG2331831
1,2,3-Trimethylbenzene	10.5		1.04	10.0	10	07/29/2024 14:23	WG2331831
1,3,5-Trimethylbenzene	3.58	J	1.04	10.0	10	07/29/2024 14:23	WG2331831
Vinyl chloride	U	C3	2.34	10.0	10	07/29/2024 14:23	WG2331831
Xylenes, Total	26.3	J	1.74	30.0	10	07/29/2024 14:23	WG2331831
(S) Toluene-d8	*110*			*80.0-120*		*07/29/2024 14:23*	WG2331831
(S) 4-Bromofluorobenzene	*110*			*77.0-126*		*07/29/2024 14:23*	WG2331831
(S) 1,2-Dichloroethane-d4	*117*			*70.0-130*		*07/29/2024 14:23*	WG2331831

Method Blank (MB)

(MB) R4100532-2 07/29/24 12:03

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	79.8	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*105*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R4100532-1 07/29/24 11:17

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5000	5200	104	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*78.0-120*	

Method Blank (MB)

(MB) R4100479-3 07/29/24 23:01

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	48.6	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4100479-1 07/29/24 21:25 • (LCSD) R4100479-2 07/29/24 21:48

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5000	5000	5140	100	103	70.0-124			2.76	20
(S) a,a,a-Trifluorotoluene(FID)				*105*	*107*	*78.0-120*				

Method Blank (MB)

(MB) R4101723-3 08/01/24 10:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	36.4	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*98.3*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R4101723-1 08/01/24 09:28

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5000	5340	107	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*104*	*78.0-120*	

Method Blank (MB)

(MB) R4100490-5 07/28/24 21:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon disulfide	U		0.0962	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00

Method Blank (MB)

(MB) R4100490-5 07/28/24 21:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U		0.337	1.00
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	*115*			*80.0-120*
(S) 4-Bromofluorobenzene	*114*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*123*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4100490-1 07/28/24 18:56 • (LCSD) R4100490-2 07/28/24 19:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	24.9	25.4	99.6	102	19.0-160	J	J	1.99	27
Acrolein	25.0	43.2	40.9	173	164	10.0-160	J J4	J J4	5.47	26
Acrylonitrile	25.0	34.5	35.9	138	144	55.0-149			3.98	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4100490-1 07/28/24 18:56 • (LCSD) R4100490-2 07/28/24 19:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	5.13	5.05	103	101	70.0-123			1.57	20
Bromobenzene	5.00	4.77	4.97	95.4	99.4	73.0-121			4.11	20
Bromodichloromethane	5.00	5.12	5.13	102	103	75.0-120			0.195	20
Bromoform	5.00	4.79	4.91	95.8	98.2	68.0-132			2.47	20
Bromomethane	5.00	5.03	6.27	101	125	10.0-160			21.9	25
n-Butylbenzene	5.00	4.70	4.81	94.0	96.2	73.0-125			2.31	20
sec-Butylbenzene	5.00	5.14	5.08	103	102	75.0-125			1.17	20
tert-Butylbenzene	5.00	5.08	4.89	102	97.8	76.0-124			3.81	20
Carbon disulfide	5.00	4.83	4.59	96.6	91.8	61.0-128			5.10	20
Carbon tetrachloride	5.00	5.31	5.67	106	113	68.0-126			6.56	20
Chlorobenzene	5.00	5.28	5.15	106	103	80.0-121			2.49	20
Chlorodibromomethane	5.00	4.87	4.74	97.4	94.8	77.0-125			2.71	20
Chloroethane	5.00	6.06	6.07	121	121	47.0-150			0.165	20
Chloroform	5.00	5.43	5.35	109	107	73.0-120			1.48	20
Chloromethane	5.00	5.28	5.21	106	104	41.0-142			1.33	20
2-Chlorotoluene	5.00	5.32	5.11	106	102	76.0-123			4.03	20
4-Chlorotoluene	5.00	4.93	4.89	98.6	97.8	75.0-122			0.815	20
1,2-Dibromo-3-Chloropropane	5.00	5.39	5.57	108	111	58.0-134			3.28	20
1,2-Dibromoethane	5.00	5.34	5.27	107	105	80.0-122			1.32	20
Dibromomethane	5.00	5.21	5.06	104	101	80.0-120			2.92	20
1,2-Dichlorobenzene	5.00	5.06	5.30	101	106	79.0-121			4.63	20
1,3-Dichlorobenzene	5.00	5.00	4.93	100	98.6	79.0-120			1.41	20
1,4-Dichlorobenzene	5.00	4.86	4.84	97.2	96.8	79.0-120			0.412	20
Dichlorodifluoromethane	5.00	5.53	5.37	111	107	51.0-149			2.94	20
1,1-Dichloroethane	5.00	5.72	5.59	114	112	70.0-126			2.30	20
1,2-Dichloroethane	5.00	6.29	6.24	126	125	70.0-128			0.798	20
1,1-Dichloroethene	5.00	4.85	4.94	97.0	98.8	71.0-124			1.84	20
cis-1,2-Dichloroethene	5.00	4.96	4.89	99.2	97.8	73.0-120			1.42	20
trans-1,2-Dichloroethene	5.00	5.05	4.90	101	98.0	73.0-120			3.02	20
1,2-Dichloropropane	5.00	5.66	5.70	113	114	77.0-125			0.704	20
1,1-Dichloropropene	5.00	5.54	5.56	111	111	74.0-126			0.360	20
1,3-Dichloropropane	5.00	5.04	5.09	101	102	80.0-120			0.987	20
cis-1,3-Dichloropropene	5.00	4.90	4.84	98.0	96.8	80.0-123			1.23	20
trans-1,3-Dichloropropene	5.00	5.04	4.94	101	98.8	78.0-124			2.00	20
2,2-Dichloropropane	5.00	4.81	4.40	96.2	88.0	58.0-130			8.90	20
Di-isopropyl ether	5.00	6.09	6.16	122	123	58.0-138			1.14	20
Ethylbenzene	5.00	5.19	5.10	104	102	79.0-123			1.75	20
Hexachloro-1,3-butadiene	5.00	5.56	5.57	111	111	54.0-138			0.180	20
Isopropylbenzene	5.00	5.24	5.18	105	104	76.0-127			1.15	20
p-Isopropyltoluene	5.00	5.00	4.99	100	99.8	76.0-125			0.200	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4100490-1 07/28/24 18:56 • (LCSD) R4100490-2 07/28/24 19:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	25.0	32.5	33.7	130	135	44.0-160			3.63	20
Methylene Chloride	5.00	5.06	4.77	101	95.4	67.0-120		J	5.90	20
4-Methyl-2-pentanone (MIBK)	25.0	36.4	37.4	146	150	68.0-142	J4	J4	2.71	20
Methyl tert-butyl ether	5.00	5.41	5.35	108	107	68.0-125			1.12	20
Naphthalene	5.00	4.76	4.98	95.2	99.6	54.0-135	J	J	4.52	20
n-Propylbenzene	5.00	4.83	4.94	96.6	98.8	77.0-124			2.25	20
Styrene	5.00	4.85	4.68	97.0	93.6	73.0-130			3.57	20
1,1,1,2-Tetrachloroethane	5.00	5.30	5.15	106	103	75.0-125			2.87	20
1,1,2,2-Tetrachloroethane	5.00	4.87	4.55	97.4	91.0	65.0-130			6.79	20
1,1,2-Trichlorotrifluoroethane	5.00	5.76	5.62	115	112	69.0-132			2.46	20
Tetrachloroethene	5.00	5.80	5.80	116	116	72.0-132			0.000	20
Toluene	5.00	5.08	4.92	102	98.4	79.0-120			3.20	20
1,2,3-Trichlorobenzene	5.00	5.27	5.47	105	109	50.0-138			3.72	20
1,2,4-Trichlorobenzene	5.00	4.77	5.03	95.4	101	57.0-137			5.31	20
1,1,1-Trichloroethane	5.00	5.65	5.66	113	113	73.0-124			0.177	20
1,1,2-Trichloroethane	5.00	5.01	5.02	100	100	80.0-120			0.199	20
Trichloroethene	5.00	5.27	5.57	105	111	78.0-124			5.54	20
Trichlorofluoromethane	5.00	6.69	6.72	134	134	59.0-147			0.447	20
1,2,3-Trichloropropane	5.00	5.42	5.80	108	116	73.0-130			6.77	20
1,2,4-Trimethylbenzene	5.00	4.95	5.13	99.0	103	76.0-121			3.57	20
1,2,3-Trimethylbenzene	5.00	5.06	5.04	101	101	77.0-120			0.396	20
1,3,5-Trimethylbenzene	5.00	5.07	5.29	101	106	76.0-122			4.25	20
Vinyl chloride	5.00	5.29	5.19	106	104	67.0-131			1.91	20
Xylenes, Total	15.0	15.3	15.4	102	103	79.0-123			0.651	20
(S) Toluene-d8				*109*	*107*	*80.0-120*				
(S) 4-Bromofluorobenzene				*106*	*107*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*124*	*124*	*70.0-130*				

Method Blank (MB)

(MB) R4101556-2 07/29/24 07:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon disulfide	U		0.0962	1.00
Carbon tetrachloride	U		0.128	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00

Method Blank (MB)

(MB) R4101556-2 07/29/24 07:47

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Hexachloro-1,3-butadiene	U		0.337	1.00
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	*111*			*80.0-120*
(S) 4-Bromofluorobenzene	*110*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*124*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4101556-1 07/29/24 06:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	25.0	19.1	76.4	19.0-160	J
Acrolein	25.0	36.4	146	10.0-160	J
Acrylonitrile	25.0	27.6	110	55.0-149	

Laboratory Control Sample (LCS)

(LCS) R4101556-1 07/29/24 06:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Benzene	5.00	4.20	84.0	70.0-123	
Bromobenzene	5.00	4.04	80.8	73.0-121	
Bromodichloromethane	5.00	4.32	86.4	75.0-120	
Bromoform	5.00	4.12	82.4	68.0-132	
Bromomethane	5.00	5.19	104	10.0-160	
n-Butylbenzene	5.00	3.99	79.8	73.0-125	
sec-Butylbenzene	5.00	4.38	87.6	75.0-125	
tert-Butylbenzene	5.00	4.08	81.6	76.0-124	
Carbon disulfide	5.00	3.56	71.2	61.0-128	
Carbon tetrachloride	5.00	4.62	92.4	68.0-126	
Chlorobenzene	5.00	4.29	85.8	80.0-121	
Chlorodibromomethane	5.00	4.04	80.8	77.0-125	
Chloroethane	5.00	4.07	81.4	47.0-150	J
Chloroform	5.00	4.36	87.2	73.0-120	J
Chloromethane	5.00	4.20	84.0	41.0-142	
2-Chlorotoluene	5.00	4.47	89.4	76.0-123	
4-Chlorotoluene	5.00	4.30	86.0	75.0-122	
1,2-Dibromo-3-Chloropropane	5.00	4.50	90.0	58.0-134	J
1,2-Dibromoethane	5.00	4.41	88.2	80.0-122	
Dibromomethane	5.00	4.20	84.0	80.0-120	
1,2-Dichlorobenzene	5.00	4.40	88.0	79.0-121	
1,3-Dichlorobenzene	5.00	4.28	85.6	79.0-120	
1,4-Dichlorobenzene	5.00	4.14	82.8	79.0-120	
Dichlorodifluoromethane	5.00	4.18	83.6	51.0-149	J
1,1-Dichloroethane	5.00	4.51	90.2	70.0-126	
1,2-Dichloroethane	5.00	5.22	104	70.0-128	
1,1-Dichloroethene	5.00	3.78	75.6	71.0-124	
cis-1,2-Dichloroethene	5.00	4.05	81.0	73.0-120	
trans-1,2-Dichloroethene	5.00	4.06	81.2	73.0-120	
1,2-Dichloropropane	5.00	4.62	92.4	77.0-125	
1,1-Dichloropropene	5.00	4.44	88.8	74.0-126	
1,3-Dichloropropane	5.00	4.29	85.8	80.0-120	
cis-1,3-Dichloropropene	5.00	4.16	83.2	80.0-123	
trans-1,3-Dichloropropene	5.00	4.28	85.6	78.0-124	
2,2-Dichloropropane	5.00	4.34	86.8	58.0-130	
Di-isopropyl ether	5.00	4.98	99.6	58.0-138	
Ethylbenzene	5.00	4.22	84.4	79.0-123	
Hexachloro-1,3-butadiene	5.00	4.86	97.2	54.0-138	
Isopropylbenzene	5.00	4.27	85.4	76.0-127	
p-Isopropyltoluene	5.00	4.29	85.8	76.0-125	

Laboratory Control Sample (LCS)

(LCS) R4101556-1 07/29/24 06:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
2-Butanone (MEK)	25.0	25.7	103	44.0-160	
Methylene Chloride	5.00	4.00	80.0	67.0-120	J
4-Methyl-2-pentanone (MIBK)	25.0	28.9	116	68.0-142	
Methyl tert-butyl ether	5.00	4.50	90.0	68.0-125	
Naphthalene	5.00	4.22	84.4	54.0-135	J
n-Propylbenzene	5.00	4.18	83.6	77.0-124	
Styrene	5.00	3.94	78.8	73.0-130	
1,1,1,2-Tetrachloroethane	5.00	4.36	87.2	75.0-125	
1,1,2,2-Tetrachloroethane	5.00	3.96	79.2	65.0-130	
1,1,2-Trichlorotrifluoroethane	5.00	4.52	90.4	69.0-132	
Tetrachloroethene	5.00	4.73	94.6	72.0-132	
Toluene	5.00	4.24	84.8	79.0-120	
1,2,3-Trichlorobenzene	5.00	4.65	93.0	50.0-138	
1,2,4-Trichlorobenzene	5.00	4.34	86.8	57.0-137	
1,1,1-Trichloroethane	5.00	4.50	90.0	73.0-124	
1,1,2-Trichloroethane	5.00	4.46	89.2	80.0-120	
Trichloroethene	5.00	4.56	91.2	78.0-124	
Trichlorofluoromethane	5.00	5.42	108	59.0-147	
1,2,3-Trichloropropane	5.00	5.02	100	73.0-130	
1,2,4-Trimethylbenzene	5.00	4.53	90.6	76.0-121	
1,2,3-Trimethylbenzene	5.00	4.36	87.2	77.0-120	
1,3,5-Trimethylbenzene	5.00	4.44	88.8	76.0-122	
Vinyl chloride	5.00	3.95	79.0	67.0-131	
Xylenes, Total	15.0	13.0	86.7	79.0-123	
(S) Toluene-d8			*106*	*80.0-120*	
(S) 4-Bromofluorobenzene			*103*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*120*	*70.0-130*	

Method Blank (MB)

(MB) R4101590-5 07/31/24 21:46

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Benzene	U		0.0941	1.00
Ethylbenzene	U		0.137	1.00
Naphthalene	U		1.00	5.00
n-Propylbenzene	U		0.0993	1.00
(S) Toluene-d8	*114*			*80.0-120*
(S) 4-Bromofluorobenzene	*103*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*94.3*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4101590-1 07/31/24 20:03 • (LCSD) R4101590-4 07/31/24 21:05

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	5.37	5.11	107	102	70.0-123			4.96	20
Ethylbenzene	5.00	5.63	5.43	113	109	79.0-123			3.62	20
Naphthalene	5.00	4.36	3.87	87.2	77.4	54.0-135	J	J	11.9	20
n-Propylbenzene	5.00	5.00	4.83	100	96.6	77.0-124			3.46	20
(S) Toluene-d8				*110*	*111*	*80.0-120*				
(S) 4-Bromofluorobenzene				*103*	*103*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*101*	*100*	*70.0-130*				

Method Blank (MB)

(MB) R4101897-2 08/01/24 16:26

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Benzene	U		0.0941	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	*103*			*80.0-120*
(S) 4-Bromofluorobenzene	*103*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*95.9*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R4101897-1 08/01/24 15:44

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Benzene	5.00	4.09	81.8	70.0-123	
Xylenes, Total	15.0	12.8	85.3	79.0-123	
(S) Toluene-d8			*105*	*80.0-120*	
(S) 4-Bromofluorobenzene			*104*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*94.9*	*70.0-130*	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Agency, Authorized Purchaser or Agent: Oregon DEQ	Contract Laboratory Name: Pace National	Lab Selection Criteria:	Turn Around Time:
Send Lab Report To: Kara Master Address: Department of Environmental Quality 700 NE Multnomah St, Suite 600 Portland, OR 97232 E-mail: Kara.E.MASTER@deq.oregon.gov	Lab Batch #: Invoice To: ODEQ/Business Office Address: 700 NE Multnomah Street, Suite 600 Portland, OR. 97232 Tel. #: (800) 452-4011	☐ Proximity (if TAT < 48 hrs) ☐ Prior work on same project ☒ Cost (for anticipated analyses) ☐ Other labs disqualified or unable to perform requested services ☐ Emergency work	☒ 10 days (std.) ☐ 5 days ☐ 72 hours ☐ 48 hours ☐ 24 hours ☐ Other

Project Name: **Johnson Oil**
Project #: 32-24008422

L1759747

Sample ID#	Collection Date/Time	Matrix	Number of Containers	Sample Preservative: HCl	HCl								Comments
				Requested Analyses: NWTPH-Gx	VOCs – EPA 8260B								
MW-4	7/23/24 / 12:42	GW	6	X	X								-01
MW-5	7/23/24 / 10:52	GW	6	X	X								-02
MW-6	7/23/24 / 11:27	GW	6	X	X								-03
MW-7	7/23/24 / 12:06	GW	6	X	X								-04
MW-8	7/22/24 / 16:37	GW	6	X	X								-05
MW-9	7/22/24 / 16:03	GW	6	X	X								-06
MW-12	7/23/24 / 13:30	GW	6	X	X								-07
MW-13	7/22/24 / 17:04	GW	6	X	X								-08
MW-14	7/22/24 / 15:35	GW	6	X	X								-09
MW-15	7/22/24 / 14:35	GW	6	X	X								-10
Dup	7/22/24 / 15:45	GW	6	X	X								-11

Notes: Report Results to: MStevens@apexcos.com;carmen.owens@apexcos.com; Kara.E.MASTER@deq.oregon.gov

Relinquished By: Christine Weer	Agency/Agent: Apex Companies	Received By: Ashley Baxter	Agency:
Signature:	Time & Date: 7/29/24, 16:15	Signature:	Time & Date: 07/24/2024 0900
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature:	Time & Date:

THIS PURCHASE IS SUBMITTED PURSUANT TO STATE OF OREGON SOLICITATION #**102-1098-07** AND PRICE AGREEMENT # **8903**. THE PRICE AGREEMENT INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S &C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND SHALL APPLY TO THIS PURCHASE AND SHALL TAKE PRECEDENCE OVER ALL OTHER CONFLICTING T'S AND C'S, EXPRESS OR IMPLIED.

EDA9 10.0+0.3=10.3 7241 0723 3803

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	Y N
Bottles arrive intact:	Y N	Pres. Correct/Check:	Y N
Correct bottles used:	Y N		
Sufficient volume sent:	Y N		
RA Screen <0.5 mR/hr:	Y N		

Containers: 66 4 3x TB w/ HCl

7/24 NCF-L1759747 OREGONDEQ

R5

Time estimate: oh **Time spent:** oh

Members

Nicolle Faulk (responsible) BF Brian Ford

Due on *31 July 2024 5:00 PM* for target *Done*

- [ ] Parameter(s) past holding time
- [x] Temperature not in range
- [ ] Improper container type
- [ ] pH not in range
- [ ] Insufficient sample volume
- [ ] Sample is biphasic
- [ ] Vials received with headspace
- [ ] Broken container
- [ ] Sufficient sample remains
- [ ] If broken container: Insufficient packing material around container
- [ ] If broken container: Insufficient packing material inside cooler
- [ ] If broken container: Improper handling by carrier:_____
- [ ] If broken container: Sample was frozen
- [ ] If broken container: Container lid not intact
- [ ] Client informed by Call
- [x] Client informed by Email
- [ ] Client informed by Voicemail
- [ ] Date/Time:_____
- [x] PM initials:_____bjf_____
- [ ] Client Contact:_____

Comments

Nicolle Faulk *24 July 2024 2:00 PM*

Received OOT @10.3 all ice melted

Brian Ford *24 July 2024 3:58 PM*

proceed with analysis

Nicolle Faulk *24 July 2024 3:58 PM*

done

ANALYTICAL REPORT

July 29, 2024

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group:	L1759795
Samples Received:	07/24/2024
Project Number:	24008422
Description:	Johnson Oil
Report To:	Kara Master

Entire Report Reviewed By:

Brian Ford
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 mydata.pacelabs.com

TABLE OF CONTENTS

SG-7 L1759795-01 Air

Collected by: Christine Weer
Collected date/time: 07/22/24 09:53
Received date/time: 07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2331131	1	07/27/24 12:44	07/27/24 12:44	JAP	Mt. Juliet, TN

SG-8 L1759795-02 Air

Collected by: Christine Weer
Collected date/time: 07/22/24 10:02
Received date/time: 07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2331131	1	07/27/24 13:24	07/27/24 13:24	JAP	Mt. Juliet, TN

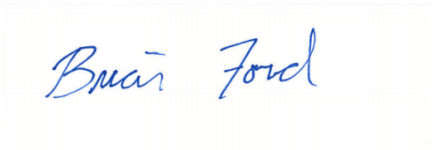
SG-10 L1759795-03 Air

Collected by: Christine Weer
Collected date/time: 07/22/24 10:19
Received date/time: 07/24/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2331131	1	07/27/24 14:04	07/27/24 14:04	JAP	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Brian Ford
Project Manager

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	12.0	28.5		1	WG2331131
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2331131
Benzene	71-43-2	78.10	0.200	0.639	0.256	0.818		1	WG2331131
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2331131
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2331131
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2331131
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2331131
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2331131
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		1	WG2331131
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2331131
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2331131
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2331131
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2331131
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG2331131
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2331131
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG2331131
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2331131
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2331131
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2331131
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2331131
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2331131
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2331131
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2331131
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2331131
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2331131
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2331131
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2331131
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2331131
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2331131
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2331131
Ethanol	64-17-5	46.10	2.50	4.71	27.1	51.1		1	WG2331131
Ethylbenzene	100-41-4	106	0.200	0.867	0.274	1.19		1	WG2331131
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.735	3.61		1	WG2331131
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.295	1.66		1	WG2331131
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.300	1.48		1	WG2331131
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2331131
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2331131
Heptane	142-82-5	100	0.200	0.818	0.296	1.21		1	WG2331131
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2331131
n-Hexane	110-54-3	86.20	0.630	2.22	0.664	2.34		1	WG2331131
Isopropylbenzene	98-82-8	120.20	0.200	0.983	0.425	2.09		1	WG2331131
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.841	2.92		1	WG2331131
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2331131
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	3.76	11.1		1	WG2331131
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	1.40	5.73		1	WG2331131
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2331131
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2331131
Naphthalene	91-20-3	128	0.630	3.30	1.90	9.95		1	WG2331131
2-Propanol	67-63-0	60.10	1.25	3.07	14.2	34.9		1	WG2331131
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG2331131
n-Propylbenzene	103-65-1	120	0.200	0.982	0.819	4.02		1	WG2331131
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	WG2331131
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2331131
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.776	5.27		1	WG2331131
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	0.521	1.54		1	WG2331131
Toluene	108-88-3	92.10	0.500	1.88	1.45	5.46		1	WG2331131

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG2331131
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG2331131
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG2331131
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG2331131
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	6.11	30.0		1	WG2331131
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	2.78	13.6		1	WG2331131
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	0.209	0.976		1	WG2331131
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG2331131
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG2331131
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	WG2331131
m&p-Xylene	179601-23-1	106	0.400	1.73	1.27	5.51		1	WG2331131
o-Xylene	95-47-6	106	0.200	0.867	0.905	3.92		1	WG2331131
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	204	843		1	WG2331131
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.8*				WG2331131

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	3.33	7.91		1	WG2331131
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2331131
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG2331131
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2331131
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2331131
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2331131
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2331131
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2331131
Carbon disulfide	75-15-0	76.10	0.400	1.24	2.70	8.40		1	WG2331131
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2331131
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2331131
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2331131
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2331131
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG2331131
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2331131
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG2331131
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2331131
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2331131
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2331131
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2331131
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2331131
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2331131
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2331131
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2331131
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2331131
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2331131
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2331131
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2331131
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2331131
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2331131
Ethanol	64-17-5	46.10	2.50	4.71	3.18	6.00		1	WG2331131
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG2331131
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG2331131
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.319	1.79		1	WG2331131
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.335	1.66		1	WG2331131
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2331131
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2331131
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG2331131
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2331131
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG2331131
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG2331131
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG2331131
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2331131
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG2331131
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2331131
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2331131
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2331131
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2331131
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG2331131
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG2331131
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	WG2331131
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	WG2331131
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2331131
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG2331131
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG2331131
Toluene	108-88-3	92.10	0.500	1.88	0.500	1.88		1	WG2331131

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG2331131
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG2331131
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG2331131
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG2331131
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG2331131
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG2331131
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG2331131
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG2331131
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG2331131
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	WG2331131
m&p-Xylene	179601-23-1	106	0.400	1.73	ND	ND		1	WG2331131
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG2331131
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	ND	ND		1	WG2331131
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.2*				WG2331131

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	8.42	20.0		1	WG2331131
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2331131
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG2331131
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2331131
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2331131
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2331131
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2331131
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2331131
Carbon disulfide	75-15-0	76.10	0.400	1.24	ND	ND		1	WG2331131
Carbon tetrachloride	56-23-5	154	0.200	1.26	0.200	1.26		1	WG2331131
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2331131
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2331131
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2331131
Chloromethane	74-87-3	50.50	0.200	0.413	0.409	0.845		1	WG2331131
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2331131
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG2331131
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2331131
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2331131
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2331131
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2331131
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2331131
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2331131
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2331131
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2331131
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG2331131
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2331131
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2331131
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2331131
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2331131
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2331131
Ethanol	64-17-5	46.10	2.50	4.71	2.92	5.51		1	WG2331131
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG2331131
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG2331131
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG2331131
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.398	1.97		1	WG2331131
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2331131
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2331131
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG2331131
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2331131
n-Hexane	110-54-3	86.20	0.630	2.22	ND	ND		1	WG2331131
Isopropylbenzene	98-82-8	120.20	0.200	0.983	1.04	5.11		1	WG2331131
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG2331131
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2331131
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	1.77	5.22		1	WG2331131
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2331131
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2331131
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2331131
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2331131
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG2331131
Propene	115-07-1	42.10	1.25	2.15	ND	ND		1	WG2331131
n-Propylbenzene	103-65-1	120	0.200	0.982	ND	ND		1	WG2331131
Styrene	100-42-5	104	0.400	1.70	ND	ND		1	WG2331131
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2331131
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.231	1.57		1	WG2331131
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG2331131
Toluene	108-88-3	92.10	0.500	1.88	0.653	2.46		1	WG2331131

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG2331131
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG2331131
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG2331131
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG2331131
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG2331131
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG2331131
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG2331131
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG2331131
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG2331131
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	WG2331131
m&p-Xylene	179601-23-1	106	0.400	1.73	ND	ND		1	WG2331131
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG2331131
TPH (GC/MS) Low Fraction	8006-61-9	101	200	826	320	1320		1	WG2331131
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*94.9*				WG2331131

Method Blank (MB)

(MB) R4099353-3 07/27/24 09:13

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		0.584	1.25
Allyl chloride	U		0.114	0.200
Benzene	U		0.0715	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0702	0.200
Bromoform	U		0.0732	0.600
Bromomethane	U		0.0982	0.200
1,3-Butadiene	U		0.104	2.00
Carbon disulfide	U		0.102	0.400
Carbon tetrachloride	U		0.0732	0.200
Chlorobenzene	U		0.0832	0.200
Chloroethane	U		0.0996	0.200
Chloroform	U		0.0717	0.200
Chloromethane	U		0.103	0.200
2-Chlorotoluene	U		0.0828	0.200
Cyclohexane	U		0.0753	0.200
Dibromochloromethane	U		0.0727	0.200
1,2-Dibromoethane	U		0.0721	0.200
1,2-Dichlorobenzene	U		0.128	0.200
1,3-Dichlorobenzene	U		0.182	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0700	0.200
1,1-Dichloroethane	U		0.0723	0.200
1,1-Dichloroethene	U		0.0762	0.200
cis-1,2-Dichloroethene	U		0.0784	0.200
trans-1,2-Dichloroethene	U		0.0673	0.200
1,2-Dichloropropane	U		0.0760	0.200
cis-1,3-Dichloropropene	U		0.0689	0.200
trans-1,3-Dichloropropene	U		0.0728	0.200
1,4-Dioxane	U		0.0833	0.630
Ethanol	U		0.265	2.50
Ethylbenzene	U		0.0835	0.200
4-Ethyltoluene	U		0.0783	0.200
Trichlorofluoromethane	U		0.0819	0.200
Dichlorodifluoromethane	U		0.137	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0793	0.200
1,2-Dichlorotetrafluoroethane	U		0.0890	0.200
Heptane	U		0.104	0.200
Hexachloro-1,3-butadiene	U		0.105	0.630
n-Hexane	U		0.206	0.630

Method Blank (MB)

(MB) R4099353-3 07/27/24 09:13

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Isopropylbenzene	U		0.0777	0.200
Methylene Chloride	U		0.0979	0.200
Methyl Butyl Ketone	U		0.133	1.25
2-Butanone (MEK)	U		0.0814	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0765	1.25
Methyl methacrylate	U		0.0876	0.200
MTBE	U		0.0647	0.200
Naphthalene	U		0.350	0.630
2-Propanol	U		0.264	1.25
Propene	U		0.0932	1.25
n-Propylbenzene	U		0.0773	0.200
Styrene	U		0.0788	0.400
1,1,2,2-Tetrachloroethane	U		0.0743	0.200
Tetrachloroethylene	U		0.0814	0.200
Tetrahydrofuran	U		0.0734	0.200
Toluene	U		0.0870	0.500
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0736	0.200
1,1,2-Trichloroethane	U		0.0775	0.200
Trichloroethylene	U		0.0680	0.200
1,2,4-Trimethylbenzene	U		0.0764	0.200
1,3,5-Trimethylbenzene	U		0.0779	0.200
2,2,4-Trimethylpentane	U		0.133	0.200
Vinyl chloride	U		0.0949	0.200
Vinyl Bromide	U		0.0852	0.200
Vinyl acetate	U		0.116	0.630
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	U		39.7	200
(S) 1,4-Bromofluorobenzene	*97.8*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4099353-1 07/27/24 07:11 • (LCSD) R4099353-2 07/27/24 07:52

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	3.75	3.98	3.80	106	101	70.0-130			4.63	25
Allyl chloride	3.75	3.92	3.78	105	101	70.0-130			3.64	25
Benzene	3.75	4.02	4.04	107	108	70.0-130			0.496	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4099353-1 07/27/24 07:11 • (LCSD) R4099353-2 07/27/24 07:52

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzyl Chloride	3.75	3.82	3.89	102	104	70.0-152			1.82	25
Bromodichloromethane	3.75	3.83	3.85	102	103	70.0-130			0.521	25
Bromoform	3.75	3.71	3.79	98.9	101	70.0-130			2.13	25
Bromomethane	3.75	3.68	3.78	98.1	101	70.0-130			2.68	25
1,3-Butadiene	3.75	4.02	4.06	107	108	70.0-130			0.990	25
Carbon disulfide	7.50	7.49	7.41	99.9	98.8	70.0-130			1.07	25
Carbon tetrachloride	3.75	3.80	3.82	101	102	70.0-130			0.525	25
Chlorobenzene	3.75	3.89	3.95	104	105	70.0-130			1.53	25
Chloroethane	3.75	3.87	3.92	103	105	70.0-130			1.28	25
Chloroform	3.75	3.79	3.80	101	101	70.0-130			0.264	25
Chloromethane	3.75	3.90	3.82	104	102	70.0-130			2.07	25
2-Chlorotoluene	3.75	4.08	4.11	109	110	70.0-130			0.733	25
Cyclohexane	3.75	4.02	4.18	107	111	70.0-130			3.90	25
Dibromochloromethane	3.75	3.86	3.94	103	105	70.0-130			2.05	25
1,2-Dibromoethane	3.75	3.99	4.03	106	107	70.0-130			0.998	25
1,2-Dichlorobenzene	3.75	3.86	3.94	103	105	70.0-130			2.05	25
1,3-Dichlorobenzene	3.75	3.85	3.91	103	104	70.0-130			1.55	25
1,4-Dichlorobenzene	3.75	4.09	4.11	109	110	70.0-130			0.488	25
1,2-Dichloroethane	3.75	3.82	3.94	102	105	70.0-130			3.09	25
1,1-Dichloroethane	3.75	3.86	3.91	103	104	70.0-130			1.29	25
1,1-Dichloroethene	3.75	4.09	4.03	109	107	70.0-130			1.48	25
cis-1,2-Dichloroethene	3.75	3.84	3.82	102	102	70.0-130			0.522	25
trans-1,2-Dichloroethene	3.75	3.95	4.05	105	108	70.0-130			2.50	25
1,2-Dichloropropane	3.75	3.95	4.01	105	107	70.0-130			1.51	25
cis-1,3-Dichloropropene	3.75	4.06	4.12	108	110	70.0-130			1.47	25
trans-1,3-Dichloropropene	3.75	4.10	4.12	109	110	70.0-130			0.487	25
1,4-Dioxane	3.75	4.18	4.15	111	111	70.0-140			0.720	25
Ethanol	3.75	4.15	4.19	111	112	55.0-148			0.959	25
Ethylbenzene	3.75	3.91	3.98	104	106	70.0-130			1.77	25
4-Ethyltoluene	3.75	4.10	4.23	109	113	70.0-130			3.12	25
Trichlorofluoromethane	3.75	4.00	4.07	107	109	70.0-130			1.73	25
Dichlorodifluoromethane	3.75	3.90	3.94	104	105	64.0-139			1.02	25
1,1,2-Trichlorotrifluoroethane	3.75	3.80	3.82	101	102	70.0-130			0.525	25
1,2-Dichlorotetrafluoroethane	3.75	3.88	3.84	103	102	70.0-130			1.04	25
Heptane	3.75	4.28	4.38	114	117	70.0-130			2.31	25
Hexachloro-1,3-butadiene	3.75	3.76	3.87	100	103	70.0-151			2.88	25
n-Hexane	3.75	4.11	4.08	110	109	70.0-130			0.733	25
Isopropylbenzene	3.75	4.06	4.16	108	111	70.0-130			2.43	25
Methylene Chloride	3.75	3.73	3.66	99.5	97.6	70.0-130			1.89	25
Methyl Butyl Ketone	3.75	4.36	4.43	116	118	70.0-149			1.59	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4099353-1 07/27/24 07:11 • (LCSD) R4099353-2 07/27/24 07:52

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	3.75	4.14	4.09	110	109	70.0-130			1.22	25
4-Methyl-2-pentanone (MIBK)	3.75	4.31	4.31	115	115	70.0-139			0.000	25
Methyl methacrylate	3.75	4.25	4.19	113	112	70.0-130			1.42	25
MTBE	3.75	4.00	4.05	107	108	70.0-130			1.24	25
Naphthalene	3.75	4.08	4.14	109	110	70.0-159			1.46	25
2-Propanol	3.75	3.95	4.16	105	111	70.0-139			5.18	25
Propene	3.75	3.83	3.84	102	102	64.0-144			0.261	25
n-Propylbenzene	3.75	4.11	4.21	110	112	70.0-130			2.40	25
Styrene	7.50	8.74	8.85	117	118	70.0-130			1.25	25
1,1,2,2-Tetrachloroethane	3.75	3.69	3.77	98.4	101	70.0-130			2.14	25
Tetrachloroethylene	3.75	3.92	3.95	105	105	70.0-130			0.762	25
Tetrahydrofuran	3.75	3.98	4.01	106	107	70.0-137			0.751	25
Toluene	3.75	4.13	4.20	110	112	70.0-130			1.68	25
1,2,4-Trichlorobenzene	3.75	3.87	3.93	103	105	70.0-160			1.54	25
1,1,1-Trichloroethane	3.75	3.84	3.81	102	102	70.0-130			0.784	25
1,1,2-Trichloroethane	3.75	3.89	3.97	104	106	70.0-130			2.04	25
Trichloroethylene	3.75	3.86	3.96	103	106	70.0-130			2.56	25
1,2,4-Trimethylbenzene	3.75	4.38	4.39	117	117	70.0-130			0.228	25
1,3,5-Trimethylbenzene	3.75	4.23	4.33	113	115	70.0-130			2.34	25
2,2,4-Trimethylpentane	3.75	4.07	4.03	109	107	70.0-130			0.988	25
Vinyl chloride	3.75	3.99	4.01	106	107	70.0-130			0.500	25
Vinyl Bromide	3.75	4.03	4.19	107	112	70.0-130			3.89	25
Vinyl acetate	3.75	4.78	4.81	127	128	70.0-130			0.626	25
m&p-Xylene	7.50	8.24	8.46	110	113	70.0-130			2.63	25
o-Xylene	3.75	4.14	4.28	110	114	70.0-130			3.33	25
TPH (GC/MS) Low Fraction	188	182	184	96.8	97.9	70.0-130			1.09	25
(S) 1,4-Bromofluorobenzene				*96.7*	*97.1*	*60.0-140*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Pace® Location Requested (City/State):

Air CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR code for instructions

M129

Company Name: Apex Companies, LLC - Portland, OR	Contact/Report To: Kara Master
Street Address: 15618 SW 72nd Ave.	Phone #: 503-924-4704
	E-Mail: Kara.E.MASTER@deq.oregon.gov
City, State Zip: Tigard, OR 97224	Cc E-Mail: carmen.owens@apexcos.com
Customer Project #: 24008422	Invoice to: Apex Companies, LLC
Project Name: Johnson Oil	Invoice E-Mail: carmen.owens@apexcos.com
Site Collection Info/Facility ID (as applicable): Johnson Oil	Purchase Order # (if applicable):
	Quote #:
Time Zone Collected: [ ] AK [X] PT [ ] MT [ ] CT [ ] ET	State origin of sample(s): Oregon

Data Deliverables: [ ] Level II [X] Level III [ ] Level IV [ ] EQUIS [ ] Other_____

Regulatory Program (CAA, RCRA, etc.) as applicable:

Rush (Pre-approval required): 2 Day 3 day 5 day Other_____

Date Results Requested:

Permit # as applicable:

Units for Reporting: ug/m³ PPBV mg/m³ PPMV

Field Information

Analyses Requested

Lab Use Only: Proj. Manager; AcctNum / Client ID:; Table #:; Profile / Template:; Prelog / Bottle Ord. ID: P1026203

* Matrix Codes (Insert in Matrix box below): Ambient (A), Indoor (I), Soil Vapor (SV), Other (O)

Customer Sample ID	Matrix *	Summa Canister ID	Flow Controller ID	Begin Collection Date	Begin Collection Time	End Collection Date	End Collection Time	Canister Pressure / Vacuum: Start Pressure / Vacuum (in Hg)	Canister Pressure / Vacuum: End Pressure / Vacuum (in Hg)	PUF / FILTER: Duration (minutes)	PUF / FILTER: Flow Rate m³/min or L/min	PUF / FILTER: Total Volume Sampled m³ or L	TO-15 Summa				Sample Comment
SG-7	SV	8507	~~8507~~ 10989	7/22	947	7/22	953	-29	-4	6		1L	X				L1759 979581
SG-8	SV	9994	20341	7/22	956	7/22	1002	-29	-2	6		1L	X				01
SG-10	SV	029158	11945	7/22	10:14	~~7/22~~ 7/22 ~~10:19~~	10:19	-29	-3	5		1L	X				03

Sample Receipt Checklist

COC Seal Present/Intact: Y N — Airs
COC Signed/Accurate: Y N — Size: 3 1L ___ 6L ___ 1.4L
Bottles arrive intact: Y N — Tage Color: G__ W 3 P__ B__
Correct bottles used: Y N — Tubing ___ Shunt ___

Unused:

T/P#:

Customer Remarks / Special Conditions / Possible Hazards:

Collected By: Christine Weer
Printed Name: Christine Weer
Signature: Christine Weer

Additional Instructions from Pace®:

Coolers: Thermometer ID: Correction Factor (°C): Obs. Temp. (°C): 4.0 Corrected Temp. (°C):

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Christine Weer / Apex Companies, LLC	7/23/24 0900		
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time: 7/24 0900

Tracking Number: 1241 0723 3799

Delivered by: In- Person Courier FedEx UPS Other

Page: 1 of: 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/