Oregon Department of Environmental Quality

Former City Texaco Station Project Report

200 North Main Street, Toledo, Oregon

LUST #21-97-4123

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State of Oregon Department of Environmental Quality

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Prepared for:

State of Oregon Department of Environmental Quality

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Abbreviations and Acronyms

µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
ACTenviro	ACTenviro/Advanced Chemical Transport, LLC
APS	Applied Professional Services, Inc.
BB&A	BB&A Environmental, Inc.
BAP Eq	total benzo(a)pyrene equivalents
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and total xylenes
cPAH	carcinogenic polycyclic aromatic hydrocarbon
COPC	chemical of potential concern
CSM	conceptual site model
c-DCE	*cis*-1,2-dichloroethene
t-DCE	*trans*-1,2-dichloroethene
DEQ	Oregon Department of Environmental Quality
DOT	U.S. Department of Transportation
EDB	1,2-dibromoethane
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
GSI	GSI Water Solutions, Inc.
HASP	Health and Safety Plan
HPAH	high molecular weight polycyclic aromatic hydrocarbon
IDP	Inadvertent Discovery Plan
IDW	investigation-derived waste
LOF	locality of the facility
LUST	leaking underground storage tank
MDL	method detection limit
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MRL	method reporting limit
msl	mean sea level
OAR	Oregon Administrative Rule
OWRD	Oregon Water Resources Department
Pace	Pace Analytical National
PAH	polycyclic aromatic hydrocarbon
PPE	personal protective equipment
PWS	public water system
QAPP	Quality Assurance Project Plan
QC	quality control

RBC	risk-based concentration
SHPO	State Historic Preservation Office
T&E	threatened and endangered
TCE	trichloroethene
TPH	total petroleum hydrocarbons
UST	underground storage tank
VI	vapor intrusion
VOC	volatile organic compound

Executive Summary

In January and February 2024, GSI Water Solutions, Inc. (GSI), performed investigation activities at the former City Texaco Station project site (the "site") in Toledo, Oregon (Figure 1). The purpose of the investigation was to further assess subsurface conditions at the site and to evaluate the potential risks posed by chemical contamination to human health or the environment. A summary of this Project Report is presented below. Please refer to the main body of this report for a detailed discussion of activities and results.

- The site is located at 200 North Main Street in downtown Toledo, Oregon (Figure 1). The site is currently a parking lot that serves City Hall and the nearby neighborhood (Figure 2). Subsurface soils at the site consist of a clayey silt, sometimes with coarse sand and/or gravel component, to 15 feet below the ground surface (bgs). The shallow groundwater table was encountered between 2.8 and 11.5 feet bgs (Table 1). Shallow groundwater is anticipated to flow downslope to the west towards Depot Creek.
- In 1936, the Texaco Master Service Station was built on the site property. The station was either reconstructed or reconfigured in approximately 1959 and operated to approximately 1982. The City of Toledo acquired the site in 1992. In 1997, the station was demolished, and five USTs decommissioned by removal. After removal of contaminated soil, samples from the excavation limits were analyzed for total petroleum hydrocarbons (TPH), with only 6.8 milligrams per kilogram (mg/kg) gasoline being detected in a sample from the northernmost sidewall.
- To confirm the extent and magnitude of residual petroleum contamination at the site, GSI completed six push probes and two soil vapor points (Figure 2). Selected soil and groundwater samples were analyzed for TPH, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals (Table 2). Relatively high gasoline concentrations (565 to 689 mg/kg) were detected around the former gasoline UST excavation. Oil-range contamination was also present, with 3,940 mg/kg being detected in Probe P2. Groundwater around the former gasoline UST excavation also had gasoline- and diesel-range TPH, with 1,590 and 667 µg/L of each, respectively, being detected in downgradient Probe P5. PAH and VOC detections in soil and groundwater were minor, and metals were consistent with background concentrations. Soil vapor data showed low-fraction TPH and VOC concentrations by the commercial building, including the presence of chlorinated VOCs. Analytical results from this investigation and previous environmental activities are listed in Tables 3 through 10, with Figures 3 through 5 showing soil, soil vapor, and groundwater results for TPH and selected contaminants.
- Based on land and beneficial water use determinations, a conceptual site model was developed to identify potentially complete exposure pathways whereby contamination might result in exposure to human receptors, specifically off-site residents, off-site occupational workers, and future occupational, construction, and excavation workers (Figure 6). Ecological receptors were not identified as the site is mostly paved. Chemical results were screened against risk-based concentrations (RBCs) for identified exposure pathways and receptors. RBC exceedances included: TPH as oil, benzo(a)pyrene, and carcinogenic PAHs in soil in Probe P2 for residential direct contact; TPH as gasoline and/or diesel/oil in groundwater in four probes for residential vapor intrusion (VI); TPH as gasoline in groundwater from Probe P2 for occupational VI; and six VOCs in soil vapor samples above chronic VI RBCs for residential and commercial building uses, with trichloroethene (TCE) in sample SV2 exceeding acute VI RBCs.
- Further review of the soil data indicated that it would not pose an unacceptable risk to people. The presence of VI RBC exceedances in groundwater and soil vapor indicates that VI could pose concerns to off-site residences, off-site commercial buildings, and if the site were redeveloped, an on-site building. The primary concern is for VI to pose an unacceptable risk to off-site occupational workers in the Toledo City Hall building on the north side of the site, particularly as TCE exceeds its acute VI RBC for commercial buildings. VI concerns for other buildings in the area are less as they are located further away and attenuation of any contaminants in soil vapor would be anticipated before reaching them.

- Based on the findings of this report and the potential for VI to surrounding buildings (particularly Toledo City Hall), GSI recommends performing a VI investigation to gather additional data to evaluate the VI pathway. This investigation would likely include soil vapor and/or sub-slab vapor sampling, fixed gas measurements, and analysis for low-fraction TPH (i.e., gasoline), VOCs, and diesel-range TPH.

1 Introduction

This Project Report presents the results of investigation activities completed in January and February 2024 at the former City Texaco Station leaking underground storage tank (LUST) site #21-97-4123 in Toledo, Oregon (Figure 1). The work was completed by the Oregon Department of Environmental Quality (DEQ) and is funded by the Comprehensive Environmental Response, Compensation, and Liability Act Section 128(a) State and Tribal Response Program-Infrastructure, Investment, and Jobs Act. GSI Water Solutions, Inc. (GSI), prepared this Project Report for DEQ under Task 6 of Task Order 065-23-12.

1.1 Purpose

In 1997, five underground storage tanks (USTs) were decommissioned by removal at the site. Petroleum releases were evident, and contaminated soil was excavated. After excavation, sampling of soil and water from the UST excavations detected relatively low concentrations of petroleum hydrocarbons. The purpose of this project was to confirm the extent and magnitude of residual petroleum contamination at the site by obtaining and completing chemical analyses on soil, soil vapor, and groundwater samples. Analytical results would be screened against DEQ risk-based concentrations (RBCs) to assess whether contamination at the site poses unacceptable risks to human health or the environment.

1.2 Scope of Work

To accomplish the objectives above, GSI performed site investigation activities in general accordance with the scope of work described in the January 23, 2024, Former City Texaco Station Work Plan (GSI, 2024b). These activities consisted of the following tasks.

- Advancing six push probes with temporary groundwater monitoring wells to collect soil and groundwater samples.
- Obtaining two soil vapor samples from vapor sampling points near the offsite building.
- Managing investigation-derived waste (IDW).
- Performing land and beneficial water use determinations and an ecological scoping evaluation to develop a conceptual site model (CSM) for the site.
- Analyzing selected soil, soil vapor, and groundwater samples for petroleum products and associated chemical constituents.
- Preparing this Project Report discussing the above activities, the analytical results, and the potential risks posed by chemical contamination at the site via exposure pathways identified in the CSM.

1.3 Limitations

This Project Report has been prepared for DEQ. Work for this project was performed in accordance with generally accepted professional practices relating to the nature of work completed at the same or similar localities. It is intended for the exclusive use of DEQ and for specific application to the site. No other warranty, express or implied, is made.

2 Background

This section presents a description of the site, its physical setting, and results of previous environmental activities. Information about the site was provided by DEQ, readily available information from internet sources, and GSI's activities at the site. References are provided in Section 9.

2.1 Site Location and Description

The former City Texaco Station is located at 200 North Main Street in Toledo, Oregon, on the northeast corner of the intersection of North Main Street and NE 1st Street (Figures 1 and 2). The site property (Map ID 11-10-17-BB-0-000 tax lot 11500) covers approximately 0.22 acres and is situated in the NW1/4 of the NW1/4 of Section 17, Township 11 South, Range 10 West, Willamette Meridian. Adjacent properties consist of City Hall (to the north), commercial buildings (to the west, southwest, and south), and residences (to the south, southeast, and east).

The site is currently a paved parking lot that serves City Hall and the nearby neighborhood. A retaining wall with mural is present along the east side. In 1936, the Texaco Master Service Station was built on the site property (Toledo History Center, 2023). Based on historical documentation, the station building was either reconstructed or reconfigured in approximately 1959. The station likely closed in approximately 1982 as UST decommissioning documentation indicates this was the last year of the USTs use (Statewide Environmental Services [SES], 1997b). In 1992, the City of Toledo acquired the site property (Lincoln County Assessor, 2024). In 1997, the station was demolished, and five USTs decommissioned by removal (SES, 1997b).

2.2 Physical Setting

The following discussion of the physical setting of the site and vicinity is based on Google Earth imagery, topographic maps, geologic maps, and exploration logs from site investigations and the Oregon Water Resources Department (OWRD) database (OWRD, 2024).

Topography. The site property is a level parking lot that was historically excavated into the west-facing slope of a north-south trending ridge between the Depot Slough (to the west) and Ollala Slough (on the east side of the ridge). An upslope retaining wall is present on the east side of the site. The site is at an elevation of approximately 52 feet above mean sea level (msl), with the ridge rising to approximately 200 feet msl to the east. To the west, the slope drops to approximately 12 feet msl by the Depot Slough. The Depot Slough flows southward about a half mile to its confluence with the Yaquina River.

Geology. Push probe explorations for this investigation generally encountered clayey silt, sometimes with coarse sand and/or gravel component, to 15 feet ground surface (bgs), the maximum depth of the probes. In Probe P6 (Figure 2), medium sand was encountered from 2.5 to 8 feet bgs suggesting that sand was used as backfill for the UST excavation. Nearby OWRD logs (LINC 50936 and LINC 51106) at the same elevation record sandy clay, sandy silt, and silty sand to 21.5 feet below ground surface (bgs). Further downslope, silty sand and sand were noted to 24 feet bgs (LINC 50385). Bedrock in the vicinity of the site is likely marine siltstone and sandstone of the Yamhill Formation (Snavely, et al., 1976)

Hydrogeology. Shallow groundwater was encountered during the field investigation at varying depths that stabilized between 2.8 and 11.5 feet bgs (Table 1). During UST decommissioning activities in August 1997, groundwater was encountered at approximately 10 feet bgs, although it was later reported as being at 6 feet bgs (SES, 1997). Nearby OWRD logs record shallow groundwater levels at 7.5 feet bgs in March 2000 (LINN 51106) and 11 feet bgs in October 1991 (LINN 50385). These shallow groundwater levels could represent the localized and/or seasonal fluctuation in groundwater levels between about 3 to 12 feet bgs. Shallow groundwater is anticipated to flow downslope to the west towards Depot Creek.

2.3 Previous Environmental Activities

In August 1997, SES decommissioned five USTs at the site (SES, 1997b). Four USTs were removed from the southwest corner of the property: one 6,000-gallon gasoline UST, two 4,000-gallon gasoline USTs, and one 1,000-gallon heating oil UST. A 550-gallon used oil UST was also removed from the north end of the property. Figure 2 shows the approximate former UST locations (based on a crude hand sketch). The USTs were in poor condition with rust and holes. Petroleum contamination was observed, and a release was reported, with DEQ assigning the site as LUST #21-97-4123. The gasoline UST excavation was over-excavated to 10 to 11 feet bgs. The UST excavations were backfilled with soil and ¾-inch rock.

SES transported approximately 640 cubic yards of gasoline-contaminated soil for off-site aeration treatment (SES, 1997b). SES (1997a) reported that the maximum detected gasoline concentration of this soil was 2,460 milligrams/kilogram (mg/kg). Another 142.48 tons of soil from the used oil excavation was disposed of at the Valley Landfills in Corvallis, Oregon (SES, 1997b). Analyses for profiling this soil detected 2,470 mg/kg total petroleum hydrocarbons (TPH) as diesel/oil, but no TPH as gasoline, volatile organic compounds (VOCs), polychlorinated biphenyls (PCBs), and leachable cadmium, chromium, or lead (laboratory data in SES, 1999).

Soil samples were obtained from the excavation sidewalls from both excavations and from the bottom of the used oil UST excavation. Figure 2 shows the sample locations, with Figure 3 showing the analytical results. Each soil sample from the gasoline UST excavation was analyzed for either hydrocarbon identification or TPH as gasoline. The only detection was 6.8 mg/kg gasoline in a sample from the northernmost sidewall. A water sample from the gasoline excavation was also tested with results detecting only 7.2 micrograms per liter (µg/L) benzene; results did not detect TPH as diesel/oil, polycyclic aromatic hydrocarbons (PAHs), other gasoline-associated VOCs, or dissolved lead. Samples from the used oil UST excavation were analyzed for TPH as diesel/oil (EPA Method 418.1) with results only detecting TPH in the north sidewall sample at 49 mg/kg. All results can be found in SES (1997b).

3 Land and Water Use Determinations

In evaluating the possible risk the site poses to human health or the environment, land and beneficial water uses were identified at the site property and surrounding area based on existing and readily available information (e.g., zoning maps) and a land and water use survey per DEQ guidance (DEQ, 2017a,c). The results of this review are presented below, with survey documentation provided in Appendix A.

3.1 Locality of the Facility

The locality of the facility (LOF) is any point where a human or an ecological receptor contacts, or is reasonably likely to come into contact with, chemical constituents from the site. The LOF considers the likelihood of the chemical constituents migrating over time. Based on environmental activities at the site, residual petroleum contamination is present in soil and groundwater around the former gasoline UST excavation. Low fraction TPH and VOCs were also detected in soil vapor samples on the north portion of the site. To encompass potential migration of contaminants in groundwater and soil vapor, the LOF for the site was set to include the entire site and adjacent portions of North Main Street, NE 1st Street, and City Hall. The LOF is shown in Figure 2. Further investigation, however, may result in expansion of this LOF to the west (for groundwater transport) and north (through VOC migration).

3.2 Land Use

The site property and surrounding area are zoned Commercial (City of Toledo, 2023). This zoning designation is intended to provide for retail and service commercial uses and allows for compatible uses including public, civic, and institutional uses (City of Toledo, 2024a). Residential use above the commercial main floor, separate and distinct from the commercial main floor. The City of Toledo comprehensive plan is the same. For the LOF, the site property has historically been commercial (a gasoline station). Its current use is a parking lot that serves City Hall and the nearby neighborhood.

As part of our site activities, GSI filled out DEQ's ecological scoping checklist to assess the site for ecological habitat and receptors and the likelihood for contaminant exposures (DEQ, 2020). Appendix A includes the ecological scoping checklist. Onsite personnel evaluated the site based on the checklist and concluded that it did not have any ecological habitat as the site is essentially paved with some surrounding landscaped areas with a few trees and bushes. The closest surface water is the Depot Slough located approximately 830 feet to the southwest. This slough is listed by the National Wetlands Inventory as estuarine and marine deepwater habitat (U.S. Fish & Wildlife Service, 2024). A freshwater emergent wetland is identified approximately 630 feet west-northwest of the site but is occupied by a baseball field. As the site is paved and on a sloping hillside, no wetlands are located in or near the LOF.

3.3 Water Use

To determine current and reasonably likely future water uses within and adjacent to the LOF, GSI completed a beneficial water use determination by reviewing groundwater use in the area, and conducting a water use survey of properties adjacent to the site. The results of our determination indicate groundwater is not used within the developed portion of the City of Toledo and that the City of Toledo has a municipal water system that provides water to the site and surrounding area.

Water Well Search. GSI conducted an OWRD database search for water well logs within Sections 7, 8, 17, and 18 of Township 11 South, Range 10 West, Willamette Meridian (OWRD, 2024). A total of 46 water well records were listed in these four sections (OWRD, 2024; Appendix A). GSI was able to locate most of the wells to their general location based on information provided on each well records. Water wells are present

on the outskirts of town and beyond where municipal water is not available. The closet well that GSI located was LINC 126 at 550 NE Slope Road in Toledo, which is approximately a half mile to the northeast and on the east slope side of ridge (Appendix A includes this well record).

Water Use Survey. In February 2024, GSI inquired of nearby property owners regarding the source of water to their properties. One property representative was interviewed, who indicated that water was provided by a municipal source. For properties where no tenant or owner was present, mail-in questionnaires were left. One questionnaire was returned to GSI, which indicated a municipal water supply. Survey questionnaires are included in Appendix A.

City of Toledo Water Supply System. The City of Toledo owns and operates a municipal water system since the 1930s, providing water to residential, commercial, and industrial customers within the 2,630-acre Urban Growth Boundary (City of Toledo, 2024b). Water is derived from the Siletz River during the summer and Mill Creek during the winter. Water is treated by a conventional treatment plant consisting of chemical addition, rapid mix, dual-stage flocculation, sedimentation, and mixed-media gravity filtration. The City of Toledo has 1.4 million gallons of treated water storage provided by two steel storage tanks. The municipal water system consists of over 35 miles of piping.

Summary. GSI's water use determination indicates that the site and adjoining properties are served by the municipal water system. Groundwater is used at and beyond the City of Toledo limits where municipal water is not available or was not available when the property was developed. No water wells were identified within a half mile of the site. For the LOF, groundwater is not expected to be used due to municipal water being readily available.

4 Site Investigation Activities

On January 31 and February 1, 2024, GSI performed investigation activities to further assess subsurface conditions at the former City Texaco Station project site. Activities included completing six push probe explorations for soil and groundwater samples and obtaining soil vapor samples from two locations. The discussion below summarizes the field activities. Appendix B presents representative photographs of the field activities.

4.1 Preparatory Activities

Prior to field work, several preparatory activities were performed. These activities are discussed below.

Site-Specific Health and Safety Plan. GSI prepared a site-specific Health and Safety Plan (HASP) for the investigation activities in general accordance with the Occupational Safety and Health Act and the Oregon Administrative Rules (OARs). GSI personnel had a copy of the HASP for their use during the field activities and also conducted safety briefings with the drilling subcontractor prior to initiating field activities each day.

Endangered Species Act Information. GSI gathered and reviewed federal and state threatened and endangered (T&E) species information for the Endangered Species Act (ESA) review. T&E species information was obtained from the Oregon Biodiversity Information Center for an area within 2 miles around the site and the U.S. Fish and Wildlife Service's Planning and Consultation database. Additionally, GSI contacted the Oregon Department of Fish and Wildlife and appropriate Tribal representatives for their knowledge of T&E species within the general site vicinity. A site visit by GSI on November 1, 2023, also provided observations that the site had little to no habitat for ecological species. The result of this work was documented in a letter (GSI, 2024a) that was used to show that the investigation activities would not have an impact on T&E species or their preferred habitat. DEQ provided this letter to the U.S. Environmental Protection Agency (EPA) for a "No Effect" determination.

Subcontractor Solicitation. Investigation activities required GSI to subcontract for underground utility locating, drilling, and IDW disposal. GSI obtained quotes from private utility locators and, based on cost, responsiveness, and equipment, Applied Professional Services, Inc. (APS), of Portland, Oregon, was selected. GSI also competitively solicited drilling and IDW disposal services, with successful bidders respectively including BB&A Environmental, Inc. (BB&A), of Eugene, Oregon, and ACTenviro/Advanced Chemical Transport, LLC (ACTenviro), headquartered in San Jose, California. GSI executed subcontracts with APS, BB&A, and ACTenviro prior to each firm's activities at the site.

Property Access and Work Notification. In October 2023, DEQ obtained an access agreement with the City of Toledo (the property owner) to conduct investigative activities at the site. GSI also notified a representative of the City of Toledo in advance of conducting work on the site property.

Underground Utility Location. GSI contacted the Oregon Utility Notification Center before mobilizing to the site, who in turn notified the various utilities in the area to mark any underground installations in the vicinity of the site. GSI also had APS check proposed probe locations and mark utilities at and near the site prior to beginning field activities.

Cultural Resource Consultation. As assessment activities included soil sampling, GSI consulted with the State Historic Preservation Office (SHPO) to assess whether cultural or historical resources are likely to exist at the site. SHPO responded that it concurred that no historical properties would be affected by the proposed investigation but did advise preparing an Inadvertent Discovery Plan (IDP) and consulting with the appropriate Tribes (SHPO, 2024). GSI prepared an IDP that presented standard operating procedures in the

event of an inadvertent discovery (GSI, 2024c). DEQ also notified the appropriate Tribes regarding the planned investigation. No historical or cultural artifacts were observed during our investigation activities.

4.2 Push Probe Explorations and Sampling

On January 31 and February 1, 2024, BB&A completed six push probes on the site to assess subsurface soil and groundwater conditions. Explorations were performed in accordance with OWRD regulations (OAR 690-240). GSI representatives were present to observe the push probe activities, document subsurface conditions, and collect samples. Appendix C includes a detailed discussion of our field investigation procedures and exploration logs.

4.2.1 Locations

Figure 2 shows the six push probe locations to further assess the extent of subsurface contamination around the former UST excavations. The probes were named starting with P7 to continue the naming convention of the previous environmental investigation. Descriptions of the locations are as follows. No adjustments were made from the target locations in the Work Plan (GSI, 2024b).

- **P1:** This probe was completed to further assess subsurface conditions downgradient of the former pump island. TPH was not detected in the west sidewall sample in this area (sample #5 on Figure 3) but was obtained at 5 feet bgs, above the groundwater table.
- **P2:** This probe was completed upgradient (east) of the former gasoline UST excavation to assess subsurface conditions in this area.
- **P3:** This probe was completed in the central portion of the site and northeast of the former gasoline UST excavation to assess subsurface conditions in this area.
- **P4:** This probe was completed downgradient of the former used oil UST.
- **P5:** This probe was completed to assess subsurface conditions on the downgradient (west) side of the former UST excavation.
- **P6:** This probe was completed south of the former UST excavation to further assess subsurface conditions along the south side of the former UST excavation.

4.2.2 Sampling Activities

Sampling was conducted according to the Work Plan (GSI, 2024b) and DEQ's UST Quality Assurance Project Plan (QAPP; DEQ, 2016).

Exploration Depth and Soil Sampling. All probes were completed using a direct-push drill rig. The probes were advanced to at least 5 feet below the groundwater table at the time of drilling. Probes were generally completed to 15 feet bgs, except for Probe P6 which was completed to 10 feet bgs. Groundwater levels in Probes P3 and P5 later rose to shallower levels when groundwater sampling was conducted.

Continuous soil cores were obtained using a 5-foot-long soil sampler, except for the first 5 feet of Probe P5 which was completed by hand augering due to a potential stormwater utility. Upon retrieval, each core was opened for sampling, field screening, and description of lithology and other observations (e.g., odor, staining). Hand-augered cuttings were also field screened and described. Soils consisted of clayey silt, sometimes with coarse sand and/or gravel component. Substantial field indications of contamination (i.e., odors and photoionization detector readings) were noted in Probe P3 from 3 to 5 feet bgs and in Probe P5 from 7 to 10 feet bgs. Core intervals, recovery, field screening results, and lithologic observations are shown on the logs in Appendix C.

If recovery was sufficient, two soil samples were collected from each core representing material from the upper and lower portions of the core. Sometimes one sample obtained from the first 5-foot drive below the ground surface to avoid surface materials (e.g., asphalt pavement). Soil samples were transferred from the core into sampling jars. Soil samples for VOC analysis were collected using EPA Method 5035 procedures, which utilizes a plastic plunger to transfer 5 grams of soil into methanol-preserved containers. Sample intervals are shown on the logs in Appendix C and summarized in Table 2.

Groundwater Sampling. Shallow groundwater was sampled from probes using temporary well materials. A polyvinyl chloride riser casing with a 5 feet of slotted screen at the bottom was placed in the probe holes to serve as a temporary well point for sampling. The screen was positioned to bridge 1 foot of screen above the static groundwater level. The depth to groundwater was measured to the nearest 0.1 foot using an interface probe. The shallow groundwater table ranged from 2.8 to 11.5 feet bgs.

Groundwater sampling was conducted using a peristaltic pump and low-flow sampling techniques. During purging, groundwater field parameters (pH, electrical conductivity, temperature, dissolved oxygen, and oxidation-reduction potential) were measured. At least three casing volumes were removed from each temporary well. A sheen was observed on water purged from Probes P5 and P6. Final field parameter measurements are presented in Table 1.

After purging, a groundwater sample from each probe well was collected using the same equipment used for purging. Groundwater was pumped directly into sample containers, with all VOC containers being fully filled with no headspace. Groundwater was still slightly turbid when sampling was conducted. For dissolved metals, groundwater was field filtered using a 0.45-micron filter. A duplicate groundwater sample (P1-D) was obtained from Probe P1 but was mistakenly not analyzed.

4.2.3 Completion

The push probes were abandoned in accordance with OWRD regulations. Abandonment consisted of filling the probe hole with granular bentonite and hydrating with water. Cold patch asphalt was placed on top of the bentonite to match the surrounding grade. Excess soil and purged groundwater from the probes were placed in a separately labelled and secured U.S. Department of Transportation (DOT)-approved drums pending disposal. Final sample locations were recorded with a global positioning system unit.

4.3 Soil Vapor Sampling

On February 1, 2024, BB&A installed vapor sampling points SV1 and SV2 near the Toledo City Hall building bordering the north side of the site (Figure 2). A third vapor point (SV3) was also installed along the southern property boundary by Probe P-2; however, during sampling, water was pulled up into the tubing by the Summa canister and this location could not be sampled.

Each sampling point was constructed in a push probe completed to a depth of 5 feet. BB&A constructed each vapor sampling point by placing an 0.25-inch tubing with aquarium filter stone at 4.5 feet bgs within the center of a 1-foot sand pack. The remainder of each borehole was filled with unhydrated bentonite with a hydrated bentonite seal at the surface. When sampling each point, GSI placed a helium shroud over the borehole. After purging and seal testing, the sample point was allowed to equilibrate for 20 minutes prior to sample collection into a 1-liter Summa canister. A duplicate sample was attempted at sampling point SV2 but, as with point SV3, water as pulled up into tubing and the sample could not be collected.

Appendix C includes a detailed discussion of the sampling procedure. After sampling, the tubing from the sampling point was pulled, and the surface finished with a cold asphalt patch to match preexisting conditions.

4.4 Decontamination

Clean, dedicated sampling equipment (e.g., disposable gloves, groundwater sampling tubing) were used at each sampling location and discarded after use. Cleaning of non-disposable items consisted of washing in a non-phosphate detergent solution, rinsing once with distilled water, and rinsing once with deionized water. Push probe tooling was brushed and decontaminated with detergent solution before and after each location. To assess the adequacy of decontamination of sampling equipment, a rinsate blank was collected for analysis by pouring deionized water over a stainless-steel sampling spoon into sample containers.

4.5 Investigation-Derived Waste Management

IDW consisted of excess soil cuttings from push probes, purged groundwater from groundwater sampling, decontamination water, sampling supplies (e.g., used tubing), and personal protective equipment (PPE). Disposable sampling supplies, PPE, and other refuse were disposed of as solid waste. Soil and water were placed into separate DOT-approved 55-gallon steel drums and stored on the site while awaiting waste profiling and pickup. In total, one drum for IDW soil and one drum for IDW water were generated. A sample was obtained from each drum for chemical analysis for profiling. IDW was profiled as non-hazardous. ACTenviro picked up the IDW from the site on March 29, 2024, for transport to Patriot Environmental Services in Portland, Oregon, for soil disposal at a Subtitle D landfill and for water treatment prior discharge to the municipal sewer

5 Chemical Analyses and Results

GSI submitted soil, soil vapor, and groundwater samples to Pace Analytical National (Pace) of Mt. Juliet, Tennessee, for chemical analysis under State Price Agreement #8903. Testing was completed on a standard turnaround time. Analyses were conducted in accordance with DEQ's UST Program QAPP (DEQ, 2016) and included testing of field quality control (QC) samples such as blanks and duplicates.

5.1 Analyses Performed

Gasoline releases were reported from the UST system in the southern portion of the site property, with minor detections of TPH as gasoline in one soil sample and benzene in excavation water. Soil from the used oil UST excavation had one detection of TPH as diesel/oil. Chemicals of potential concern (COPCs) include petroleum products and their associated chemical constituents, additives, or contaminants (e.g., benzene, PAHs, and lead and other metals). The analytical methods that were used to test for these COPCs are as follows:

- TPH as gasoline by Northwest Method NWTPH-Gx
- TPH as diesel/oil by Northwest Method NWTPH-Dx
- VOCs by EPA Method 8260D
- Low-fraction TPH and VOCs by EPA Method TO-15 (for soil vapor)
- PAHs by EPA Method 8270E-SIM
- Cadmium, chromium, and/or lead by EPA Method 6020B

Table 2 presents a summary of the analytical program, including the rationale for sample selection and the chemical analyses performed on each sample. Further discussion of the analytical program is as follows.

Soil Samples. One to three samples were selected from each probe for chemical analysis. Samples selected were based on field indications of contamination, to assess the vertical extent of suspected contamination, and to assess surface soils (0 to 3 feet bgs). Selected samples were analyzed for TPH as gasoline and TPH as diesel/oil, with many of these samples also analyzed for VOCs and PAHs. Five samples were analyzed for cadmium, chromium, and lead. A field duplicate sample (P3-S2-D) from Probe P3 was analyzed for the same analyses as the primary sample (P3-S2).

Groundwater Samples. Groundwater samples were analyzed for TPH as gasoline, TPH as diesel/oil, VOCs, PAHs, and dissolved lead, except for groundwater from Probe P4 (downgradient of the former used oil UST) which was also analyzed for dissolved cadmium and chromium.

Soil Vapor Sample. Soil vapor samples SV1 and SV2 were analyzed for low-fraction TPH (i.e., total gasoline-range hydrocarbons) and VOCs.

IDW Samples. The IDW soil and water samples underwent profiling analysis for TPH as gasoline, TPH as diesel/oil, VOCs, and total cadmium, chromium, and lead.

QC Samples. Besides the soil field duplicate, the rinsate blank collected during decontamination (Section 4.4) was analyzed for TPH as gasoline, TPH as diesel/oil, and VOCs. A trip blank that accompanied sample containers with the cooler was analyzed for VOCs.

5.2 Chemical Results

Upon receipt of analytical results from Pace, the chemical results underwent data validation. A copy of the laboratory report and the data validation report are included in Appendix D. Chemical results were compiled

in summary tables. Soil data from this investigation and previous UST decommissioning activities are listed in Tables 3 through 5; groundwater data are listed in Tables 6 through 8; and soil vapor results are in Table 9. A brief discussion of results follows. A risk screening of the data against DEQ RBCs, which are included in the tables, is provided in Section 7.

5.2.1 Soil Chemical Results

A summary of the soil results on probe samples, including field duplicate, from this investigation is described below. Figure 4 presents TPH results from this investigation as well as COPCs that had RBC exceedances after screening in Section 7.

TPH. TPH as gasoline was detected in Probes P3, P4, and P5, with high concentrations present in sample P3-S2D from 3 to 5 feet bgs (689 mg/kg) and in sample P5-S3 from 8 to 10 feet bgs (565 mg/kg). TPH as oil was detected at higher concentrations in sample P2-S3 at 5 to 10 feet bgs (3,940 mg/kg) and in sample P3-S3 from 5 to 7 feet bgs (415 mg/kg). These detections are upgradient (Probe P2) and downgradient (Probe P5) of the former gasoline UST excavation and in the central portion of the site (Probe P3).

VOCs. VOCs were detected in all samples analyzed (Table 4). Except for methylene chloride, VOCs detected were typical of gasoline. The concentrations were relatively low, with individual VOCs being generally detected at less than 0.1 mg/kg. Only in sample P1-S3 (5 to 7 feet bgs) and P5-S3 (8 to 10 feet bgs) were individual VOCs detected between 0.1 and 0.5 mg/kg (total xylenes and *n*- and *sec*-butylbenzenes, respectively). Methylene chloride was also detected in five samples with estimated concentrations ranging from 0.0125 to 0.0867 mg/kg. These detections likely reflect laboratory contamination as methylene chloride is used as an extractant in laboratories, the concentrations are consistent, and methylene chloride is not a COPC for this site.

PAHs. PAHs were detected in six of the eight samples analyzed (Table 5). PAHs in two samples in Probe P2 (P2-S1 and P2-S3) routinely had individual PAH concentrations greater than 0.1 mg/kg and included high molecular weight PAHs (HPAHs) which generally consist of carcinogenic PAHs and are found in heavier oil products such as used oil or asphalt. Sample P2-S3 was observed to have black angular gravel which might represent buried asphalt pavement. Similar PAH compositions at lower concentrations were also present in samples P4-S3 and P6-S1.

Metals. Cadmium, chromium, and lead were detected at concentration below their respective published natural background concentration (Table 3; DEQ, 2018). For each metal, concentrations were consistent among the samples analyzed except cadmium and lead in sample P2-S1 was slightly elevated when compared to the other samples.

5.2.2 Groundwater Chemical Results

A summary of the groundwater results from this investigation is described below. Figure 4 shows the results from this investigation for TPH; benzene, toluene, ethylbenzene, and total xylenes (BTEX); naphthalene; and dissolved metals.

TPH. TPH results are listed in Table 6. TPH as gasoline was detected in all groundwater samples except from Probe P4. The highest concentrations were present in Probes P5 and P6 adjacent to the former gasoline UST excavation at 1,590 and 512 µg/L, respectively. TPH as diesel was detected in four probes, with Probes P5 and P6 having the highest at 667 and 843 µg/L, respectively. TPH detections in groundwater are not surprising as sheen was observed during purging of Probes P5 and P6. TPH as oil was also present at less than 300 µg/L in Probes P2, P3, and P6.

VOCs. Gasoline-associated VOCs were detected in all groundwater samples analyzed (Table 7). Overall, VOCs are infrequent and at relatively low concentrations. Total xylenes were elevated in Probes P1 through P4 (1.47 to 5.58 µg/L), and *n*-propylbenzene and *sec*-butylbenzene were elevated in Probes P5 and P6 (1.13 to 5.16 µg/L). Acetone was detected at 28.2 µg/L in groundwater from Probe P3.

PAHs. PAHs were detected in groundwater samples from Probes P2, P5, and P6 around the former gasoline UST excavation (Table 8). Individual PAH concentrations were less than 1 µg/L except in Probe P5 where acenaphthene, fluorene, and naphthalene were detected between 1 and 2 µg/L.

Metals. Dissolved cadmium, chromium, and lead were not detected in the groundwater samples from the probes (Table 6).

5.2.3 Soil Vapor Results

Table 9 summarizes the low-fraction TPH and VOC results on soil vapor samples SV1 and SV2. Figure 4 includes the TPH and BTEX results as well as COPCs that had RBC exceedances after screening in Section 7. Low-fraction TPH was detected at 25,600 µg/m^3 and 88,800 µg/m^3 in samples SV1 and SV2, respectively. BTEX compounds ranged from 12.1 µg/m^3 for benzene to 4,540 µg/m^3 for total xylenes. Twenty-six other VOCs were detected at concentrations, most at less than 70 µg/m^3 each. There were, however, some higher detected concentrations as follows:

- *cis*-1,2-Dichloroethene (c-DCE) was present in SV1 at 432 µg/m^3
- *trans*-1,2-Dichloroethene (t-DCE) was present in SV1 at 157 µg/m^3
- n-Hexane was present in SV2 at 430 µg/m^3
- Propene was present in SV1 and SV2 at 269 and 270 µg/m^3, respectively.
- Trichloroethene (TCE) was present in SV1 at 1,800 µg/m^3

The presence of TCE and its degradation products, c-DCE, t-DCE, and vinyl chloride, in sample SV1 is unexpected as these compounds were not detected in soil or groundwater samples during this investigation or in excavated soil from the former used oil UST excavation (SES, 1999). TCE and c-DCE were also detected in sample SV2, located approximately 25 feet from sample SV1. The other VOCs detected at higher concentrations are associated with petroleum releases.

5.2.4 Investigation-Derived Waste and Blank Samples

Analytical results on IDW and blank samples are listed in Table 10. For the IDW soil sample, TPH as oil, three VOCs, and chromium and lead (background concentrations) were detected. For the IDW water sample, TPH as gasoline, diesel, and oil, three VOCs, and total cadmium, chromium, and lead (likely due to turbidity) were detected. These results were sufficient for profiling the IDW for treatment and/or disposal (Section 4.6). No contaminants were detected in the rinsate blank, and no VOCs were detected in the trip blank (Table 9).

6 Conceptual Site Model

Based on the data gathered from sampling activities, the CSM for the site was developed and is shown in Figure 5. The CSM identifies site sources, potentially complete exposure pathways, and potential receptors. A discussion of each of the CSM elements is presented below, with an evaluation of whether contaminants present at the site pose an unacceptable risk to human health and the environment.

6.1 Sources and Extent of Contamination

The source of contamination at the site is the former USTs from the gasoline station that was present on the site from 1936 through approximately 1982. The USTs were removed in 1997, along with approximately 783 tons of contaminated soil. After excavation, samples from the excavation limits were analyzed with only 6.8 mg/kg gasoline in a sample from the northernmost sidewall (Figure 3).

This investigation found that contamination is still present in soil and groundwater. TPH as gasoline is present in soil at Probes P3 and P5 at 689 and 565 mg/kg, respectively, and TPH as oil present in soil in Probes P2 and P3 at 3,940 and 415 mg/kg, respectively (Table 1). The depth of soil contamination generally varies between 3 and 10 feet bgs and may be the result of different historical releases. The high TPH concentration in Probe P2, combined with the presence of HPAHs and field observations, suggests asphalt pavement is present at 7 feet bgs possibly the result of filling the UST excavation (note that the extent of excavations is based on a crude hand sketch). In groundwater, TPH as gasoline was present at 1,590 and 512 µg/L in Probes P5 and P6, respectively. From the investigation data, the area around and likely downgradient (west) of the former gasoline UST excavation is contaminated by TPH (VOCs and PAHs were relatively low).

Two soil vapor samples were collected near the Toledo City Hall building, and low-fraction TPH (i.e., gasoline) and VOCs were detected. Relatively higher petroleum VOC concentrations were detected in vapor point sample SV2, whereas sample SV1 had higher chlorinated VOC concentrations (i.e., TCE, c-DCE, and t-DCE). Because of these detections, off-site vapor migration is possible. The LOF was extended northward to account for this migration (Figure 2). Off-site vapor migration is currently not anticipated to the structures in other directions due to their distance from the site (over 50 feet) and, in the case to the east, a 30-foot gain in elevation. However, additional data would be needed to verify that no vapor migration is occurring.

6.2 Receptors and Exposure Pathways

Based on current and reasonably likely land and water use within the LOF and adjacent area, potential receptors to site contamination were identified. Potential exposure routes to these receptors were also identified. Possible receptors and potentially complete pathways are discussed below and are graphically illustrated in Figure 6.

6.2.1 Receptors

Currently, the site is occupied by a paved parking lot that serves City Hall and the nearby neighborhood. It is reasonably likely that this use will continue into the future. Potential receptors would be the off-site residents and occupational workers that park at the lot, as well as the off-site occupational workers that work within the Toledo City Hall building and the commercial building across North Main Street (i.e., downgradient to the west). Off-site residences are also present to the east and south across NE 1st Street. Infrastructure installation and replacement on the site would be performed by future excavation workers. If the site were redeveloped, future construction and excavation workers would be involved, and due to zoning, the likely use would be a commercial building with occupational workers.

The ecological scoping evaluation did not identify any ecological habitat at the site since it is mostly paved with only some surrounding landscaped areas with a few trees and bushes. The closest aquatic habitat is the Depot Slough, approximately 830 feet to the southwest, well outside the LOF. As such, exposure to terrestrial and aquatic receptors by site contaminants is not anticipated and further ecological evaluation is not needed.

6.2.2 Exposure Pathways

GSI evaluated various exposure pathways for human receptors based on DEQ's Risk-Based Decision Making for the Remediation of Contaminated Sites (DEQ, 2017b). Potential pathways considered include:

- Soil contamination that is ingested, inhaled, or directly contacted (collectively "direct contact").
- Uptake of contaminants from soil by biota and subsequent ingestion.
- Soil or groundwater contamination volatilizing to indoor or outdoor air, where it is inhaled.
- Soil contamination leaching to groundwater, where contaminants are ingested and/or volatilized.
- Groundwater contamination ingested or directly contacted (i.e., groundwater use).
- Contact with contaminated groundwater by construction or excavation workers.
- Groundwater or soil contamination migrating off the site, resulting in an exposure via dermal contact and/or incidental ingestion to contaminated water or soil.

Each of these pathways was evaluated based on GSI's current understanding of site conditions, including land and water uses within the vicinity. Evaluation results are summarized below.

Direct Contact with Soil. Direct contact with soil is divided into exposure to shallow soil (less than 3 feet bgs) versus deep soil (greater than 3 feet bgs). Chemical results on soil only detected TPH as diesel/oil in Probe P2 and PAHs in Probes P2 and P6. Asphalt pavement covers the parking area, so direct contact with soil by people parking in the lot does not occur. Direct contact would occur, however, to future construction or excavation workers redeveloping the property or modifying the infrastructure of the property. If soil were exposed, future occupational workers could possibly contact it.

Uptake of Contaminants in Soil by Biota. This pathway involves the update of contaminants in surface soil at the site by biota and the subsequent consumption by a higher tropic receptor. Currently the site is paved limiting forage opportunities. As such, this pathway is not complete.

Inhalation Pathways from Soil and Groundwater. Inhalation of contaminants can occur through the volatilization of lighter petroleum hydrocarbons (i.e., VOCs) from soil or groundwater, with VOCs migrating up into outdoor air or entering buildings (i.e., vapor intrusion). VOCs were detected in soil and groundwater beneath the site, as well as in soil vapor samples SV1 and SV2. As such, this pathway could be complete. VOCs could migrate off the site, with the Toledo City Hall being the closest structure. While VOCs may emerge into the outdoor air of the site, no or negligible exposure would occur to people parking their vehicles due to their short time on the site. Future redevelopment of the property for commercial use could result in exposures to occupational workers in a new building.

Leaching from Soil to Groundwater. This pathway involves both leaching of contaminants to groundwater and then the subsequent use of groundwater. The beneficial water use determination, however, found that groundwater is not currently used or reasonably likely to be used within or near the LOF due to the availability of municipal water. Therefore, this pathway is not complete.

Groundwater Use. This pathway consists of pumping groundwater to the surface where it may be ingested or used. The water use determination in Section 3.3 concluded that groundwater is reasonably unlikely to be used as municipal water is readily available within the LOF and the area. As such, this pathway is incomplete.

Groundwater Contact by Construction or Excavation Workers. Shallow groundwater table was encountered between 2.8 and 11.5 feet bgs at the site and chemical analyses on groundwater have generally detected TPH as gasoline or diesel. Construction and excavation workers could directly contact contaminated groundwater, thus resulting in a potentially complete pathway.

Migration of Contaminated Groundwater and/or Soil Off the Site. This pathway can involve contaminated groundwater and/or soil migrating off the site, whereupon receptors might be exposed through ingestion and/or dermal contact to contaminated water and/or soil. Contaminants have been detected in groundwater at the site (Tables 6, 7, and 8) and off-site migration was considered in determining the LOF. The LOF does not include any surface water bodies. Infiltration into stormwater piping could lead to a surface water body; however, the travel distance to the closest water body (830 feet to the Depot Slough) would result in volatilization of any VOCs and/or dilution from other infiltrating groundwater, thus reducing contaminants concentrations to negligible or undetectable levels. As such, this pathway is not complete. For soil, stormwater erosion is unlikely as the site is paved.

6.2.3 Conceptual Site Model Figure

Figure 5 shows the CSM for the site. The figure summarizes identified sources, pathways, and receptors for reasonably likely future site uses. Potentially complete exposure pathways for contaminants are indicated by an "X." These pathways include the following:

- Direct contact with shallow soil by future occupational workers, future construction workers, and future excavation workers.
- Direct contact with deep soil and groundwater by future construction workers and future excavation workers.
- Inhalation of VOCs by off-site residents, off-site occupational workers, and future on-site occupational workers that have volatilized from soil and/or groundwater and have migrated to indoor and/or outdoor air.
- Inhalation of VOCs by future construction workers and future excavation workers that have volatilized from soil and/or groundwater and have migrated to outdoor air.

7 Risk-Based Screening

To evaluate the potential risks posed by contamination at the site to human receptors, chemical data were screened against applicable RBCs for potentially and possibly complete pathways identified in Section 6.2.3. An exceedance of an RBC by a contaminant does not necessarily indicate an unacceptable risk is present, but further evaluation is warranted. Our screening evaluation of the data is presented below.

7.1 Screening Levels

Potential risks posed by contamination to human and ecological receptors at the site via the potentially complete pathways were evaluated by comparing chemical results to available RBCs. The various RBCs used for screening site data are explained below.

Human Receptors. DEQ has calculated RBCs for various exposure pathways and human receptors (DEQ, 2023, 2024b). Human receptors at and off the site include residents and occupational, construction, and excavation workers. If a DEQ RBC was not available, the EPA Regional Screening Level for residential or industrial soil exposure was used (EPA, 2024). For TPH, DEQ and EPA have not developed an RBC for oil-range hydrocarbons because of the diversity in composition of oil products and used oils. To provide a conservative approach for evaluating potential risks from TPH, GSI compared the summation of both diesel and oil results to diesel RBCs in this report. Because metals are naturally present in soil, only results that were detected above natural background concentration for Coast Range physiographic province (DEQ, 2018) were screened against its RBCs. Additionally, the terms "occupational," "commercial," and "industrial" convey the same type of receptor (an 8 hour/day exposure), are used interchangeably, and reflect the terminology of the source documents for the RBCs.

Data Reduction and Summations. Some RBCs apply to summations of groups of analytes. In general, totals were calculated by summing only detected concentrations and by summing all detected concentrations plus one half the method detection limit (MDL) value for non-detected results. In some cases, data validation raised non-detect values to the method reporting limit (MRL), which was adopted in these calculations. If no analytes were detected in a chemical class, the highest MDL or MRL value was used for the summation total. These summation rules were used for deriving a TPH as diesel/oil concentration.

For carcinogenic PAHs (cPAHs), total benzo(a)pyrene equivalents (BAP Eq) were also calculated based on the toxic equivalency factors in DEQ's Human Health Risk Assessment Guidance (DEQ, 2010). For each sample the concentrations of the seven cPAHs were multiplied by their respective toxicity equivalency factor and the above summation rules were applied to derive the total BAP Eq.

RBCs and MDLs. Samples were analyzed by standard analytical methods, with MDLs consistent with industry standards. In general, MDLs were below RBCs. However, as RBCs are calculated values, RBCs can be below MDLs. Matrix interferences and sample dilutions for quantification can also result in raising an MDL above its RBC for a given contaminant. For soil vapor analysis, 1,2-dibromoethane (EDB) and naphthalene had MDLs above their respective RBCs. EDB was not detected in soil or groundwater and, thus, is unlikely to be present at this site. Naphthalene is present in soil and groundwater at the site and was present in vapor sample SV2. The MDL for naphthalene only slightly exceeds the residential RBC (3.3 µg/m^3 versus 2.8 µg/m^3) and is well below the commercial RBC (12 µg/m^3), the most applicable RBC for assessing off-site building impacts and a future potential use of the property. Upon review and validation, the data are sufficient and suitable for assessing potential unacceptable risks to human health.

7.2 Risk Screening Results

Tables 3 through 8 include applicable RBCs, by receptor, for potentially and possibly complete exposure pathways. To provide an indication of whether a detected concentration might pose a concern, detected concentrations exceeding an RBC, as well as the exceeded RBC, are shaded in the tables. Data from both the current investigation and UST decommissioning activities were screened against RBCs. For metals in soil, a detected concentration first required exceedance of its respective natural background concentration. RBC exceedances are discussed below.

Soil. Chemical analyses detected TPH as oil, benzo(a)pyrene, and cPAHs in Probe P2 above residential direct contact RBCs.

Groundwater. Chemical analyses detected the following contaminants in groundwater exceeding RBCs for the following human receptors.

- TPH as gasoline in Probes P2, P5, and P6 exceeded the residential RBC for volatilization to indoor air, commonly known as "vapor intrusion (VI)." Probe P5 also exceeded the occupational RBC for VI.
- TPH as diesel and/or oil exceeded the residential RBC for VI in Probes P2, P3, P5, and P6.
- Benzene in the gasoline UST excavation in 1997 exceeded its residential RBC for VI. This exceedance is no longer considered applicable as the data are 28 years old and current investigation data are available.

Soil Vapor. Chemical analysis detected the following contaminants in soil vapor exceeding RBCs for human receptors:

- Low fraction TPH, benzene, ethylbenzene, naphthalene, TCE, and vinyl chloride in sample SV1 and/or SV2 exceeded their respective chronic RBCs for residential building use.
- Low fraction TPH, ethylbenzene, and TCE in sample SV1 and/or SV2 exceeded their respective chronic RBCs for commercial building use.
- TCE in sample SV1 exceeded its acute RBCs for both residential and commercial building uses.

7.3 Evaluation of Site Risks

Screening of the chemical data from the site has indicated that several contaminants exceed RBCs. These exceedances are evaluated further in the context of location, depth, extent, and magnitude to understand the likelihood that detected contamination could pose unacceptable risks to human receptors.

For soil, three residential direct contact RBCs were exceeded. The pertinent receptor is an off-site resident using the parking lot. As the site is paved, exposure by direct contact by an off-site resident is not a complete pathway. Groundwater VI RBCs for TPH as gasoline and TPH as diesel/oil were exceeded in three and four probes, respectively, for residential building use. Off-site residential buildings are greater than the 30 feet specified for potential VI risks from petroleum sources (DEQ, 2024a), suggesting that these detections may not pose a current VI concern from petroleum hydrocarbons. TPH in gasoline also exceeded its commercial VI RBC in Probe P5, and similarly, no building is located within 30 feet of Probe P5. Groundwater migration to the business across North Main Street could occur, but VOC concentrations were low in Probe P5. Additional data would be needed to verify that no vapor migration is occurring to off-site buildings.

Soil vapor data from samples SV1 and SV2 showed that low-fraction TPH and several VOCs exceeded residential VI RBCs. As with soil and groundwater data, residences are greater than 30 feet away when considering exposures from petroleum VOCs. However, sample SV1 had two chlorinated VOCs (TCE and vinyl chloride), for which a residence within 100 feet may have a VI concern (DEQ, 2024a). The residence to the east is 90 feet from sample SV1. Data from SV2 shows that chlorinated VOCs have attenuated to below their

RBCs by approximately 22 feet away from sample SV1. Therefore, VI to this residence is less of a concern, but may want to be verified by additional sampling. There is a VI concern to the off-site Toledo City Hall as both sample SV1 and SV2 have RBC exceedances, the building is within 10 feet of the sample locations, and TCE exceeds its acute RBC by 8.6 times.

8 Conclusions and Recommendations

In January and February 2024, GSI completed investigation activities at the former City Texaco Station project site in Toledo, Oregon, to further assess subsurface conditions at the site. Six push probes were completed to collect soil and groundwater samples and two soil vapor points were installed to obtain soil vapor samples near the Toledo City Hall building bordering the north side of the site. Additionally, GSI conducted a land and beneficial water use survey and completed an ecological scoping checklist.

While data reported from the UST decommissioning activities indicated that petroleum contamination had been addressed, chemical data from this investigation found residual gasoline contamination present at relatively high concentrations (565 to 689 mg/kg) around the former gasoline UST excavation. Oil-range contamination was also present, being detected in Probe P2 at 3,940 mg/kg (however, this may be due to buried asphalt). Groundwater around the former gasoline UST excavation also had gasoline- and diesel-range TPH, with 1,590 and 667 µg/L of each, respectively, being detected in Probe P5 on the downgradient of the former excavation. PAH and VOC detections in soil and groundwater were minor, and metals were consistent with natural background concentrations. Soil vapor data showed low-fraction TPH and VOC concentrations by the commercial building, including the presence of chlorinated VOCs (i.e., TCE, c-DCE, t-DCE, and vinyl chloride).

GSI developed a CSM to identify potentially complete exposure pathways whereby site contamination could potentially pose an unacceptable risk to human health or the environment. Potential human receptors include off-site residents, off-site occupational workers, future on-site occupational workers, future construction workers, and future excavation workers. Ecological receptors were not identified as the site is mostly paved except for perimeter landscaping. Chemical data were compared to DEQ's RBCs for identified exposure pathways and receptors. Based on this risk screening and further review of the data, the following potential unacceptable risks to human receptors were identified:

- VI might pose a potential concern to off-site residential buildings due to the presence of TPH as gasoline and TPH as diesel/oil in groundwater and low-fraction TPH and VOCs in soil vapor. Residences are, however, at least 50 feet away from the site and attenuation of any contaminants in soil vapor by biodegradation and/or diffusion would be expected to occur prior to reaching a residence.
- TPH as gasoline was detected in groundwater above VI RBCs in Probe P5 on the downgradient side of the site. Off-site migration of contaminated groundwater could pose a VI to the business across North Main Street if still exhibiting sufficient gasoline concentrations (VOC concentrations in Probe P5, however, were low in groundwater and would not pose an unacceptable risk).
- VI is a potential concern to the off-site Toledo City Hall as both soil vapor sample SV1 and SV2 have RBC exceedances of low-fraction TPH, ethylbenzene, and TCE; the building is within 10 feet of the sample locations; and TCE exceeds its acute RBC by 8.6 times. These detections would also pose a potential unacceptable risk if the property was redeveloped with a commercial building.

Findings from this investigation show that there is a potential for VI to pose unacceptable risks, primarily to off-site occupational workers in the Toledo City Hall building. Risks to nearby residences, off-site businesses other than City Hall, and a future on-site commercial building are unlikely but still possible. Based on the current data and VI concerns, GSI recommends performing a VI investigation to gather additional data to evaluate the VI pathway. A VI investigation would likely include soil vapor and/or sub-slab vapor sampling, fixed gas measurements (e.g., oxygen and carbon dioxide levels), and analysis for low-fraction TPH (i.e., gasoline), VOCs, and diesel-range TPH.

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Table 1. Groundwater Elevations and Field Parameters
Former City Texaco Station, Toledo, Oregon

Sample Location	Date of Measurement	Depth to Water (ft bgs)	Temperature (°C)	pH	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)
P1	1/31/24	8.8	15.6	6.52	413.5	79.0	2.18
P2	1/31/24	9.9	15.2	6.81	500.0	28.2	3.36
P3	1/31/24	2.8	12.9	6.87	39.5	69.0	8.71
P4	1/31/24	11.5	15.0	6.52	354.0	78.9	4.91
P5	2/1/24	6.1	14.4	6.42	304.5	-43.1	3.44
P6	2/1/24	3.7	12.6	5.87	127.6	71.2	6.89

Notes

µS/cm = micro-Siemens per centimeter
°C = degrees Celsius
DO = dissolved oxygen
ft bgs = feet below ground surface
ORP = oxidation-reduction potential
mg/L = milligrams per liter
mV = millivolts

Table 2. Sample Selection and Analytical Program
Former City Texaco Station, Toledo, Oregon

Probe	Sample ID	Sample Depth (ft bgs)	Analysis							Analysis Rationale
			TPH-G	TPH-Dx	VOCs	PAHs	Total Cd, Cr, Pb	Dissolved Pb[1]	Dissolved Cd, Cr, Pb[1]	
Soil Samples										
P1	P1-S1	1-3	--	--	--	--	--	--	--	--
	P1-S2	3-5	--	--	--	--	--	--	--	--
	P1-S3	5-7	X	X	X	--	--	--	--	Odor
	P1-S3-D	5-7	--	--	--	--	--	--	--	--
	P1-S4	7-10	X	X	X	X	X	--	--	Odor and slight PID reading
	P1-S5	10-12	--	--	--	--	--	--	--	--
	P1-S6	13-15	--	--	--	--	--	--	--	--
P2	P2-S1	1-2	X	X	--	X	X	--	--	Near surface sample
	P2-S2	3-5	--	--	--	--	--	--	--	--
	P2-S3	5-10	X	X	X	X	--	--	--	Sheen and potential buried contamination
	P2-S4	10-12	--	--	--	--	--	--	--	--
	P2-S5	13-15	--	--	--	--	--	--	--	--
P3	P3-S1	1-3	--	--	--	--	--	--	--	--
	P3-S2	3-5	X	X	X	X	X	--	--	Odor and high PID reading
	P3-S2-D	3-5	X	X	X	X	X	--	--	QA/QC requirement
	P3-S3	5-7	X	X	X	--	--	--	--	Bound vertical extent of contamination in sample above.
	P3-S4	8-10	--	--	--	--	--	--	--	--
P4	P4-S1	1-3	--	--	--	--	--	--	--	--
	P4-S2	3-5	--	--	--	--	--	--	--	--
	P4-S3	5-7	X	X	X	X	--	--	--	Soil in potential seasonal high groundwater table.
	P4-S4	8-10	--	--	--	--	--	--	--	--
	P4-S5	10-12	--	--	--	--	--	--	--	--
	P4-S6	13-15	--	--	--	--	--	--	--	--
P5	P5-S1	1-3	--	--	--	--	--	--	--	--
	P5-S2	5-7	X	X	X	--	--	--	--	High PID
	P5-S3	8-10	X	X	X	X	X	--	--	High PID, odor, and sheen
	P5-S4	10-12	X	--	X	--	--	--	--	Bound vertical extent of contamination in sample above.
	P5-S5	13-15	--	--	--	--	--	--	--	--
P6	P6-S1	1-3	X	--	X	X	--	--	--	Near surface sample
	P6-S2	5-7.5	--	--	--	--	--	--	--	--
	P6-S3	7.5-10	X	X	X	--	--	--	--	Odor, sheen, and slight PID reading
Groundwater Samples										
P1		8.8	X	X	X	X	--	X	--	Run per work plan
P1-D		8.8	--	--	--	--	--	--	--	QA/QC requirement, but not analyzed
P2		9.9	X	X	X	X	--	X	--	Run per work plan
P3		2.8	X	X	X	X	--	X	--	Run per work plan
P4		11.5	X	X	X	X	--	--	X	Run per work plan
P5		6.1	X	X	X	X	--	X	--	Run per work plan
P6		3.7	X	X	X	X	--	X	--	Run per work plan
Soil Vapor Samples										
SV1		--	X	--	X	--	--	--	--	Run per work plan
SV2		--	X	--	X	--	--	--	--	Run per work plan
Investigation-Derived Waste										
IDW Soil Drum	IDW-S	--	X	X	X	--	X	--	--	Disposal characterization
IDW Water Drum	IDW-W	--	X	X	X	--	X	--	--	Disposal characterization
Blanks										
Rinsate Blank	RINSE	--	X	X	X	--	--	--	--	QA/QC requirement
Trip Blank	TRIP	--	--	--	X	--	--	--	--	QA/QC requirement

Notes, Acronyms, and Abbreviations

[1]Dissolved analyses field filtered
— = not analyzed or not applicable
Cd = cadmium
Cr = chromium
ft bgs = feet below ground surface
IDW = investigation-derived waste
PAH = polycyclic aromatic hydrocarbon
Pb = lead
PID = photoionization detector
QA/QC = quality assurance/quality control
TPH-G = total petroleum hydrocarbons as gasoline
TPH-Dx = total petroleum hydrocarbons as diesel and oil
VOC = volatile organic compound

Table 3. Soil Chemical Analyses Results: TPH and Metals
Former City Texaco Station, Toledo, Oregon

Sample	Depth (ft bgs)	Date	TPH				Cadmium	Chromium	Lead
			Gasoline-Range	Diesel-Range	Oil-Range	Total Diesel/Oil			
Used Oil UST Excavation			Concentrations in mg/kg						
#1	9	8/6/97	–	–	–	20 U	–	–	–
#2	6	8/6/97	–	–	–	20 U	–	–	–
#3	8	8/6/97	–	–	–	20 U	–	–	–
#4	7	8/6/97	–	–	–	**49**	–	–	–
#5	8	8/6/97	–	–	–	20 U	–	–	–
Gasoline UST Excavation			Concentrations in mg/kg						
#1	9*	8/7/97	5.00 U	–	–	–	–	–	–
#2	9*	8/7/97	5.00 U	–	–	–	–	–	–
#3	6	8/7/97	20.0 U	50 U	–	50 U	–	–	–
#4	9*	8/7/97	5.00 U	–	–	–	–	–	–
#5	5	8/7/97	20.0 U	50 U	–	50 U	–	–	–
#6	9*	8/7/97	**6.8**	–	–	–	–	–	–
#7	4	8/7/97	20.0 U	50 U	–	50 U	–	–	–
#8	9*	8/7/97	5.00 U	–	–	–	–	–	–
Current Investigation			Concentrations in mg/kg						
P1-S3	5-7	1/31/24	6.13 U	**6.19 NJ**	4.82 U	**8.60 NJ**	–	–	–
P1-S4	7-10	1/31/24	26.2 U	**2.49 J**	4.64 U	**4.81 J**	0.119 U	**50.5**	**13.6**
P2-S1	1-2	1/31/24	6.77 U	**38.6 NJ**	**207 NJ**	**246 NJ**	**0.273 J**	**45.8**	**44.9**
P2-S3	5-10	1/31/24	68.6 U	**253 NJ**	**3,940 NJ**	**4,193 NJ**	–	–	–
P3-S2	3-5	1/31/24	**448 J**	**40.7 NJ**	**78.3 NJ**	**119 NJ**	0.120 U	**55.2**	**14.7**
P3-S2-D	3-5	1/31/24	**689 J**	**35.1**	**58.7**	**93.8**	0.114 U	**56.1**	**13.4**
P3-S3	5-7	1/31/24	**16.9**	**38.8 NJ**	**415 NJ**	**454 NJ**	–	–	–
P4-S3	5-7	1/31/24	**2.00 J**	**6.46 NJ**	**111 NJ**	**117 NJ**	–	–	–
P5-S2	5-7	2/1/24	**7.63**	**8.50 NJ**	**8.11 NJ**	**16.6 NJ**	–	–	–
P5-S3	8-10	2/1/24	**565 J+**	**43.1 NJ**	**6.10 NJ**	**49.2 NJ**	**0.109 J**	**50.7**	**15.3**
P5-S4	10-12	2/1/24	86.8 U	–	–	–	–	–	–
P6-S1	1-3	2/1/24	4.57 U	–	–	–	–	–	–
P6-S3	7.5-10	2/1/24	23.4 U	**3.44 J**	4.49 U	**5.69 J**	–	–	–
Background Values			–	–	–	–	0.54	240	34
Human Health RBCs									
Direct Contact - Residential			1,200	1,100			78	120,000	"100"
Direct Contact - Occupational Worker			20,000	14,000			1,100	>Max	800
Direct Contact - Construction Worker			9,700	4,600			350	530,000	800
Direct Contact - Excavation Worker			>Max	>Max			9,700	>Max	800
Volatilization to Outdoor Air - Residential			5,900	>Max			NV	NV	NV
Volatilization to Outdoor Air - Occupational			69,000	>Max			NV	NV	NV

Notes

Current investigation utilized Northwest Method NWTPH-Gx for gasoline, and NWTPH-Dx for diesel and oil. Previous UST decommissioning activities used Oregon DEQ TPH-HCID for hydrocarbon identification (gasoline- and diesel-ranges), TPH-G for gasoline, and Method 418.1 modified for oil.

Total cadmium, chromium, and lead by EPA Method 6020B.

Results reported on a dry weight basis at the MDL unless changed to MRL by validation (see Appendix D). Previous results reported at the MRL.

Bold denotes a detected concentration.

Summations include half the MDL/MRL for undetected compounds. If all compounds are not detected, the highest MDL/MRL is used.

Human health RBCs from DEQ (2023). The lead RBC in quotes ("") is for residential soil where other sources of lead (e.g., lead-based paint) may be present (EPA, 2024). Background metal values from DEQ regional background values (2018).

Diesel and/or oil concentrations screened conservatively against the human health RBC for diesel.

Light blue shading denotes a detected analyte concentration exceeding a DEQ RBC. The exceeded RBC is also shaded.

*Depth reported as soil/groundwater interface and was estimated based on information in SES (1997b).

Acronyms and Abbreviations

– = not analyzed or not available
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
ft bgs = feet below ground surface
J = estimated value, typically below laboratory MRL
J+ = the reported result is an estimated value, but the result may be biased high
>Max = the RBC for this constituent and pathway is above 1,000,000 mg/kg
MDL = method detection limit
mg/kg = milligrams per kilogram
MRL = method reporting limit
NJ = the analyte has been tentatively identified or presumptively as present, and the associated value is estimated
NV = not volatile
RBC = risk-based concentration
TPH = total petroleum hydrocarbons
U = not detected
UST = underground storage tank

Table 4. Soil Chemical Analyses Results: VOCs
Former City Texaco Station, Toledo, Oregon

Sample	Depth (ft bgs)	Date	Gasoline RBDM VOCs												Other Detected VOCs			
			BTEX															
			Benzene	Toluene	Ethylbenzene	Total Xylenes	1,2-Dibromoethane (EDB)	1,2-Dichloroethane (EDC)	Isopropylbenzene	Methyl tert-butyl ether (MTBE)	Naphthalene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	*n*-Butylbenzene	*sec*-Butylbenzene	p-Isopropyltoluene	Methylene Chloride
Current Investigation			Concentrations in mg/kg															
P1-S3	5-7	1/31/24	0.000917 U	**0.00385 J**	**0.0635**	**0.483**	0.00127 U	0.00127 U	**0.00210 J**	0.000688 U	0.00959 U	0.00187 U	0.00310 U	0.00393 U	0.0103 U	0.00566 U	0.00501 U	0.0130 U
P1-S4	7-10	1/31/24	0.000839 U	**0.00440 J**	0.00132 U	0.00158 U	0.00116 U	0.00117 U	0.000763 U	0.000628 U	0.00876 U	0.00171 U	0.00284 U	0.00359 U	0.00943 U	0.00517 U	0.00458 U	0.0119 U
P2-S3	5-10	1/31/24	0.000937 U	**0.00457 J**	0.00148 U	**0.00540 J**	0.00130 U	0.00130 U	**0.0113**	0.000702 U	0.00979 U	**0.0423**	**0.00375 J**	**0.00405 J**	**0.0211 J**	**0.0750**	**0.00734 J**	0.0133 U
P3-S2	3-5	1/31/24	0.000865 U	**0.00387 J**	**0.00320 J**	0.00163 U	0.00120 U	0.00120 U	0.000787 U	0.000648 U	0.00904 U	0.00176 U	0.00293 U	0.00370 U	0.00972 U	**0.0522**	0.00472 U	0.0123 U
P3-S2-D	3-5	1/31/24	0.00630 U	0.0175 U	0.00994 U	0.0119 U	0.00872 U	0.00874 U	0.00573 U	0.00472 U	**0.0846 J**	0.0128 U	0.0212 U	0.0269 U	0.0707 U	**0.0413 J**	0.0344 U	0.0894 U
P3-S3	5-7	1/31/24	0.000902 U	**0.00372 J**	0.00142 U	**0.00362 J**	0.00125 U	0.00125 U	0.000820 U	0.000676 U	0.00941 U	0.00183 U	0.00306 U	0.00386 U	0.0101 U	0.00555 U	0.00492 U	**0.0139 J**
P4-S3	5-7	1/31/24	0.000807 U	**0.00502 J**	**0.0125**	**0.0810**	0.00112 U	0.00112 U	0.000735 U	0.000606 U	0.00844 U	0.00164 U	0.00273 U	0.00346 U	0.00908 U	0.00498 U	0.00441 U	**0.0125 J**
P5-S2	5-7	2/1/24	0.000874 U	**0.00874 J**	0.00138 U	0.00165 U	0.00121 U	0.00121 U	0.000795 U	0.000656 U	0.00912 U	0.00177 U	0.00296 U	0.00374 U	0.00982 U	0.00538 U	0.00477 U	**0.0130 J**
P5-S3	8-10	2/1/24	0.00598 U	0.0166 U	0.00944 U	0.0113 U	0.00829 U	0.00830 U	0.00544 U	0.00448 U	0.0624 U	0.0122 U	0.0202 U	0.0256 U	**0.200**	**0.270**	0.0326 U	**0.0867 J**
P5-S4	10-12	2/1/24	0.000861 U	0.00240 U	0.00136 U	0.00162 U	0.00119 U	0.00120 U	0.000784 U	0.000645 U	0.00900 U	0.00175 U	0.00291 U	0.00369 U	0.00968 U	**0.0134 J**	0.00470 U	0.0122 U
P6-S1	1-3	2/1/24	0.000929 U	0.00259 U	0.00147 U	0.00175 U	0.00129 U	0.00129 U	0.000845 U	0.000696 U	0.00971 U	0.00189 U	0.00314 U	0.00398 U	0.0104 U	0.00573 U	0.00507 U	**0.0145 J**
P6-S3	7.5-10	2/1/24	0.000815 U	**0.00319 J**	0.00129 U	0.00154 U	0.00113 U	0.00113 U	**0.00368 J**	0.000611 U	0.00851 U	**0.0114**	0.00276 U	0.00349 U	0.00916 U	**0.0389**	0.00445 U	0.0116 U
Human Health RBCs																		
Direct Contact - Residential			8.2	5,800	34	1,400	0.16	3.6	3,500	250	5.3	"3,800"	430	430	"3,900"	"7,800"	—	76
Direct Contact - Occupational Worker			37	88,000	150	25,000	0.73	16	57,000	1,100	23	"24,000"	6,900	6,900	"58,000"	"120,000"	—	1,600
Direct Contact - Construction Worker			380	28,000	1,700	20,000	9.0	200	27,000	12,00	580	—	2,900	2,900	—	—	—	>Csat
Direct Contact - Excavation Worker			11,000	770,000	49,000	560,000	250	5,600	750,000	320,000	16,000	—	81,000	81,000	—	—	—	>Csat
Volatilization to Outdoor Air - Residential			11	>Csat	36	>Csat	0.15	3.4	>Csat	340	6.4	—	>Csat	>Max	—	—	—	>Csat
Volatilization to Outdoor Air - Occupational			50	>Csat	160	>Csat	0.65	15	>Csat	1,500	83	—	>Csat	>Max	—	—	—	>Csat

Notes

VOCs by EPA Method 8260D. Those listed are VOCs for petroleum-contaminated sites (DEQ 2017) and other detected VOCs. The full analyte list of VOCs for EPA Method 8260D are provided in the analytical reports in Appendix D.

Results reported on a dry weight basis. Previous results reported at the MRL and current results reported to the MDL.

Bold denotes a detected concentration.

Human health RBCs from DEQ (2023). RBCs in quotes ("") are for residential and industrial soil from EPA (2024).

Acronyms and Abbreviations

— = not available
>Csat = this soil RBC exceeds the limit of three-phase equilibrium partitioning.
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
ft bgs = feet below ground surface
J = estimated value, typically below laboratory MRL
>Max = the RBC for this constituent and pathway is above 1,000,000 mg/kg
MDL = method detection limit
mg/kg = milligrams per kilogram.
MRL = method reporting limit
RBC = risk-based concentration
RBDM = risk-based decision making
U = not detected
VOC = volatile organic compound

Table 5. Soil Chemical Analyses Results: PAHs
Former City Texaco Station, Toledo, Oregon

Sample	Depth (ft bgs)	Date	Non-Carcinogenic PAHs										Carcinogenic PAHs									
			Acenaphthene	Acenaphthylene	Anthracene	2-Chloronaphthalene	Fluoranthene	Fluorene	1-Methylnaphthalene	2-Methylnaphthalene	Phenanthrene	Pyrene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Naphthalene	Total Carcinogenic PAHs (BaP Eq)
Current Investigation			Concentrations in mg/kg																			
P1-S4	7-10	1/31/24	0.00291 U	0.00301 U	0.00320 U	0.00649 U	0.00316 U	0.00286 U	0.00626 U	0.00595 U	0.00322 U	0.00279 U	0.00241 U	0.00249 U	0.00213 U	0.00247 U	0.00300 U	0.00323 U	0.00240 U	0.00252 U	0.00569 U	0.00223 U
P2-S1	1-2	1/31/24	**0.00475 J**	**0.0261**	**0.0223**	0.00610 U	**0.182**	**0.00657 J**	**0.0115 J**	**0.0212 J**	**0.0612**	**0.242**	**0.129**	**0.306**	**0.189**	**0.302**	**0.0551**	**0.120**	**0.0267**	**0.301**	**0.0481**	**0.398**
P2-S3	5-10	1/31/24	**0.0174**	**0.0133**	**0.0302**	0.00683 U	**0.202**	**0.0223**	**0.0398**	**0.0226 J**	**0.144**	**0.218**	**0.146**	**0.131**	**0.135**	**0.133**	**0.0312**	**0.160**	**0.0520**	**0.0713**	**0.0268 J**	**0.220**
P3-S2	3-5	1/31/24	0.00294 U	0.00304 U	0.00324 U	0.00656 U	0.00320 U	**0.00367 J**	0.00632 U	0.00601 U	0.00325 U	**0.00383 J**	0.00244 U	0.00252 U	0.00215 U	0.00249 U	0.00303 U	0.00327 U	0.00242 U	0.00255 U	0.00574 U	0.00152 U
P3-S2-D	3-5	1/31/24	0.00278 U	0.00287 U	0.00306 U	0.00619 U	0.00302 U	0.00272 U	0.00597 U	0.00567 U	0.00307 U	0.00266 U	0.00230 U	0.00238 U	0.00203 U	0.00235 U	0.00286 U	0.00308 U	0.00229 U	0.00240 U	0.00542 U	0.00155 U
P4-S3	5-7	1/31/24	0.00281 U	0.00290 U	0.00309 U	0.00626 U	0.00305 U	0.00275 U	0.00603 U	0.00574 U	0.00310 U	**0.00328 J**	**0.00334 J**	**0.00318 J**	**0.00247 J**	**0.00384 J**	0.00289 U	**0.00369 J**	0.00231 U	0.00243 U	0.00548 U	**0.00509 J**
P5-S3	8-10	2/1/24	**0.00283 J**	0.00273 U	0.00291 U	0.00590 U	0.00287 U	**0.00708 J**	0.00569 UJ	0.00541 UJ	0.00292 U	0.00253 U	0.00219 U	0.00227 U	0.00194 U	0.00224 U	0.00272 U	0.00294 U	0.00218 U	0.00229 U	**0.00539 J**	0.00257 U
P6-S1	1-3	2/1/24	0.00308 U	**0.00392 J**	0.00339 U	0.00687 U	**0.0116**	0.00302 U	0.00662 U	0.00630 U	**0.00417 J**	**0.0173**	**0.00864 J**	**0.0149**	**0.0152**	**0.0189**	**0.00416 J**	**0.0102**	**0.00280 J**	**0.0132**	0.00602 U	**0.0216 J**
TEFs to Calculate BaP Eq			—	—	—	—	—	—	—	—	—	—	0.1	1	0.1	0.01	0.01	0.001	1	0.1	—	—
Human Health RBCs																						
Direct Contact - Residential			4,700	—	23,000	"4,800"	2,400	3,100	"0.18"	"240"	—	1,800	1.1	0.11	1.1	—	11	110	0.11	1.1	5.3	0.11
Direct Contact - Occupational Worker			70,000	—	350,000	"60,000"	30,000	47,000	"0.77"	"3,000"	—	23,000	21	2.1	21	—	210	2,100	2.1	21	23	2.1
Direct Contact - Construction Worker			21,000	—	110,000	—	10,000	14,000	—	—	—	7,500	170	17	170	—	1,700	17,000	17	170	580	17
Direct Contact - Excavation Worker			590,000	—	>Max	—	280,000	390,000	—	—	—	210,000	4,800	490	4,900	—	49,000	490,000	490	4,900	16,000	490
Volatilization to Outdoor Air - Residential			>Max	—	>Max	—	NV	>Max	—	—	—	>Max	>Csat	NV	NV	—	NV	NV	NV	NV	6.4	NV
Volatilization to Outdoor Air - Occupational			>Max	—	>Max	—	NV	>Max	—	—	—	>Max	>Csat	NV	NV	—	NV	NV	NV	NV	83	NV

Notes

PAHs by EPA Method 8270E-SIM.

Results reported on a dry weight basis at the MDL.

Bold denotes a detected concentration.

Summations include half the MDL for undetected compounds. If all compounds are not detected, the highest MDL is used.

Human health RBCs from DEQ (2023). RBCs in quotes ("") are for residential and industrial soil from EPA (2024).

Total carcinogenic PAHs are the sum of each detected carcinogenic PAHs multiplied by its TEF, plus half-MDL values of nondetected PAHs first multiplied by their TEFs.

Light blue shading denotes a detected analyte concentration exceeding a DEQ RBC. The exceeded RBC is also shaded.

Acronyms and Abbreviations

— = not available

BaP Eq = benzo(a)pyrene equivalence per human health risk assessment guidance (DEQ, 2010).

>Csat = this soil RBC exceeds the limit of three-phase equilibrium partitioning.

DEQ = Oregon Department of Environmental Quality

EPA = U.S. Environmental Protection Agency

ft bgs = feet below ground surface

J = estimated value, typically below laboratory MRL

>Max = The RBC for this constituent and pathway is above 1,000,000 mg/kg

MDL = method detection limit

mg/kg = milligrams per kilogram.

NV = not volatile

PAH = polycyclic aromatic hydrocarbon

RBC = risk-based concentration

TEF = toxicity equivalency factors

U = not detected

UJ = the result is a non-detect but the value is estimated

Table 6. Groundwater Chemical Analyses Results: TPH and Metals
Former City Texaco Station, Toledo, Oregon

Sample	Date	TPH				Dissolved Metals		
		Gasoline-Range	Diesel-Range	Oil-Range	Total Diesel/Oil	Cadmium	Chromium	Lead
Gasoline UST Excavation		Concentrations in µg/L						
Water	8/7/97	—	—	—	1,000 U	—	—	50 U
Current Investigation		Concentrations in µg/L						
P1	1/31/24	**47.3 J**	100 U	250 U	250 U	—	—	0.849 U
P2	1/31/24	**123**	**250**	**257 J**	**507 J**	—	—	0.849 U
P3	1/31/24	**79.0 J**	**298 NJ-**	**294 NJ-**	**592 NJ-**	—	—	0.849 U
P4	1/31/24	31.6 U	100 U	83.3 U	100 U	0.150 U	1.24 U	0.849 U
P5	2/1/24	**1,590**	**667**	85.8 U	**710**	—	—	0.849 U
P6	2/1/24	**512**	**843**	**253 J**	**1,096 J**	—	—	0.849 U
DEQ RBCs								
Vapor Intrusion into Building - Residential		120	400			NV	NITI, NV	NV
Vapor Intrusion into Building - Commercial		520	1,700			NV	NITI, NV	NV
Volatilization to Outdoor Air - Residential		>S	>S			NV	NV	NV
Volatilization to Outdoor Air - Occupational		>S	>S			NV	NV	NV
Groundwater in Excavation		14,000	>S			130,000	>S	NV

Notes

Current investigation utilized Northwest Method NWTPH-Gx for gasoline, and NWTPH-Dx for diesel and oil. Previous gasoline UST excavation used EPA Method TPH-418.1 for TPH.

Dissolved cadmium, chromium, and lead by EPA Method 6020B. Previous dissolved lead by EPA Method 7000-series.

Previous investigation results reported at the MRL and current results reported to the MDL.

Bold denotes a detected concentration.

Summations include half the MDL/MRL for undetected compounds. If all compounds are not detected, the highest MDL/MRL is used.

Human health RBCs from DEQ (2023, 2024b).

Diesel and/or oil concentrations screened conservatively against the human health RBC for diesel.

Light blue shading denotes a detected analyte concentration exceeding a DEQ RBC. The exceeded RBC is also shaded.

Acronyms and Abbreviations

— = not analyzed
µg/L = micrograms per liter
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
J = estimated value, typically below laboratory MRL
MDL = method detection limit
MRL = method reporting limit
NJ- = the analyte has been tentatively identified or presumptively as present, and the associated value is estimated, biased low
NV = not volatile
RBC = risk-based concentration
>S = the groundwater RBC exceeds the solubility limit.
TPH = total petroleum hydrocarbons
U = not detected
UST = underground storage tank

Table 7. Groundwater Chemical Analyses Results: VOCs
Former City Texaco Station, Toledo, Oregon

Sample	Date	Gasoline RBDM VOCs												Other Detected VOCs				
		BTEX																
		Benzene	Toluene	Ethylbenzene	Total Xylenes	1,2-Dibromoethane (EDB)	1,2-Dichloroethane (EDC)	Isopropylbenzene	Methyl tert-butyl ether (MTBE)	Naphthalene	n-Propylbenzene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Acetone	*sec*-Butylbenzene	Carbon Disulfide	Di-Isopropyl Ether	p-Isopropyltoluene
Gasoline UST Excavation		Concentrations in µg/L																
Water	8/7/97	**7.2**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	—	—	—	—	—	—	—	—	—	—	—
Current Investigation		Concentrations in µg/L																
P1	1/31/24	0.0941 U	0.278 U	**0.423 J**	**3.11**	0.126 U	**0.675 J**	0.105 U	0.101 U	1.00 U	0.0993 U	0.322 U	0.104 U	11.3 U	0.125 U	0.0962 U	**0.141 J**	0.120 U
P2	1/31/24	0.0941 U	0.278 U	**0.469 J**	**3.40**	0.126 U	0.0819 U	**0.131 J**	0.101 U	1.00 U	**0.288 J**	0.322 U	0.104 U	11.3 U	**0.268 J**	**0.102 J**	0.105 U	0.120 U
P3	1/31/24	0.0941 U	0.278 U	**0.195 J**	**1.47 J**	0.126 U	0.0819 U	0.105 U	0.101 U	1.00 U	0.0993 U	0.322 U	0.104 U	**28.2 J**	**0.154 J**	**0.119 J**	0.105 U	**0.128 J**
P4	1/31/24	0.0941 U	0.278 U	**0.828 J**	**5.58**	0.126 U	0.0819 U	0.105 U	0.101 U	1.00 U	0.0993 U	0.322 U	0.104 U	11.3 U	0.125 U	0.0962 U	0.105 U	0.120 U
P5	2/1/24	0.0941 U	0.278 U	0.137 U	**0.201 J**	0.126 U	0.0819 U	**1.08**	0.101 U	1.00 U	**1.13**	0.322 U	0.104 U	11.3 U	**5.16**	0.0962 U	0.105 U	0.120 U
P6	2/1/24	0.0941 U	0.278 U	0.137 U	0.174 U	0.126 U	0.0819 U	**0.196 J**	0.101 U	1.00 U	**1.33**	0.322 U	0.104 U	11.3 U	**1.58**	0.0962 U	0.105 U	0.120 U
Human Health RBCs																		
Vapor Intrusion into Building - Residential		2.8	36,000	7.1	780	0.34	4.0	2,200	740	11	5,300	560	400	NITI	NITI	1,900	12,000	—
Vapor Intrusion into Building - Commercial		12	150,000	31	3,300	1.5	18	9,100	3,200	50	22,000	2,400	1,700	NITI	NITI	8,200	50,000	—
Volatilization to Outdoor Air - Residential		3100	>S	9,900	>S	180	2,100	>S	350,000	3,600	—	>S	>S	—	—	—	—	—
Volatilization to Outdoor Air - Urban Residenti		7400	>S	23,000	>S	430	4,900	>S	830,000	8,500	—	>S	>S	—	—	—	—	—
Volatilization to Outdoor Air - Occupational		14,000	>S	43,000	>S	790	9,000	>S	1,500,000	16,000	—	>S	>S	—	—	—	—	—
Groundwater in Excavation		1,800	220,000	4,500	23,000	27	630	51,000	63,000	500	—	6,300	7,500	—	—	—	—	—

Notes
VOC analyses for gasoline UST excavation by EPA Methods 8011 (Modified) and 8020.
Current investigation utilized EPA Method 8260D for VOCs. Those listed are VOCs for petroleum-contaminated sites (DEQ 2017) and other detected VOCs. The full analyte list of VOCs for EPA Method 8260D are provided in the analytical reports in Appendix D.
Previous investigation results reported at the MRL and current results reported to the MDL.
Bold denotes a detected concentration.
Human health RBCs from DEQ (2023, 2024b).
Light blue shading denotes a detected analyte concentration exceeding a DEQ RBC. The exceeded RBC is also shaded.

Acronyms and Abbreviations
— = not analyzed or not available
µg/L = micrograms per liter
BTEX = benzene, toluene, ethylbenzene, and total xylenes
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
J = estimated value, typically below laboratory MRL
MDL = method detection limit
MRL = method reporting limit
NITI = no inhalation toxicity information
RBC = risk-based concentration
RBDM = risk-based decision making
>S = the groundwater RBC exceeds the solubility limit.
U = not detected
UST = underground storage tank
VOC = volatile organic compound

Table 8. Groundwater Chemical Analyses Results: PAHs
Former City Texaco Station, Toledo, Oregon

Sample	Date	Non-Carcinogenic PAHs										Carcinogenic PAHs									Total Carcinogenic PAHs (BaP Eq)
		Acenaphthene	Acenaphthylene	Anthracene	2-Chloronaphthalene	Fluoranthene	Fluorene	1-Methylnaphthalene	2-Methylnaphthalene	Phenanthrene	Pyrene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Naphthalene	
Gasoline UST Excavation		Concentrations in µg/L																			
Water	8/7/97	5.0 U	–	5.0 U	–	5.0 U	5.0 U	–	–	–	5.0 U	5.0 U	5.0 U	5.0 U	–	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	–
Current Investigation		Concentrations in µg/L																			
P1	1/31/24	0.0190 U	0.0171 U	0.0190 U	0.0682 U	0.0270 U	0.0169 U	0.0687 U	0.0674 U	0.0180 U	0.0169 U	0.0203 U	0.0184 U	0.0168 U	0.0184 U	0.0202 U	0.0179 U	0.0160 U	0.0158 U	0.0917 U	0.0200 U
P2	1/31/24	**0.0968**	**0.0262 J**	0.0190 U	0.0682 U	0.0270 U	**0.0726**	**0.404**	0.0674 U	**0.0371 J**	0.0169 U	0.0203 U	0.0184 U	0.0168 U	0.0184 U	0.0202 U	0.0179 U	0.0160 U	0.0158 U	**0.270**	0.0200 U
P3	1/31/24	0.0380 U	0.0342 U	0.0380 U	0.136 U	0.0540 U	0.0338 U	0.137 U	0.135 U	0.0360 U	0.0338 U	0.0406 U	0.0368 U	0.0336 U	0.0368 U	0.0404 U	0.0358 U	0.0320 U	0.0316 U	0.183 U	0.0401 U
P4	1/31/24	0.0190 U	0.0171 U	0.0190 U	0.0682 U	0.0270 U	0.0169 U	0.0687 U	0.0674 U	0.0180 U	0.0169 U	0.0203 U	0.0184 U	0.0168 U	0.0184 U	0.0202 U	0.0179 U	0.0160 U	0.0158 U	0.0917 U	0.0200 U
P5	2/1/24	**1.74**	0.0171 U	**0.0673**	0.0682 U	**0.0314 J**	**1.63**	**0.827**	0.0674 U	**0.0774**	**0.0364 J**	0.0203 U	0.0184 U	0.0168 U	0.0184 U	0.0202 U	0.0179 U	0.0160 U	0.0158 U	**1.35**	0.0200 U
P6	2/1/24	**0.339**	0.0171 U	0.0190 U	0.0682 U	**0.0455 J**	**0.562**	0.0687 U	0.0674 U	**0.153**	0.0169 U	0.0203 U	0.0184 U	0.0168 U	0.0184 U	0.0202 U	0.0179 U	0.0160 U	0.0158 U	0.0917 U	0.0200 U
TEFs to Calculate BaP Eq		–	–	–	–	–	–	–	–	–	–	0.1	1	0.1	0.01	0.01	0.001	1	0.1	–	–
Human Health RBCs																					
Vapor Intrusion into Building - Residential		NITI	–	NITI	NITI	NITI, NV	NITI	NITI	NITI	–	NITI	190	NV	NV	–	NV	NV	NV	NV	11	NV
Vapor Intrusion into Building - Commercial		NITI	–	NITI	NITI	NITI, NV	NITI	NITI	NITI	–	NITI	2,300	NV	NV	–	NV	NV	NV	NV	50	NV
Volatilization to Outdoor Air - Residential		>S	–	>S	–	NV	>S	–	–	–	>S	>S	NV	NV	–	NV	NV	NV	NV	3,600	NV
Volatilization to Outdoor Air - Occupational		>S	–	>S	–	NV	>S	–	–	–	>S	>S	NV	NV	–	NV	NV	NV	NV	16,000	NV
Groundwater in Excavation		>S	–	>S	–	>S	>S	–	–	–	>S	>S	>S	>S	–	>S	>S	>S	>S	500	>S

Notes

PAHs by EPA Method 8270E-SIM. Previous results by gas chromotagraphy/mass spectroscopy.
Previous investigation results reported at the MRL and current results reported to the MDL.
Bold denotes a detected concentration.
Human health RBCs from DEQ (2023, 2024b).
Total carcinogenic PAHs are the sum of each detected carcinogenic PAHs multiplied by its TEF, plus half-MDL/MRL values of nondetected PAHs first multiplied by their TEFs.

Acronyms and Abbreviations

– = not analyzed or not available
µg/L = micrograms per liter
BaP Eq = Benzo(a)pyrene equivalence per human health risk assessment guidance (DEQ, 2010).
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
J = estimated value, typically below laboratory MRL
MDL = method detection limit
MRL = method reporting limit
NITI = no inhalation toxicity information
NV = not volatile
PAH = polycyclic aromatic hydrocarbon
TEF = toxicity equivalency factors
U = not detected
UJ = the result is a non-detect but the value is estimated
UST = underground storage tank

Table 9. Soil Vapor Chemical Analyses Results: TPH and VOCs
Former City Texaco Station, Toledo, Oregon

Chemical Compound	Sample: Date:	SV1 2/1/2024	SV2 2/1/24	DEQ RBCs			
				Residential		Commercial	
				Chronic	Acute	Chronic	Acute
TPH		Concentrations in µg/m^3					
	Low Fraction	**25,600 J+**	**88,800**	10,000	—	40,000	—
VOCs							
BTEX							
	Benzene	**12.1 J+**	**18.6 J+**	12	970	52	2,900
	Toluene	**38.8 J+**	**74.2 J+**	170,000	250,000	730,000	770,000
	Ethylbenzene	**418**	**824**	37	730,000	160	2,200,000
	Total Xylenes	**2,324**	**4,540**	3,500	290,000	15,000	870,000
RBDM VOCs							
	1,2-Dibromoethane (EDB)	1.54 U	1.54 U	0.16	—	0.68	—
	1,2-Dichloroethane (EDC)	0.810 U	0.810 U	3.6	—	16	—
	Isopropylbenzene	**10.3 J+**	**33.1 J+**	14,000	—	58,000	—
	Methyl tert-butyl ether	0.233 U	0.233 U	360	270,000	1,600	800,000
	Naphthalene	3.30 U	**5.97 J+**	2.8	6,700	12	20,000
	n-Propylbenzene	**3.44 J+**	**7.90 J+**	35,000	—	150,000	—
	1,2,4-Trimethylbenzene	**11.1 J+**	**9.52 J+**	2,100	—	8,800	—
	1,3,5-Trimethylbenzene	**2.56 J+**	**3.58 J+**	2,100	—	8,800	—
Other VOCs							
	Acetone	**62.5 J+**	2.97 U	NITI	2,100,000	NITI	6,300,000
	Carbon disulfide	**16.3 J+**	**7.75 J+**	24,000	210,000	100,000	630,000
	Chloromethane	**2.40 J+**	**1.23 J+**	3,100	33,000	13,000	100,000
	Cyclohexane	**6.44 J+**	**31.2 J+**	210,000	—	880,000	—
	Dichlorodifluoromethane	**2.45 J**	**2.22 J**	3,500	—	15,000	—
	1,1-Dichloroethene	**7.89 J+**	0.793 U	7,000	6,700	29,000	20,000
	cis -1,2-Dichloroethene	**432**	**1.13 J+**	1,400	—	5,800	—
	trans -1,2-Dichloroethene	**157 J+**	0.793 U	1,400	26,000	5,800	80,000
	Ethanol	**58.1 J+**	**30.4 J+**	—	—	—	—
	4-Ethyltoluene	**3.03 J+**	**3.25 J+**	—	—	—	—
	Heptane	**16.7 J+**	**45.0 J+**	14,000	—	58,000	—
	n -Hexane	**25.9 J+**	**430**	24,000	—	100,000	—
	Methylene Chloride	**1.97 J+**	**1.06 J+**	3,400	70,000	41,000	210,000
	2-Butanone (MEK)	**11.6 J+**	**4.33 J+**	170,000	170,000	730,000	500,000
	2-Propanol	**10.3 J+**	**4.06 J+**	7,000	110,000	29,000	320,000
	Propene	**269**	**270**	100,000	—	440,000	—
	Tetrachoroethene (PCE)	**2.17 J+**	1.36 U	360	1,400	1,600	4,000
	Trichloroethene (TCE)	**1,800**	**7.13 J+**	16	70	100	210
	Trichlorofluoromethane	1.12 U	**1.30 J+**	NITI	—	NITI	—
	2,2,4-Trimethylpentane	**7.75 J+**	**34.6 J+**	—	—	—	—
	Vinyl Chloride	**15.3 J+**	0.511 U	5.6	43,000	93	130,000

Notes

Low fraction TPH and VOCs by EPA Method TO-15.

Results reported at the MRL.

VOCs listed are RBDM VOCs (DEQ 2017) and other detected VOCs. The full analyte list of VOCs for EPA Method TO-15 are provided in the analytical report in Appendix D.

Bold denotes a detected concentration.

Human health RBCs from DEQ (2024b).

Light blue shading denotes a detected analyte concentration exceeding a DEQ Vapor Intrusion RBC. The exceeded RBC is also shaded.

Acronyms and Abbreviations

— = not available
µg/m^3 = micrograms per cubic meter
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
J = estimated value
J+ = estimated value, biased high
MRL = method reporting limit
NITI = no inhalation toxicity information available
RBC = risk-based concentration
RBDM = risk-based decision making
TPH = total petroleum hydrocarbons
U = not detected
VOC = volatile organic compound

Table 10. Chemical Analyses Results: IDW and Blanks
Former City Texaco Station, Toledo, Oregon

Chemical Compound	Sample: Date:	IDW-S 2/1/24	IDW-W 2/1/24	RINSE 2/1/24	TRIP 2/1/24
TPH		Concentrations in mg/kg (soil) and µg/L (water)			
	Gasoline-Range	38.6 U	**222**	31.6 U	—
	Diesel-Range	45.1 U	**444 J-**	172 U	—
	Oil-Range	**404**	**320 J-**	278 U	—
VOCs					
BTEX					
	Benzene	0.000801 U	0.0941 U	0.0941 U	0.0941 UJ
	Toluene	**0.00470 J**	0.278 U	0.278 U	0.278 UJ
	Ethylbenzene	0.00126 U	0.137 U	0.137 U	0.137 UJ
	Total Xylenes	**0.00261 J**	**0.339 J**	0.174 U	0.174 UJ
RBDM VOCs					
	1,2-Dibromoethane (EDB)	0.00111 U	0.126 U	0.126 U	0.126 UJ
	1,2-Dichloroethane (EDC)	0.00111 U	0.0819 U	0.0819 U	0.0819 UJ
	Isopropylbenzene	0.000729 U	**0.140 J**	0.105 U	0.105 UJ
	Methyl tert-butyl ether	0.000601 U	0.101 U	0.101 U	0.101 UJ
	Naphthalene	0.00837 U	1.00 U	1.00 U	1.00 UJ
	n-Propylbenzene	0.00163 U	**0.409 J**	0.0993 U	0.0993 UJ
	1,2,4-Trimethylbenzene	0.00271 U	0.322 U	0.322 U	0.322 UJ
	1,3,5-Trimethylbenzene	0.00343 U	0.104 U	0.104 U	0.104 UJ
Other VOCs					
	sec -Butylbenzene	**0.00606 J**	**0.745 J**	0.125 U	0.125 UJ
Total Metals					
	Cadmium	0.116 U	**0.490 J**	—	—
	Chromium	**50.2**	**22.1**	—	—
	Lead	**14.7**	**32.1**	—	—

Notes

TPH by Northwest Method NWTPH-Gx for gasoline and NWTPH-Dx for diesel and oil.

VOCs by EPA Method 8260D. Those listed are VOCs for petroleum-contaminated sites (DEQ 2017) and other detected VOCs. The full analyte list of VOCs for EPA Method 8260D are provided in the analytical reports in Appendix D.

Total (soil) and dissolved (water) lead by EPA Method 6020B.

Results reported at the MDL.

Bold denotes a detected concentration.

Acronyms and Abbreviations

— = not analyzed
µg/L = micrograms per liter
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
J = estimated value, typically below laboratory MRL
J- = estimated value, biased low
MDL = method detection limit
mg/kg = milligrams per kilogram
MRL = method reporting limit
NJ = the analyte has been tenatively identified or presumtively as present, and the associated value is estimated
RBDM = risk-based decision making
PAH = polycyclic aromatic hydrocarbon
TPH = total petroleum hydrocarbons
U = not detected above the indicated MDL
UJ = the result is a non-detect but the value is estimated
VOC = volatile organic compound

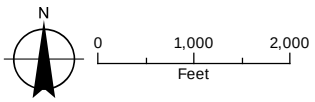
LEGEND

- Site Location
- City Boundary
- Major Road

FIGURE 1

Site Vicinity Map

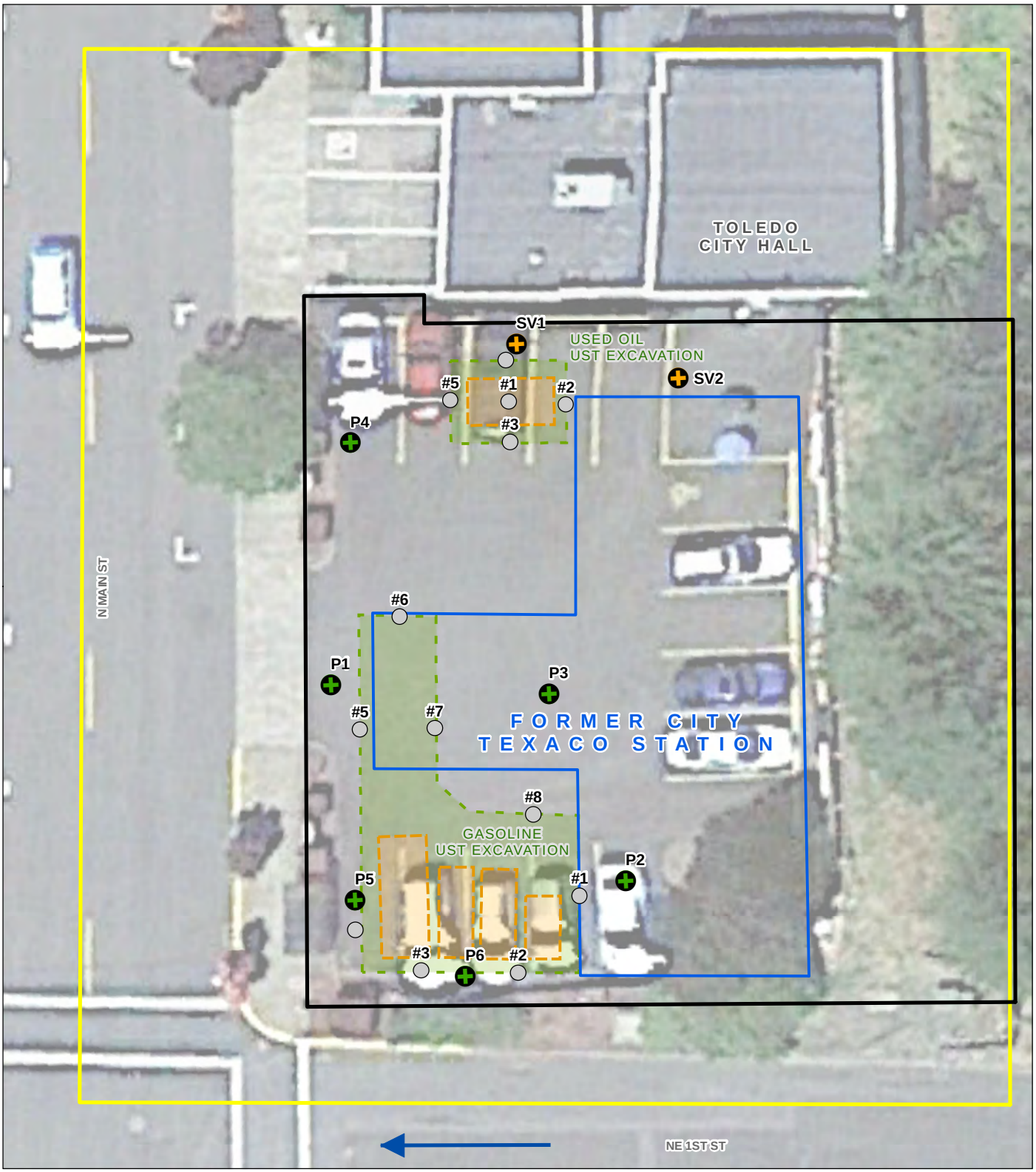
Former City Texaco Station



Date: June 17, 2024
Data Sources: BLM, ESRI, ODOT, USGS, Aerial Photo 2020

GSI Water Solutions, Inc.

Document Path: Y:\2060_DEQ\012_LUST_Sites\Source_Figures\Texaco\Figure1_Texaco_Site_Map.mxd, iramos



LEGEND

- Push Probe Location
- Soil Vapor Sample Location
- Soil Sample (1997)
- Former LUST
- Excavation Area (1997)
- Former Service Station
- Locality of the Facility
- Property Boundary
- Assumed Groundwater Flow Direction

NOTE
All features are approximate.

Date: June 27, 2024
Data Sources: BLM, ESRI, ODOT, USGS, Aerial Photo 2020

FIGURE 2

Sample Locations

Former City Texaco Station

N

0 10 20
Feet

GSI Water Solutions, Inc.

Document Path: Y:\2060_DEQ\012_LUST_Sites\Source_Figures\Texaco\Figure2_Texaco_Samp_Locs.mxd, npalmer

NOTES
All features are approximate.
Soil results reported in milligram per kilogram (mg/kg).

U = not detected above the indicated MRL
* Depth reported as soil/groundwater interface and was estimated.

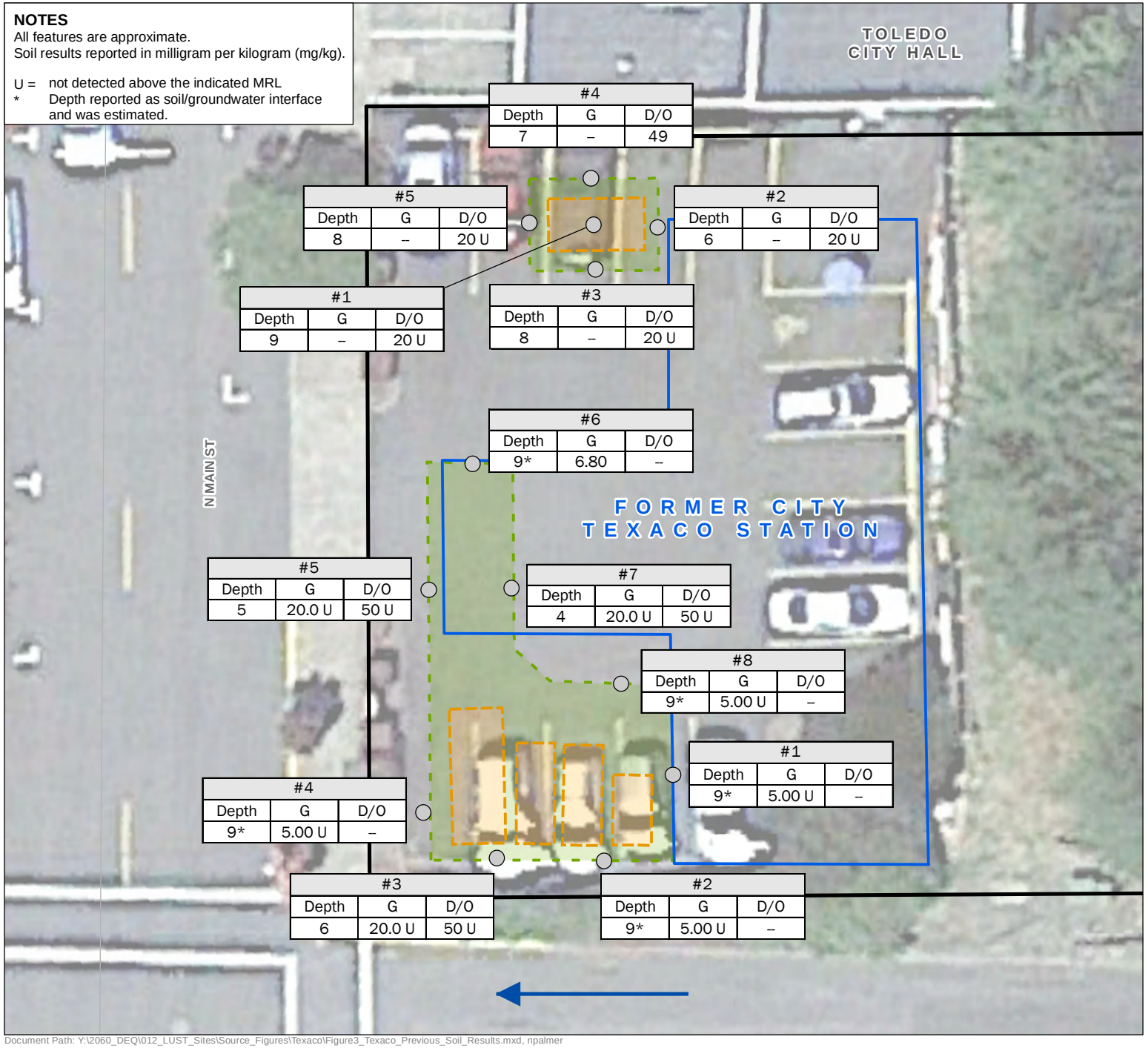


FIGURE 3

Previous Soil Results

Former City Texaco Station

LEGEND

- Soil Sample (1997)
- Former LUST
- Excavation Area (1997)
- Former Service Station
- Property Boundary
- Assumed Groundwater Flow Direction

Sample Number		
Depth	G	D/O
Depth in Feet	TPH as Gasoline	TPH as Diesel/Oil

N

0 9 18
Feet

Date: June 27, 2024
Data Sources: BLM, ESRI, ODOT, USGS, Aerial Photo 2020

GSI Water Solutions, Inc.

Document Path: Y:\2060_DEQ\012_LUST_Sites\Source_Figures\Texaco\Figure3_Texaco_Previous_Soil_Results.mxd, npalmer

FIGURE 4

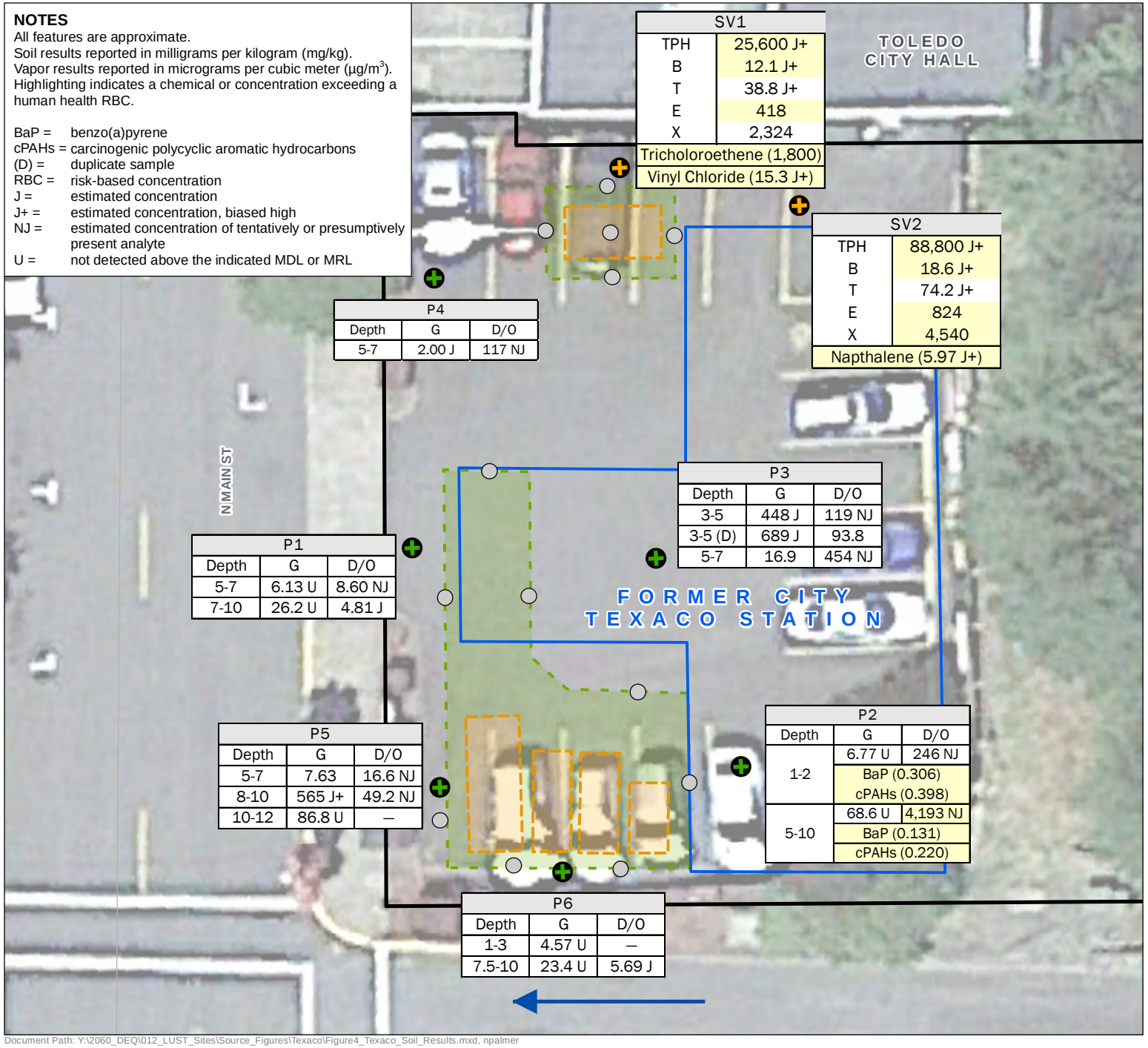
Soil and Soil Vapor Results and Exceedances

Former City Texaco Station

NOTES

All features are approximate.
Soil results reported in milligrams per kilogram (mg/kg).
Vapor results reported in micrograms per cubic meter (µg/m^3).
Highlighting indicates a chemical or concentration exceeding a human health RBC.

BaP = benzo(a)pyrene
cPAHs = carcinogenic polycyclic aromatic hydrocarbons
(D) = duplicate sample
RBC = risk-based concentration
J = estimated concentration
J+ = estimated concentration, biased high
NJ = estimated concentration of tentatively or presumptively present analyte
U = not detected above the indicated MDL or MRL



SV1	
TPH	25,600 J+
B	12.1 J+
T	38.8 J+
E	418
X	2,324
Tricholoroethene (1,800)	
Vinyl Chloride (15.3 J+)	

SV2	
TPH	88,800 J+
B	18.6 J+
T	74.2 J+
E	824
X	4,540
Napthalene (5.97 J+)	

P4		
Depth	G	D/O
5-7	2.00 J	117 NJ

P3		
Depth	G	D/O
3-5	448 J	119 NJ
3-5 (D)	689 J	93.8
5-7	16.9	454 NJ

P1		
Depth	G	D/O
5-7	6.13 U	8.60 NJ
7-10	26.2 U	4.81 J

P5		
Depth	G	D/O
5-7	7.63	16.6 NJ
8-10	565 J+	49.2 NJ
10-12	86.8 U	–

P2		
Depth	G	D/O
1-2	6.77 U	246 NJ
	BaP (0.306)	
	cPAHs (0.398)	
5-10	68.6 U	4,193 NJ
	BaP (0.131)	
	cPAHs (0.220)	

P6		
Depth	G	D/O
1-3	4.57 U	–
7.5-10	23.4 U	5.69 J

LEGEND

- Push Probe Location
- Soil Vapor Sample Location
- Soil Sample (1997)
- Former LUST
- Excavation Area (1997)
- Former Service Station
- Property Boundary
- Assumed Groundwater Flow Direction

Soil Vapor Sample	
TPH	Low Fraction TPH
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylenes

Probe/Sample Number		
Depth	G	D/O
Depth in Feet	TPH as Gasoline	TPH as Diesel/Oil
	Other Compound Exceedances	

N

0 9 18
Feet

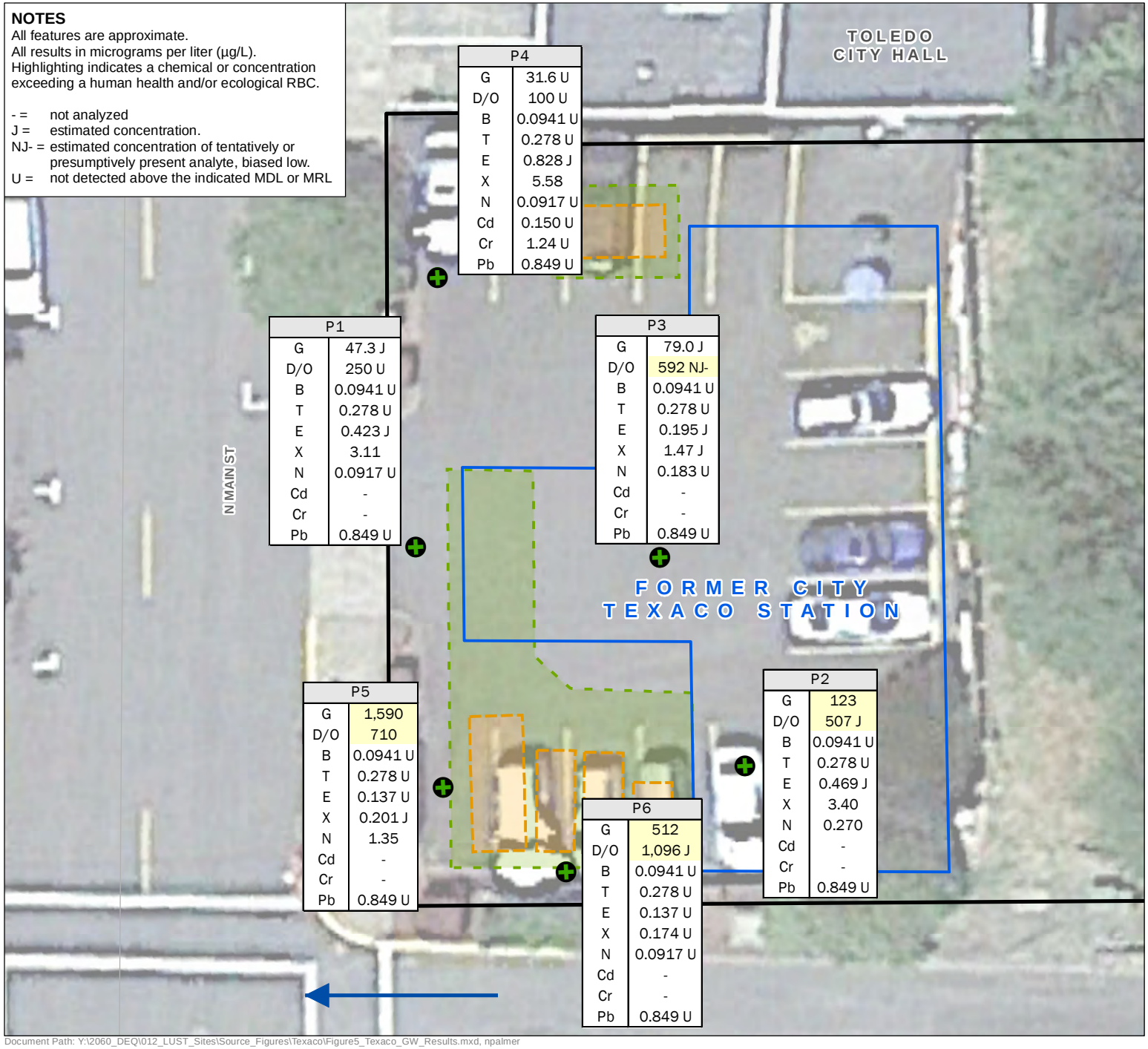
Date: June 27, 2024
Data Sources: BLM, ESRI, ODOT, USGS, Aerial Photo 2020

GSI Water Solutions, Inc.

Document Path: Y:\2060_DEQ\012_LUST_Sites\Source_Figures\Texaco\Figure4_Texaco_Soil_Results.mxd, npalmer

NOTES
All features are approximate.
All results in micrograms per liter (µg/L).
Highlighting indicates a chemical or concentration exceeding a human health and/or ecological RBC.

- = not analyzed
J = estimated concentration.
NJ- = estimated concentration of tentatively or presumptively present analyte, biased low.
U = not detected above the indicated MDL or MRL



P4	
G	31.6 U
D/O	100 U
B	0.0941 U
T	0.278 U
E	0.828 J
X	5.58
N	0.0917 U
Cd	0.150 U
Cr	1.24 U
Pb	0.849 U

P1	
G	47.3 J
D/O	250 U
B	0.0941 U
T	0.278 U
E	0.423 J
X	3.11
N	0.0917 U
Cd	-
Cr	-
Pb	0.849 U

P3	
G	79.0 J
D/O	592 NJ-
B	0.0941 U
T	0.278 U
E	0.195 J
X	1.47 J
N	0.183 U
Cd	-
Cr	-
Pb	0.849 U

P5	
G	1,590
D/O	710
B	0.0941 U
T	0.278 U
E	0.137 U
X	0.201 J
N	1.35
Cd	-
Cr	-
Pb	0.849 U

P6	
G	512
D/O	1,096 J
B	0.0941 U
T	0.278 U
E	0.137 U
X	0.174 U
N	0.0917 U
Cd	-
Cr	-
Pb	0.849 U

P2	
G	123
D/O	507 J
B	0.0941 U
T	0.278 U
E	0.469 J
X	3.40
N	0.270
Cd	-
Cr	-
Pb	0.849 U

FIGURE 5

Groundwater Results and Exceedances

Former City Texaco Station

LEGEND

- Push Probe Location
- Former LUST
- Excavation Area (1997)
- Former Service Station
- Property Boundary
- Assumed Groundwater Flow Direction

Probe/Sample Number	
G	TPH as Gasoline
D/O	TPH as Diesel/Oil
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylenes
N	Napthalene
Cd	Dissolved Cadmium
Cr	Dissolved Chromium
Pb	Dissolved Lead

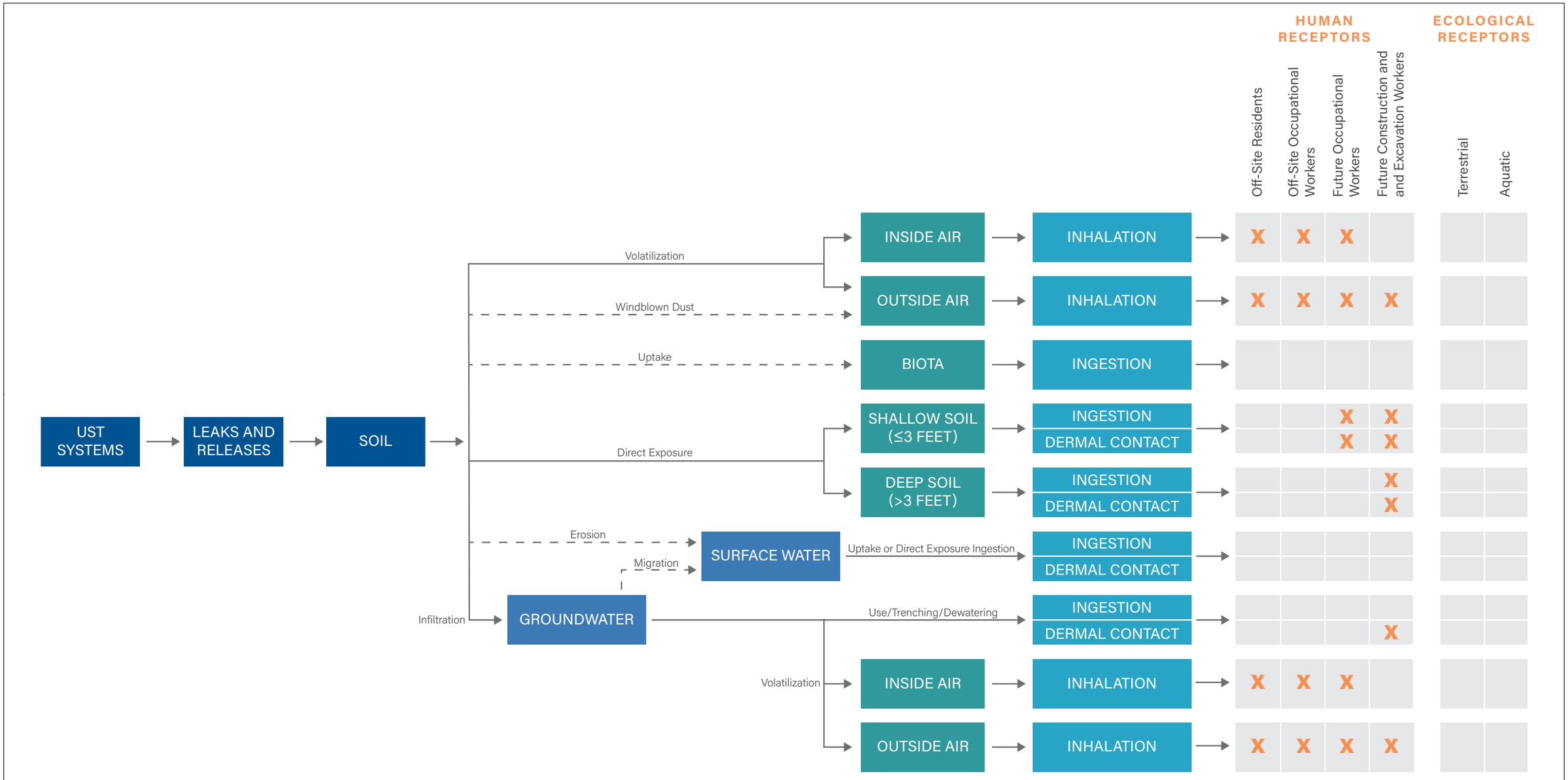
N

0 9 18
Feet

Date: June 27, 2024
Data Sources: BLM, ESRI, ODOT, USGS, Aerial Photo 2020

GSI Water Solutions, Inc.

Document Path: Y:\2060_DEQ\012_LUST_Sites\Source_Figures\Texaco\Figure5_Texaco_GW_Results.mxd, npalmer



LEGEND

X Potentially Complete Exposure Pathway

--→ Contaminant Pathway not Present or Complete

FIGURE 6

Conceptual Site Model

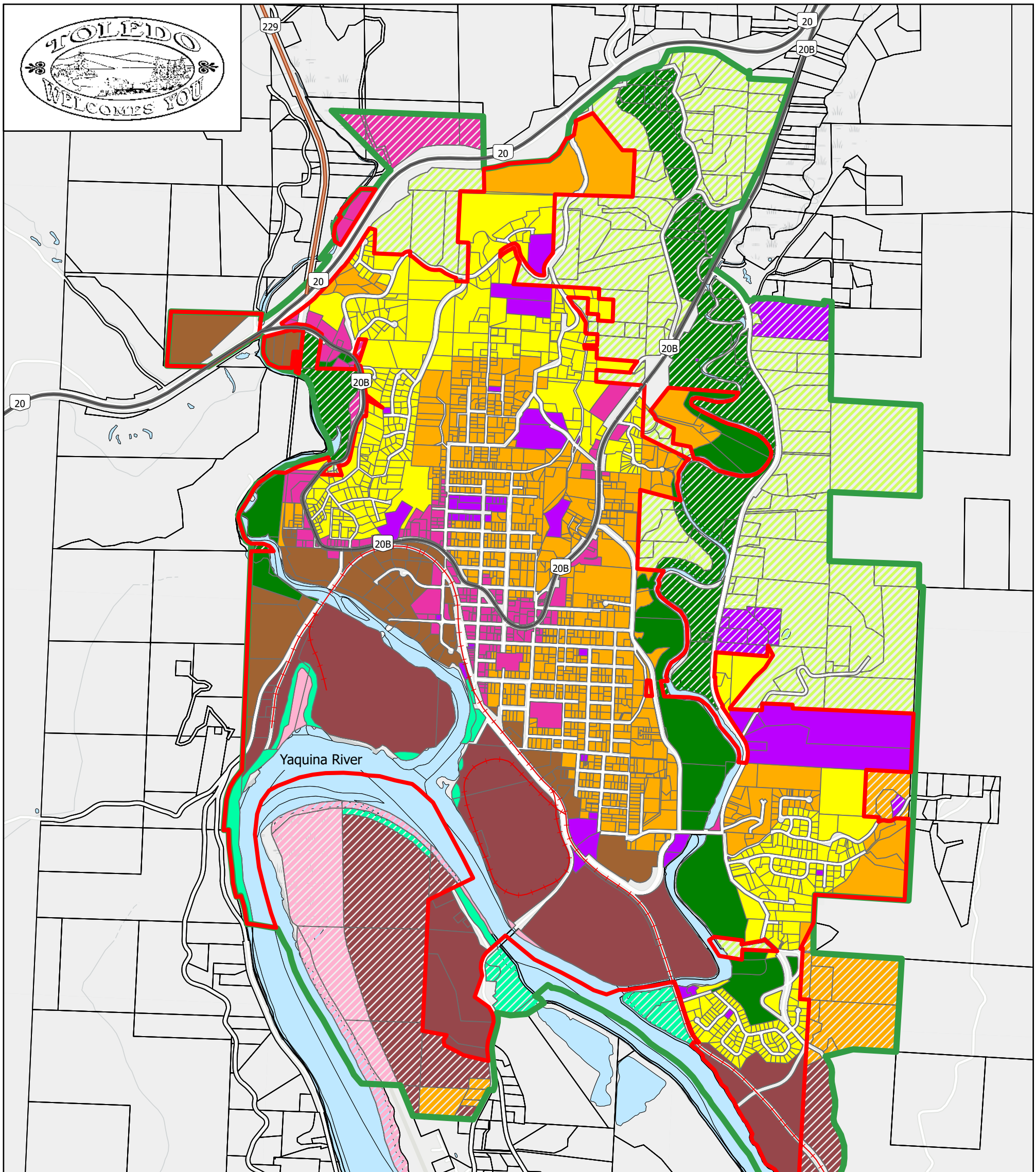
Former City Texaco Station

GSI Water Solutions, Inc.

Y:\2060_DEQ\012_LUST_Sites\Source_Figures

APPENDIX A

Land and Water Use Documentation



The 2023 Toledo Comprehensive Land Use Plan and Zoning Map

For Planning Purposes Only. For questions or clarifications, contact the Planning Department at (541) 336-2247.

Zoning at Site and Surrounding Area

Chapter 17.16 - COMMERCIAL ZONE (C)

17.16.010 - Purpose.

The purpose of the C zone is to provide for retail and service commercial uses. It is also intended that these uses will supply personal services or goods to the average person and that a majority of the floor space will be devoted to that purpose. Compatible uses including public, civic, and institutional uses are also allowed. Residential use above the commercial main floor, separate and distinct from the commercial main floor, or a residential live work unit is allowed, subject to inspection and approval by the city for fire and life safety and are allowed only where there is a commercial use and the business has obtained a business license from the city of Toledo.

(Ord. 1286 § 1 (part), 2001; Ord. No. 1398, § 24, 10-6-2021)

17.16.020 - Uses permitted outright.

In the C zone, the following uses and their accessory uses are permitted outright. Special standards for certain uses, marked with an asterisk (*), are found in Section 17.16.050.

A. Retail trade or commercial services, except drive-in uses.
B. Entertainment (e.g., theaters, clubs, amusement uses).
C. Hotel, motels, bed and breakfast facility, hostel, or residency hotels.
D. Personal and professional services (e.g., child care center, catering/food services, restaurants, taverns, laundromats and dry cleaners, barber shops and salons, banks and financial institutions, or similar uses).
E. Medical and dental offices, clinics or laboratories.
F. Office uses (i.e., those not otherwise listed).
G. Public and institutional uses such as religious uses, clubs, lodges, government offices and facilities, public safety services, libraries, museums, community centers, public parking lots, parks, schools, or other similar uses.
H. Custom manufacturing of goods for retail and/or wholesale sale on the premises such as small-scale crafts, electronic equipment, bakery, furniture, art, sculpture, pottery, or other similar types of goods.
I. Truck and car repair and service—minor.*
J. Automobile service stations.
K. One live work accessory dwelling unit that meets applicable code requirements.
L. Temporary street vendors/seasonal commercial uses not to exceed six months.
M. Transportation facilities (operation, maintenance, preservation, and construction in accordance with the city Transportation System Plan).

(Ord. 1311 § 1, 2006; Ord. 1307 §§ 26, 27, 2005; Ord. 1286 § 1 (part), 2001)

(Ord. No. 1355, § 11, 9-17-2014; Ord. No. 1398, § 25, 10-6-2021)

17.16.030 - Conditional uses permitted.

A. Animal hospitals or kennels.
B. Drive-in use for uses which are permitted outright or as conditional uses in the C zone.
C. Restaurants (take-out or drive-in).
D. Machine shops.
E. Mini-storage.
F. Multi-family dwelling units.
G. Overnight trailer park or recreational vehicle parks.
H. Pumping station or utility substations.
I. Truck and car repair and service - major.
J. Food production and/or beverage production, where the majority of the floor space will be devoted to providing personal services or goods to the public.
K. Medical marijuana dispensary facility.
L. Uses which are similar to those permitted outright or conditionally in the C zone and which conform to the purpose of the zone.
M. Uses which are similar to those permitted outright or conditionally in the C zone and which conform to the purpose of the zone.
N. Cottage clusters.

(Ord. 1286 § 1 (part), 2001)

(Ord. No. 1354, § 1, 4-2-2014; Ord. No. 1357, §§ 2, 3, 11-19-2014; Ord. No. 1360, §§ 2, 3, 2-3-2016; Ord. No. 1398, § 26, 10-6-2021)

17.16.040 - Setback requirements.

Except for allowed uses within the Main Street District area as defined in Section 17.40.010, the front yard in a C zone shall be a minimum of twenty-five (25) feet.

(Ord. 1286 § 1 (part), 2001)

17.16.050 - Special standards for certain uses (marked with an asterisk (*) in Section 17.16.020).

A. Truck and Car Repair and Service - Minor:

1. All repair shall be conducted entirely within an enclosed building.
2. Non-operating vehicles shall be stored overnight only within the building and outdoors in designated storage spaces. The maximum number of non-operating vehicle, outdoor, storage spaces shall be limited to one space for the first four repair bays with .25 storage spaces per each additional repair bay. Required customer/employee parking spaces shall not be used for overnight storage of non-operating vehicles.
3. Operating vehicles shall be parked overnight only in designated parking areas or within the building.

(Ord. 1286 § 1 (part), 2001)

General Site Information	
ECSI File No. or LUST File No.:	2-9744/35
Site Name:	TEXACO STATION
Site Location (address, city, and/or county):	TOLEDO, OR
Latitude/Longitude or other location documentation for site:	
Current and Historical Site Use (gas station, dry cleaner, jet hangar, etc.) [1]:	currently parking lot
Zoning:	Commercial
Site[2] Features:	PAVED ASPHALT LOT, former tank pits
Chemicals of Interest[3]:	PAHS, TPH, VOC, METALS — bar & diesel constituents

[1] Include contaminant management, treatment, storage or disposal and areas where a release may have occurred. Historical sources should be identified using sources of information which help in identifying current or past uses or occupants of a site including aerial photographs, fire insurance maps, property tax files, recorded land title records, United States Geological Survey (USGS) 7.5 minute topographic maps, local street directories, building department records, zoning or land use records. Any previous site assessments, environmental assessments or studies should be summarized

[2] Facility or Site (OAR 340-122-0115(26)) means any building, structure, installation, equipment, pipe or pipeline including any pipe into a sewer or publicly owned treatment works, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, above ground tank, underground storage tank, motor vehicle, rolling stock, aircraft, or any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located and where a release has occurred or where there is a threat of a release, but does not include any consumer product in consumer use or any vessel.

[3] A COI list should include chemicals that are detected or are suspected to be present based on historical and current operations. For Stage 1, the site-specific history of hazardous substance uses and releases is usually the source of potential chemical information. Identify hazardous substances that have the potential to bioaccumulate in Section C2 of Attachment 1.

Site Conditions – Provide Approximate Areas (acreage or square feet)

These habitats may occur in a range of natural and protected areas, including parks and green space found within urban areas. More information and habitat classification can be found at: https://oregonexplorer.info/content/classification-wildlife-habitats

Site Adjacent to Site

____ N **Terrestrial Open Habitat / Grasslands**: Dominated by short to medium-tall grasses, low to medium shrubs, or bare soil.

____ N **Forest or Woodland Habitats:** Woodlands (maple, alder, aspen), conifer forest (Douglas fir, hemlock, cedar, spruce), mixed-woodland, juniper, pine (ponderosa, lodgepole).

____ N **Wetland[4]:** May be either tidal or non-tidal wetlands with emergent herbaceous plants.

____ N **Riparian Zone:** Patches or linear strips of land adjacent to waterbodies (rivers, streams, waterbodies), or on nearby floodplains and terraces. May be impacted by periodic riverine flooding or perennial flowing water. May or may not also contain wetlands.

____ N **Aquatic Open Water:** Ponds, lakes, reservoirs, rivers, creeks, streams, bays estuaries, and nearshore marine and intertidal.

X X **Impermeable Surface:** Pavement, structures.

Documentation

- Aerial Site Vicinity Map(s) identifying zoning and Site features. Include topographic map.
- Summarize known or potential contaminated soil, groundwater, migration pathways.
- Figure illustrating source/release areas, sample locations, estimated areas of contamination, and surface features such as pavement, stormwater catch basins/drainage system including outfalls, dry wells or stormwater swales.
- Aerial Map showing habitat types described above both within and adjacent to the Site by at least 1/4 mile from Site boundary. Definitions and tools[5] for identifying wetlands include:

[4] Covered Under Oregon Statewide Wetlands Inventory (ORS 196.674) https://www.oregon.gov/dsl/WW/Pages/SWI.aspx

[5] Information shown on the Local Wetland Inventory maps is for planning purposes only, as wetland information is subject to change. There may be unmapped wetland and waters subject to regulation and all wetlands and waters boundary mapping is approximate. In all cases, actual field conditions determine the presence, absence and boundaries of wetlands and waters.

ATTACHMENT 1
Ecological Scoping Checklist

Site Name	FORMER TEXACO STATION
Date of Site Visit	2/1/24
Site Location	TOLEDO, OR
Site Visit Conducted by	B. WHITAKER

Part ❶

CONTAMINANTS OF INTEREST IN LOCALITY OF FACILITY† Types, Classes, Or Specific Hazardous Substances ‡ Known Or Suspected	Upland	Aquatic
GAS, DIESEL, TPHs	X	

‡ As defined by OAR 340-122-115(30) † As defined by OAR 340-122-115(34)

Part ❷

OBSERVED IMPACTS OBSERVED IN THE LOCALITY OF THE FACILITY	Finding
Onsite vegetation (None, Limited, Extensive)	N
Vegetation in the locality of the site (None, Limited, Extensive)	N
Onsite wildlife such as macroinvertebrates, reptiles, amphibians, birds, mammals, other (None, Limited, Extensive)	N
Wildlife such as macroinvertebrates, reptiles, amphibians, birds, mammals, other in the locality of the site (None, Limited, Extensive)	N
Other readily observable impacts (None, Discuss below)	
Discussion:	

https://www.oregon.gov/dsl/WW/Pages/Inventories.aspx http://tools.oregonexplorer.info/oe_map_viewer_2_0/viewer.html?Viewer=orwap National Wetlands Inventory: https://www.fws.gov/wetlands/Data/Mapper.html	
Checklist Completed By: (name and title/expertise) SHERON WARNER GEOLOGIST	Date: 2/11/24

U.S. Fish and Wildlife Service

National Wetlands Inventory

City of Toledo

June 27, 2024

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

ATTACHMENT 1
Ecological Scoping Checklist (cont'd)

Part ❸

SPECIFIC EVALUATION OF ECOLOGICAL RECEPTORS / HABITAT	Finding
Terrestrial - Wooded	
Percentage of site that is wooded	0
Dominant vegetation type (**E**vergreen, **D**eciduous, **M**ixed)	**P** *
Prominent tree size at breast height, i.e., four feet (<6", 6" to 12", >12")	
Evidence / observation of wildlife (**M**acroinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	
Terrestrial - Scrub/Shrub/Grasses	
Percentage of site that is scrub/shrub	0
Dominant vegetation type (**S**crub, **S**hrub, **G**rasses, **O**ther)	**P**
Prominent height of vegetation (<2', 2' to 5', >5')	
Density of vegetation (**D**ense, **P**atchy, **S**parse)	**P**
Evidence / observation of wildlife (**M**acroinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	
Terrestrial - Ruderal	
Percentage of site that is ruderal	0
Dominant vegetation type (**L**andscaped, **A**griculture, **B**are ground)	**P**
Prominent height of vegetation (0', >0' to <2', 2' to 5', >5')	
Density of vegetation (**D**ense, **P**atchy, **S**parse)	**P**
Evidence / observation of wildlife (**M**acroinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	
Aquatic - Non-flowing (lentic)	
Percentage of site that is covered by lakes or ponds	0
Type of water bodies (**L**akes, **P**onds, **V**ernal pools, **I**mpoundments, **Lag**oon, **R**eservoir, **C**anal)	
Size (acres), average depth (feet), trophic status of water bodies	
Source water (**R**iver, **S**tream, **G**roundwater, **I**ndustrial discharge, **Su**rface water runoff)	
Water discharge point (**N**one, **R**iver, **S**tream, **G**roundwater, **W**etlands impoundment)	
Nature of bottom (**M**uddy, **R**ocky, **S**and, **C**oncrete, **O**ther)	**P**
Vegetation present (**S**ubmerged, **E**mergent, **F**loating)	**P**
Obvious wetlands present (**Y**es / **N**o)	
Evidence / observation of wildlife (**M**acroinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	
Aquatic - Flowing (lotic)	
Percentage of site that is covered by rivers, streams (brooks, creeks), intermittent streams, dry wash, arroyo, ditches, or channel waterway	0
Type of water bodies (**R**ivers, **S**treams, **I**ntermittent Streams, **D**ry wash, **A**rroyo, **D**itches, **C**hannel waterway)	
Size (acres), average depth (feet), approximate flow rate (cfs) of water bodies	**P**
Bank environment (cover: **V**egetated, **B**are / slope: **S**teep, **G**radual / height (in feet))	

SPECIFIC EVALUATION OF ECOLOGICAL RECEPTORS / HABITAT	Finding
Source water (**R**iver, **S**tream, **G**roundwater, **I**ndustrial discharge, **S**urface water runoff)	
Tidal influence (**Y**es / **N**o)	
Water discharge point (**N**one, **R**iver, **S**tream, **G**roundwater, **W**etlands impoundment)	
Nature of bottom (**M**uddy, **R**ocky, **S**and, **C**oncrete, **O**ther)	
Vegetation present (**S**ubmerged, **E**mergent, **F**loating)	📷
Obvious wetlands present (**Y**es / **N**o)	
Evidence / observation of wildlife (**M**acroinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	
Aquatic - Wetlands	
Obvious or designated wetlands present (**Y**es / **N**o)	
Wetlands suspected as site is/has (**A**djacent to water body, in **F**loodplain, **S**tanding water, **D**ark wet soils, **M**ud cracks, **D**ebris line, **W**ater marks)	
Vegetation present (**S**ubmerged, **E**mergent, **S**crub/shrub, **W**ooded)	📷
Size (acres) and depth (feet) of suspected wetlands	
Source water (**R**iver, **S**tream, **G**roundwater, **I**ndustrial discharge, **S**urface water runoff)	
Water discharge point (**N**one, **R**iver, **S**tream, **G**roundwater, **I**mpoundment)	
Tidal influence (**Y**es / **N**o)	
Evidence / observation of wildlife (**M**acroinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	

📷: Photographic documentation of these features is highly recommended.

Part ❹

HABITATS AND SPECIES OBSERVED OR DOCUMENTED IN LOF
Garden slugs removed by us but no native habitat

ATTACHMENT 2
Evaluation of Receptor-Pathway Interactions

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
Are hazardous substances present or potentially present in surface waters? This includes tidal or seasonally inundated areas and wetlands. **AND** **Could hazardous substances reach these receptors via surface water?**		X	
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in surface waters. • Ability of hazardous substances to migrate to surface waters. Consider migration pathways such as erosion of soils adjacent to aquatic environments (e.g., banks or riparian areas), subsurface preferential pathways (e.g., pipes), outfalls, groundwater discharges, and surface migration (e.g., ditches). • Terrestrial organisms may be dermally exposed to water-borne contaminants as a result of wading or swimming in contaminated waters. Aquatic receptors may be exposed through osmotic exchange, respiration or ventilation of surface waters. • Contaminants may be taken-up by terrestrial plants whose roots are in contact with surface waters. • Terrestrial receptors may ingest water-borne contaminants if contaminated surface waters are used as a drinking water source.			
Are hazardous substances present or potentially present in groundwater? **AND** **Could hazardous substances reach these receptors via groundwater?**		X	
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in groundwater. • Ability of hazardous substances to migrate to groundwater. • Potential for hazardous substances to migrate via groundwater and discharge into habitats and/or surface waters. • Contaminants may be taken-up by terrestrial and rooted aquatic plants whose roots are in contact with groundwater present within the root zone (~1m depth). • Terrestrial wildlife receptors generally will not contact groundwater unless it is discharged to the surface.			

"Y" = yes; "N" = No, "U" = Unknown (counts as a "Y")

ATTACHMENT 2
Evaluation of Receptor-Pathway Interactions (cont'd)

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
Are hazardous substances present or potentially present in sediments? This includes tidal or seasonally inundated areas and wetlands. **AND** **Could hazardous substances reach receptors via contact with sediments?**			
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in sediment. • Ability of hazardous substances to leach or erode from surface soils and be carried into sediment via surface runoff. • Potential for contaminated groundwater to upwell through, and deposit contaminants in, sediments. • If sediments are present in an area that is only periodically inundated with water, both aquatic and terrestrial species may exposed. Aquatic receptors may be directly exposed to sediments or may be exposed through osmotic exchange, respiration or ventilation of sediment pore waters. • Terrestrial species may be exposed to sediment in an area that is only periodically inundated with water. • If sediments are present in an area that is only periodically inundated with water, terrestrial species may have direct access to sediments for the purposes of incidental ingestion. Aquatic receptors may regularly or incidentally ingest sediment while foraging.		X	
Are hazardous substances present or potentially present in prey or food items of ecologically important receptors? **AND** **Could hazardous substances reach these receptors via consumption of food items?**		X	
When answering the above questions, consider the following: • Higher trophic level terrestrial and aquatic consumers and predators may be exposed through consumption of contaminated food sources. • In general, organic contaminants with log K_{ow} > 3.5 may accumulate in terrestrial mammals and those with a log K_{ow} > 5 may accumulate in aquatic vertebrates.			

"Y" = yes; "N" = No, "U" = Unknown (counts as a "Y")

ATTACHMENT 2
Evaluation of Receptor-Pathway Interactions (cont'd)

EVALUATION OF RECEPTOR-PATHWAY INTERACTIONS	Y	N	U
Are hazardous substances present or potentially present in surficial soils? **AND** **Could hazardous substances reach these receptors via incidental ingestion of or dermal contact with surficial soils?**		X	
When answering the above questions, consider the following: • Known or suspected presence of hazardous substances in surficial (~1m depth) soils. • Ability of hazardous substances to migrate to surficial soils. • Significant exposure via dermal contact would generally be limited to organic contaminants which are lipophilic and can cross epidermal barriers. • Exposure of terrestrial plants to contaminants present in particulates deposited on leaf and stem surfaces by rain striking contaminated soils (i.e., rain splash). • Contaminants in bulk soil may partition into soil solution, making them available to roots. • Incidental ingestion of contaminated soil could occur while animals grub for food resident in the soil, feed on plant matter covered with contaminated soil or while grooming themselves clean of soil.			
Are hazardous substances present or potentially present in soils? **AND** **Could hazardous substances reach these receptors via vapors or fugitive dust carried in surface air or confined in burrows?**		X	
When answering the above questions, consider the following: • Volatility of the hazardous substance (volatile chemicals generally have Henry's Law constant > 10^{-5} atm-m^3/mol and molecular weight < 200 g/mol). • Exposure via inhalation is most important to organisms that burrow in contaminated soils, given the limited amounts of air present to dilute vapors and an absence of air movement to disperse gases. • Exposure via inhalation of fugitive dust is particularly applicable to ground-dwelling species that could be exposed to dust disturbed by their foraging or burrowing activities or by wind movement. • Foliar uptake of organic vapors would be limited to those contaminants with relatively high vapor pressures. • Exposure of terrestrial plants to contaminants present in particulates deposited on leaf and stem surfaces.			

"Y" = yes; "N" = No, "U" = Unknown (counts as a "Y")

Oregon Water Resources Department
Well Report Query

Main Help
Return Contact Us

Well Report Query Results

GPS points, where available are at the far right of the table. Click link to view on map

Township: 11 S, Range: 10 W, Sections: 7,8,17,18, Type of Log: W

Well Log	Details	T-R-S/ QQ-Q	Taxlot	Street of Well	Owner	Company	Special Standards	Well Type	First Water	Completed Depth	Static Water Level	Yield	Completed Date	Received Date	Bonded Constructor	Startcard	Well Id #	New	Abandon	Deepen	Alteration	Conversion	Domestic	Irrigation	Community	Livestock	Industrial	Injection	Thermal	Dewatering	Piezometer	Latitude/ Longitude
LINC 1063	Details	11.00S-10.00W-7 -		190 NW SKYLINE	UTIGER, GARY 190 NW SKYLINE TOLEDO OR 97391			W		185.00	34.00	0.0	06/13/1988	06/23/1988	KINNEY, GARY L	3090		✓					✓										
LINC 1064	Details	11.00S-10.00W-7 -			BOYDSTON, JOHN RT 2 BOX 45 TOLEDO OR 97391			W	50.00	104.00	37.50	4.0	08/09/1972	08/28/1972	MUTSCHLER, LEROY W L W MUTSCHLER WELL DRILLING			✓					✓										
LINC 1065	Details	11.00S-10.00W-7 -			OVERLY, DON RT 2 BOX 39 TOLEDO OR 97391			W	35.00	40.00	18.00	10.0	06/25/1975	09/25/1975	GELLATLY, RAYMOND C			✓					✓										
LINC 1066	Details	11.00S-10.00W-7 -			MCADAMS, HARRY RT 2 BOX 41 TOLEDO OR 97391			W	52.00	82.00	48.00	5.0	08/10/1972	08/28/1972	MUTSCHLER, LEROY W L W MUTSCHLER WELL DRILLING			✓					✓										
LINC 2017	Details	11.00S-10.00W-7 -	1001	NW LINCOLN WAY, TOLEDO	FISHER, MARY PO BOX 1263 NEWPORT OR 97365			W	0.00	0.00	0.00			03/29/1995	JONES, BERT D	73814			✓														
LINC 51830	Details	11.00S-10.00W-7 -	501		WETLEN, JEFF	WETLEN, CATHY 919 CHRISTIANSEN RD TOLEDO OR 97391		W	2.80	7.10	2.80	1.0	10/16/1987	05/13/2005	WETLEN, JEFF C LAND OWNER		77869	✓					✓										
LINC 1067	Details	11.00S-10.00W-7 SE-NE			NESHEIM, A O 712 SANBAYO NEWPORT OR 97365			W	72.00	76.00		15.0	10/31/1957	12/10/1957	HOWELL, BILL			✓					✓										
LINC 51188	Details	11.00S-10.00W-7 SE-NE	100	370 SKYLINE DR	BAILEY, ROB 1535 SE ALDER LANE DR TOLEDO OR 97391			W	50.00	100.00	21.00	2.0	10/12/2000	11/03/2000	KINNEY, GARY L CORVALLIS DRILLING CO.	130999	44372	✓					✓										
LINC 53525 Exempt Use Map	Details	11.00S-10.00W-7 SE-NW	600	5441 HWY 20		DAHL AND DAHL INC. 5441 HWY 20 TOLEDO OR 97391		W	50.00	220.00	31.00	0.5	08/03/2015	08/10/2015	KINNEY, CLINTON S CORVALLIS DRILLING CO INC	211874	117852	✓									✓						44.6325, -123.9536
LINC 126	Details	11.00S-10.00W-8 -	2300	550 EAST SLOPE RD	MOON, MICHAEL 550 E SLOPE RD TOLEDO OR 97391			W	46.00	74.00	30.00	30.0	07/10/1988	07/13/1988	HILDERBRAND, ORVAIL	5022		✓					✓										
LINC 127	Details	11.00S-10.00W-8 -			LEACH, GUY HIDDEN VALLEY RD RT 1 BOX 121 TOLEDO OR 97391			W	75.00	205.00	30.00	2.0	03/01/1978	04/03/1978	KINNEY, CLARENCE A CORVALLIS DRILLING CO. INC.			✓					✓										
LINC 1068	Details	11.00S-10.00W-8 -		201 NW SKYLINE DR	RETHERFORD, VANCE 201 NW SKYLINE DR TOLEDO OR 97391			W	42.00	65.00	25.00	1.0	06/16/1988	06/23/1988	KINNEY, GARY L	3092		✓					✓										
LINC 1069	Details	11.00S-10.00W-8 -			STEVENS, GERY RT 1 BOX 296 TOLEDO OR 97391			W	49.00	85.00	30.00	9.0	06/14/1985	06/18/1985	KINNEY, GARY L CORVALLIS DRILLING CO. INC.			✓					✓										
LINC 1070	Details	11.00S-10.00W-8 -			STEVENS, GERY RT 1 BOX 296 TOLEDO OR 97391			W	0.00	0.00	0.00			06/18/1985	KINNEY, GARY L CORVALLIS DRILLING CO. INC.				✓				✓										
LINC 1071	Details	11.00S-10.00W-8 -			STILWELL, STEVE RT 1 BOX 326 TOLEDO OR 97391			W	50.00	75.00	37.00	10.0	05/21/1984	06/01/1984	KINNEY, GARY L CORVALLIS DRILLING CO. INC.			✓					✓										
LINC 1072	Details	11.00S-10.00W-8 -			STILWELL, STEVE RT 1 BOX 326 TOLEDO OR 97391			W	63.00	162.00	40.00	0.0	05/18/1984	06/01/1984	KINNEY, GARY L CORVALLIS DRILLING CO.			✓					✓										
LINC 1073	Details	11.00S-10.00W-8 -			LEACH, GUY RT 1 BOX 121 HIDDEN VALLEY RD TOLEDO OR 97391			W		150.00			06/05/1981	07/08/1981	JONES, ALVIN K CORVALLIS DRILLING CO. INC.			✓	✓				✓										
LINC 1074	Details	11.00S-10.00W-8 -			HOWARD, LEONARD RT 1 BOX 301 TOLEDO OR 97391			W		0.00	100.00	2.0	10/08/1979	11/01/1979	JONES, ALVIN K CORVALLIS DRILLING CO. INC.			✓	✓				✓										
LINC 1075	Details	11.00S-10.00W-8 -			HOWARD, LEONARD RT 1 BOX 301 TOLEDO OR 97391			W	69.00	80.00	30.00	3.0	10/10/1979	11/01/1979	JONES, ALVIN K CORVALLIS DRILLING CO. INC.			✓					✓										
LINC 1079	Details	11.00S-10.00W-8 -			SWANNER, WAYNE HWY 20 TOLEDO OR 97391			W	140.00	155.00	31.00	1.0	08/01/1972	08/14/1972	KINNEY, CLARENCE A CORVALLIS DRILLING CO. INC.			✓					✓										
LINC 50491	Details	11.00S-10.00W-8 -	500	800 RIDGE DR, TOLEDO	PFEFFERKUCH, BILL 3590 HILLVIEW DRIVE SE SALEM OR 97302			W									6529															
LINC 51552	Details	11.00S-10.00W-8 -	600	109 SKYLINE DR	SNOOK, RONALD 109 SKYLINE DR TOLEDO OR 97394			W						01/27/2003	WELL ID APPLICATION WELL ID APPLICATION		63262														

LINC 1076	Details	11.00S-10.00W-8 NE-NE			RAY, VEARL RT 1 BOX 258 TOLEDO OR 97391			W		0.00			08/27/1979	11/30/1979	MUTSCHLER, LEROY W M & H WELL DRILLING INC.			✓	✓			✓														
LINC 1077	Details	11.00S-10.00W-8 NE-NE			RAY, VEARL RT 1 BOX 258 TOLEDO OR 97391			W		0.00		0.0	08/27/1979	11/30/1979	MUTSCHLER, LEROY W M & H WELL DRILLING INC.			✓	✓			✓														
LINC 1078	Details	11.00S-10.00W-8 NE-NE			RAY, VEARL RT 1 BOX 258 TOLEDO OR 97391			W		0.00		0.0	08/28/1979	11/30/1979	MUTSCHLER, LEROY W M-H WELL DRILLING INC.			✓	✓			✓														
LINC 1776	Details	11.00S-10.00W-8 NE-NE	501	OLD RD, TOLEDO	MCNEIL, HARLEY 11975 FOOTHILLS HWY LONGMONT CO 80503			W	95.00	205.00	90.00	1.0	12/09/1992	12/17/1992	JONES, BERT	48780		✓					✓														
LINC 50916	Details	11.00S-10.00W-8 NE-NE	700	2124 NE STURDEVANT PLACE	TURNER, DANIEL 2124 NE STURDEVANT PLACE TOLEDO OR 973912402			W	75.00	130.00	55.00	50.0	05/06/1999	05/13/1999	JONES, BERT D JONES WELL DRILLING CO. INC.	121448	35238	✓					✓														
LINC 51842	Details	11.00S-10.00W-8 NE-NE	700	2124 NE STURDEVANT PLACE	GROVE, RANDY 2124 NE STURDEVANT PLACE TOLEDO OR 97391			W		125.00			06/23/2005	07/05/2005	JONES, BRET S JONES DRILLING CO. INC.	175088	35238				✓		✓														
LINC 52149	Details	11.00S-10.00W-8 NE-NE	1100	2610 NE STURDEVANT PLACE	RICE, OTTO 2610 NE STURDEVANT PLACE TOLEDO OR 97391			W	77.00	130.00	20.00	1.8	10/19/2006	11/24/2006	KINNEY, GARY L CORVALLIS DRILLING CO.	188295	86719	✓					✓														
LINC 52150	Details	11.00S-10.00W-8 NE-NE	1100	2610 NE STURDEVANT	RICE, OTTO 2610 NE STURDEVANT TOLEDO OR 97391			W	33.00	61.00	23.00	15.0	10/23/2006	11/24/2006	KINNEY, GARY L CORVALLIS DRILLING CO.	188296	86720	✓					✓														
LINC 53377 Exempt Use Map	Details	11.00S-10.00W-8 NE-NE	1300	2105 STURDEVENT PLAVE	KENWARD, TERRY 2105 STURDEVENT PLAVE TOLEDO OR 97391			W	25.00	61.00	10.00	5.0	01/22/2014	01/27/2014	KINNEY, CLINTON S CORVALLIS DRILLING CO INC	210766	113634	✓					✓														44.6354, -123.6138
LINC 52296	Details	11.00S-10.00W-8 NE-SE	103	1266 STURDEVANT RD NE	LIMING, DAN	LIMING, LINDA PO BOX 217 TOLEDO OR 97391		W	56.00	100.00	32.00	5.0	07/09/2007	08/08/2007	KINNEY, GARY L CORVALLIS DRILLING CO INC	191600	89111	✓					✓														
LINC 53490 Exempt Use Map	Details	11.00S-10.00W-8 NE-SE	00103	1266 NE STURDEVANT ROAD TOLEDO OR 97391	LIMING, DAN 1266 NE STURDEVANT ROAD TOLEDO OR 97391			W	48.00	85.00	29.00	22.0	02/26/2015	03/24/2015	HOWELL, JACOB WEST COAST DRILLING	1025654	116261	✓					✓														44.6284, -123.9208
LINC 1081	Details	11.00S-10.00W-8 NE-SW			LUCE, DARIB PO BOX L TOLEDO OR 97391			W	14.00	0.00	10.00	2.0	12/11/1973	02/14/1974	MUTSCHLER, LEROY W MUTSCHLER WELL DRILLING			✓	✓			✓														
LINC 1080	Details	11.00S-10.00W-8 NW-NE			ODELL, J R STAR RT E 96A NEWPORT OR 97365			W	46.00	67.00	31.00	35.0	06/07/1973	10/16/1973	MUTSCHLER, LEROY W L W MUTSCHLER WELL DRILLING			✓					✓														
LINC 1082 Groundwater Info	Details	11.00S-10.00W-8 SE-NW			DALBEY, RAYMOND G NYE ST TOLEDO OR 97391			W		54.00	30.90	5.0	09/17/1964	11/07/1962	FRANKLIN, HELEN M FRANKLIN WELL DRILLING			✓					✓														
LINC 53573 Exempt Use Map	Details	11.00S-10.00W-8 SW-SE	3200	520 NE E SLOPE RD	HOLLAND, BURT 520 NE E SLOPE RD TOLEDO OR 97391			W	50.00	80.00	30.00	10.0	11/12/2015	11/23/2015	KINNEY, CLINTON S CORVALLIS DRILLING CO INC	212487	120500	✓					✓														44.6246, -123.9275
LINC 1109	Details	11.00S-10.00W-17 -			WILSON, LEONARD 1957 SE KAURI ST TOLEDO OR 97391			W		275.00		0.0	08/22/1975	09/16/1975	KINNEY, CLARENCE A CORVALLIS DRILLING CO. INC.			✓					✓														
LINC 1110	Details	11.00S-10.00W-17 -			HAYDEN, WILLIAM PO BOX 356 TOLEDO OR 97391			W	105.00	140.00	20.00	5.0	10/02/1985	10/16/1985	KINNEY, GARY L CORVALLIS DRILLING CO. INC.			✓					✓														
LINC 1111	Details	11.00S-10.00W-17 -			HAYDEN, WILLIAM PO BOX 356 TOLEDO OR 97391			W	115.00	185.00	45.00	2.0	10/01/1985	10/16/1985	KINNEY, GARY L CORVALLIS DRILLING CO. INC.			✓					✓														
LINC 1112	Details	11.00S-10.00W-17 -			GILKERSON, KELLY TOLEDO OR 97391			W		175.00	54.00	60.0	08/11/1969	08/22/1969	JONES, DELBERT S CASEY JONES WELL DRILLING CO.			✓					✓														
LINC 1108	Details	11.00S-10.00W-17 SW-SE	2301	550 E SLOPE RD	ROBISON, ROBERT C 550 E SLOPE RD TOLEDO OR 97391			W	91.00	115.00	52.00	4.0	10/16/1989	10/31/1989	HILDERBRAND, ORVAL	15297		✓					✓														
LINC 131	Details	11.00S-10.00W-18 -			BARNETT, SHERMAN SE AMMON RD TOLEDO OR 97391			W	110.00	125.00	35.00	10.0	03/03/1978	04/03/1978	KINNEY, CLARENCE A CORVALLIS DRILLING CO. INC.			✓					✓														
LINC 1113	Details	11.00S-10.00W-18 -	701		LUCKINI, BOB 429 HIDDEN VALLEY TOLEDO OR 97391			W		53.00	9.00	4.0	08/21/1986	08/27/1986	HILDERBRAND, ORVAL M & H WELL DRILLING			✓					✓														
LINC 1114	Details	11.00S-10.00W-18 -			PRESTON, RAY AMMON RD SE TOLEDO OR 97391			W	90.00	110.00	30.00	10.0	03/06/1978	04/08/1978	KINNEY, CLARENCE A CORVALLIS DRILLING CO. INC.			✓					✓														
LINC 1774	Details	11.00S-10.00W-18 -	400	186 HIDDEN VALLEY	BROWN, THEODORE 1022 SW 8TH ST NEWPORT OR 97365			W	95.00	108.00	20.00	25.0	11/21/1992	11/25/1992	JONES, BERT D	50038		✓					✓														

Download Data

STATE OF OREGON

WATER WELL REPORT

(as required by ORS 537.765)

RECEIVED

JUL 13 1988

WATER RESOURCES DEPT.
SALEM, OREGON

4 NA 126

11S/10W-8

5022

Well Number:

(1) OWNER:

Name MICHAEL MOON

Address 550 EAST SLOPE RD.

City TOLEDO State ORE Zip 97391

(2) TYPE OF WORK:

☒ New Well ☐ Deepen ☐ Recondition ☐ Abandon

(3) DRILL METHOD

☒ Rotary Air ☐ Rotary Mud ☐ Cable

☐ Other

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation

☐ Thermal ☐ Injection ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval Yes ☐ No ☒ Depth of Completed Well 74 ft.

Explosives used Yes ☐ No ☒ Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Amount sacks or pounds
20	0	20	CEMENT	0	20	9
6	20	74				

How was seal placed: Method ☐ A ☐ B ☒ C ☐ D ☐ E

☐ Other

Backfill placed from ft. to ft. Material

Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6	+1	39	.250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:	4½	0	74	160	☐	☒	☒	☐
					☐	☐	☐	☐

Final location of shoe(s) NA

(7) PERFORATIONS/SCREENS:

☒ Perforations Method

☐ Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
54	74		90	½		☐	☒
						☐	☐
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
30		74	1 hr.

Temperature of water Depth Artesian Flow Found

Was a water analysis done? ☐ Yes By whom

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:

County LINCOLN Latitude ' " Longitude ' "

Township 11S N or S, Range 10W E or W, WM.

Section 8 ¼ ¼

Tax Lot 2300 Lot Block Subdivision

Street Address of Well (or nearest address) 550 EAST SLOPE RD. TOLEDO ORE 97391

(10) STATIC WATER LEVEL:

30 ft. below land surface. Date 7-10-88

Artesian pressure lb. per square inch. Date

(11) WATER BEARING ZONES:

Depth at which water was first found 46

From	To	Estimated Flow Rate	SWL
46	56	30	30

(12) WELL LOG:

Ground elevation

Material	From	To	SWL
SOIL	0	1	
CLAY YELLOW	1	25	
CLAY GREY	25	46	
CLAY GREY W/WATER	46	56	30
CLAY GREY	56	74	

Date started 7-10-88 Completed 7-10-88

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon well construction standards. Materials used and information reported above are true to my best knowledge and belief.

WWC Number

Signed Date

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. all work performed during this time is in compliance with Oregon well construction standards. This report is true to the best of my knowledge and belief. WWC Number 1238

Signed Orval Hildebrand Date 7-12-88

WHITE COPIES - WATER RESOURCES DEPARTMENT YELLOW COPY - CONSTRUCTOR PINK COPY - CUSTOMER 9809C 10/86

In-Person Land and Water Use Interview Form

Name: N/A			
Property Address: 297 N main st			
Telephone Number (optional):			
Check all of the boxes below that apply to your property.			
Land Activity or Use	**Past**	**Current**	**Planned**
Residential		X	
Commercial			
Industrial			
Agricultural			
Recreational			
Other (Describe)			
Water Use			
Drinking Water		X	
Irrigation/Landscape			
Vegetable Garden			
Industrial Process			
Livestock			
Other (Describe)			
Water Source			
Public Water Supply		X	
Shared Well (<5 Residences)			
On-Site Well			
Surface Water			
Other (Describe)			

Additional Questions:

1. If an on-site well is used for drinking water or irrigation, what is your estimate of the water usage rate? (how many gallons used per day?)

2. If an on-site well exists, do you know how deep the well is? _____

4. Do you have any planned changes to the current land use of your property? If yes, describe.

   No

5. Please provide any additional comments in the space below.

Water Use Survey
Oregon Department of Environmental Quality
September 2020

Your Name: Toledo History Center
Your Address: PO Box 213
Your Phone #: Main Street
Toledo, Oregon 97391

	Yes	No
1. Is water supplied to your property by the city?	☒	☐
2. Is there a well on your property?	☐	☐

IF YOU ANSWERED NO TO NO. 2 SKIP TO NO. 3:

What do you use the well for? (Check all that apply)

- Not used at all ☐
- Drinking Water ☐
- Irrigation/Landscape ☐
- Heat Pump ☐
- Commercial Supply ☐
- Other: _____ ☐

How deep is your well? Depth _____ feet (Don't Know) ☐

How often do you pump from the well? (Please indicate season of use)

Daily	_____	Season	_____
Weekly	_____	Season	_____
Monthly	_____	Season	_____

	Yes	No
Would you allow DEQ to sample your well (no cost to you)?	☐	☐

	Yes	No
3. Do you plan to make changes to your water system?	☐	☒

If yes, could you describe those changes? _____

_____

Thank you very much for your assistance! Please return the questionnaire to us in the attached self-addressed, stamped envelope. If you have any questions, don't hesitate to call: Della Graham, on behalf of the Oregon DEQ at 971-808-5184.

APPENDIX B

Photograph Log

1.

2.

1:
Setting up to sample groundwater at Probe P1.

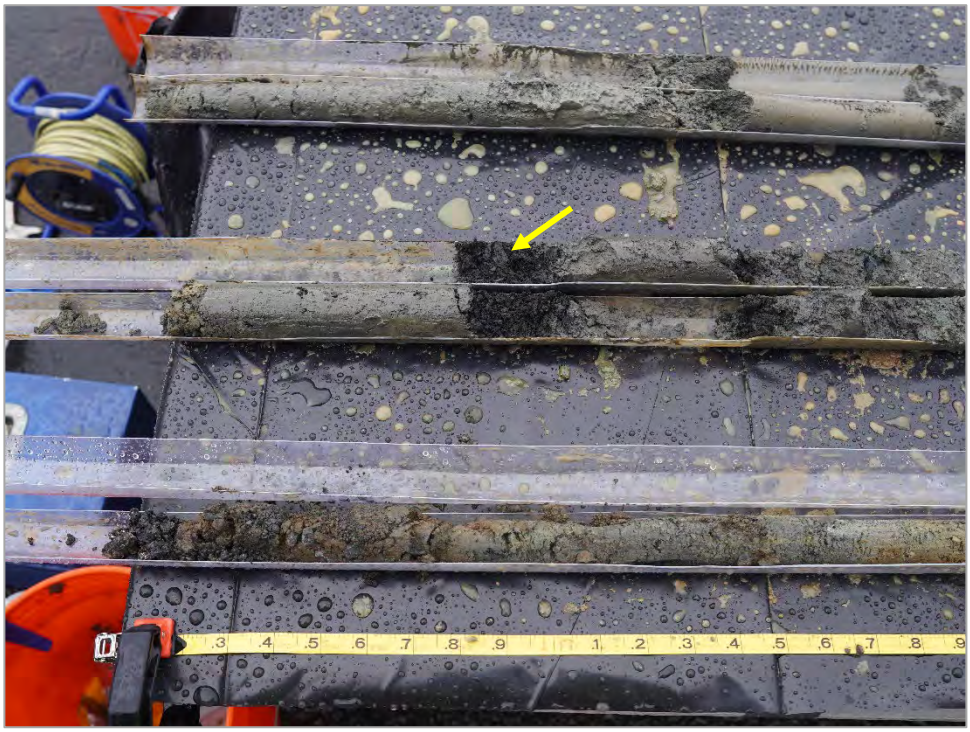
2:
Soil cores from Probe P1. For this and all following photographs, cores increase in depth from bottom to top of photograph. Bottom core is 0-5 feet bgs, followed by 5-10 feet bgs in the center, and 10-15 feet bgs at the top.

Appendix B
Photograph Log
Former City Texaco Station

GSI Water Solutions, Inc.

File Path:

3.



4.

3:
Top half of soil cores from Probe P2. Yellow arrow points to black angular gravel present at approximately 7 feet bgs.

4:
Bottom half of soil cores from Probe P2.

Appendix B
Photograph Log
Former City Texaco Station

GSI Water Solutions, Inc.

File Path:

5.

6.

5:
Soil cores from Probe P3.

6:
Drilling Probe P4.

Appendix B
Photograph Log
Former City Texaco Station

GSI Water Solutions, Inc.

File Path:

7.

8.

7:
Soil cores from Probe P4.

8:
Hand auger cuttings from first 5 feet of Probe P5 (i.e., 0-5 feet bgs).

GSI Water Solutions, Inc.

File Path:

9.

10.

9:
Remainder of Probe P5 soil cores (5-10 and 10-15 feet bgs).

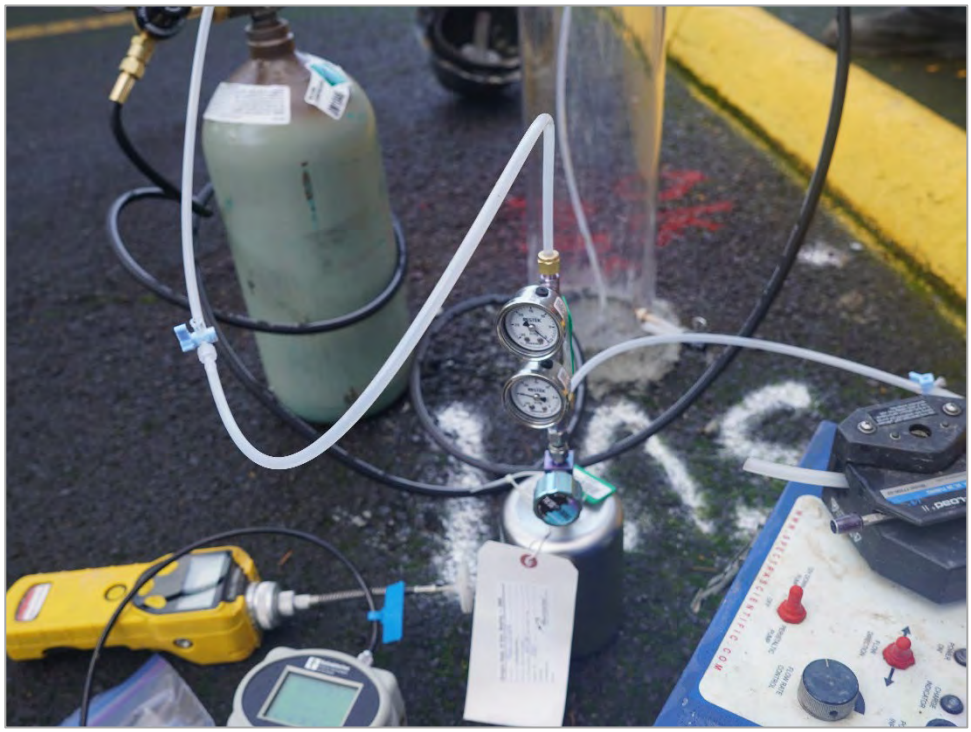
10:
Soil cores from Probe P6.

Appendix B
Photograph Log
Former City Texaco Station

GSI Water Solutions, Inc.

File Path:

11.



12.

11:
Sampling soil vapor sampling point SV1.

12:
Completed soil vapor sampling point SV2 and staged IDW drums.

Appendix B
Photograph Log
Former City Texaco Station

GSI Water Solutions, Inc.

File Path:

APPENDIX C

Field Methods, Sampling Procedures, and Exploration Logs

Field Methods, Sampling Procedures, and Exploration Logs

This appendix presents the field methods and sampling procedures that GSI Water Solutions, Inc. (GSI), used to complete the investigation activities on January 31 and February 1, 2024, at the former City Texaco Station project site in Toledo, Oregon (Figure 1). Field quality assurance/quality control (QA/QC) is also discussed. Drafted logs of the push probe explorations are presented in this appendix. Appendix B also includes representative photographs of the site and investigation activities.

1 Field and Sampling Procedures

Field and sampling procedures included the following:

- Push probe explorations
- Soil vapor sampling
- Sample management
- Decontamination procedures
- Handling of investigation-derived waste (IDW)

1.1 Push Probe Explorations

On January 31 and February 1, 2024, GSI completed six push probe explorations (P1 through P6) at the site. BB&A Environmental, Inc. (BB&A), of Eugene, Oregon completed the probes under subcontract to GSI. Two GSI representatives were present to observe and document the exploration activities. The probes were completed in accordance with Oregon Water Resources Department (OWRD) regulations using the procedures below.

Soil Sampling. Push probe explorations were completed using a direct-push rig. Soil cores were obtained continuously using a 5-foot-long soil sampler. The probes were advanced to at least 5 feet below the groundwater table at the time of drilling. Probes were generally completed to 15 feet below the ground surface (bgs), except for Probe P6 which was completed to 10 feet bgs. Groundwater levels in Probes P3 and P5 later rose to shallower levels when groundwater sampling was conducted

Continuous soil cores were obtained using a 5-foot-long soil sampler, except for the first 5 feet of Probe P5 which was completed by hand augering due to a potential stormwater utility. The direct-push sampling procedure involved driving the soil sampler using a combination of hydraulic pressure and mechanical hammer blows. After driving the sampler 5 feet, it was removed from the hole, and the sample core was removed (the core is contained in a clear, acetate liner inside the sampler barrel). The sampler was then prepared for driving the next 5-foot-depth interval.

For each 5-foot-long drive interval, field personnel cut open the acetate sleeve and used a stainless-steel spoon to expose a fresh section along the entire length of recovered core for description and field screening for contamination (see below). Hand-augered cuttings were also field screened and described. If recovery was sufficient, two soil samples were collected from each core representing material from the upper and lower portions of the core. Sometimes one sample obtained from the first 5-foot drive to avoid surface grade materials (e.g., asphalt pavement). Soil for samples was transferred into laboratory-supplied sample jars using a stainless-steel spoon. Soil samples for volatile organic compound (VOC) analysis were collected using EPA Method 5035 (i.e., obtaining approximately 5 grams of soil with a Terra Core® sampler for placement in a methanol-preserved 40-milliliter vial).

Field Screening. During core processing, olfactory indications of contamination (i.e., odor) were noted. Soil from the probe cores was also field screened for VOCs using a photoionization detector (PID) and for

petroleum hydrocarbons using a sheen test (a visual test to assess if sheen is produced on water by the soil), as follows:

- **PID Measurements.** Headspace vapor measurements were recorded for soil samples using a PID to assess for the possible presence of VOCs. The PID is not compound- or concentration- specific, and only provides a qualitative indication of the presence of VOCs. Soil was placed in a Ziploc® bag (filled less than half full), sealed with some air, and allowed to warm to ambient temperatures. PID measurements were made within 30 minutes of collection by opening the bag slightly and inserting a 10.6 eV probe into the air space of the bag. Measurements were recorded in the field logs. The PID was calibrated at the beginning of each work day using a manufacturer-supplied standard gas.
- **Sheen Tests.** Sheen tests were conducted on soil samples to assess if petroleum hydrocarbons were present. A small portion of soil was placed in a disposable pie tin and water poured over the soil. If a petroleum hydrocarbon sheen was produced on the water surface, it was noted in the field logs.

Groundwater Sampling. After soil sampling was completed for an exploration, a groundwater sample was obtained from a "temporary well" placed within the exploration borehole. The wells consisted of temporary polyvinyl chloride (PVC) well casing and a single 5-foot length of PVC screen. After installation, groundwater was allowed to equilibrate within the temporary well, after which the depth to groundwater was measured using a water level meter. The screen interval was then lifted and fixed at the surface to expose approximately 1 foot of screen interval above the groundwater level.

Groundwater in each temporary well was purged at a low flow rate using a peristaltic pump connected to disposable tubing dedicated to the well. The tubing inlet was initially placed approximately 1 foot below the top of the groundwater table. Groundwater field parameters (i.e., pH, electrical conductivity, temperature, dissolved oxygen, and oxidation-reduction potential) were measured by means of a static sampling container. Purging was considered complete when three casing volumes of water had been removed or field parameters stabilized to within 10 percent.

After purging, a groundwater sample was collected using the same low flow equipment used for purging. Groundwater was transferred directly into laboratory-supplied sample containers including preservative, if required, and leaving no headspace for VOC sample analyses. Samples for dissolved metals analysis were filtered in the field using a 0.45-micron filter.

Borehole Completion. The boreholes were abandoned in accordance with OWRD regulations. Abandonment consisted of filling the probe with granular bentonite and hydrating the bentonite with water. Cold patch asphalt was used to restore the surface finish at all probes.

1.2 Soil Vapor Sampling

On February 1, 2024, BB&A installed vapor sampling points SV1 and SV2 within 10 feet of the Toledo City Hall building bordering the north side of the site. A third vapor point SV3 was also installed along the southern property boundary by Probe P-2; however, during sampling, water was pulled up into the tubing by the Summa canister and this location could not be sampled. The temporary vapor point was installed and sampled using the following procedures. A photograph showing the typical set-up for vapor sampling is also shown below in Exhibit 1.

- The direct-push drill rig was used to extract a 5-foot-long core from the sampling location.
- Six inches of clean sand for a filter pack was added to the borehole. A 5-foot length of 1-inch-diameter PVC casing was placed in the borehole, and sample-dedicated Teflon-lined 0.25-inch tubing with a 1-inch length of aquarium stone filter at the end was placed at 4.5 feet bgs by means of the casing.

- Another 6 inches of clean sand for the filter pack was poured into the borehole, and the PVC casing was removed leaving the 0.25-inch tubing with aquarium stone embedded in the filter pack.
- While holding the tubing vertical in the borehole, unhydrated sodium bentonite granules were poured into the annular space. For the remaining 3 to 6 inches, hydrated bentonite paste was applied to seal the ground surface.
- A 6-inch-diameter helium shroud was placed atop the bentonite and sealed to the ground surface with bentonite paste. Tubing was fed through the upper cap of the shroud and sealed on the exterior with bentonite paste.
- The tubing sampling was adapted to a disposable medical grade 3-way valve, then to the sampling port of the Summa canister manifold (with vacuum gauges and 200 milliliter/minute flow controller), which was equipped with Swagelok fittings. Tubing was run from the purge port of the manifold to another disposable 3-way valve, then to a peristaltic pump.
- A shut-in test was performed on the sampling train by closing the down-hole disposable 3-way valve, evacuating the system with the peristaltic pump, and closing the disposable valve nearest the peristaltic pump. The test was considered successful when the Summa canister gauges held the same vacuum level for 30 seconds.
- The helium shroud was then slowly filled from the top of the shroud via a pressurized gas quick connection with cylinder of industrial grade helium. Helium levels were monitored via a small sealable, helium-monitoring port at the base of the shroud with a helium detector until the helium level reached approximately 50 percent or greater.
- After displacing sufficient atmospheric air in the shroud, the base helium-monitoring port was sealed, the disposable three-way valves opened, and the sample point (tubing and filter pack) was purged for one minute. During this time, the helium detector and a PID were used to monitor purged air at the exhaust (downstream) end of the peristaltic pump. PID measurements were zero, although the formation appeared too tight to evacuate soil vapor continuously. The surface seal was considered effective as no helium was detected.
- The disposable valves were closed, and the purged sampled point allowed to equilibrate for 20 minutes.
- After 20 minutes, the 3-way valve between the shroud and Summa canister was opened, and the Summa canister's collection valve opened. The time and initial Summa canister vacuum were noted.
- Upon sample completion, the time and final Summa canister vacuum was noted.
- With the Summan canister collection valve closed, the 3-way valve by the peristaltic pump was opened, and the tubing purged via peristaltic pump for a post-sampling integrity test. At the exhaust monitoring point, the PID reading was zero and helium was less than one percent. Helium in the shroud was also measured to be 11.3 percent, therefore the surface seal was considered sufficient over the equilibration and sampling period.
- The shroud was removed, tubing pulled directly out of the ground, and the surface finished with gravel/mulch to match preexisting conditions.

Exhibit 1. Soil vapor sampling set-up.

1.3 Sample Management

Soil and groundwater samples were collected in clean laboratory-supplied sample containers provided by Pace Analytical National (Pace) of Mt. Juliet, Tennessee, and ready for sample collection, including appropriate preservatives. For soil vapor sampling, Pace provided the Summa canister with manifold (including gauges and flow controller). A sample label was affixed to each sample container and marked with a unique sample number, date and time of collection, and project number. Soil and groundwater samples were placed in a cooler with ice until delivered to Pace by overnight shipping. Summa canisters were also shipped overnight to Pace in the cardboard container it was received in (canisters do not need to be refrigerated). Chain of custody was maintained and documented throughout the sample handling process.

1.4 Decontamination

Personnel Decontamination. Personnel decontamination procedures depend on the level of protection specified for a given activity. The site-specific Health and Safety Plan identified the appropriate level of protection for the type of work and conditions involved in this project. Field personnel thoroughly washed their hands at the end of each day and before taking any work breaks.

Sampling Equipment Decontamination. To prevent cross contamination between sampling locations, clean, dedicated sampling equipment (e.g., disposable gloves, groundwater sampling tubing) was used when possible at each sampling location and discarded after use. Cleaning of non-disposable items consisted of washing in a non-phosphate detergent solution, rinsing with tap water, and rinsing with deionized water. Exposed surfaces of drilling equipment were thoroughly brushed and decontaminated with a detergent solution after each location. Decontamination water was collected and handled as IDW, as discussed below.

1.5 Investigation-Derived Waste Management

IDW consisted of excess soil cuttings and purged groundwater from push probes, decontamination water, personal protective equipment (PPE), and disposable sampling supplies. PPE and used sampling supplies were disposed of as solid waste. Soil and water IDW were placed in separately labeled, Department of Transportation-approved, 55-gallon steel drums. The IDW drums were stored on the site while awaiting waste profiling and pickup. A sample was obtained from each drum for profiling. Both IDW soil and water were profiled as non-hazardous. ACTenviro/Advanced Chemical Transport, LLC, picked up the IDW from the site on March 29, 2024, for transport to Patriot Environmental Services in Portland, Oregon, for soil disposal at a Subtitle D landfill and for water treatment prior discharge to the municipal sewer.

2 Field Quality Assurance/Quality Control

QA/QC was practiced throughout the field activities. As discussed above, sampling equipment was decontaminated or disposed of between sampling locations. Laboratory containers were marked with a unique sample identification number, the date and time of collection, and the project number. Each soil and groundwater container was packed in a cooled ice chest for field storage and transport to Pace. The Summa canisters for the soil vapor samples were stored in the cardboard container it was received in until transported to Pace. Standard chain of custody protocols were followed at all times.

Field duplicates on soil and groundwater samples were collected to serve as a check on laboratory quality as well as on potential variability in the sampling method and the sample matrix. As shown on Table 2, two soil duplicates were collected (P1-S3-D and P3-S2-D); however, only sample P3-S2D was selected for analysis due to field indications of contamination. For groundwater, a duplicate of primary sample P1 (P1-D) was collected but was mistakenly not analyzed (the laboratory ran duplicates on control and matrix spike samples). The soil field duplicate was analyzed for the same analyses as primary sample (i.e., P3-S3). Analytical results on the field duplicate is included in the report tables, with a QA review of the data in the validation report in Appendix D.

A rinsate blank was collected by pouring laboratory-supplied deionized water over a stainless-steel sampling spoon, following decontamination, into sample containers to assess the adequacy of decontamination. The rinsate sample was analyzed for total petroleum hydrocarbons and VOCs. A trip blank was prepared by Pace and accompanied the sample containers to serve as a check that the containers and their contents had not been contaminated during the course of sampling and transportation to and from the laboratory. The trip blank was analyzed for VOCs. The results of these analyses are listed in Table 10, and a QA review of the data is included in the validation report in Appendix D.

GSI Water Solutions, Inc.

PROBE ID: P1

PROJECT:	Former Texaco Station	**DATE:** 1/31/2024	
BORING LOCATION:	Toledo, OR	**PROJECT NUMBER:** 2060.012.006	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 8.8	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		

DEPTH (ft bgs)	Penetration (ft)	Recovery (ft)	Sample Intervals (recovered ft)	PID Reading (ppmV)	Sheen Test Result	Grain Size Distribution % (G/S/F) (+Organics)	SAMPLE DESCRIPTION
0						100%	AS — Asphalt
	0-5	3.4'	P1-S1	0.8	No	20% / 20% / 60%	Silt (ML) - Yellow brown, dry-damp, soft, clayey silt with some rounded coarse sand and gravel up to 0.25".
			P1-S2	0.7	No		
5							Grades to blue-gray, chippy texture, some odor, and less gravel and sand.
	5-10	2.7'	P1-S3; P1-S3-D	0.8	No		
			P1-S4	5	No	5% / 10% / 85%	ML — Becomes mottled orange and blue-gray. Odor.
10							Becomes light brown, moist-wet.

Sampling Notes: Groundwater encountered at 10.1 feet bgs during probing, which rose to 7.9 feet bgs; however, stabilized at 8.8 feet bgs.

GSI Water Solutions, Inc.

PROBE ID: P1

PROJECT:	Former Texaco Station	**DATE:** 1/31/2024	
BORING LOCATION:	Toledo, OR	**PROJECT NUMBER:** 2060.012.006	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 8.8	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		

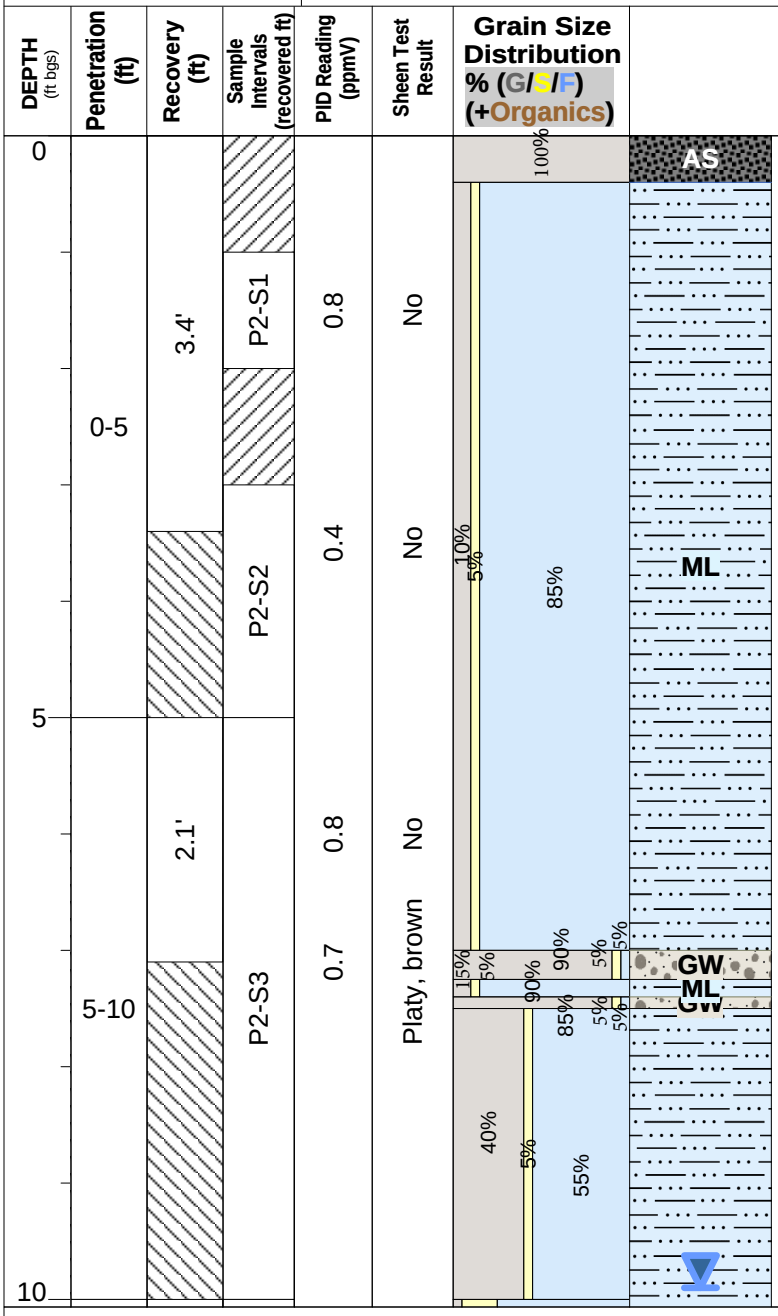
DEPTH (ft bgs)	Penetration (ft)	Recovery (ft)	Sample Intervals (recovered ft)	PID Reading (ppmV)	Sheen Test Result	Grain Size Distribution % (G/S/F) (+Organics)	SAMPLE DESCRIPTION
10	10-15	4.7'	P1-S5	0.6	No	5% / 10% / 85%	Becomes dry, dark blue-gray, chippy and crumbling texture with no gravel or sand.
15			P1-S6	0.6	No	5% / 95%	

Sampling Notes: Groundwater encountered at 10.1 feet bgs during probing, which rose to 7.9 feet bgs; however, stabilized at 8.8 feet bgs.

GSI Water Solutions, Inc.

PROBE ID: P2

PROJECT:	Former Texaco Station	**DATE:** 1/31/2024	
BORING LOCATION:	Toledo, OR	**PROJECT NUMBER:** 2060.012.006	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 9.9	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		



SAMPLE DESCRIPTION

Asphalt

Silt (ML) - Brown and blue-gray, moist, stiff, clayey silt with some 1/4" gravel and coarse sand. Massive texture.

Bed of black angular gravel.

Same feature as above.

Becomes increasingly gravelly.

Sampling Notes:

GSI Water Solutions, Inc.

PROBE ID: P2

PROJECT:	Former Texaco Station	**DATE:** 1/31/2024	
BORING LOCATION:	Toledo, OR	**PROJECT NUMBER:** 2060.012.006	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 9.9	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		

DEPTH (ft bgs)	Penetration (ft)	Recovery (ft)	Sample Intervals (recovered ft)	PID Reading (ppmV)	Sheen Test Result	Grain Size Distribution % (G/S/F) (+Organics)	SAMPLE DESCRIPTION
10-15	10-15	4.6'	P2-S4	1.5	No	5% / 20% / 75%	Silt (ML) - Brown and blue-gray, moist, stiff, sandy, clayey silt with some gravel and coarse sand.
			P2-S5	0.6	No	5% / 95%	Silt (ML) - Blue-gray, dry, stiff, clayey silt.
15							

Sampling Notes:

PROBE ID: P3

PROJECT:	Former Texaco Station	**DATE:** 1/31/2024	
BORING LOCATION:	Toledo, OR	**PROJECT NUMBER:** 2060.012.006	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 2.8	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		

DEPTH (ft bgs)	Penetration (ft)	Recovery (ft)	Sample Intervals (recovered ft)	PID Reading (ppmV)	Sheen Test Result	Grain Size Distribution % (G/S/F) (+Organics)	SAMPLE DESCRIPTION
0	0-5	3.6'	P3-S1	0.6	No	100%	AS — Asphalt
							Silt (ML) - Mottled light brown, red, and light gray, moist, firm, clayey silt with massive texture.
							Grades to blue-gray and stiff.
			P3-S2; P3-S2-D	47.5	Small rounded plates		Blackened branch or bark debris. Strong odor.
5	5-10	3.1'	P3-S3	1.9	No	5% / 95%	ML — Becomes light brown.
			P3-S4	1	No		Becomes red brown.
10							Becomes gray and very stiff.

Sampling Notes:

PROBE ID: P3

PROJECT:	Former Texaco Station	**DATE:** 1/31/2024	
BORING LOCATION:	Toledo, OR	**PROJECT NUMBER:** 2060.012.006	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 2.8	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		

DEPTH (ft bgs)	Penetration (ft)	Recovery (ft)	Sample Intervals (recovered ft)	PID Reading (ppmV)	Sheen Test Result	Grain Size Distribution % (G/S/F) (+Organics)	SAMPLE DESCRIPTION
10-15	10-15	2.8'	2.8'	2.6	No	5% / 95%	Dark gray, very stiff silt.
15				0.7	No		

Sampling Notes:

GSI Water Solutions, Inc.

PROBE ID: P4

PROJECT:	Former Texaco Station	**DATE:** 1/31/2024	
BORING LOCATION:	Toledo, OR	**PROJECT NUMBER:** 2060.012.006	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 11.5	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		

DEPTH (ft bgs)	Penetration (ft)	Recovery (ft)	Sample Intervals (recovered ft)	PID Reading (ppmV)	Sheen Test Result	Grain Size Distribution % (G/S/F) (+Organics)	SAMPLE DESCRIPTION
0	0-5	3.0'	P4-S1	0.8	No	100%	Asphalt
							Silt (ML) - Mottled light brown, red, and light gray, dry to moist, stiff, clayey silt.
			P4-S2	0.7	No		
5	5-10	3.4'	P4-S3	1.2	No		Becomes red.
						5% / 95%	ML
			P4-S4	0.6	No		Very stiff and compacted.
10							

Sampling Notes:

GSI Water Solutions, Inc.

PROBE ID: P4

PROJECT:	Former Texaco Station	**DATE:** 1/31/2024	
BORING LOCATION:	Toledo, OR	**PROJECT NUMBER:** 2060.012.006	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 11.5	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		

DEPTH (ft bgs)	Penetration (ft)	Recovery (ft)	Sample Intervals (recovered ft)	PID Reading (ppmV)	Sheen Test Result	Grain Size Distribution % (G/S/F) (+Organics)	SAMPLE DESCRIPTION
10-15	10-15	3.0'	P4-S5	0.3	No	5% / 95%	
			P4-S6	0.7	No		
15							

Sampling Notes:

GSI Water Solutions, Inc.

PROBE ID: P5

PROJECT:	Former Texaco Station	**DATE:** 2/1/2024	
BORING LOCATION:	Toledo, OR	**PROJECT NUMBER:** 2060.012.006	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 6.1	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		

DEPTH (ft bgs)	Penetration (ft)	Recovery (ft)	Sample Intervals (recovered ft)	PID Reading (ppmV)	Sheen Test Result	Grain Size Distribution % (G/S/F) (+Organics)	SAMPLE DESCRIPTION
0						100%	AS — Asphalt
	0-5	5'	P5-S1	1	No	20% / 80%	Silt (ML) - Light brown but mottled orange, dry, medium stiff silt with coarse sand and 1/2-2" pedogenic soil texture.
5			P5-S2	2.8	No		Becomes green-gray.
	5-10	3.5'		154	Yes, platy	ML	
			P5-S3			5% / 95%	Very stiff, moist, with less coarse sand. Increased orange mottling and odor.
10							

Sampling Notes:

GSI Water Solutions, Inc.

PROBE ID: P5

PROJECT:	Former Texaco Station	**DATE:** 2/1/2024	
BORING LOCATION:	Toledo, OR	**PROJECT NUMBER:** 2060.012.006	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 6.1	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		

DEPTH (ft bgs)	Penetration (ft)	Recovery (ft)	Sample Intervals (recovered ft)	PID Reading (ppmV)	Sheen Test Result	Grain Size Distribution % (G/S/F) (+Organics)	SAMPLE DESCRIPTION
10-15	10-15	3.3'	P5-S4	1.7	Yes, platy	5% / 95%	Becomes soft, wet.
							Becomes bright orange, dry-moist.
			P5-S5	1.3	No		Becomes dark gray and very stiff.
15							

Sampling Notes:

PROBE ID: P6

PROJECT:	Former Texaco Station	**DATE:** 2/1/2024	
BORING LOCATION:	Toledo, OR	**PROJECT NUMBER:** 2060.012.006	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 3.7	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		

DEPTH (ft bgs)	Penetration (ft)	Recovery (ft)	Sample Intervals (recovered ft)	PID Reading (ppmV)	Sheen Test Result	Grain Size Distribution % (G/S/F) (+Organics)	SAMPLE DESCRIPTION
0						100%	AS — Asphalt
		2.8'	P6-S1	1.1	Yes, platy	40% / 60%	ML — Silt (ML) - Dark brown with orange mottling, moist, soft, sandy silt. Sand is fine-coarse.
	0-5					60% / 40%	SM — Sand (SM) - Dark brown, wet, soft and loose, moderately-sorted medium sand with some silt and odor.
5		2.3'	P6-S2	2	Yes, platy		
	5-10		P6-S3	5.1	Yes, platy		4-inch interval of dark gray sand.
						20% / 80%	ML — Silt (ML) - Light blue-gray, damp, stiff, sandy silt with low plasticity, odor.
10							

Sampling Notes:

APPENDIX D

Analytical Laboratory Documentation and Data Validation Report

Data Validation Report

DEQ LUST #21-97-4123

City Texaco Station

March 5, 2024

Prepared by: Mitchell Fargher

GSI Water Solutions, Inc.

GSI Water Solutions, Inc.

650 NE Holladay Street, Suite 900, Portland, OR 97232

Report Narrative

The data in this abbreviated validation and usability report (EPA Stage 2A) were reviewed using the guidance presented in the following:

- Project QAPP (where required)
- Method Specific Control Limits
- Laboratory Standard Operation Procedures (SOPs) & Control Limits
- *National Functional Guidelines for Organic Data Review (USEPA 2020)*
- *National Functional Guidelines for Inorganic Data Review (USEPA 2020)*
- *National Functional Guidelines for High Resolution Superfund Methods Data Review (USEPA 2020)*

Data that is not qualified meets the data quality objectives specified in the referenced documents and can be used for decision-making purposes. Data qualified as estimated (J/UJ) may be used for decision-making purposes but should be used in conjunction with the reason codes assigned to the qualifier for further context. Data that is rejected (R) should not be used for any decision-making purposes due to significant deviations in quality control requirements.

Sample Delivery Group (SDG) Summary

SDG	Analytical Laboratory	Sample Receipt Date	Lab Report Date
L1701988	Pace Analytical	02/03/2024	02/26/2024

Analytical Methods & Technical Holding Times

Analytical Method	Sample Matrix	Technical Holding Time (4 °C)
EPA 8270E-SIM	Solid	7 Days Extraction 40 Days Analysis Post-Extraction
NWTPH-Dx	Solid	14 Days Extraction 40 Days Analysis Post-Extraction
NWTPH-Gx	Solid	14 Days Extraction 40 Days Analysis Post-Extraction
EPA 8260D	Solid	14 Days
SM 2540 G	Solid	14 Days
EPA 6020B	Solid	6 Months
EPA 8270E-SIM	Aqueous	7 Days Extraction 40 Days Analysis Post-Extraction
NWTPH-Dx	Aqueous	14 Days Extraction 40 Days Analysis Post-Extraction
NWTPH-Gx	Aqueous	14 Days Extraction 40 Days Analysis Post-Extraction
EPA 8260D	Aqueous	14 Days
EPA 6020B	Aqueous	6 Months
TO-15	Air	30 Days

Sample Delivery Group: L1701988

Sample Delivery Group L1701988 was comprised of a single Pace Analytical laboratory report. The section below contains qualifications related to the entirety of the package.

Sample Identification

The following three field samples and one rinse blank were included in this sample delivery group:

Field Sample ID	Lab Sample ID	Sample Date	Matrix	Sample Type
P1	L1701988-01	01/31/24 12:10	Groundwater	Primary
P2	L1701988-02	01/31/24 14:05	Groundwater	Primary
P3	L1701988-03	01/31/24 15:30	Groundwater	Primary
P4	L1701988-04	01/31/24 16:45	Soil	Primary
P1-S3	L1701988-08	01/31/24 12:25	Soil	Primary
P1-S4	L1701988-09	01/31/24 12:30	Soil	Primary
P2-S1	L1701988-13	01/31/24 13:35	Soil	Primary
P2-S3	L1701988-15	01/31/24 13:45	Soil	Primary
P3-S2	L1701988-19	01/31/24 15:30	Soil	Primary
P3-S3	L1701988-20	01/31/24 15:35	Soil	Primary
P3-S2-D	L1701988-22	01/31/24 15:51	Soil	Duplicate
P4-S3	L1701988-25	01/31/24 16:35	Soil	Primary
P5-S2	L1701988-30	02/01/24 12:05	Soil	Primary
P5-S3	L1701988-31	02/01/24 12:10	Soil	Primary
P5-S4	L1701988-32	02/01/24 12:15	Soil	Primary
P6-S1	L1701988-34	02/01/24 11:55	Soil	Primary
P6-S3	L1701988-36	02/01/24 12:05	Soil	Primary
SV1	L1701988-37	02/01/24 08:31	Air	Primary
SV2	L1701988-38	02/01/24 09:32	Air	Primary
P5	L1701988-39	02/01/24 12:10	Groundwater	Primary
P6	L1701988-40	02/01/24 13:10	Groundwater	Primary
IDW-S	L1701988-41	02/01/24 13:15	Soil	Primary
IDW-W	L1701988-42	02/01/24 13:25	Groundwater	Primary
RINSE	L1701988-43	02/01/24 13:35	Aqueous QC	Rinse Blank
TRIP	L1701988-44	02/01/24 00:00	Aqueous QC	Trip Blank

Sample Management

Sample Receipt

All sample receipt documentation was complete and correct. Samples were shipped to the laboratory by the client. Custody seals were used and intact. Samples were received intact, on ice, and the bottle labels agreed with the COC. No anomalies were noted.

Holding Time/Preservation

The samples were analyzed within the technical holding times and were properly preserved except for:

Field Sample ID	Method	Analyte	Qualifier
RINSE	NWTPHDX	Diesel Range Organics (DRO)	J
RINSE	NWTPHDX	Residual Range Organics (RRO)	J
TRIP	8260D	All	J

The RINSE samples were reanalyzed due to original analysis blank contamination. Results didn't confirm, and the laboratory reported both analyses.

Laboratory QA/QC

Initial & Continuing Calibration (ICV/CCV)

Not independently verified during abbreviated Stage 2A/B validation with access to only the Level 2 lab report. Lab did not flag any sample results having an associated ICV/CCV outside of specified control limits except for:

Batch	Method	Analyte	Reason	Qualifier
WG2220512	8260D	Acrolein	CCV < LCL	J-
WG2223745	8260D	Acetone	CCV < LCL	J-
WG2223659	8260D	Carbon disulfide	CCV < LCL	J-
WG2223659	8260D	tert-Butylbenzene	CCV < LCL	J-
WG2223659	8260D	Vinyl chloride	CCV < LCL	J-
WG2233119	8260D	1,1,2,2-Tetrachloroethane	CCV < LCL	J-
WG2233119	8260D	Bromobenzene	CCV < LCL	J-
WG2233119	8260D	Di-isopropyl ether	CCV < LCL	J-
WG2233119	8260D	Naphthalene	CCV < LCL	J-

Method Blanks

Method blanks were performed per lab batch and no analytes were detected or did not affect qualification of samples except for:

Field Sample ID	Method	Analyte	Reason	Qualifier
P1	NWTPHDX	Diesel Range Organics (DRO)	Result < MB	U
P1	NWTPHDX	Residual Range Organics (RRO)	Result < RL	U
P4	NWTPHDX	Diesel Range Organics (DRO)	Result < MB	U
P1-S3	NWTPHGX	Gasoline Range Organics-NWTPH	Result < MB - Dilution	U

P1-S4	NWTPHGX	Gasoline Range Organics-NWTPH	Result < 5X MB - Dilution	U
P2-S1	NWTPHGX	Gasoline Range Organics-NWTPH	Result < MB - Dilution	U
P2-S3	NWTPHGX	Gasoline Range Organics-NWTPH	Result < 5X MB - Dilution	U
P5-S4	NWTPHGX	Gasoline Range Organics-NWTPH	Result < 5X MB - Dilution	U
P6-S1	NWTPHGX	Gasoline Range Organics-NWTPH	Result < MB	U
P6-S3	NWTPHGX	Gasoline Range Organics-NWTPH	Result < MB	U
SV1	TO-15	TPH (GC/MS) Low Fraction	Result < 10X MB - Dilution	J+
IDW-S	NWTPHGX	Gasoline Range Organics-NWTPH	Result < 5X MB - Dilution	U
RINSE	NWTPHDX	Diesel Range Organics (DRO)	Result < MB	U
RINSE	NWTPHDX	Residual Range Organics (RRO)	Result < RL	U
RINSE	NWTPHDX	Diesel Range Organics (DRO)	Result < MB	U

Reporting Limits

Reporting limits were not verified against project specific requirements.

Sample Dilutions

Reported sample dilutions were reviewed and detected analytes were reported from a sample analysis with the lowest dilution.

Surrogate Spikes / Labeled Standards

Surrogates or labeled standards were added to field and QC samples as required per the method where applicable. Sample surrogate percent recoveries for were within QC acceptance limits except for:

Batch	Method	Reason	Qualifier
WG2224397	NWTPHDX	SUR < LCL	J-
WG2220187	TO-15	SUR > UCL	J+

Matrix Spike (MS)/Matrix Spike Duplicates (MSD)

The MS and MSD analyses performed on SDG samples met all QC acceptance criteria for percent recovery and relative percent difference (RPD) where required per the method except for:

Field Sample ID	Method	Analyte	Reason	Qualifier
P5-S3	8270E-SIM	1-Methylnaphthalene	MSD RPD > Limit	UJ
P5-S3	8270E-SIM	2-Methylnaphthalene	MSD RPD > Limit	UJ
P5-S3	8270E-SIM	Acenaphthene	MSD RPD > Limit	J

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

An LCS was analyzed for each batch and all recoveries were within QC acceptance criteria except for:

Batch	Method	Analyte	Reason	Qualifier
WG2223659	8260D	2-Butanone (MEK)	LCSD RPD > Limit	J
WG2223659	8260D	Vinyl chloride	LCSD RPD > Limit	J
WG2220187	TO-15	Dichlorodifluoromethane	LCSD < LCL, LCSD RPD > Limit	J

Laboratory Duplicates

Laboratory duplicate analyses were analyzed where required and all recoveries were within QC acceptance criteria.

Target Compound Identification

All target compound identifications were within validation criteria for relative retention times, characteristic ions, and relative ion abundances where applicable.

Tentatively Identified Compounds (TIC)

No results were reported as TICs as a part of this SDG except for:

Field Sample ID	Method	Analyte	Reason	Qualifier
P3	NWTPHDX	Diesel Range Organics (DRO)	Resembles laboratory standard for Gas.	NJ
P3	NWTPHDX	Residual Range Organics (RRO)	Resembles laboratory standard for Gas.	NJ
P1-S3	NWTPHDX	Diesel Range Organics (DRO)	Sample does not resemble laboratory standards	NJ
P2-S1	NWTPHDX	Diesel Range Organics (DRO)	Sample resembles laboratory standard for Hydraulic Oil	NJ
P2-S1	NWTPHDX	Residual Range Organics (RRO)	Sample resembles laboratory standard for Hydraulic Oil	NJ
P2-S3	NWTPHDX	Diesel Range Organics (DRO)	Sample resembles laboratory standard for Hydraulic Oil	NJ
P2-S3	NWTPHDX	Residual Range Organics (RRO)	Sample resembles laboratory standard for Hydraulic Oil	NJ
P3-S2	NWTPHDX	Diesel Range Organics (DRO)	Sample resembles laboratory standard for Fuel Oil #6	NJ
P3-S2	NWTPHDX	Residual Range Organics (RRO)	Sample resembles laboratory standard for Fuel Oil #6	NJ

P3-S3	NWTPHDX	Diesel Range Organics (DRO)	Sample resembles laboratory standard for Hydraulic Oil	NJ
P3-S3	NWTPHDX	Residual Range Organics (RRO)	Sample resembles laboratory standard for Hydraulic Oil	NJ
P4-S3	NWTPHDX	Diesel Range Organics (DRO)	Sample resembles laboratory standard for Hydraulic Oil	NJ
P4-S3	NWTPHDX	Residual Range Organics (RRO)	Sample resembles laboratory standard for Hydraulic Oil	NJ
P5-S2	NWTPHDX	Diesel Range Organics (DRO)	Sample does not resemble laboratory standards	NJ
P5-S2	NWTPHDX	Residual Range Organics (RRO)	Sample does not resemble laboratory standards	NJ
P5-S3	NWTPHDX	Diesel Range Organics (DRO)	Sample resembles laboratory standard for Kerosene	NJ
P5-S3	NWTPHDX	Residual Range Organics (RRO)	Sample resembles laboratory standard for Kerosene	NJ

Field QA/QC

Field Duplicates

One field duplicate was analyzed as part of this SDG. No results were outside of QC limits except for:

Field Sample ID	Method	Analyte	Reason	Qualifier
P3-S2 / P3-S2-D	NWTPHGX	Gasoline Range Organics-NWTPH	Field Duplicate RPD > 35%	J

Equipment Blanks

One equipment blank was analyzed as a part of this SDG. Three detected results were qualified as non-detect due to method blank contamination.

No sample results were qualified due to equipment blank detections.

Trip Blanks

One trip blank was analyzed as a part of this SDG. No results were detected.

SDG Overall Assessment

The data found in this report complied with the data quality objectives as specified. The data, as qualified, are acceptable to use for decision-making purposes. No results were rejected. Data qualifiers are summarized in the following table (results qualified as U due to being non-detect were not included in the table below):

Field Sample ID	Analyte	Result	Qualifier	Validation Code
P1	1,2-Dichloroethane	0.675	J	BRL
P1	Acrolein	2.54	UJ	CCV
P1	Di-isopropyl ether	0.141	J	BRL
P1	Ethylbenzene	0.423	J	BRL
P1	Diesel Range Organics (DRO)	100	U	MBK
P1	Residual Range Organics (RRO)	250	U	MBK
P1	Gasoline Range Organics-NWTPH	47.3	J	BRL
P2	Acrolein	2.54	UJ	CCV
P2	Carbon disulfide	0.102	J	BRL
P2	Ethylbenzene	0.469	J	BRL
P2	Isopropylbenzene	0.131	J	BRL
P2	n-Propylbenzene	0.288	J	BRL
P2	sec-Butylbenzene	0.268	J	BRL
P2	Acenaphthylene	0.0262	J	BRL
P2	Phenanthrene	0.0371	J	BRL
P2	Residual Range Organics (RRO)	257	J	BRL
P3	Acetone	28.2	J	BRL
P3	Acrolein	2.54	UJ	CCV
P3	Carbon disulfide	0.119	J	BRL
P3	Ethylbenzene	0.195	J	BRL
P3	p-Isopropyltoluene	0.128	J	BRL
P3	sec-Butylbenzene	0.154	J	BRL
P3	Xylenes, Total	1.47	J	BRL
P3	Diesel Range Organics (DRO)	298	NJ-	SUR, TIC
P3	Residual Range Organics (RRO)	294	NJ-	SUR, TIC
P3	Gasoline Range Organics-NWTPH	79.0	J	BRL
P4	Acrolein	2.54	UJ	CCV
P4	Ethylbenzene	0.828	J	BRL
P4	Diesel Range Organics (DRO)	100	U	MBK
P1-S3	Acetone	0.0717	UJ	CCV
P1-S3	Isopropylbenzene	0.00210	J	BRL
P1-S3	Toluene	0.00385	J	BRL
P1-S3	Diesel Range Organics (DRO)	6.19	NJ	TIC
P1-S3	Gasoline Range Organics-NWTPH	6.13	U	MBK
P1-S4	2-Butanone (MEK)	0.114	UJ	LCS
P1-S4	Carbon disulfide	0.00126	UJ	CCV
P1-S4	tert-Butylbenzene	0.00350	UJ	CCV
P1-S4	Toluene	0.00440	J	BRL
P1-S4	Vinyl chloride	0.00208	UJ	CCV, LCS
P1-S4	Diesel Range Organics (DRO)	2.49	J	BRL

P1-S4	Gasoline Range Organics-NWTPH	26.2	U	MBK
P2-S1	Cadmium	0.273	J	BRL
P2-S1	1-Methylnaphthalene	0.0115	J	BRL
P2-S1	2-Methylnaphthalene	0.0212	J	BRL
P2-S1	Acenaphthene	0.00475	J	BRL
P2-S1	Fluorene	0.00657	J	BRL
P2-S1	Diesel Range Organics (DRO)	38.6	NJ	TIC
P2-S1	Residual Range Organics (RRO)	207	NJ	TIC
P2-S1	Gasoline Range Organics-NWTPH	6.77	U	MBK
P2-S3	1,2,4-Trimethylbenzene	0.00375	J	BRL
P2-S3	1,3,5-Trimethylbenzene	0.00405	J	BRL
P2-S3	2-Butanone (MEK)	0.127	UJ	LCS
P2-S3	Carbon disulfide	0.00140	UJ	CCV
P2-S3	n-Butylbenzene	0.0211	J	BRL
P2-S3	p-Isopropyltoluene	0.00734	J	BRL
P2-S3	tert-Butylbenzene	0.00391	UJ	CCV
P2-S3	Toluene	0.00457	J	BRL
P2-S3	Vinyl chloride	0.00233	UJ	CCV, LCS
P2-S3	Xylenes, Total	0.00540	J	BRL
P2-S3	2-Methylnaphthalene	0.0226	J	BRL
P2-S3	Naphthalene	0.0268	J	BRL
P2-S3	Diesel Range Organics (DRO)	253	NJ	TIC, BRL
P2-S3	Residual Range Organics (RRO)	3940	NJ	TIC
P2-S3	Gasoline Range Organics-NWTPH	68.6	U	MBK
P3-S2	2-Butanone (MEK)	0.118	UJ	LCS
P3-S2	Carbon disulfide	0.00130	UJ	CCV
P3-S2	Ethylbenzene	0.00320	J	BRL
P3-S2	tert-Butylbenzene	0.00361	UJ	CCV
P3-S2	Toluene	0.00387	J	BRL
P3-S2	Vinyl chloride	0.00215	UJ	CCV, LCS
P3-S2	Fluorene	0.00367	J	BRL
P3-S2	Pyrene	0.00383	J	BRL
P3-S2	Diesel Range Organics (DRO)	40.7	NJ	TIC
P3-S2	Residual Range Organics (RRO)	78.3	NJ	TIC
P3-S2	Gasoline Range Organics-NWTPH	448	J	FDP
P3-S3	2-Butanone (MEK)	0.123	UJ	LCS
P3-S3	Carbon disulfide	0.00135	UJ	CCV
P3-S3	Methylene Chloride	0.0139	J	BRL
P3-S3	tert-Butylbenzene	0.00376	UJ	CCV
P3-S3	Toluene	0.00372	J	BRL
P3-S3	Vinyl chloride	0.00224	UJ	CCV, LCS

P3-S3	Xylenes, Total	0.00362	J	BRL
P3-S3	Diesel Range Organics (DRO)	38.8	NJ	TIC, BRL
P3-S3	Residual Range Organics (RRO)	415	NJ	TIC
P3-S2-D	2-Butanone (MEK)	0.856	UJ	LCS
P3-S2-D	Carbon disulfide	0.00943	UJ	CCV
P3-S2-D	Naphthalene	0.0846	J	BRL
P3-S2-D	sec-Butylbenzene	0.0413	J	BRL
P3-S2-D	tert-Butylbenzene	0.0263	UJ	CCV
P3-S2-D	Vinyl chloride	0.0156	UJ	CCV, LCS
P3-S2-D	Gasoline Range Organics-NWTPH	689	J	FDP
P4-S3	2-Butanone (MEK)	0.110	UJ	LCS
P4-S3	Carbon disulfide	0.00121	UJ	CCV
P4-S3	Methylene Chloride	0.0125	J	BRL
P4-S3	tert-Butylbenzene	0.00337	UJ	CCV
P4-S3	Toluene	0.00502	J	BRL
P4-S3	Vinyl chloride	0.00200	UJ	CCV, LCS
P4-S3	Benzo(a)anthracene	0.00334	J	BRL
P4-S3	Benzo(a)pyrene	0.00318	J	BRL
P4-S3	Benzo(b)fluoranthene	0.00247	J	BRL
P4-S3	Benzo(g,h,i)perylene	0.00384	J	BRL
P4-S3	Chrysene	0.00369	J	BRL
P4-S3	Pyrene	0.00328	J	BRL
P4-S3	Diesel Range Organics (DRO)	6.46	NJ	TIC
P4-S3	Residual Range Organics (RRO)	111	NJ	TIC
P4-S3	Gasoline Range Organics-NWTPH	2.00	J	BRL
P5-S2	2-Butanone (MEK)	0.119	UJ	LCS
P5-S2	Carbon disulfide	0.00131	UJ	CCV
P5-S2	Methylene Chloride	0.0130	J	BRL
P5-S2	tert-Butylbenzene	0.00364	UJ	CCV
P5-S2	Toluene	0.00874	J	BRL
P5-S2	Vinyl chloride	0.00217	UJ	CCV, LCS
P5-S2	Diesel Range Organics (DRO)	8.50	NJ	TIC
P5-S2	Residual Range Organics (RRO)	8.11	NJ	TIC, BRL
P5-S3	Cadmium	0.109	J	BRL
P5-S3	2-Butanone (MEK)	0.813	UJ	LCS
P5-S3	Carbon disulfide	0.00896	UJ	CCV
P5-S3	Methylene Chloride	0.0867	J	BRL
P5-S3	tert-Butylbenzene	0.0250	UJ	CCV
P5-S3	Vinyl chloride	0.0148	UJ	CCV, LCS
P5-S3	1-Methylnaphthalene	0.00569	UJ	MSD, BRL
P5-S3	2-Methylnaphthalene	0.00541	UJ	MSD, BRL

P5-S3	Acenaphthene	0.00273	J	MSD, BRL
P5-S3	Fluorene	0.00708	J	BRL
P5-S3	Naphthalene	0.00539	J	BRL
P5-S3	Diesel Range Organics (DRO)	43.1	NJ	TIC
P5-S3	Residual Range Organics (RRO)	6.10	NJ	TIC, BRL
P5-S4	2-Butanone (MEK)	0.117	UJ	LCS
P5-S4	Carbon disulfide	0.00129	UJ	CCV
P5-S4	sec-Butylbenzene	0.0134	J	BRL
P5-S4	tert-Butylbenzene	0.00360	UJ	CCV
P5-S4	Vinyl chloride	0.00214	UJ	CCV, LCS
P5-S4	Gasoline Range Organics-NWTPH	86.8	U	MBK
P6-S1	2-Butanone (MEK)	0.126	UJ	LCS
P6-S1	Carbon disulfide	0.00139	UJ	CCV
P6-S1	Methylene Chloride	0.0145	J	BRL
P6-S1	tert-Butylbenzene	0.00388	UJ	CCV
P6-S1	Vinyl chloride	0.00231	UJ	CCV, LCS
P6-S1	Acenaphthylene	0.00392	J	BRL
P6-S1	Benzo(a)anthracene	0.00864	J	BRL
P6-S1	Benzo(k)fluoranthene	0.00416	J	BRL
P6-S1	Dibenz(a,h)anthracene	0.00280	J	BRL
P6-S1	Phenanthrene	0.00417	J	BRL
P6-S1	Gasoline Range Organics-NWTPH	4.57	U	MBK
P6-S3	2-Butanone (MEK)	0.111	UJ	LCS
P6-S3	Carbon disulfide	0.00122	UJ	CCV
P6-S3	Isopropylbenzene	0.00368	J	BRL
P6-S3	tert-Butylbenzene	0.00340	UJ	CCV
P6-S3	Toluene	0.00319	J	BRL
P6-S3	Vinyl chloride	0.00202	UJ	CCV, LCS
P6-S3	Diesel Range Organics (DRO)	3.44	J	BRL
P6-S3	Gasoline Range Organics-NWTPH	23.4	U	MBK
SV1	1,1-Dichloroethene	1.99	J+	SUR
SV1	1,2,4-Trimethylbenzene	2.26	J+	SUR
SV1	1,3,5-Trimethylbenzene	0.521	J+	SUR
SV1	2,2,4-Trimethylpentane	1.66	J+	SUR
SV1	2-Butanone (MEK)	3.93	J+	SUR
SV1	2-Propanol	4.19	J+	SUR
SV1	4-Ethyltoluene	0.617	J+	SUR
SV1	Acetone	26.3	J+	SUR
SV1	Benzene	3.80	J+	SUR
SV1	Carbon disulfide	5.25	J+	SUR
SV1	Chloromethane	1.16	J+	SUR

SV1	Cyclohexane	1.87	J+	SUR
SV1	Dichlorodifluoromethane	0.495	J	SUR, LCS
SV1	Ethanol	30.8	J+	SUR
SV1	Heptane	4.09	J+	SUR
SV1	Isopropylbenzene	2.09	J+	SUR
SV1	Methylene Chloride	0.568	J+	SUR
SV1	n-Hexane	7.36	J+	SUR
SV1	n-Propylbenzene	0.700	J+	SUR
SV1	Tetrachloroethylene	0.319	J+	SUR
SV1	Toluene	10.3	J+	SUR
SV1	trans-1,2-Dichloroethene	39.5	J+	SUR
SV1	Vinyl chloride	5.97	J+	SUR
SV1	TPH (GC/MS) Low Fraction	6200	J+	MBK
SV2	1,2,4-Trimethylbenzene	1.94	J+	SUR
SV2	1,3,5-Trimethylbenzene	0.729	J+	SUR
SV2	2,2,4-Trimethylpentane	7.40	J+	SUR
SV2	2-Butanone (MEK)	1.47	J+	SUR
SV2	2-Propanol	1.65	J+	SUR
SV2	4-Ethyltoluene	0.663	J+	SUR
SV2	Benzene	5.83	J+	SUR
SV2	Carbon disulfide	2.49	J+	SUR
SV2	Chloromethane	0.596	J+	SUR
SV2	cis-1,2-Dichloroethene	0.286	J+	SUR
SV2	Cyclohexane	9.06	J+	SUR
SV2	Dichlorodifluoromethane	0.448	J	SUR, LCS
SV2	Ethanol	16.1	J+	SUR
SV2	Heptane	11.0	J+	SUR
SV2	Isopropylbenzene	6.73	J+	SUR
SV2	Methylene Chloride	0.306	J+	SUR
SV2	n-Propylbenzene	1.61	J+	SUR
SV2	Naphthalene	1.14	J+	SUR
SV2	Toluene	19.7	J+	SUR
SV2	Trichloroethylene	1.33	J+	SUR
SV2	Trichlorofluoromethane	0.232	J+	SUR
P5	Acrolein	2.54	UJ	CCV
P5	Xylenes, Total	0.201	J	BRL
P5	Fluoranthene	0.0314	J	BRL
P5	Pyrene	0.0364	J	BRL
P6	Acrolein	2.54	UJ	CCV
P6	Isopropylbenzene	0.196	J	BRL
P6	Fluoranthene	0.0455	J	BRL

P6	Residual Range Organics (RRO)	253	J	BRL
IDW-S	2-Butanone (MEK)	0.109	UJ	LCS
IDW-S	Carbon disulfide	0.00120	UJ	CCV
IDW-S	sec-Butylbenzene	0.00606	J	BRL
IDW-S	tert-Butylbenzene	0.00335	UJ	CCV
IDW-S	Toluene	0.00470	J	BRL
IDW-S	Vinyl chloride	0.00199	UJ	CCV, LCS
IDW-S	Xylenes, Total	0.00261	J	BRL
IDW-S	Gasoline Range Organics-NWTPH	38.6	U	MBK
IDW-W	Cadmium,Dissolved	0.490	J	BRL
IDW-W	Acrolein	2.54	UJ	CCV
IDW-W	Isopropylbenzene	0.140	J	BRL
IDW-W	n-Propylbenzene	0.409	J	BRL
IDW-W	sec-Butylbenzene	0.745	J	BRL
IDW-W	Xylenes, Total	0.339	J	BRL
IDW-W	Diesel Range Organics (DRO)	444	J-	SUR
IDW-W	Residual Range Organics (RRO)	320	J-	SUR
RINSE	Acrolein	2.54	UJ	CCV
RINSE	Diesel Range Organics (DRO)	172	U	MBK
RINSE	Residual Range Organics (RRO)	278	U	MBK
RINSE	Diesel Range Organics (DRO)	100	UJ	MBK, HTE
RINSE	Residual Range Organics (RRO)	83.3	UJ	HTE
TRIP	1,1,2,2-Tetrachloroethane	0.133	UJ	CCV, HTE
TRIP	Bromobenzene	0.118	UJ	CCV, HTE
TRIP	Di-isopropyl ether	0.105	UJ	CCV, HTE
TRIP	Naphthalene	1.00	UJ	CCV, HTE
TRIP	1,1,1,2-Tetrachloroethane	0.147	UJ	HTE
TRIP	1,1,1-Trichloroethane	0.149	UJ	HTE
TRIP	1,1,2-Trichloroethane	0.158	UJ	HTE
TRIP	1,1,2-Trichlorotrifluoroethane	0.180	UJ	HTE
TRIP	1,1-Dichloroethane	0.100	UJ	HTE
TRIP	1,1-Dichloroethene	0.188	UJ	HTE
TRIP	1,1-Dichloropropene	0.142	UJ	HTE
TRIP	1,2,3-Trichlorobenzene	0.230	UJ	HTE
TRIP	1,2,3-Trichloropropane	0.237	UJ	HTE
TRIP	1,2,3-Trimethylbenzene	0.104	UJ	HTE
TRIP	1,2,4-Trichlorobenzene	0.481	UJ	HTE
TRIP	1,2,4-Trimethylbenzene	0.322	UJ	HTE
TRIP	1,2-Dibromo-3-Chloropropane	0.276	UJ	HTE
TRIP	1,2-Dibromoethane	0.126	UJ	HTE
TRIP	1,2-Dichlorobenzene	0.107	UJ	HTE

TRIP	1,2-Dichloroethane	0.0819	UJ	HTE
TRIP	1,2-Dichloropropane	0.149	UJ	HTE
TRIP	1,3,5-Trimethylbenzene	0.104	UJ	HTE
TRIP	1,3-Dichlorobenzene	0.110	UJ	HTE
TRIP	1,3-Dichloropropane	0.110	UJ	HTE
TRIP	1,4-Dichlorobenzene	0.120	UJ	HTE
TRIP	2,2-Dichloropropane	0.161	UJ	HTE
TRIP	2-Butanone (MEK)	1.19	UJ	HTE
TRIP	2-Chlorotoluene	0.106	UJ	HTE
TRIP	4-Chlorotoluene	0.114	UJ	HTE
TRIP	4-Methyl-2-pentanone (MIBK)	0.478	UJ	HTE
TRIP	Acetone	11.3	UJ	HTE
TRIP	Acrolein	2.54	UJ	HTE
TRIP	Acrylonitrile	0.671	UJ	HTE
TRIP	Benzene	0.0941	UJ	HTE
TRIP	Bromodichloromethane	0.136	UJ	HTE
TRIP	Bromoform	0.129	UJ	HTE
TRIP	Bromomethane	0.605	UJ	HTE
TRIP	Carbon disulfide	0.0962	UJ	HTE
TRIP	Carbon tetrachloride	0.128	UJ	HTE
TRIP	Chlorobenzene	0.116	UJ	HTE
TRIP	Chlorodibromomethane	0.140	UJ	HTE
TRIP	Chloroethane	0.192	UJ	HTE
TRIP	Chloroform	0.111	UJ	HTE
TRIP	Chloromethane	0.960	UJ	HTE
TRIP	cis-1,2-Dichloroethene	0.126	UJ	HTE
TRIP	cis-1,3-Dichloropropene	0.111	UJ	HTE
TRIP	Dibromomethane	0.122	UJ	HTE
TRIP	Dichlorodifluoromethane	0.374	UJ	HTE
TRIP	Ethylbenzene	0.137	UJ	HTE
TRIP	Hexachloro-1,3-butadiene	0.337	UJ	HTE
TRIP	Isopropylbenzene	0.105	UJ	HTE
TRIP	Methyl tert-butyl ether	0.101	UJ	HTE
TRIP	Methylene Chloride	0.430	UJ	HTE
TRIP	n-Butylbenzene	0.157	UJ	HTE
TRIP	n-Propylbenzene	0.0993	UJ	HTE
TRIP	p-Isopropyltoluene	0.120	UJ	HTE
TRIP	sec-Butylbenzene	0.125	UJ	HTE
TRIP	Styrene	0.118	UJ	HTE
TRIP	tert-Butylbenzene	0.127	UJ	HTE
TRIP	Tetrachloroethene	0.300	UJ	HTE

TRIP	Toluene	0.278	UJ	HTE
TRIP	trans-1,2-Dichloroethene	0.149	UJ	HTE
TRIP	trans-1,3-Dichloropropene	0.118	UJ	HTE
TRIP	Trichloroethene	0.190	UJ	HTE
TRIP	Trichlorofluoromethane	0.160	UJ	HTE
TRIP	Vinyl chloride	0.234	UJ	HTE
TRIP	Xylenes, Total	0.174	UJ	HTE

Overall Assessment

The data found in this report complied with the data quality objectives as specified. The data, as qualified, are acceptable to use for decision-making purposes. In total, 1,972 results were reviewed from one sample delivery group. A groundwater field duplicate was missed and not collected as part of this sampling event. The overall completeness for this event was 100% as no results were rejected.

Definitions of Qualifiers

The following table lists each potential validation qualifier and associated definition.

Qualifier	Definition
U	The analyte was not detected and is reported as less than the LOD or as defined by the client. The LOD has been adjusted for any dilution or concentration of the sample.
J	The reported result is an estimated value.
J+	The reported result is an estimated value, but the result may be biased high.
J-	The reported result is an estimated value, but the result may be biased low.
UJ	The analyte was not detected and is reported as less than the LOD or as defined by the client. However, the associated numerical value is approximate.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.
NJ	The analyte has been “tentatively identified” or “presumptively” as present, and the associated numerical value is the estimated concentration in the sample.
R	The sample results (including non-detects) were affected by serious deficiencies in the ability to analyze the sample and to meet published method and project quality control criteria. The presence or absence of the analyte cannot be substantiated by the data provided. Exclusion of the data is recommended.

Definitions of Validation Codes

The following table lists possible validation codes and their associated definition.

Code	Definition
BRL	Below reporting limit
HTE	Holding time exceeded
INT	Interference
FDP	Field duplicate RPD outside of control limits
LCS	Laboratory control sample/Laboratory control sample duplicate outside of quality control limits
LDP	Laboratory duplicate sample analysis outside of quality control limits
MSD	Matrix spike/Matrix spike duplicate outside of quality control limits
PRF	Professional judgment
SUR	Surrogate/labeled standard outside of quality control limits
MBK	Method blank contamination
TIC	Tentatively identified compound
CCV	Continuing calibration verification analysis outside of quality control limits

Blank Contamination Actions

The following table lists the standard guidelines (high-resolution in parenthesis) for applying qualifiers due to blank contamination.

Blank Result	Sample Result	Action
< RL	< RL	Report at RL & qualify U
	> RL, < 5X (2X) Blank Result	Report at sample result & qualify U
	> RL, < 10X (5X) Blank Result	Report at sample result & qualify J+
	> RL, > 10X (5X) Blank Result	No qualification
> RL	< RL	Report at RL & qualify U
	> RL, < 5X (2X) Blank Result	Report at sample result & qualify U
	> RL, < 10X (5X) Blank Result	Report at sample result & qualify J+
	> RL, > 10X (5X) Blank Result	No qualification

ANALYTICAL REPORT

February 26, 2024

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group:	L1701988
Samples Received:	02/03/2024
Project Number:	2060.012.006
Description:	Former City Texaco Station

Report To: Ellen Woods
700 NE Multnomah St. #600
Portland, OR 97124

Entire Report Reviewed By:

Brian Ford
Project Manager

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

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P1 L1701988-01 GW

Collected by	Collected date/time	Received date/time
	01/31/24 12:10	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2219792	1	02/07/24 09:41	02/07/24 16:57	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222678	1	02/08/24 17:17	02/08/24 17:17	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2220512	1	02/05/24 22:17	02/05/24 22:17	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2220594	1	02/06/24 07:49	02/07/24 08:42	TGB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2219641	1	02/05/24 14:49	02/05/24 22:42	AGW	Mt. Juliet, TN

P2 L1701988-02 GW

Collected by	Collected date/time	Received date/time
	01/31/24 14:05	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2219792	1	02/07/24 09:41	02/07/24 17:00	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222678	1	02/08/24 17:39	02/08/24 17:39	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2220512	1	02/05/24 22:36	02/05/24 22:36	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2224397	1.04	02/12/24 21:10	02/14/24 05:15	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2219641	1	02/05/24 14:49	02/05/24 23:01	AGW	Mt. Juliet, TN

P3 L1701988-03 GW

Collected by	Collected date/time	Received date/time
	01/31/24 15:30	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2219792	1	02/07/24 09:41	02/07/24 17:03	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222678	1	02/08/24 18:01	02/08/24 18:01	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2220512	1	02/05/24 22:55	02/05/24 22:55	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2224397	1.04	02/12/24 21:10	02/14/24 12:17	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2219641	2	02/05/24 14:49	02/06/24 01:38	AGW	Mt. Juliet, TN

P4 L1701988-04 GW

Collected by	Collected date/time	Received date/time
	01/31/24 16:45	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2219792	1	02/07/24 09:41	02/07/24 17:07	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222678	1	02/08/24 18:22	02/08/24 18:22	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2220512	1	02/05/24 23:14	02/05/24 23:14	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2220594	1	02/06/24 07:49	02/07/24 09:50	TGB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2219641	1	02/05/24 14:49	02/05/24 23:21	AGW	Mt. Juliet, TN

P1-S3 L1701988-08 Solid

Collected by	Collected date/time	Received date/time
	01/31/24 12:25	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220756	1	02/07/24 08:30	02/07/24 08:37	CMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2221650	25	01/31/24 12:25	02/07/24 21:00	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223745	1	01/31/24 12:25	02/10/24 06:53	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221313	1	02/07/24 08:05	02/07/24 15:03	JSS	Mt. Juliet, TN

P1-S4 L1701988-09 Solid

Collected by	Collected date/time	Received date/time
	01/31/24 12:30	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220758	1	02/07/24 08:10	02/07/24 08:18	CMB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2220616	5	02/06/24 09:17	02/06/24 19:17	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2221650	25	01/31/24 12:30	02/07/24 21:23	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	1	01/31/24 12:30	02/10/24 00:45	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221313	1	02/07/24 08:05	02/07/24 15:03	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2220596	1	02/07/24 04:43	02/08/24 03:52	AGW	Mt. Juliet, TN

P2-S1 L1701988-13 Solid

Collected by	Collected date/time	Received date/time
	01/31/24 13:35	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220758	1	02/07/24 08:10	02/07/24 08:18	CMB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2220616	5	02/06/24 09:17	02/06/24 19:38	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2221650	25	01/31/24 13:35	02/07/24 21:46	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221313	5	02/07/24 08:05	02/07/24 16:41	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2220596	1	02/07/24 04:43	02/08/24 06:10	AGW	Mt. Juliet, TN

P2-S3 L1701988-15 Solid

Collected by	Collected date/time	Received date/time
	01/31/24 13:45	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220758	1	02/07/24 08:10	02/07/24 08:18	CMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2221650	25	01/31/24 13:45	02/07/24 22:09	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	1	01/31/24 13:45	02/10/24 01:06	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221313	100	02/07/24 08:05	02/07/24 16:55	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2220596	1	02/07/24 04:43	02/09/24 01:36	AGW	Mt. Juliet, TN

P3-S2 L1701988-19 Solid

Collected by	Collected date/time	Received date/time
	01/31/24 15:30	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220758	1	02/07/24 08:10	02/07/24 08:18	CMB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2220616	5	02/06/24 09:17	02/06/24 19:41	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222586	250	01/31/24 15:30	02/08/24 21:39	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	1	01/31/24 15:30	02/10/24 01:28	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221313	5	02/07/24 08:05	02/07/24 16:41	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2220596	1	02/07/24 04:43	02/08/24 04:12	AGW	Mt. Juliet, TN

P3-S3 L1701988-20 Solid

Collected by	Collected date/time	Received date/time
	01/31/24 15:35	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220758	1	02/07/24 08:10	02/07/24 08:18	CMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222586	28.2	01/31/24 15:35	02/08/24 20:40	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	1.13	01/31/24 15:35	02/10/24 01:49	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221313	10	02/07/24 08:05	02/07/24 16:55	JSS	Mt. Juliet, TN

P3-S2-D L1701988-22 Solid

Collected by	Collected date/time	Received date/time
	01/31/24 15:51	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220758	1	02/07/24 08:10	02/07/24 08:18	CMB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2220616	5	02/06/24 09:17	02/06/24 19:44	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222190	100	01/31/24 15:51	02/08/24 09:18	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	8	01/31/24 15:51	02/10/24 07:12	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221313	1	02/07/24 08:05	02/07/24 16:13	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2220596	1	02/07/24 04:43	02/08/24 04:32	AGW	Mt. Juliet, TN

P4-S3 L1701988-25 Solid

Collected by	Collected date/time	Received date/time
	01/31/24 16:35	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220759	1	02/06/24 17:00	02/06/24 17:08	CMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222741	25.8	01/31/24 16:35	02/08/24 21:00	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	1.03	01/31/24 16:35	02/10/24 02:10	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221313	1	02/07/24 08:05	02/07/24 15:59	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2220596	1	02/07/24 04:43	02/08/24 05:31	AGW	Mt. Juliet, TN

P5-S2 L1701988-30 Solid

Collected by	Collected date/time	Received date/time
	02/01/24 12:05	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220759	1	02/06/24 17:00	02/06/24 17:08	CMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222741	28.2	02/01/24 12:05	02/08/24 21:19	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	1.13	02/01/24 12:05	02/10/24 02:31	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221313	1	02/07/24 08:05	02/07/24 15:45	JSS	Mt. Juliet, TN

P5-S3 L1701988-31 Solid

Collected by	Collected date/time	Received date/time
	02/01/24 12:10	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220759	1	02/06/24 17:00	02/06/24 17:08	CMB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2220616	5	02/06/24 09:17	02/06/24 19:48	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222381	100	02/01/24 12:10	02/09/24 08:29	WHS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	8	02/01/24 12:10	02/10/24 07:34	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221313	1	02/07/24 08:05	02/07/24 15:45	JSS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2221456	1	02/07/24 14:37	02/08/24 15:21	LS	Mt. Juliet, TN

P5-S4 L1701988-32 Solid

Collected by	Collected date/time	Received date/time
	02/01/24 12:15	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220759	1	02/06/24 17:00	02/06/24 17:08	CMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222381	25	02/01/24 12:15	02/09/24 04:00	WHS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	1	02/01/24 12:15	02/10/24 02:53	JHH	Mt. Juliet, TN

P6-S1 L1701988-34 Solid

Collected by	Collected date/time	Received date/time
	02/01/24 11:55	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220759	1	02/06/24 17:00	02/06/24 17:08	CMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222381	25	02/01/24 11:55	02/09/24 04:25	WHS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	1	02/01/24 11:55	02/10/24 03:15	JHH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2221364	1	02/07/24 07:02	02/07/24 20:34	MBE	Mt. Juliet, TN

P6-S3 L1701988-36 Solid

Collected by	Collected date/time	Received date/time
	02/01/24 12:05	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220759	1	02/06/24 17:00	02/06/24 17:08	CMB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222381	25	02/01/24 12:05	02/09/24 04:49	WHS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	1	02/01/24 12:05	02/10/24 03:36	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221315	1	02/07/24 16:03	02/08/24 00:51	KAP	Mt. Juliet, TN

SV1 L1701988-37 Air

Collected by	Collected date/time	Received date/time
	02/01/24 08:31	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2220187	1	02/05/24 17:25	02/05/24 17:25	JAP	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2220829	20	02/06/24 19:23	02/06/24 19:23	GH	Mt. Juliet, TN

SV2 L1701988-38 Air

Collected by	Collected date/time	Received date/time
	02/01/24 09:32	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2220187	1	02/05/24 17:50	02/05/24 17:50	JAP	Mt. Juliet, TN
Volatile Organic Compounds (MS) by Method TO-15	WG2220829	20	02/06/24 19:52	02/06/24 19:52	GH	Mt. Juliet, TN

P5 L1701988-39 GW

Collected by	Collected date/time	Received date/time
	02/01/24 12:10	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2219792	1	02/07/24 09:41	02/07/24 17:25	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222678	1	02/08/24 18:44	02/08/24 18:44	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2220512	1	02/05/24 23:33	02/05/24 23:33	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2224397	1.03	02/12/24 21:10	02/14/24 12:37	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2219646	1	02/05/24 07:36	02/05/24 15:42	JRM	Mt. Juliet, TN

P6 L1701988-40 GW

Collected by	Collected date/time	Received date/time
	02/01/24 13:10	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2219792	1	02/07/24 09:41	02/07/24 16:03	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222678	1	02/08/24 19:05	02/08/24 19:05	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2220512	1	02/05/24 23:52	02/05/24 23:52	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2224397	1.02	02/12/24 21:10	02/14/24 05:35	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2219646	1	02/05/24 07:36	02/05/24 18:35	JRM	Mt. Juliet, TN

IDW-S L1701988-41 Solid

Collected by	Collected date/time	Received date/time
	02/01/24 13:15	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2220759	1	02/06/24 17:00	02/06/24 17:08	CMB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2220616	5	02/06/24 09:17	02/06/24 19:51	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222381	25	02/01/24 13:15	02/09/24 05:14	WHS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223659	1	02/01/24 13:15	02/10/24 03:57	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2221315	25	02/07/24 16:03	02/08/24 13:10	KAP	Mt. Juliet, TN

IDW-W L1701988-42 GW

Collected by	Collected date/time	Received date/time
	02/01/24 13:25	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2219792	1	02/07/24 09:41	02/07/24 17:28	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222678	1	02/08/24 19:27	02/08/24 19:27	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2220512	1	02/06/24 00:11	02/06/24 00:11	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2224397	1	02/12/24 21:10	02/14/24 05:55	MAA	Mt. Juliet, TN

RINSE L1701988-43 GW

Collected by	Collected date/time	Received date/time
	02/01/24 13:35	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2222678	1	02/08/24 19:49	02/08/24 19:49	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2220512	1	02/06/24 00:30	02/06/24 00:30	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2220594	1.11	02/06/24 07:49	02/07/24 15:06	KAP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG2229012	1	02/19/24 20:31	02/20/24 09:58	KAP	Mt. Juliet, TN

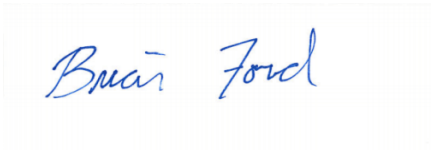
TRIP L1701988-44 GW

Collected by	Collected date/time	Received date/time
	02/01/24 00:00	02/03/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2233119	1	02/24/24 11:30	02/24/24 11:30	JHH	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

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	U		0.849	2.00	1	02/07/2024 16:57	WG2219792

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	47.3	J	31.6	100	1	02/08/2024 17:17	WG2222678
(S) a,a,a-Trifluorotoluene(FID)	*105*			*78.0-120*		*02/08/2024 17:17*	WG2222678

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	02/05/2024 22:17	WG2220512
Acrolein	U	C3	2.54	50.0	1	02/05/2024 22:17	WG2220512
Acrylonitrile	U		0.671	10.0	1	02/05/2024 22:17	WG2220512
Benzene	U		0.0941	1.00	1	02/05/2024 22:17	WG2220512
Bromobenzene	U		0.118	1.00	1	02/05/2024 22:17	WG2220512
Bromodichloromethane	U		0.136	1.00	1	02/05/2024 22:17	WG2220512
Bromoform	U		0.129	1.00	1	02/05/2024 22:17	WG2220512
Bromomethane	U		0.605	5.00	1	02/05/2024 22:17	WG2220512
n-Butylbenzene	U		0.157	1.00	1	02/05/2024 22:17	WG2220512
sec-Butylbenzene	U		0.125	1.00	1	02/05/2024 22:17	WG2220512
tert-Butylbenzene	U		0.127	1.00	1	02/05/2024 22:17	WG2220512
Carbon disulfide	U		0.0962	1.00	1	02/05/2024 22:17	WG2220512
Carbon tetrachloride	U	J4	0.128	1.00	1	02/05/2024 22:17	WG2220512
Chlorobenzene	U		0.116	1.00	1	02/05/2024 22:17	WG2220512
Chlorodibromomethane	U		0.140	1.00	1	02/05/2024 22:17	WG2220512
Chloroethane	U		0.192	5.00	1	02/05/2024 22:17	WG2220512
Chloroform	U		0.111	5.00	1	02/05/2024 22:17	WG2220512
Chloromethane	U		0.960	2.50	1	02/05/2024 22:17	WG2220512
2-Chlorotoluene	U		0.106	1.00	1	02/05/2024 22:17	WG2220512
4-Chlorotoluene	U		0.114	1.00	1	02/05/2024 22:17	WG2220512
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/05/2024 22:17	WG2220512
1,2-Dibromoethane	U		0.126	1.00	1	02/05/2024 22:17	WG2220512
Dibromomethane	U		0.122	1.00	1	02/05/2024 22:17	WG2220512
1,2-Dichlorobenzene	U		0.107	1.00	1	02/05/2024 22:17	WG2220512
1,3-Dichlorobenzene	U		0.110	1.00	1	02/05/2024 22:17	WG2220512
1,4-Dichlorobenzene	U		0.120	1.00	1	02/05/2024 22:17	WG2220512
Dichlorodifluoromethane	U		0.374	5.00	1	02/05/2024 22:17	WG2220512
1,1-Dichloroethane	U		0.100	1.00	1	02/05/2024 22:17	WG2220512
1,2-Dichloroethane	0.675	J	0.0819	1.00	1	02/05/2024 22:17	WG2220512
1,1-Dichloroethene	U		0.188	1.00	1	02/05/2024 22:17	WG2220512
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/05/2024 22:17	WG2220512
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/05/2024 22:17	WG2220512
1,2-Dichloropropane	U		0.149	1.00	1	02/05/2024 22:17	WG2220512
1,1-Dichloropropene	U		0.142	1.00	1	02/05/2024 22:17	WG2220512
1,3-Dichloropropane	U		0.110	1.00	1	02/05/2024 22:17	WG2220512
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/05/2024 22:17	WG2220512
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/05/2024 22:17	WG2220512
2,2-Dichloropropane	U		0.161	1.00	1	02/05/2024 22:17	WG2220512
Di-isopropyl ether	0.141	J	0.105	1.00	1	02/05/2024 22:17	WG2220512
Ethylbenzene	0.423	J	0.137	1.00	1	02/05/2024 22:17	WG2220512
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/05/2024 22:17	WG2220512
Isopropylbenzene	U		0.105	1.00	1	02/05/2024 22:17	WG2220512
p-Isopropyltoluene	U		0.120	1.00	1	02/05/2024 22:17	WG2220512

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	U		1.19	10.0	1	02/05/2024 22:17	WG2220512
Methylene Chloride	U		0.430	5.00	1	02/05/2024 22:17	WG2220512
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/05/2024 22:17	WG2220512
Methyl tert-butyl ether	U		0.101	1.00	1	02/05/2024 22:17	WG2220512
Naphthalene	U		1.00	5.00	1	02/05/2024 22:17	WG2220512
n-Propylbenzene	U		0.0993	1.00	1	02/05/2024 22:17	WG2220512
Styrene	U		0.118	1.00	1	02/05/2024 22:17	WG2220512
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/05/2024 22:17	WG2220512
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/05/2024 22:17	WG2220512
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/05/2024 22:17	WG2220512
Tetrachloroethene	U		0.300	1.00	1	02/05/2024 22:17	WG2220512
Toluene	U		0.278	1.00	1	02/05/2024 22:17	WG2220512
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/05/2024 22:17	WG2220512
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/05/2024 22:17	WG2220512
1,1,1-Trichloroethane	U		0.149	1.00	1	02/05/2024 22:17	WG2220512
1,1,2-Trichloroethane	U		0.158	1.00	1	02/05/2024 22:17	WG2220512
Trichloroethene	U		0.190	1.00	1	02/05/2024 22:17	WG2220512
Trichlorofluoromethane	U		0.160	5.00	1	02/05/2024 22:17	WG2220512
1,2,3-Trichloropropane	U		0.237	2.50	1	02/05/2024 22:17	WG2220512
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/05/2024 22:17	WG2220512
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 22:17	WG2220512
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 22:17	WG2220512
Vinyl chloride	U		0.234	1.00	1	02/05/2024 22:17	WG2220512
Xylenes, Total	3.11		0.174	3.00	1	02/05/2024 22:17	WG2220512
(S) Toluene-d8	*101*			*80.0-120*		*02/05/2024 22:17*	WG2220512
(S) 4-Bromofluorobenzene	*99.2*			*77.0-126*		*02/05/2024 22:17*	WG2220512
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*		*02/05/2024 22:17*	WG2220512

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	82.3	B J	33.3	100	1	02/07/2024 08:42	WG2220594
Residual Range Organics (RRO)	212	J	83.3	250	1	02/07/2024 08:42	WG2220594
(S) o-Terphenyl	*30.3*	J2		*31.0-160*		*02/07/2024 08:42*	WG2220594

Sample Narrative:

L1701988-01 WG2220594: Sample produced emulsion during Extraction process, low surr/spike recoveries due to matrix.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/05/2024 22:42	WG2219641
Acenaphthene	U		0.0190	0.0500	1	02/05/2024 22:42	WG2219641
Acenaphthylene	U		0.0171	0.0500	1	02/05/2024 22:42	WG2219641
Benzo(a)anthracene	U		0.0203	0.0500	1	02/05/2024 22:42	WG2219641
Benzo(a)pyrene	U		0.0184	0.0500	1	02/05/2024 22:42	WG2219641
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/05/2024 22:42	WG2219641
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/05/2024 22:42	WG2219641
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/05/2024 22:42	WG2219641
Chrysene	U		0.0179	0.0500	1	02/05/2024 22:42	WG2219641
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/05/2024 22:42	WG2219641
Fluoranthene	U		0.0270	0.100	1	02/05/2024 22:42	WG2219641
Fluorene	U		0.0169	0.0500	1	02/05/2024 22:42	WG2219641
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/05/2024 22:42	WG2219641
Naphthalene	U		0.0917	0.250	1	02/05/2024 22:42	WG2219641

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Phenanthrene	U		0.0180	0.0500	1	02/05/2024 22:42	WG2219641
Pyrene	U		0.0169	0.0500	1	02/05/2024 22:42	WG2219641
1-Methylnaphthalene	U		0.0687	0.250	1	02/05/2024 22:42	WG2219641
2-Methylnaphthalene	U	J4	0.0674	0.250	1	02/05/2024 22:42	WG2219641
2-Chloronaphthalene	U		0.0682	0.250	1	02/05/2024 22:42	WG2219641
(S) Nitrobenzene-d5	*107*			*31.0-160*		*02/05/2024 22:42*	WG2219641
(S) 2-Fluorobiphenyl	*114*			*48.0-148*		*02/05/2024 22:42*	WG2219641
(S) p-Terphenyl-d14	*105*			*37.0-146*		*02/05/2024 22:42*	WG2219641

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	U		0.849	2.00	1	02/07/2024 17:00	WG2219792

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	123		31.6	100	1	02/08/2024 17:39	WG2222678
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*		*02/08/2024 17:39*	WG2222678

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	02/05/2024 22:36	WG2220512
Acrolein	U	C3	2.54	50.0	1	02/05/2024 22:36	WG2220512
Acrylonitrile	U		0.671	10.0	1	02/05/2024 22:36	WG2220512
Benzene	U		0.0941	1.00	1	02/05/2024 22:36	WG2220512
Bromobenzene	U		0.118	1.00	1	02/05/2024 22:36	WG2220512
Bromodichloromethane	U		0.136	1.00	1	02/05/2024 22:36	WG2220512
Bromoform	U		0.129	1.00	1	02/05/2024 22:36	WG2220512
Bromomethane	U		0.605	5.00	1	02/05/2024 22:36	WG2220512
n-Butylbenzene	U		0.157	1.00	1	02/05/2024 22:36	WG2220512
sec-Butylbenzene	0.268	J	0.125	1.00	1	02/05/2024 22:36	WG2220512
tert-Butylbenzene	U		0.127	1.00	1	02/05/2024 22:36	WG2220512
Carbon disulfide	0.102	J	0.0962	1.00	1	02/05/2024 22:36	WG2220512
Carbon tetrachloride	U	J4	0.128	1.00	1	02/05/2024 22:36	WG2220512
Chlorobenzene	U		0.116	1.00	1	02/05/2024 22:36	WG2220512
Chlorodibromomethane	U		0.140	1.00	1	02/05/2024 22:36	WG2220512
Chloroethane	U		0.192	5.00	1	02/05/2024 22:36	WG2220512
Chloroform	U		0.111	5.00	1	02/05/2024 22:36	WG2220512
Chloromethane	U		0.960	2.50	1	02/05/2024 22:36	WG2220512
2-Chlorotoluene	U		0.106	1.00	1	02/05/2024 22:36	WG2220512
4-Chlorotoluene	U		0.114	1.00	1	02/05/2024 22:36	WG2220512
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/05/2024 22:36	WG2220512
1,2-Dibromoethane	U		0.126	1.00	1	02/05/2024 22:36	WG2220512
Dibromomethane	U		0.122	1.00	1	02/05/2024 22:36	WG2220512
1,2-Dichlorobenzene	U		0.107	1.00	1	02/05/2024 22:36	WG2220512
1,3-Dichlorobenzene	U		0.110	1.00	1	02/05/2024 22:36	WG2220512
1,4-Dichlorobenzene	U		0.120	1.00	1	02/05/2024 22:36	WG2220512
Dichlorodifluoromethane	U		0.374	5.00	1	02/05/2024 22:36	WG2220512
1,1-Dichloroethane	U		0.100	1.00	1	02/05/2024 22:36	WG2220512
1,2-Dichloroethane	U		0.0819	1.00	1	02/05/2024 22:36	WG2220512
1,1-Dichloroethene	U		0.188	1.00	1	02/05/2024 22:36	WG2220512
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/05/2024 22:36	WG2220512
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/05/2024 22:36	WG2220512
1,2-Dichloropropane	U		0.149	1.00	1	02/05/2024 22:36	WG2220512
1,1-Dichloropropene	U		0.142	1.00	1	02/05/2024 22:36	WG2220512
1,3-Dichloropropane	U		0.110	1.00	1	02/05/2024 22:36	WG2220512
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/05/2024 22:36	WG2220512
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/05/2024 22:36	WG2220512
2,2-Dichloropropane	U		0.161	1.00	1	02/05/2024 22:36	WG2220512
Di-isopropyl ether	U		0.105	1.00	1	02/05/2024 22:36	WG2220512
Ethylbenzene	0.469	J	0.137	1.00	1	02/05/2024 22:36	WG2220512
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/05/2024 22:36	WG2220512
Isopropylbenzene	0.131	J	0.105	1.00	1	02/05/2024 22:36	WG2220512
p-Isopropyltoluene	U		0.120	1.00	1	02/05/2024 22:36	WG2220512

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	U		1.19	10.0	1	02/05/2024 22:36	WG2220512
Methylene Chloride	U		0.430	5.00	1	02/05/2024 22:36	WG2220512
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/05/2024 22:36	WG2220512
Methyl tert-butyl ether	U		0.101	1.00	1	02/05/2024 22:36	WG2220512
Naphthalene	U		1.00	5.00	1	02/05/2024 22:36	WG2220512
n-Propylbenzene	0.288	J	0.0993	1.00	1	02/05/2024 22:36	WG2220512
Styrene	U		0.118	1.00	1	02/05/2024 22:36	WG2220512
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/05/2024 22:36	WG2220512
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/05/2024 22:36	WG2220512
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/05/2024 22:36	WG2220512
Tetrachloroethene	U		0.300	1.00	1	02/05/2024 22:36	WG2220512
Toluene	U		0.278	1.00	1	02/05/2024 22:36	WG2220512
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/05/2024 22:36	WG2220512
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/05/2024 22:36	WG2220512
1,1,1-Trichloroethane	U		0.149	1.00	1	02/05/2024 22:36	WG2220512
1,1,2-Trichloroethane	U		0.158	1.00	1	02/05/2024 22:36	WG2220512
Trichloroethene	U		0.190	1.00	1	02/05/2024 22:36	WG2220512
Trichlorofluoromethane	U		0.160	5.00	1	02/05/2024 22:36	WG2220512
1,2,3-Trichloropropane	U		0.237	2.50	1	02/05/2024 22:36	WG2220512
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/05/2024 22:36	WG2220512
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 22:36	WG2220512
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 22:36	WG2220512
Vinyl chloride	U		0.234	1.00	1	02/05/2024 22:36	WG2220512
Xylenes, Total	3.40		0.174	3.00	1	02/05/2024 22:36	WG2220512
(S) Toluene-d8	*102*			*80.0-120*		*02/05/2024 22:36*	WG2220512
(S) 4-Bromofluorobenzene	*100*			*77.0-126*		*02/05/2024 22:36*	WG2220512
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*02/05/2024 22:36*	WG2220512

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	250		34.6	104	1.04	02/14/2024 05:15	WG2224397
Residual Range Organics (RRO)	257	J	86.6	260	1.04	02/14/2024 05:15	WG2224397
(S) o-Terphenyl	*52.9*			*31.0-160*		*02/14/2024 05:15*	WG2224397

Sample Narrative:

L1701988-02 WG2224397: Dilution due to sample volume.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/05/2024 23:01	WG2219641
Acenaphthene	0.0968		0.0190	0.0500	1	02/05/2024 23:01	WG2219641
Acenaphthylene	0.0262	J	0.0171	0.0500	1	02/05/2024 23:01	WG2219641
Benzo(a)anthracene	U		0.0203	0.0500	1	02/05/2024 23:01	WG2219641
Benzo(a)pyrene	U		0.0184	0.0500	1	02/05/2024 23:01	WG2219641
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/05/2024 23:01	WG2219641
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/05/2024 23:01	WG2219641
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/05/2024 23:01	WG2219641
Chrysene	U		0.0179	0.0500	1	02/05/2024 23:01	WG2219641
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/05/2024 23:01	WG2219641
Fluoranthene	U		0.0270	0.100	1	02/05/2024 23:01	WG2219641
Fluorene	0.0726		0.0169	0.0500	1	02/05/2024 23:01	WG2219641
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/05/2024 23:01	WG2219641
Naphthalene	0.270		0.0917	0.250	1	02/05/2024 23:01	WG2219641

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Phenanthrene	0.0371	J	0.0180	0.0500	1	02/05/2024 23:01	WG2219641
Pyrene	U		0.0169	0.0500	1	02/05/2024 23:01	WG2219641
1-Methylnaphthalene	0.404		0.0687	0.250	1	02/05/2024 23:01	WG2219641
2-Methylnaphthalene	U	J4	0.0674	0.250	1	02/05/2024 23:01	WG2219641
2-Chloronaphthalene	U		0.0682	0.250	1	02/05/2024 23:01	WG2219641
(S) Nitrobenzene-d5	*105*			*31.0-160*		*02/05/2024 23:01*	WG2219641
(S) 2-Fluorobiphenyl	*115*			*48.0-148*		*02/05/2024 23:01*	WG2219641
(S) p-Terphenyl-d14	*103*			*37.0-146*		*02/05/2024 23:01*	WG2219641

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	U		0.849	2.00	1	02/07/2024 17:03	WG2219792

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	79.0	J	31.6	100	1	02/08/2024 18:01	WG2222678
(S) a,a,a-Trifluorotoluene(FID)	*106*			*78.0-120*		*02/08/2024 18:01*	WG2222678

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	28.2	J	11.3	50.0	1	02/05/2024 22:55	WG2220512
Acrolein	U	C3	2.54	50.0	1	02/05/2024 22:55	WG2220512
Acrylonitrile	U		0.671	10.0	1	02/05/2024 22:55	WG2220512
Benzene	U		0.0941	1.00	1	02/05/2024 22:55	WG2220512
Bromobenzene	U		0.118	1.00	1	02/05/2024 22:55	WG2220512
Bromodichloromethane	U		0.136	1.00	1	02/05/2024 22:55	WG2220512
Bromoform	U		0.129	1.00	1	02/05/2024 22:55	WG2220512
Bromomethane	U		0.605	5.00	1	02/05/2024 22:55	WG2220512
n-Butylbenzene	U		0.157	1.00	1	02/05/2024 22:55	WG2220512
sec-Butylbenzene	0.154	J	0.125	1.00	1	02/05/2024 22:55	WG2220512
tert-Butylbenzene	U		0.127	1.00	1	02/05/2024 22:55	WG2220512
Carbon disulfide	0.119	J	0.0962	1.00	1	02/05/2024 22:55	WG2220512
Carbon tetrachloride	U	J4	0.128	1.00	1	02/05/2024 22:55	WG2220512
Chlorobenzene	U		0.116	1.00	1	02/05/2024 22:55	WG2220512
Chlorodibromomethane	U		0.140	1.00	1	02/05/2024 22:55	WG2220512
Chloroethane	U		0.192	5.00	1	02/05/2024 22:55	WG2220512
Chloroform	U		0.111	5.00	1	02/05/2024 22:55	WG2220512
Chloromethane	U		0.960	2.50	1	02/05/2024 22:55	WG2220512
2-Chlorotoluene	U		0.106	1.00	1	02/05/2024 22:55	WG2220512
4-Chlorotoluene	U		0.114	1.00	1	02/05/2024 22:55	WG2220512
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/05/2024 22:55	WG2220512
1,2-Dibromoethane	U		0.126	1.00	1	02/05/2024 22:55	WG2220512
Dibromomethane	U		0.122	1.00	1	02/05/2024 22:55	WG2220512
1,2-Dichlorobenzene	U		0.107	1.00	1	02/05/2024 22:55	WG2220512
1,3-Dichlorobenzene	U		0.110	1.00	1	02/05/2024 22:55	WG2220512
1,4-Dichlorobenzene	U		0.120	1.00	1	02/05/2024 22:55	WG2220512
Dichlorodifluoromethane	U		0.374	5.00	1	02/05/2024 22:55	WG2220512
1,1-Dichloroethane	U		0.100	1.00	1	02/05/2024 22:55	WG2220512
1,2-Dichloroethane	U		0.0819	1.00	1	02/05/2024 22:55	WG2220512
1,1-Dichloroethene	U		0.188	1.00	1	02/05/2024 22:55	WG2220512
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/05/2024 22:55	WG2220512
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/05/2024 22:55	WG2220512
1,2-Dichloropropane	U		0.149	1.00	1	02/05/2024 22:55	WG2220512
1,1-Dichloropropene	U		0.142	1.00	1	02/05/2024 22:55	WG2220512
1,3-Dichloropropane	U		0.110	1.00	1	02/05/2024 22:55	WG2220512
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/05/2024 22:55	WG2220512
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/05/2024 22:55	WG2220512
2,2-Dichloropropane	U		0.161	1.00	1	02/05/2024 22:55	WG2220512
Di-isopropyl ether	U		0.105	1.00	1	02/05/2024 22:55	WG2220512
Ethylbenzene	0.195	J	0.137	1.00	1	02/05/2024 22:55	WG2220512
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/05/2024 22:55	WG2220512
Isopropylbenzene	U		0.105	1.00	1	02/05/2024 22:55	WG2220512
p-Isopropyltoluene	0.128	J	0.120	1.00	1	02/05/2024 22:55	WG2220512

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	U		1.19	10.0	1	02/05/2024 22:55	WG2220512
Methylene Chloride	U		0.430	5.00	1	02/05/2024 22:55	WG2220512
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/05/2024 22:55	WG2220512
Methyl tert-butyl ether	U		0.101	1.00	1	02/05/2024 22:55	WG2220512
Naphthalene	U		1.00	5.00	1	02/05/2024 22:55	WG2220512
n-Propylbenzene	U		0.0993	1.00	1	02/05/2024 22:55	WG2220512
Styrene	U		0.118	1.00	1	02/05/2024 22:55	WG2220512
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/05/2024 22:55	WG2220512
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/05/2024 22:55	WG2220512
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/05/2024 22:55	WG2220512
Tetrachloroethene	U		0.300	1.00	1	02/05/2024 22:55	WG2220512
Toluene	U		0.278	1.00	1	02/05/2024 22:55	WG2220512
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/05/2024 22:55	WG2220512
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/05/2024 22:55	WG2220512
1,1,1-Trichloroethane	U		0.149	1.00	1	02/05/2024 22:55	WG2220512
1,1,2-Trichloroethane	U		0.158	1.00	1	02/05/2024 22:55	WG2220512
Trichloroethene	U		0.190	1.00	1	02/05/2024 22:55	WG2220512
Trichlorofluoromethane	U		0.160	5.00	1	02/05/2024 22:55	WG2220512
1,2,3-Trichloropropane	U		0.237	2.50	1	02/05/2024 22:55	WG2220512
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/05/2024 22:55	WG2220512
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 22:55	WG2220512
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 22:55	WG2220512
Vinyl chloride	U		0.234	1.00	1	02/05/2024 22:55	WG2220512
Xylenes, Total	1.47	J	0.174	3.00	1	02/05/2024 22:55	WG2220512
(S) Toluene-d8	*102*			*80.0-120*		*02/05/2024 22:55*	WG2220512
(S) 4-Bromofluorobenzene	*104*			*77.0-126*		*02/05/2024 22:55*	WG2220512
(S) 1,2-Dichloroethane-d4	*99.9*			*70.0-130*		*02/05/2024 22:55*	WG2220512

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	298		34.6	104	1.04	02/14/2024 12:17	WG2224397
Residual Range Organics (RRO)	294		86.6	260	1.04	02/14/2024 12:17	WG2224397
(S) o-Terphenyl	*14.8*	J2		*31.0-160*		*02/14/2024 12:17*	WG2224397

Sample Narrative:

L1701988-03 WG2224397: Sample produced emulsion during Extraction, low surr/ due to matrix.resembles laboratory std for Gas

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0380	0.100	2	02/06/2024 01:38	WG2219641
Acenaphthene	U		0.0380	0.100	2	02/06/2024 01:38	WG2219641
Acenaphthylene	U		0.0342	0.100	2	02/06/2024 01:38	WG2219641
Benzo(a)anthracene	U		0.0406	0.100	2	02/06/2024 01:38	WG2219641
Benzo(a)pyrene	U		0.0368	0.100	2	02/06/2024 01:38	WG2219641
Benzo(b)fluoranthene	U		0.0336	0.100	2	02/06/2024 01:38	WG2219641
Benzo(g,h,i)perylene	U		0.0368	0.100	2	02/06/2024 01:38	WG2219641
Benzo(k)fluoranthene	U		0.0404	0.100	2	02/06/2024 01:38	WG2219641
Chrysene	U		0.0358	0.100	2	02/06/2024 01:38	WG2219641
Dibenz(a,h)anthracene	U		0.0320	0.100	2	02/06/2024 01:38	WG2219641
Fluoranthene	U		0.0540	0.200	2	02/06/2024 01:38	WG2219641
Fluorene	U		0.0338	0.100	2	02/06/2024 01:38	WG2219641
Indeno(1,2,3-cd)pyrene	U		0.0316	0.100	2	02/06/2024 01:38	WG2219641
Naphthalene	U		0.183	0.500	2	02/06/2024 01:38	WG2219641

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Phenanthrene	U		0.0360	0.100	2	02/06/2024 01:38	WG2219641
Pyrene	U		0.0338	0.100	2	02/06/2024 01:38	WG2219641
1-Methylnaphthalene	U		0.137	0.500	2	02/06/2024 01:38	WG2219641
2-Methylnaphthalene	U	J4	0.135	0.500	2	02/06/2024 01:38	WG2219641
2-Chloronaphthalene	U		0.136	0.500	2	02/06/2024 01:38	WG2219641
(S) Nitrobenzene-d5	*89.0*			*31.0-160*		*02/06/2024 01:38*	WG2219641
(S) 2-Fluorobiphenyl	*56.5*			*48.0-148*		*02/06/2024 01:38*	WG2219641
(S) p-Terphenyl-d14	*27.5*	J2		*37.0-146*		*02/06/2024 01:38*	WG2219641

Sample Narrative:

L1701988-03 WG2219641: Dilution due to matrix impact during extraction procedure

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium,Dissolved	U		0.150	1.00	1	02/07/2024 17:07	WG2219792
Chromium,Dissolved	U		1.24	2.00	1	02/07/2024 17:07	WG2219792
Lead,Dissolved	U		0.849	2.00	1	02/07/2024 17:07	WG2219792

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	U		31.6	100	1	02/08/2024 18:22	WG2222678
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*		*02/08/2024 18:22*	WG2222678

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	02/05/2024 23:14	WG2220512
Acrolein	U	C3	2.54	50.0	1	02/05/2024 23:14	WG2220512
Acrylonitrile	U		0.671	10.0	1	02/05/2024 23:14	WG2220512
Benzene	U		0.0941	1.00	1	02/05/2024 23:14	WG2220512
Bromobenzene	U		0.118	1.00	1	02/05/2024 23:14	WG2220512
Bromodichloromethane	U		0.136	1.00	1	02/05/2024 23:14	WG2220512
Bromoform	U		0.129	1.00	1	02/05/2024 23:14	WG2220512
Bromomethane	U		0.605	5.00	1	02/05/2024 23:14	WG2220512
n-Butylbenzene	U		0.157	1.00	1	02/05/2024 23:14	WG2220512
sec-Butylbenzene	U		0.125	1.00	1	02/05/2024 23:14	WG2220512
tert-Butylbenzene	U		0.127	1.00	1	02/05/2024 23:14	WG2220512
Carbon disulfide	U		0.0962	1.00	1	02/05/2024 23:14	WG2220512
Carbon tetrachloride	U	J4	0.128	1.00	1	02/05/2024 23:14	WG2220512
Chlorobenzene	U		0.116	1.00	1	02/05/2024 23:14	WG2220512
Chlorodibromomethane	U		0.140	1.00	1	02/05/2024 23:14	WG2220512
Chloroethane	U		0.192	5.00	1	02/05/2024 23:14	WG2220512
Chloroform	U		0.111	5.00	1	02/05/2024 23:14	WG2220512
Chloromethane	U		0.960	2.50	1	02/05/2024 23:14	WG2220512
2-Chlorotoluene	U		0.106	1.00	1	02/05/2024 23:14	WG2220512
4-Chlorotoluene	U		0.114	1.00	1	02/05/2024 23:14	WG2220512
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/05/2024 23:14	WG2220512
1,2-Dibromoethane	U		0.126	1.00	1	02/05/2024 23:14	WG2220512
Dibromomethane	U		0.122	1.00	1	02/05/2024 23:14	WG2220512
1,2-Dichlorobenzene	U		0.107	1.00	1	02/05/2024 23:14	WG2220512
1,3-Dichlorobenzene	U		0.110	1.00	1	02/05/2024 23:14	WG2220512
1,4-Dichlorobenzene	U		0.120	1.00	1	02/05/2024 23:14	WG2220512
Dichlorodifluoromethane	U		0.374	5.00	1	02/05/2024 23:14	WG2220512
1,1-Dichloroethane	U		0.100	1.00	1	02/05/2024 23:14	WG2220512
1,2-Dichloroethane	U		0.0819	1.00	1	02/05/2024 23:14	WG2220512
1,1-Dichloroethene	U		0.188	1.00	1	02/05/2024 23:14	WG2220512
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/05/2024 23:14	WG2220512
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/05/2024 23:14	WG2220512
1,2-Dichloropropane	U		0.149	1.00	1	02/05/2024 23:14	WG2220512
1,1-Dichloropropene	U		0.142	1.00	1	02/05/2024 23:14	WG2220512
1,3-Dichloropropane	U		0.110	1.00	1	02/05/2024 23:14	WG2220512
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/05/2024 23:14	WG2220512
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/05/2024 23:14	WG2220512
2,2-Dichloropropane	U		0.161	1.00	1	02/05/2024 23:14	WG2220512
Di-isopropyl ether	U		0.105	1.00	1	02/05/2024 23:14	WG2220512
Ethylbenzene	0.828	J	0.137	1.00	1	02/05/2024 23:14	WG2220512
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/05/2024 23:14	WG2220512

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Isopropylbenzene	U		0.105	1.00	1	02/05/2024 23:14	WG2220512
p-Isopropyltoluene	U		0.120	1.00	1	02/05/2024 23:14	WG2220512
2-Butanone (MEK)	U		1.19	10.0	1	02/05/2024 23:14	WG2220512
Methylene Chloride	U		0.430	5.00	1	02/05/2024 23:14	WG2220512
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/05/2024 23:14	WG2220512
Methyl tert-butyl ether	U		0.101	1.00	1	02/05/2024 23:14	WG2220512
Naphthalene	U		1.00	5.00	1	02/05/2024 23:14	WG2220512
n-Propylbenzene	U		0.0993	1.00	1	02/05/2024 23:14	WG2220512
Styrene	U		0.118	1.00	1	02/05/2024 23:14	WG2220512
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/05/2024 23:14	WG2220512
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/05/2024 23:14	WG2220512
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/05/2024 23:14	WG2220512
Tetrachloroethene	U		0.300	1.00	1	02/05/2024 23:14	WG2220512
Toluene	U		0.278	1.00	1	02/05/2024 23:14	WG2220512
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/05/2024 23:14	WG2220512
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/05/2024 23:14	WG2220512
1,1,1-Trichloroethane	U		0.149	1.00	1	02/05/2024 23:14	WG2220512
1,1,2-Trichloroethane	U		0.158	1.00	1	02/05/2024 23:14	WG2220512
Trichloroethene	U		0.190	1.00	1	02/05/2024 23:14	WG2220512
Trichlorofluoromethane	U		0.160	5.00	1	02/05/2024 23:14	WG2220512
1,2,3-Trichloropropane	U		0.237	2.50	1	02/05/2024 23:14	WG2220512
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/05/2024 23:14	WG2220512
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 23:14	WG2220512
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 23:14	WG2220512
Vinyl chloride	U		0.234	1.00	1	02/05/2024 23:14	WG2220512
Xylenes, Total	5.58		0.174	3.00	1	02/05/2024 23:14	WG2220512
(S) Toluene-d8	*103*			*80.0-120*		*02/05/2024 23:14*	WG2220512
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*02/05/2024 23:14*	WG2220512
(S) 1,2-Dichloroethane-d4	*98.8*			*70.0-130*		*02/05/2024 23:14*	WG2220512

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	70.9	B J	33.3	100	1	02/07/2024 09:50	WG2220594
Residual Range Organics (RRO)	U		83.3	250	1	02/07/2024 09:50	WG2220594
(S) o-Terphenyl	*52.0*			*31.0-160*		*02/07/2024 09:50*	WG2220594

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/05/2024 23:21	WG2219641
Acenaphthene	U		0.0190	0.0500	1	02/05/2024 23:21	WG2219641
Acenaphthylene	U		0.0171	0.0500	1	02/05/2024 23:21	WG2219641
Benzo(a)anthracene	U		0.0203	0.0500	1	02/05/2024 23:21	WG2219641
Benzo(a)pyrene	U		0.0184	0.0500	1	02/05/2024 23:21	WG2219641
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/05/2024 23:21	WG2219641
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/05/2024 23:21	WG2219641
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/05/2024 23:21	WG2219641
Chrysene	U		0.0179	0.0500	1	02/05/2024 23:21	WG2219641
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/05/2024 23:21	WG2219641
Fluoranthene	U		0.0270	0.100	1	02/05/2024 23:21	WG2219641
Fluorene	U		0.0169	0.0500	1	02/05/2024 23:21	WG2219641
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/05/2024 23:21	WG2219641
Naphthalene	U		0.0917	0.250	1	02/05/2024 23:21	WG2219641
Phenanthrene	U		0.0180	0.0500	1	02/05/2024 23:21	WG2219641

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Pyrene	U		0.0169	0.0500	1	02/05/2024 23:21	WG2219641
1-Methylnaphthalene	U		0.0687	0.250	1	02/05/2024 23:21	WG2219641
2-Methylnaphthalene	U	J4	0.0674	0.250	1	02/05/2024 23:21	WG2219641
2-Chloronaphthalene	U		0.0682	0.250	1	02/05/2024 23:21	WG2219641
(S) Nitrobenzene-d5	*109*			*31.0-160*		*02/05/2024 23:21*	WG2219641
(S) 2-Fluorobiphenyl	*121*			*48.0-148*		*02/05/2024 23:21*	WG2219641
(S) p-Terphenyl-d14	*111*			*37.0-146*		*02/05/2024 23:21*	WG2219641

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	69.0		1	02/07/2024 08:37	WG2220756

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	6.13	B	1.67	4.91	25	02/07/2024 21:00	WG2221650
(S) a,a,a-Trifluorotoluene(FID)	*94.2*			*77.0-120*		*02/07/2024 21:00*	WG2221650

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U	C3	0.0717	0.0982	1	02/10/2024 06:53	WG2223745
Acrylonitrile	U		0.00709	0.0246	1	02/10/2024 06:53	WG2223745
Benzene	U		0.000917	0.00196	1	02/10/2024 06:53	WG2223745
Bromobenzene	U		0.00177	0.0246	1	02/10/2024 06:53	WG2223745
Bromodichloromethane	U		0.00142	0.00491	1	02/10/2024 06:53	WG2223745
Bromoform	U		0.00230	0.0491	1	02/10/2024 06:53	WG2223745
Bromomethane	U		0.00387	0.0246	1	02/10/2024 06:53	WG2223745
n-Butylbenzene	U		0.0103	0.0246	1	02/10/2024 06:53	WG2223745
sec-Butylbenzene	U		0.00566	0.0246	1	02/10/2024 06:53	WG2223745
tert-Butylbenzene	U		0.00383	0.00982	1	02/10/2024 06:53	WG2223745
Carbon disulfide	U		0.00138	0.0246	1	02/10/2024 06:53	WG2223745
Carbon tetrachloride	U		0.00176	0.00982	1	02/10/2024 06:53	WG2223745
Chlorobenzene	U		0.000413	0.00491	1	02/10/2024 06:53	WG2223745
Chlorodibromomethane	U		0.00120	0.00491	1	02/10/2024 06:53	WG2223745
Chloroethane	U		0.00334	0.00982	1	02/10/2024 06:53	WG2223745
Chloroform	U		0.00202	0.00491	1	02/10/2024 06:53	WG2223745
Chloromethane	U		0.00855	0.0246	1	02/10/2024 06:53	WG2223745
2-Chlorotoluene	U		0.00170	0.00491	1	02/10/2024 06:53	WG2223745
4-Chlorotoluene	U		0.000884	0.00982	1	02/10/2024 06:53	WG2223745
1,2-Dibromo-3-Chloropropane	U		0.00766	0.0491	1	02/10/2024 06:53	WG2223745
1,2-Dibromoethane	U		0.00127	0.00491	1	02/10/2024 06:53	WG2223745
Dibromomethane	U		0.00147	0.00982	1	02/10/2024 06:53	WG2223745
1,2-Dichlorobenzene	U		0.000835	0.00982	1	02/10/2024 06:53	WG2223745
1,3-Dichlorobenzene	U		0.00118	0.00982	1	02/10/2024 06:53	WG2223745
1,4-Dichlorobenzene	U		0.00138	0.00982	1	02/10/2024 06:53	WG2223745
Dichlorodifluoromethane	U		0.00316	0.00982	1	02/10/2024 06:53	WG2223745
1,1-Dichloroethane	U		0.000965	0.00491	1	02/10/2024 06:53	WG2223745
1,2-Dichloroethane	U		0.00127	0.00491	1	02/10/2024 06:53	WG2223745
1,1-Dichloroethene	U		0.00119	0.00491	1	02/10/2024 06:53	WG2223745
cis-1,2-Dichloroethene	U		0.00144	0.00491	1	02/10/2024 06:53	WG2223745
trans-1,2-Dichloroethene	U		0.00204	0.00982	1	02/10/2024 06:53	WG2223745
1,2-Dichloropropane	U		0.00279	0.00982	1	02/10/2024 06:53	WG2223745
1,1-Dichloropropene	U		0.00159	0.00491	1	02/10/2024 06:53	WG2223745
1,3-Dichloropropane	U		0.000984	0.00982	1	02/10/2024 06:53	WG2223745
cis-1,3-Dichloropropene	U		0.00149	0.00491	1	02/10/2024 06:53	WG2223745
trans-1,3-Dichloropropene	U		0.00224	0.00982	1	02/10/2024 06:53	WG2223745
2,2-Dichloropropane	U		0.00271	0.00491	1	02/10/2024 06:53	WG2223745
Di-isopropyl ether	U		0.000805	0.00196	1	02/10/2024 06:53	WG2223745
Ethylbenzene	0.0635		0.00145	0.00491	1	02/10/2024 06:53	WG2223745
Hexachloro-1,3-butadiene	U		0.0118	0.0491	1	02/10/2024 06:53	WG2223745
Isopropylbenzene	0.00210	J	0.000835	0.00491	1	02/10/2024 06:53	WG2223745
p-Isopropyltoluene	U		0.00501	0.00982	1	02/10/2024 06:53	WG2223745
2-Butanone (MEK)	U		0.125	0.196	1	02/10/2024 06:53	WG2223745
Methylene Chloride	U		0.0130	0.0491	1	02/10/2024 06:53	WG2223745

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00448	0.0491	1	02/10/2024 06:53	WG2223745
Methyl tert-butyl ether	U		0.000688	0.00196	1	02/10/2024 06:53	WG2223745
Naphthalene	U		0.00959	0.0246	1	02/10/2024 06:53	WG2223745
n-Propylbenzene	U		0.00187	0.00982	1	02/10/2024 06:53	WG2223745
Styrene	U		0.000450	0.0246	1	02/10/2024 06:53	WG2223745
1,1,1,2-Tetrachloroethane	U		0.00186	0.00491	1	02/10/2024 06:53	WG2223745
1,1,2,2-Tetrachloroethane	U		0.00137	0.00491	1	02/10/2024 06:53	WG2223745
1,1,2-Trichlorotrifluoroethane	U		0.00148	0.00491	1	02/10/2024 06:53	WG2223745
Tetrachloroethene	U		0.00176	0.00491	1	02/10/2024 06:53	WG2223745
Toluene	0.00385	J	0.00255	0.00982	1	02/10/2024 06:53	WG2223745
1,2,3-Trichlorobenzene	U		0.0144	0.0246	1	02/10/2024 06:53	WG2223745
1,2,4-Trichlorobenzene	U		0.00864	0.0246	1	02/10/2024 06:53	WG2223745
1,1,1-Trichloroethane	U		0.00181	0.00491	1	02/10/2024 06:53	WG2223745
1,1,2-Trichloroethane	U		0.00117	0.00491	1	02/10/2024 06:53	WG2223745
Trichloroethene	U		0.00115	0.00196	1	02/10/2024 06:53	WG2223745
Trichlorofluoromethane	U		0.00162	0.00491	1	02/10/2024 06:53	WG2223745
1,2,3-Trichloropropane	U		0.00318	0.0246	1	02/10/2024 06:53	WG2223745
1,2,4-Trimethylbenzene	U		0.00310	0.00982	1	02/10/2024 06:53	WG2223745
1,2,3-Trimethylbenzene	U		0.00310	0.00982	1	02/10/2024 06:53	WG2223745
1,3,5-Trimethylbenzene	U		0.00393	0.00982	1	02/10/2024 06:53	WG2223745
Vinyl chloride	U		0.00228	0.00491	1	02/10/2024 06:53	WG2223745
Xylenes, Total	0.483		0.00173	0.0128	1	02/10/2024 06:53	WG2223745
(S) Toluene-d8	*103*			*75.0-131*		*02/10/2024 06:53*	WG2223745
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*02/10/2024 06:53*	WG2223745
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*02/10/2024 06:53*	WG2223745

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	6.19		1.93	5.80	1	02/07/2024 15:03	WG2221313
Residual Range Organics (RRO)	U		4.82	14.5	1	02/07/2024 15:03	WG2221313
(S) o-Terphenyl	*44.4*			*18.0-148*		*02/07/2024 15:03*	WG2221313

Sample Narrative:

L1701988-08 WG2221313: Sample does not resemble laboratory standards.

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	71.8		1	02/07/2024 08:18	WG2220758

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cadmium	U		0.119	1.39	5	02/06/2024 19:17	WG2220616
Chromium	50.5		0.412	6.97	5	02/06/2024 19:17	WG2220616
Lead	13.6		0.138	2.79	5	02/06/2024 19:17	WG2220616

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	26.2		1.52	4.49	25	02/07/2024 21:23	WG2221650
(S) a,a,a-Trifluorotoluene(FID)	*94.5*			*77.0-120*		*02/07/2024 21:23*	WG2221650

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0655	0.0898	1	02/10/2024 00:45	WG2223659
Acrylonitrile	U		0.00648	0.0224	1	02/10/2024 00:45	WG2223659
Benzene	U		0.000839	0.00180	1	02/10/2024 00:45	WG2223659
Bromobenzene	U		0.00162	0.0224	1	02/10/2024 00:45	WG2223659
Bromodichloromethane	U		0.00130	0.00449	1	02/10/2024 00:45	WG2223659
Bromoform	U		0.00210	0.0449	1	02/10/2024 00:45	WG2223659
Bromomethane	U		0.00354	0.0224	1	02/10/2024 00:45	WG2223659
n-Butylbenzene	U		0.00943	0.0224	1	02/10/2024 00:45	WG2223659
sec-Butylbenzene	U		0.00517	0.0224	1	02/10/2024 00:45	WG2223659
tert-Butylbenzene	U	C3	0.00350	0.00898	1	02/10/2024 00:45	WG2223659
Carbon disulfide	U	C3	0.00126	0.0224	1	02/10/2024 00:45	WG2223659
Carbon tetrachloride	U		0.00161	0.00898	1	02/10/2024 00:45	WG2223659
Chlorobenzene	U		0.000377	0.00449	1	02/10/2024 00:45	WG2223659
Chlorodibromomethane	U		0.00110	0.00449	1	02/10/2024 00:45	WG2223659
Chloroethane	U		0.00305	0.00898	1	02/10/2024 00:45	WG2223659
Chloroform	U		0.00185	0.00449	1	02/10/2024 00:45	WG2223659
Chloromethane	U		0.00781	0.0224	1	02/10/2024 00:45	WG2223659
2-Chlorotoluene	U		0.00155	0.00449	1	02/10/2024 00:45	WG2223659
4-Chlorotoluene	U		0.000808	0.00898	1	02/10/2024 00:45	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.00700	0.0449	1	02/10/2024 00:45	WG2223659
1,2-Dibromoethane	U		0.00116	0.00449	1	02/10/2024 00:45	WG2223659
Dibromomethane	U		0.00135	0.00898	1	02/10/2024 00:45	WG2223659
1,2-Dichlorobenzene	U		0.000763	0.00898	1	02/10/2024 00:45	WG2223659
1,3-Dichlorobenzene	U		0.00108	0.00898	1	02/10/2024 00:45	WG2223659
1,4-Dichlorobenzene	U		0.00126	0.00898	1	02/10/2024 00:45	WG2223659
Dichlorodifluoromethane	U		0.00289	0.00898	1	02/10/2024 00:45	WG2223659
1,1-Dichloroethane	U		0.000882	0.00449	1	02/10/2024 00:45	WG2223659
1,2-Dichloroethane	U		0.00117	0.00449	1	02/10/2024 00:45	WG2223659
1,1-Dichloroethene	U		0.00109	0.00449	1	02/10/2024 00:45	WG2223659
cis-1,2-Dichloroethene	U		0.00132	0.00449	1	02/10/2024 00:45	WG2223659
trans-1,2-Dichloroethene	U		0.00187	0.00898	1	02/10/2024 00:45	WG2223659
1,2-Dichloropropane	U		0.00255	0.00898	1	02/10/2024 00:45	WG2223659
1,1-Dichloropropene	U		0.00145	0.00449	1	02/10/2024 00:45	WG2223659
1,3-Dichloropropane	U		0.000900	0.00898	1	02/10/2024 00:45	WG2223659
cis-1,3-Dichloropropene	U		0.00136	0.00449	1	02/10/2024 00:45	WG2223659
trans-1,3-Dichloropropene	U		0.00205	0.00898	1	02/10/2024 00:45	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,2-Dichloropropane	U		0.00248	0.00449	1	02/10/2024 00:45	WG2223659
Di-isopropyl ether	U		0.000736	0.00180	1	02/10/2024 00:45	WG2223659
Ethylbenzene	U		0.00132	0.00449	1	02/10/2024 00:45	WG2223659
Hexachloro-1,3-butadiene	U		0.0108	0.0449	1	02/10/2024 00:45	WG2223659
Isopropylbenzene	U		0.000763	0.00449	1	02/10/2024 00:45	WG2223659
p-Isopropyltoluene	U		0.00458	0.00898	1	02/10/2024 00:45	WG2223659
2-Butanone (MEK)	U	J3	0.114	0.180	1	02/10/2024 00:45	WG2223659
Methylene Chloride	U		0.0119	0.0449	1	02/10/2024 00:45	WG2223659
4-Methyl-2-pentanone (MIBK)	U		0.00409	0.0449	1	02/10/2024 00:45	WG2223659
Methyl tert-butyl ether	U		0.000628	0.00180	1	02/10/2024 00:45	WG2223659
Naphthalene	U		0.00876	0.0224	1	02/10/2024 00:45	WG2223659
n-Propylbenzene	U		0.00171	0.00898	1	02/10/2024 00:45	WG2223659
Styrene	U		0.000411	0.0224	1	02/10/2024 00:45	WG2223659
1,1,1,2-Tetrachloroethane	U		0.00170	0.00449	1	02/10/2024 00:45	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00125	0.00449	1	02/10/2024 00:45	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.00135	0.00449	1	02/10/2024 00:45	WG2223659
Tetrachloroethene	U		0.00161	0.00449	1	02/10/2024 00:45	WG2223659
Toluene	0.00440	J	0.00233	0.00898	1	02/10/2024 00:45	WG2223659
1,2,3-Trichlorobenzene	U		0.0132	0.0224	1	02/10/2024 00:45	WG2223659
1,2,4-Trichlorobenzene	U		0.00790	0.0224	1	02/10/2024 00:45	WG2223659
1,1,1-Trichloroethane	U		0.00166	0.00449	1	02/10/2024 00:45	WG2223659
1,1,2-Trichloroethane	U		0.00107	0.00449	1	02/10/2024 00:45	WG2223659
Trichloroethene	U		0.00105	0.00180	1	02/10/2024 00:45	WG2223659
Trichlorofluoromethane	U		0.00148	0.00449	1	02/10/2024 00:45	WG2223659
1,2,3-Trichloropropane	U		0.00291	0.0224	1	02/10/2024 00:45	WG2223659
1,2,4-Trimethylbenzene	U		0.00284	0.00898	1	02/10/2024 00:45	WG2223659
1,2,3-Trimethylbenzene	U		0.00284	0.00898	1	02/10/2024 00:45	WG2223659
1,3,5-Trimethylbenzene	U		0.00359	0.00898	1	02/10/2024 00:45	WG2223659
Vinyl chloride	U	C3 J3	0.00208	0.00449	1	02/10/2024 00:45	WG2223659
Xylenes, Total	U		0.00158	0.0117	1	02/10/2024 00:45	WG2223659
(S) Toluene-d8	*95.9*			*75.0-131*		*02/10/2024 00:45*	WG2223659
(S) 4-Bromofluorobenzene	*95.3*			*67.0-138*		*02/10/2024 00:45*	WG2223659
(S) 1,2-Dichloroethane-d4	*91.6*			*70.0-130*		*02/10/2024 00:45*	WG2223659

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2.49	J	1.85	5.57	1	02/07/2024 15:03	WG2221313
Residual Range Organics (RRO)	U		4.64	13.9	1	02/07/2024 15:03	WG2221313
(S) o-Terphenyl	*47.6*			*18.0-148*		*02/07/2024 15:03*	WG2221313

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00320	0.00836	1	02/08/2024 03:52	WG2220596
Acenaphthene	U		0.00291	0.00836	1	02/08/2024 03:52	WG2220596
Acenaphthylene	U		0.00301	0.00836	1	02/08/2024 03:52	WG2220596
Benzo(a)anthracene	U		0.00241	0.00836	1	02/08/2024 03:52	WG2220596
Benzo(a)pyrene	U		0.00249	0.00836	1	02/08/2024 03:52	WG2220596
Benzo(b)fluoranthene	U		0.00213	0.00836	1	02/08/2024 03:52	WG2220596
Benzo(g,h,i)perylene	U		0.00247	0.00836	1	02/08/2024 03:52	WG2220596
Benzo(k)fluoranthene	U		0.00300	0.00836	1	02/08/2024 03:52	WG2220596
Chrysene	U		0.00323	0.00836	1	02/08/2024 03:52	WG2220596
Dibenz(a,h)anthracene	U		0.00240	0.00836	1	02/08/2024 03:52	WG2220596
Fluoranthene	U		0.00316	0.00836	1	02/08/2024 03:52	WG2220596

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Fluorene	U		0.00286	0.00836	1	02/08/2024 03:52	WG2220596
Indeno(1,2,3-cd)pyrene	U		0.00252	0.00836	1	02/08/2024 03:52	WG2220596
Naphthalene	U		0.00569	0.0279	1	02/08/2024 03:52	WG2220596
Phenanthrene	U		0.00322	0.00836	1	02/08/2024 03:52	WG2220596
Pyrene	U		0.00279	0.00836	1	02/08/2024 03:52	WG2220596
1-Methylnaphthalene	U		0.00626	0.0279	1	02/08/2024 03:52	WG2220596
2-Methylnaphthalene	U		0.00595	0.0279	1	02/08/2024 03:52	WG2220596
2-Chloronaphthalene	U		0.00649	0.0279	1	02/08/2024 03:52	WG2220596
(S) p-Terphenyl-d14	*92.4*			*23.0-120*		*02/08/2024 03:52*	WG2220596
(S) Nitrobenzene-d5	*93.8*			*14.0-149*		*02/08/2024 03:52*	WG2220596
(S) 2-Fluorobiphenyl	*78.0*			*34.0-125*		*02/08/2024 03:52*	WG2220596

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	76.4		1	02/07/2024 08:18	WG2220758

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cadmium	0.273	J	0.112	1.31	5	02/06/2024 19:38	WG2220616
Chromium	45.8		0.388	6.55	5	02/06/2024 19:38	WG2220616
Lead	44.9		0.130	2.62	5	02/06/2024 19:38	WG2220616

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	6.77	B	1.42	4.19	25	02/07/2024 21:46	WG2221650
(S) a,a,a-Trifluorotoluene(FID)	*93.5*			*77.0-120*		*02/07/2024 21:46*	WG2221650

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	38.6		8.71	26.2	5	02/07/2024 16:41	WG2221313
Residual Range Organics (RRO)	207		21.7	65.5	5	02/07/2024 16:41	WG2221313
(S) o-Terphenyl	*48.0*			*18.0-148*		*02/07/2024 16:41*	WG2221313

Sample Narrative:

L1701988-13 WG2221313: Sample resembles laboratory standard for Hydraulic Oil.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	0.0223		0.00301	0.00786	1	02/08/2024 06:10	WG2220596
Acenaphthene	0.00475	J	0.00274	0.00786	1	02/08/2024 06:10	WG2220596
Acenaphthylene	0.0261		0.00283	0.00786	1	02/08/2024 06:10	WG2220596
Benzo(a)anthracene	0.129		0.00227	0.00786	1	02/08/2024 06:10	WG2220596
Benzo(a)pyrene	0.306		0.00234	0.00786	1	02/08/2024 06:10	WG2220596
Benzo(b)fluoranthene	0.189		0.00200	0.00786	1	02/08/2024 06:10	WG2220596
Benzo(g,h,i)perylene	0.302		0.00232	0.00786	1	02/08/2024 06:10	WG2220596
Benzo(k)fluoranthene	0.0551		0.00282	0.00786	1	02/08/2024 06:10	WG2220596
Chrysene	0.120		0.00304	0.00786	1	02/08/2024 06:10	WG2220596
Dibenz(a,h)anthracene	0.0267		0.00225	0.00786	1	02/08/2024 06:10	WG2220596
Fluoranthene	0.182		0.00297	0.00786	1	02/08/2024 06:10	WG2220596
Fluorene	0.00657	J	0.00268	0.00786	1	02/08/2024 06:10	WG2220596
Indeno(1,2,3-cd)pyrene	0.301		0.00237	0.00786	1	02/08/2024 06:10	WG2220596
Naphthalene	0.0481		0.00534	0.0262	1	02/08/2024 06:10	WG2220596
Phenanthrene	0.0612		0.00302	0.00786	1	02/08/2024 06:10	WG2220596
Pyrene	0.242		0.00262	0.00786	1	02/08/2024 06:10	WG2220596
1-Methylnaphthalene	0.0115	J	0.00588	0.0262	1	02/08/2024 06:10	WG2220596
2-Methylnaphthalene	0.0212	J	0.00559	0.0262	1	02/08/2024 06:10	WG2220596
2-Chloronaphthalene	U		0.00610	0.0262	1	02/08/2024 06:10	WG2220596
(S) p-Terphenyl-d14	*71.3*			*23.0-120*		*02/08/2024 06:10*	WG2220596
(S) Nitrobenzene-d5	*83.7*			*14.0-149*		*02/08/2024 06:10*	WG2220596
(S) 2-Fluorobiphenyl	*70.5*			*34.0-125*		*02/08/2024 06:10*	WG2220596

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	68.3		1	02/07/2024 08:18	WG2220758

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	68.6		1.70	5.01	25	02/07/2024 22:09	WG2221650
(S) a,a,a-Trifluorotoluene(FID)	*91.6*			*77.0-120*		*02/07/2024 22:09*	WG2221650

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0732	0.100	1	02/10/2024 01:06	WG2223659
Acrylonitrile	U		0.00724	0.0251	1	02/10/2024 01:06	WG2223659
Benzene	U		0.000937	0.00201	1	02/10/2024 01:06	WG2223659
Bromobenzene	U		0.00181	0.0251	1	02/10/2024 01:06	WG2223659
Bromodichloromethane	U		0.00145	0.00501	1	02/10/2024 01:06	WG2223659
Bromoform	U		0.00235	0.0501	1	02/10/2024 01:06	WG2223659
Bromomethane	U		0.00395	0.0251	1	02/10/2024 01:06	WG2223659
n-Butylbenzene	0.0211	J	0.0105	0.0251	1	02/10/2024 01:06	WG2223659
sec-Butylbenzene	0.0750		0.00578	0.0251	1	02/10/2024 01:06	WG2223659
tert-Butylbenzene	U	C3	0.00391	0.0100	1	02/10/2024 01:06	WG2223659
Carbon disulfide	U	C3	0.00140	0.0251	1	02/10/2024 01:06	WG2223659
Carbon tetrachloride	U		0.00180	0.0100	1	02/10/2024 01:06	WG2223659
Chlorobenzene	U		0.000421	0.00501	1	02/10/2024 01:06	WG2223659
Chlorodibromomethane	U		0.00123	0.00501	1	02/10/2024 01:06	WG2223659
Chloroethane	U		0.00341	0.0100	1	02/10/2024 01:06	WG2223659
Chloroform	U		0.00207	0.00501	1	02/10/2024 01:06	WG2223659
Chloromethane	U		0.00873	0.0251	1	02/10/2024 01:06	WG2223659
2-Chlorotoluene	U		0.00174	0.00501	1	02/10/2024 01:06	WG2223659
4-Chlorotoluene	U		0.000903	0.0100	1	02/10/2024 01:06	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.00782	0.0501	1	02/10/2024 01:06	WG2223659
1,2-Dibromoethane	U		0.00130	0.00501	1	02/10/2024 01:06	WG2223659
Dibromomethane	U		0.00150	0.0100	1	02/10/2024 01:06	WG2223659
1,2-Dichlorobenzene	U		0.000852	0.0100	1	02/10/2024 01:06	WG2223659
1,3-Dichlorobenzene	U		0.00120	0.0100	1	02/10/2024 01:06	WG2223659
1,4-Dichlorobenzene	U		0.00140	0.0100	1	02/10/2024 01:06	WG2223659
Dichlorodifluoromethane	U		0.00323	0.0100	1	02/10/2024 01:06	WG2223659
1,1-Dichloroethane	U		0.000985	0.00501	1	02/10/2024 01:06	WG2223659
1,2-Dichloroethane	U		0.00130	0.00501	1	02/10/2024 01:06	WG2223659
1,1-Dichloroethene	U		0.00122	0.00501	1	02/10/2024 01:06	WG2223659
cis-1,2-Dichloroethene	U		0.00147	0.00501	1	02/10/2024 01:06	WG2223659
trans-1,2-Dichloroethene	U		0.00209	0.0100	1	02/10/2024 01:06	WG2223659
1,2-Dichloropropane	U		0.00285	0.0100	1	02/10/2024 01:06	WG2223659
1,1-Dichloropropene	U		0.00162	0.00501	1	02/10/2024 01:06	WG2223659
1,3-Dichloropropane	U		0.00100	0.0100	1	02/10/2024 01:06	WG2223659
cis-1,3-Dichloropropene	U		0.00152	0.00501	1	02/10/2024 01:06	WG2223659
trans-1,3-Dichloropropene	U		0.00229	0.0100	1	02/10/2024 01:06	WG2223659
2,2-Dichloropropane	U		0.00277	0.00501	1	02/10/2024 01:06	WG2223659
Di-isopropyl ether	U		0.000822	0.00201	1	02/10/2024 01:06	WG2223659
Ethylbenzene	U		0.00148	0.00501	1	02/10/2024 01:06	WG2223659
Hexachloro-1,3-butadiene	U		0.0120	0.0501	1	02/10/2024 01:06	WG2223659
Isopropylbenzene	0.0113		0.000852	0.00501	1	02/10/2024 01:06	WG2223659
p-Isopropyltoluene	0.00734	J	0.00511	0.0100	1	02/10/2024 01:06	WG2223659
2-Butanone (MEK)	U	J3	0.127	0.201	1	02/10/2024 01:06	WG2223659
Methylene Chloride	U		0.0133	0.0501	1	02/10/2024 01:06	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00457	0.0501	1	02/10/2024 01:06	WG2223659
Methyl tert-butyl ether	U		0.000702	0.00201	1	02/10/2024 01:06	WG2223659
Naphthalene	U		0.00979	0.0251	1	02/10/2024 01:06	WG2223659
n-Propylbenzene	0.0423		0.00191	0.0100	1	02/10/2024 01:06	WG2223659
Styrene	U		0.000459	0.0251	1	02/10/2024 01:06	WG2223659
1,1,1,2-Tetrachloroethane	U		0.00190	0.00501	1	02/10/2024 01:06	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00139	0.00501	1	02/10/2024 01:06	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.00151	0.00501	1	02/10/2024 01:06	WG2223659
Tetrachloroethene	U		0.00180	0.00501	1	02/10/2024 01:06	WG2223659
Toluene	0.00457	J	0.00261	0.0100	1	02/10/2024 01:06	WG2223659
1,2,3-Trichlorobenzene	U		0.0147	0.0251	1	02/10/2024 01:06	WG2223659
1,2,4-Trichlorobenzene	U		0.00883	0.0251	1	02/10/2024 01:06	WG2223659
1,1,1-Trichloroethane	U		0.00185	0.00501	1	02/10/2024 01:06	WG2223659
1,1,2-Trichloroethane	U		0.00120	0.00501	1	02/10/2024 01:06	WG2223659
Trichloroethene	U		0.00117	0.00201	1	02/10/2024 01:06	WG2223659
Trichlorofluoromethane	U		0.00166	0.00501	1	02/10/2024 01:06	WG2223659
1,2,3-Trichloropropane	U		0.00325	0.0251	1	02/10/2024 01:06	WG2223659
1,2,4-Trimethylbenzene	0.00375	J	0.00317	0.0100	1	02/10/2024 01:06	WG2223659
1,2,3-Trimethylbenzene	U		0.00317	0.0100	1	02/10/2024 01:06	WG2223659
1,3,5-Trimethylbenzene	0.00405	J	0.00401	0.0100	1	02/10/2024 01:06	WG2223659
Vinyl chloride	U	C3 J3	0.00233	0.00501	1	02/10/2024 01:06	WG2223659
Xylenes, Total	0.00540	J	0.00177	0.0130	1	02/10/2024 01:06	WG2223659
(S) Toluene-d8	*100*			*75.0-131*		*02/10/2024 01:06*	WG2223659
(S) 4-Bromofluorobenzene	*94.2*			*67.0-138*		*02/10/2024 01:06*	WG2223659
(S) 1,2-Dichloroethane-d4	*81.8*			*70.0-130*		*02/10/2024 01:06*	WG2223659

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	253	J	195	586	100	02/07/2024 16:55	WG2221313
Residual Range Organics (RRO)	3940		488	1470	100	02/07/2024 16:55	WG2221313
(S) o-Terphenyl	*62.5*	J7		*18.0-148*		*02/07/2024 16:55*	WG2221313

Sample Narrative:

L1701988-15 WG2221313: Sample resembles laboratory standard for Hydraulic Oil.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0302		0.00337	0.00879	1	02/09/2024 01:36	WG2220596
Acenaphthene	0.0174		0.00306	0.00879	1	02/09/2024 01:36	WG2220596
Acenaphthylene	0.0133		0.00316	0.00879	1	02/09/2024 01:36	WG2220596
Benzo(a)anthracene	0.146		0.00253	0.00879	1	02/09/2024 01:36	WG2220596
Benzo(a)pyrene	0.131		0.00262	0.00879	1	02/09/2024 01:36	WG2220596
Benzo(b)fluoranthene	0.135		0.00224	0.00879	1	02/09/2024 01:36	WG2220596
Benzo(g,h,i)perylene	0.133		0.00259	0.00879	1	02/09/2024 01:36	WG2220596
Benzo(k)fluoranthene	0.0312		0.00315	0.00879	1	02/09/2024 01:36	WG2220596
Chrysene	0.160		0.00340	0.00879	1	02/09/2024 01:36	WG2220596
Dibenz(a,h)anthracene	0.0520		0.00252	0.00879	1	02/09/2024 01:36	WG2220596
Fluoranthene	0.202		0.00333	0.00879	1	02/09/2024 01:36	WG2220596
Fluorene	0.0223		0.00300	0.00879	1	02/09/2024 01:36	WG2220596
Indeno(1,2,3-cd)pyrene	0.0713		0.00265	0.00879	1	02/09/2024 01:36	WG2220596
Naphthalene	0.0268	J	0.00598	0.0293	1	02/09/2024 01:36	WG2220596
Phenanthrene	0.144		0.00338	0.00879	1	02/09/2024 01:36	WG2220596
Pyrene	0.218		0.00293	0.00879	1	02/09/2024 01:36	WG2220596

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1-Methylnaphthalene	0.0398		0.00658	0.0293	1	02/09/2024 01:36	WG2220596
2-Methylnaphthalene	0.0226	J	0.00626	0.0293	1	02/09/2024 01:36	WG2220596
2-Chloronaphthalene	U		0.00683	0.0293	1	02/09/2024 01:36	WG2220596
(S) p-Terphenyl-d14	*80.0*			*23.0-120*		*02/09/2024 01:36*	WG2220596
(S) Nitrobenzene-d5	*98.4*			*14.0-149*		*02/09/2024 01:36*	WG2220596
(S) 2-Fluorobiphenyl	*91.7*			*34.0-125*		*02/09/2024 01:36*	WG2220596

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	71.0		1	02/07/2024 08:18	WG2220758

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cadmium	U		0.120	1.41	5	02/06/2024 19:41	WG2220616
Chromium	55.2		0.417	7.04	5	02/06/2024 19:41	WG2220616
Lead	14.7		0.139	2.82	5	02/06/2024 19:41	WG2220616

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	448		15.7	46.3	250	02/08/2024 21:39	WG2222586
(S) a,a,a-Trifluorotoluene(FID)	*94.3*			*77.0-120*		*02/08/2024 21:39*	WG2222586

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0676	0.0926	1	02/10/2024 01:28	WG2223659
Acrylonitrile	U		0.00669	0.0232	1	02/10/2024 01:28	WG2223659
Benzene	U		0.000865	0.00185	1	02/10/2024 01:28	WG2223659
Bromobenzene	U		0.00167	0.0232	1	02/10/2024 01:28	WG2223659
Bromodichloromethane	U		0.00134	0.00463	1	02/10/2024 01:28	WG2223659
Bromoform	U		0.00217	0.0463	1	02/10/2024 01:28	WG2223659
Bromomethane	U		0.00365	0.0232	1	02/10/2024 01:28	WG2223659
n-Butylbenzene	U		0.00972	0.0232	1	02/10/2024 01:28	WG2223659
sec-Butylbenzene	0.0522		0.00533	0.0232	1	02/10/2024 01:28	WG2223659
tert-Butylbenzene	U	C3	0.00361	0.00926	1	02/10/2024 01:28	WG2223659
Carbon disulfide	U	C3	0.00130	0.0232	1	02/10/2024 01:28	WG2223659
Carbon tetrachloride	U		0.00166	0.00926	1	02/10/2024 01:28	WG2223659
Chlorobenzene	U		0.000389	0.00463	1	02/10/2024 01:28	WG2223659
Chlorodibromomethane	U		0.00113	0.00463	1	02/10/2024 01:28	WG2223659
Chloroethane	U		0.00315	0.00926	1	02/10/2024 01:28	WG2223659
Chloroform	U		0.00191	0.00463	1	02/10/2024 01:28	WG2223659
Chloromethane	U		0.00806	0.0232	1	02/10/2024 01:28	WG2223659
2-Chlorotoluene	U		0.00160	0.00463	1	02/10/2024 01:28	WG2223659
4-Chlorotoluene	U		0.000833	0.00926	1	02/10/2024 01:28	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.00722	0.0463	1	02/10/2024 01:28	WG2223659
1,2-Dibromoethane	U		0.00120	0.00463	1	02/10/2024 01:28	WG2223659
Dibromomethane	U		0.00139	0.00926	1	02/10/2024 01:28	WG2223659
1,2-Dichlorobenzene	U		0.000787	0.00926	1	02/10/2024 01:28	WG2223659
1,3-Dichlorobenzene	U		0.00111	0.00926	1	02/10/2024 01:28	WG2223659
1,4-Dichlorobenzene	U		0.00130	0.00926	1	02/10/2024 01:28	WG2223659
Dichlorodifluoromethane	U		0.00298	0.00926	1	02/10/2024 01:28	WG2223659
1,1-Dichloroethane	U		0.000909	0.00463	1	02/10/2024 01:28	WG2223659
1,2-Dichloroethane	U		0.00120	0.00463	1	02/10/2024 01:28	WG2223659
1,1-Dichloroethene	U		0.00112	0.00463	1	02/10/2024 01:28	WG2223659
cis-1,2-Dichloroethene	U		0.00136	0.00463	1	02/10/2024 01:28	WG2223659
trans-1,2-Dichloroethene	U		0.00193	0.00926	1	02/10/2024 01:28	WG2223659
1,2-Dichloropropane	U		0.00263	0.00926	1	02/10/2024 01:28	WG2223659
1,1-Dichloropropene	U		0.00150	0.00463	1	02/10/2024 01:28	WG2223659
1,3-Dichloropropane	U		0.000928	0.00926	1	02/10/2024 01:28	WG2223659
cis-1,3-Dichloropropene	U		0.00140	0.00463	1	02/10/2024 01:28	WG2223659
trans-1,3-Dichloropropene	U		0.00211	0.00926	1	02/10/2024 01:28	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,2-Dichloropropane	U		0.00256	0.00463	1	02/10/2024 01:28	WG2223659
Di-isopropyl ether	U		0.000759	0.00185	1	02/10/2024 01:28	WG2223659
Ethylbenzene	0.00320	J	0.00137	0.00463	1	02/10/2024 01:28	WG2223659
Hexachloro-1,3-butadiene	U		0.0111	0.0463	1	02/10/2024 01:28	WG2223659
Isopropylbenzene	U		0.000787	0.00463	1	02/10/2024 01:28	WG2223659
p-Isopropyltoluene	U		0.00472	0.00926	1	02/10/2024 01:28	WG2223659
2-Butanone (MEK)	U	J3	0.118	0.185	1	02/10/2024 01:28	WG2223659
Methylene Chloride	U		0.0123	0.0463	1	02/10/2024 01:28	WG2223659
4-Methyl-2-pentanone (MIBK)	U		0.00422	0.0463	1	02/10/2024 01:28	WG2223659
Methyl tert-butyl ether	U		0.000648	0.00185	1	02/10/2024 01:28	WG2223659
Naphthalene	U		0.00904	0.0232	1	02/10/2024 01:28	WG2223659
n-Propylbenzene	U		0.00176	0.00926	1	02/10/2024 01:28	WG2223659
Styrene	U		0.000424	0.0232	1	02/10/2024 01:28	WG2223659
1,1,1,2-Tetrachloroethane	U		0.00176	0.00463	1	02/10/2024 01:28	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00129	0.00463	1	02/10/2024 01:28	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.00140	0.00463	1	02/10/2024 01:28	WG2223659
Tetrachloroethene	U		0.00166	0.00463	1	02/10/2024 01:28	WG2223659
Toluene	0.00387	J	0.00241	0.00926	1	02/10/2024 01:28	WG2223659
1,2,3-Trichlorobenzene	U		0.0136	0.0232	1	02/10/2024 01:28	WG2223659
1,2,4-Trichlorobenzene	U		0.00815	0.0232	1	02/10/2024 01:28	WG2223659
1,1,1-Trichloroethane	U		0.00171	0.00463	1	02/10/2024 01:28	WG2223659
1,1,2-Trichloroethane	U		0.00111	0.00463	1	02/10/2024 01:28	WG2223659
Trichloroethene	U		0.00108	0.00185	1	02/10/2024 01:28	WG2223659
Trichlorofluoromethane	U		0.00153	0.00463	1	02/10/2024 01:28	WG2223659
1,2,3-Trichloropropane	U		0.00300	0.0232	1	02/10/2024 01:28	WG2223659
1,2,4-Trimethylbenzene	U		0.00293	0.00926	1	02/10/2024 01:28	WG2223659
1,2,3-Trimethylbenzene	U		0.00293	0.00926	1	02/10/2024 01:28	WG2223659
1,3,5-Trimethylbenzene	U		0.00370	0.00926	1	02/10/2024 01:28	WG2223659
Vinyl chloride	U	C3 J3	0.00215	0.00463	1	02/10/2024 01:28	WG2223659
Xylenes, Total	U		0.00163	0.0120	1	02/10/2024 01:28	WG2223659
(S) Toluene-d8	*132*	J1		*75.0-131*		*02/10/2024 01:28*	WG2223659
(S) 4-Bromofluorobenzene	*866*	J1		*67.0-138*		*02/10/2024 01:28*	WG2223659
(S) 1,2-Dichloroethane-d4	*78.8*			*70.0-130*		*02/10/2024 01:28*	WG2223659

Sample Narrative:

L1701988-19 WG2223659: Surrogate failure due to matrix interference.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	40.7		9.36	28.2	5	02/07/2024 16:41	WG2221313
Residual Range Organics (RRO)	78.3		23.4	70.4	5	02/07/2024 16:41	WG2221313
(S) o-Terphenyl	*33.8*			*18.0-148*		*02/07/2024 16:41*	WG2221313

Sample Narrative:

L1701988-19 WG2221313: Sample resembles laboratory standard for Fuel Oil #6.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00324	0.00845	1	02/08/2024 04:12	WG2220596
Acenaphthene	U		0.00294	0.00845	1	02/08/2024 04:12	WG2220596
Acenaphthylene	U		0.00304	0.00845	1	02/08/2024 04:12	WG2220596
Benzo(a)anthracene	U		0.00244	0.00845	1	02/08/2024 04:12	WG2220596
Benzo(a)pyrene	U		0.00252	0.00845	1	02/08/2024 04:12	WG2220596

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	U		0.00215	0.00845	1	02/08/2024 04:12	WG2220596
Benzo(g,h,i)perylene	U		0.00249	0.00845	1	02/08/2024 04:12	WG2220596
Benzo(k)fluoranthene	U		0.00303	0.00845	1	02/08/2024 04:12	WG2220596
Chrysene	U		0.00327	0.00845	1	02/08/2024 04:12	WG2220596
Dibenz(a,h)anthracene	U		0.00242	0.00845	1	02/08/2024 04:12	WG2220596
Fluoranthene	U		0.00320	0.00845	1	02/08/2024 04:12	WG2220596
Fluorene	0.00367	J	0.00289	0.00845	1	02/08/2024 04:12	WG2220596
Indeno(1,2,3-cd)pyrene	U		0.00255	0.00845	1	02/08/2024 04:12	WG2220596
Naphthalene	U		0.00574	0.0282	1	02/08/2024 04:12	WG2220596
Phenanthrene	U		0.00325	0.00845	1	02/08/2024 04:12	WG2220596
Pyrene	0.00383	J	0.00282	0.00845	1	02/08/2024 04:12	WG2220596
1-Methylnaphthalene	U		0.00632	0.0282	1	02/08/2024 04:12	WG2220596
2-Methylnaphthalene	U		0.00601	0.0282	1	02/08/2024 04:12	WG2220596
2-Chloronaphthalene	U		0.00656	0.0282	1	02/08/2024 04:12	WG2220596
(S) p-Terphenyl-d14	*86.9*			*23.0-120*		*02/08/2024 04:12*	WG2220596
(S) Nitrobenzene-d5	*197*	J1		*14.0-149*		*02/08/2024 04:12*	WG2220596
(S) 2-Fluorobiphenyl	*75.8*			*34.0-125*		*02/08/2024 04:12*	WG2220596

Sample Narrative:

L1701988-19 WG2220596: Surrogate failure due to matrix interference

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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	72.7		1	02/07/2024 08:18	WG2220758

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	16.9		1.63	4.82	28.2	02/08/2024 20:40	WG2222586
(S) a,a,a-Trifluorotoluene(FID)	*95.5*			*77.0-120*		*02/08/2024 20:40*	WG2222586

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0704	0.0965	1.13	02/10/2024 01:49	WG2223659
Acrylonitrile	U		0.00697	0.0241	1.13	02/10/2024 01:49	WG2223659
Benzene	U		0.000902	0.00193	1.13	02/10/2024 01:49	WG2223659
Bromobenzene	U		0.00174	0.0241	1.13	02/10/2024 01:49	WG2223659
Bromodichloromethane	U		0.00140	0.00483	1.13	02/10/2024 01:49	WG2223659
Bromoform	U		0.00225	0.0483	1.13	02/10/2024 01:49	WG2223659
Bromomethane	U		0.00381	0.0241	1.13	02/10/2024 01:49	WG2223659
n-Butylbenzene	U		0.0101	0.0241	1.13	02/10/2024 01:49	WG2223659
sec-Butylbenzene	U		0.00555	0.0241	1.13	02/10/2024 01:49	WG2223659
tert-Butylbenzene	U	C3	0.00376	0.00965	1.13	02/10/2024 01:49	WG2223659
Carbon disulfide	U	C3	0.00135	0.0241	1.13	02/10/2024 01:49	WG2223659
Carbon tetrachloride	U		0.00172	0.00965	1.13	02/10/2024 01:49	WG2223659
Chlorobenzene	U		0.000405	0.00483	1.13	02/10/2024 01:49	WG2223659
Chlorodibromomethane	U		0.00118	0.00483	1.13	02/10/2024 01:49	WG2223659
Chloroethane	U		0.00328	0.00965	1.13	02/10/2024 01:49	WG2223659
Chloroform	U		0.00198	0.00483	1.13	02/10/2024 01:49	WG2223659
Chloromethane	U		0.00840	0.0241	1.13	02/10/2024 01:49	WG2223659
2-Chlorotoluene	U		0.00167	0.00483	1.13	02/10/2024 01:49	WG2223659
4-Chlorotoluene	U		0.000869	0.00965	1.13	02/10/2024 01:49	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.00753	0.0483	1.13	02/10/2024 01:49	WG2223659
1,2-Dibromoethane	U		0.00125	0.00483	1.13	02/10/2024 01:49	WG2223659
Dibromomethane	U		0.00145	0.00965	1.13	02/10/2024 01:49	WG2223659
1,2-Dichlorobenzene	U		0.000820	0.00965	1.13	02/10/2024 01:49	WG2223659
1,3-Dichlorobenzene	U		0.00116	0.00965	1.13	02/10/2024 01:49	WG2223659
1,4-Dichlorobenzene	U		0.00135	0.00965	1.13	02/10/2024 01:49	WG2223659
Dichlorodifluoromethane	U		0.00311	0.00965	1.13	02/10/2024 01:49	WG2223659
1,1-Dichloroethane	U		0.000948	0.00483	1.13	02/10/2024 01:49	WG2223659
1,2-Dichloroethane	U		0.00125	0.00483	1.13	02/10/2024 01:49	WG2223659
1,1-Dichloroethene	U		0.00117	0.00483	1.13	02/10/2024 01:49	WG2223659
cis-1,2-Dichloroethene	U		0.00142	0.00483	1.13	02/10/2024 01:49	WG2223659
trans-1,2-Dichloroethene	U		0.00202	0.00965	1.13	02/10/2024 01:49	WG2223659
1,2-Dichloropropane	U		0.00273	0.00965	1.13	02/10/2024 01:49	WG2223659
1,1-Dichloropropene	U		0.00156	0.00483	1.13	02/10/2024 01:49	WG2223659
1,3-Dichloropropane	U		0.000967	0.00965	1.13	02/10/2024 01:49	WG2223659
cis-1,3-Dichloropropene	U		0.00146	0.00483	1.13	02/10/2024 01:49	WG2223659
trans-1,3-Dichloropropene	U		0.00220	0.00965	1.13	02/10/2024 01:49	WG2223659
2,2-Dichloropropane	U		0.00266	0.00483	1.13	02/10/2024 01:49	WG2223659
Di-isopropyl ether	U		0.000791	0.00193	1.13	02/10/2024 01:49	WG2223659
Ethylbenzene	U		0.00142	0.00483	1.13	02/10/2024 01:49	WG2223659
Hexachloro-1,3-butadiene	U		0.0116	0.0483	1.13	02/10/2024 01:49	WG2223659
Isopropylbenzene	U		0.000820	0.00483	1.13	02/10/2024 01:49	WG2223659
p-Isopropyltoluene	U		0.00492	0.00965	1.13	02/10/2024 01:49	WG2223659
2-Butanone (MEK)	U	J3	0.123	0.193	1.13	02/10/2024 01:49	WG2223659
Methylene Chloride	0.0139	J	0.0128	0.0483	1.13	02/10/2024 01:49	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00441	0.0483	1.13	02/10/2024 01:49	WG2223659
Methyl tert-butyl ether	U		0.000676	0.00193	1.13	02/10/2024 01:49	WG2223659
Naphthalene	U		0.00941	0.0241	1.13	02/10/2024 01:49	WG2223659
n-Propylbenzene	U		0.00183	0.00965	1.13	02/10/2024 01:49	WG2223659
Styrene	U		0.000442	0.0241	1.13	02/10/2024 01:49	WG2223659
1,1,1,2-Tetrachloroethane	U		0.00183	0.00483	1.13	02/10/2024 01:49	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00134	0.00483	1.13	02/10/2024 01:49	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.00146	0.00483	1.13	02/10/2024 01:49	WG2223659
Tetrachloroethene	U		0.00172	0.00483	1.13	02/10/2024 01:49	WG2223659
Toluene	0.00372	J	0.00251	0.00965	1.13	02/10/2024 01:49	WG2223659
1,2,3-Trichlorobenzene	U		0.0141	0.0241	1.13	02/10/2024 01:49	WG2223659
1,2,4-Trichlorobenzene	U		0.00849	0.0241	1.13	02/10/2024 01:49	WG2223659
1,1,1-Trichloroethane	U		0.00178	0.00483	1.13	02/10/2024 01:49	WG2223659
1,1,2-Trichloroethane	U		0.00115	0.00483	1.13	02/10/2024 01:49	WG2223659
Trichloroethene	U		0.00113	0.00193	1.13	02/10/2024 01:49	WG2223659
Trichlorofluoromethane	U		0.00160	0.00483	1.13	02/10/2024 01:49	WG2223659
1,2,3-Trichloropropane	U		0.00313	0.0241	1.13	02/10/2024 01:49	WG2223659
1,2,4-Trimethylbenzene	U		0.00306	0.00965	1.13	02/10/2024 01:49	WG2223659
1,2,3-Trimethylbenzene	U		0.00306	0.00965	1.13	02/10/2024 01:49	WG2223659
1,3,5-Trimethylbenzene	U		0.00386	0.00965	1.13	02/10/2024 01:49	WG2223659
Vinyl chloride	U	C3 J3	0.00224	0.00483	1.13	02/10/2024 01:49	WG2223659
Xylenes, Total	0.00362	J	0.00170	0.0126	1.13	02/10/2024 01:49	WG2223659
(S) Toluene-d8	*101*			*75.0-131*		*02/10/2024 01:49*	WG2223659
(S) 4-Bromofluorobenzene	*111*			*67.0-138*		*02/10/2024 01:49*	WG2223659
(S) 1,2-Dichloroethane-d4	*85.8*			*70.0-130*		*02/10/2024 01:49*	WG2223659

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	38.8	J	18.3	55.0	10	02/07/2024 16:55	WG2221313
Residual Range Organics (RRO)	415		45.8	138	10	02/07/2024 16:55	WG2221313
(S) o-Terphenyl	*24.8*			*18.0-148*		*02/07/2024 16:55*	WG2221313

Sample Narrative:

L1701988-20 WG2221313: Sample resembles laboratory standard for Hydraulic Oil.

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	75.3		1	02/07/2024 08:18	WG2220758

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cadmium	U		0.114	1.33	5	02/06/2024 19:44	WG2220616
Chromium	56.1		0.393	6.64	5	02/06/2024 19:44	WG2220616
Lead	13.4		0.132	2.66	5	02/06/2024 19:44	WG2220616

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	689		5.71	16.8	100	02/08/2024 09:18	WG2222190
(S) a,a,a-Trifluorotoluene(FID)	*94.8*			*77.0-120*		*02/08/2024 09:18*	WG2222190

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.492	0.674	8	02/10/2024 07:12	WG2223659
Acrylonitrile	U		0.0487	0.168	8	02/10/2024 07:12	WG2223659
Benzene	U		0.00630	0.0135	8	02/10/2024 07:12	WG2223659
Bromobenzene	U		0.0121	0.168	8	02/10/2024 07:12	WG2223659
Bromodichloromethane	U		0.00977	0.0337	8	02/10/2024 07:12	WG2223659
Bromoform	U		0.0158	0.337	8	02/10/2024 07:12	WG2223659
Bromomethane	U		0.0266	0.168	8	02/10/2024 07:12	WG2223659
n-Butylbenzene	U		0.0707	0.168	8	02/10/2024 07:12	WG2223659
sec-Butylbenzene	0.0413	J	0.0387	0.168	8	02/10/2024 07:12	WG2223659
tert-Butylbenzene	U	C3	0.0263	0.0674	8	02/10/2024 07:12	WG2223659
Carbon disulfide	U	C3	0.00943	0.168	8	02/10/2024 07:12	WG2223659
Carbon tetrachloride	U		0.0121	0.0674	8	02/10/2024 07:12	WG2223659
Chlorobenzene	U		0.00283	0.0337	8	02/10/2024 07:12	WG2223659
Chlorodibromomethane	U		0.00825	0.0337	8	02/10/2024 07:12	WG2223659
Chloroethane	U		0.0229	0.0674	8	02/10/2024 07:12	WG2223659
Chloroform	U		0.0139	0.0337	8	02/10/2024 07:12	WG2223659
Chloromethane	U		0.0586	0.168	8	02/10/2024 07:12	WG2223659
2-Chlorotoluene	U		0.0117	0.0337	8	02/10/2024 07:12	WG2223659
4-Chlorotoluene	U		0.00606	0.0674	8	02/10/2024 07:12	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.0526	0.337	8	02/10/2024 07:12	WG2223659
1,2-Dibromoethane	U		0.00872	0.0337	8	02/10/2024 07:12	WG2223659
Dibromomethane	U		0.0101	0.0674	8	02/10/2024 07:12	WG2223659
1,2-Dichlorobenzene	U		0.00573	0.0674	8	02/10/2024 07:12	WG2223659
1,3-Dichlorobenzene	U		0.00808	0.0674	8	02/10/2024 07:12	WG2223659
1,4-Dichlorobenzene	U		0.00943	0.0674	8	02/10/2024 07:12	WG2223659
Dichlorodifluoromethane	U		0.0217	0.0674	8	02/10/2024 07:12	WG2223659
1,1-Dichloroethane	U		0.00662	0.0337	8	02/10/2024 07:12	WG2223659
1,2-Dichloroethane	U		0.00874	0.0337	8	02/10/2024 07:12	WG2223659
1,1-Dichloroethene	U		0.00817	0.0337	8	02/10/2024 07:12	WG2223659
cis-1,2-Dichloroethene	U		0.00989	0.0337	8	02/10/2024 07:12	WG2223659
trans-1,2-Dichloroethene	U		0.0140	0.0674	8	02/10/2024 07:12	WG2223659
1,2-Dichloropropane	U		0.0192	0.0674	8	02/10/2024 07:12	WG2223659
1,1-Dichloropropene	U		0.0109	0.0337	8	02/10/2024 07:12	WG2223659
1,3-Dichloropropane	U		0.00675	0.0674	8	02/10/2024 07:12	WG2223659
cis-1,3-Dichloropropene	U		0.0102	0.0337	8	02/10/2024 07:12	WG2223659
trans-1,3-Dichloropropene	U		0.0154	0.0674	8	02/10/2024 07:12	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,2-Dichloropropane	U		0.0185	0.0337	8	02/10/2024 07:12	WG2223659
Di-isopropyl ether	U		0.00552	0.0135	8	02/10/2024 07:12	WG2223659
Ethylbenzene	U		0.00994	0.0337	8	02/10/2024 07:12	WG2223659
Hexachloro-1,3-butadiene	U		0.0808	0.337	8	02/10/2024 07:12	WG2223659
Isopropylbenzene	U		0.00573	0.0337	8	02/10/2024 07:12	WG2223659
p-Isopropyltoluene	U		0.0344	0.0674	8	02/10/2024 07:12	WG2223659
2-Butanone (MEK)	U	J3	0.856	1.35	8	02/10/2024 07:12	WG2223659
Methylene Chloride	U		0.0894	0.337	8	02/10/2024 07:12	WG2223659
4-Methyl-2-pentanone (MIBK)	U		0.0307	0.337	8	02/10/2024 07:12	WG2223659
Methyl tert-butyl ether	U		0.00472	0.0135	8	02/10/2024 07:12	WG2223659
Naphthalene	0.0846	J	0.0657	0.168	8	02/10/2024 07:12	WG2223659
n-Propylbenzene	U		0.0128	0.0674	8	02/10/2024 07:12	WG2223659
Styrene	U		0.00308	0.168	8	02/10/2024 07:12	WG2223659
1,1,1,2-Tetrachloroethane	U		0.0128	0.0337	8	02/10/2024 07:12	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00936	0.0337	8	02/10/2024 07:12	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.0102	0.0337	8	02/10/2024 07:12	WG2223659
Tetrachloroethene	U		0.0121	0.0337	8	02/10/2024 07:12	WG2223659
Toluene	U		0.0175	0.0674	8	02/10/2024 07:12	WG2223659
1,2,3-Trichlorobenzene	U		0.0987	0.168	8	02/10/2024 07:12	WG2223659
1,2,4-Trichlorobenzene	U		0.0593	0.168	8	02/10/2024 07:12	WG2223659
1,1,1-Trichloroethane	U		0.0124	0.0337	8	02/10/2024 07:12	WG2223659
1,1,2-Trichloroethane	U		0.00805	0.0337	8	02/10/2024 07:12	WG2223659
Trichloroethene	U		0.00787	0.0135	8	02/10/2024 07:12	WG2223659
Trichlorofluoromethane	U		0.0112	0.0337	8	02/10/2024 07:12	WG2223659
1,2,3-Trichloropropane	U		0.0219	0.168	8	02/10/2024 07:12	WG2223659
1,2,4-Trimethylbenzene	U		0.0212	0.0674	8	02/10/2024 07:12	WG2223659
1,2,3-Trimethylbenzene	U		0.0212	0.0674	8	02/10/2024 07:12	WG2223659
1,3,5-Trimethylbenzene	U		0.0269	0.0674	8	02/10/2024 07:12	WG2223659
Vinyl chloride	U	C3 J3	0.0156	0.0337	8	02/10/2024 07:12	WG2223659
Xylenes, Total	U		0.0119	0.0876	8	02/10/2024 07:12	WG2223659
(S) Toluene-d8	*95.6*			*75.0-131*		*02/10/2024 07:12*	WG2223659
(S) 4-Bromofluorobenzene	*179*	J1		*67.0-138*		*02/10/2024 07:12*	WG2223659
(S) 1,2-Dichloroethane-d4	*89.8*			*70.0-130*		*02/10/2024 07:12*	WG2223659

Sample Narrative:

L1701988-22 WG2223659: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	35.1		1.77	5.31	1	02/07/2024 16:13	WG2221313
Residual Range Organics (RRO)	58.7		4.42	13.3	1	02/07/2024 16:13	WG2221313
(S) o-Terphenyl	*35.0*			*18.0-148*		*02/07/2024 16:13*	WG2221313

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00306	0.00797	1	02/08/2024 04:32	WG2220596
Acenaphthene	U		0.00278	0.00797	1	02/08/2024 04:32	WG2220596
Acenaphthylene	U		0.00287	0.00797	1	02/08/2024 04:32	WG2220596
Benzo(a)anthracene	U		0.00230	0.00797	1	02/08/2024 04:32	WG2220596
Benzo(a)pyrene	U		0.00238	0.00797	1	02/08/2024 04:32	WG2220596
Benzo(b)fluoranthene	U		0.00203	0.00797	1	02/08/2024 04:32	WG2220596
Benzo(g,h,i)perylene	U		0.00235	0.00797	1	02/08/2024 04:32	WG2220596
Benzo(k)fluoranthene	U		0.00286	0.00797	1	02/08/2024 04:32	WG2220596

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chrysene	U		0.00308	0.00797	1	02/08/2024 04:32	WG2220596
Dibenz(a,h)anthracene	U		0.00229	0.00797	1	02/08/2024 04:32	WG2220596
Fluoranthene	U		0.00302	0.00797	1	02/08/2024 04:32	WG2220596
Fluorene	U		0.00272	0.00797	1	02/08/2024 04:32	WG2220596
Indeno(1,2,3-cd)pyrene	U		0.00240	0.00797	1	02/08/2024 04:32	WG2220596
Naphthalene	U		0.00542	0.0266	1	02/08/2024 04:32	WG2220596
Phenanthrene	U		0.00307	0.00797	1	02/08/2024 04:32	WG2220596
Pyrene	U		0.00266	0.00797	1	02/08/2024 04:32	WG2220596
1-Methylnaphthalene	U		0.00597	0.0266	1	02/08/2024 04:32	WG2220596
2-Methylnaphthalene	U		0.00567	0.0266	1	02/08/2024 04:32	WG2220596
2-Chloronaphthalene	U		0.00619	0.0266	1	02/08/2024 04:32	WG2220596
(S) p-Terphenyl-d14	*83.4*			*23.0-120*		*02/08/2024 04:32*	WG2220596
(S) Nitrobenzene-d5	*137*			*14.0-149*		*02/08/2024 04:32*	WG2220596
(S) 2-Fluorobiphenyl	*74.7*			*34.0-125*		*02/08/2024 04:32*	WG2220596

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	74.5		1	02/06/2024 17:08	WG2220759

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	2.00	J	1.47	4.33	25.8	02/08/2024 21:00	WG2222741
(S) a,a,a-Trifluorotoluene(FID)	*95.9*			*77.0-120*		*02/08/2024 21:00*	WG2222741

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0631	0.0864	1.03	02/10/2024 02:10	WG2223659
Acrylonitrile	U		0.00624	0.0216	1.03	02/10/2024 02:10	WG2223659
Benzene	U		0.000807	0.00173	1.03	02/10/2024 02:10	WG2223659
Bromobenzene	U		0.00156	0.0216	1.03	02/10/2024 02:10	WG2223659
Bromodichloromethane	U		0.00125	0.00433	1.03	02/10/2024 02:10	WG2223659
Bromoform	U		0.00203	0.0433	1.03	02/10/2024 02:10	WG2223659
Bromomethane	U		0.00341	0.0216	1.03	02/10/2024 02:10	WG2223659
n-Butylbenzene	U		0.00908	0.0216	1.03	02/10/2024 02:10	WG2223659
sec-Butylbenzene	U		0.00498	0.0216	1.03	02/10/2024 02:10	WG2223659
tert-Butylbenzene	U	C3	0.00337	0.00864	1.03	02/10/2024 02:10	WG2223659
Carbon disulfide	U	C3	0.00121	0.0216	1.03	02/10/2024 02:10	WG2223659
Carbon tetrachloride	U		0.00155	0.00864	1.03	02/10/2024 02:10	WG2223659
Chlorobenzene	U		0.000362	0.00433	1.03	02/10/2024 02:10	WG2223659
Chlorodibromomethane	U		0.00106	0.00433	1.03	02/10/2024 02:10	WG2223659
Chloroethane	U		0.00294	0.00864	1.03	02/10/2024 02:10	WG2223659
Chloroform	U		0.00178	0.00433	1.03	02/10/2024 02:10	WG2223659
Chloromethane	U		0.00752	0.0216	1.03	02/10/2024 02:10	WG2223659
2-Chlorotoluene	U		0.00149	0.00433	1.03	02/10/2024 02:10	WG2223659
4-Chlorotoluene	U		0.000778	0.00864	1.03	02/10/2024 02:10	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.00674	0.0433	1.03	02/10/2024 02:10	WG2223659
1,2-Dibromoethane	U		0.00112	0.00433	1.03	02/10/2024 02:10	WG2223659
Dibromomethane	U		0.00130	0.00864	1.03	02/10/2024 02:10	WG2223659
1,2-Dichlorobenzene	U		0.000735	0.00864	1.03	02/10/2024 02:10	WG2223659
1,3-Dichlorobenzene	U		0.00104	0.00864	1.03	02/10/2024 02:10	WG2223659
1,4-Dichlorobenzene	U		0.00121	0.00864	1.03	02/10/2024 02:10	WG2223659
Dichlorodifluoromethane	U		0.00278	0.00864	1.03	02/10/2024 02:10	WG2223659
1,1-Dichloroethane	U		0.000849	0.00433	1.03	02/10/2024 02:10	WG2223659
1,2-Dichloroethane	U		0.00112	0.00433	1.03	02/10/2024 02:10	WG2223659
1,1-Dichloroethene	U		0.00105	0.00433	1.03	02/10/2024 02:10	WG2223659
cis-1,2-Dichloroethene	U		0.00127	0.00433	1.03	02/10/2024 02:10	WG2223659
trans-1,2-Dichloroethene	U		0.00180	0.00864	1.03	02/10/2024 02:10	WG2223659
1,2-Dichloropropane	U		0.00245	0.00864	1.03	02/10/2024 02:10	WG2223659
1,1-Dichloropropene	U		0.00140	0.00433	1.03	02/10/2024 02:10	WG2223659
1,3-Dichloropropane	U		0.000866	0.00864	1.03	02/10/2024 02:10	WG2223659
cis-1,3-Dichloropropene	U		0.00131	0.00433	1.03	02/10/2024 02:10	WG2223659
trans-1,3-Dichloropropene	U		0.00196	0.00864	1.03	02/10/2024 02:10	WG2223659
2,2-Dichloropropane	U		0.00238	0.00433	1.03	02/10/2024 02:10	WG2223659
Di-isopropyl ether	U		0.000708	0.00173	1.03	02/10/2024 02:10	WG2223659
Ethylbenzene	0.0125		0.00127	0.00433	1.03	02/10/2024 02:10	WG2223659
Hexachloro-1,3-butadiene	U		0.0104	0.0433	1.03	02/10/2024 02:10	WG2223659
Isopropylbenzene	U		0.000735	0.00433	1.03	02/10/2024 02:10	WG2223659
p-Isopropyltoluene	U		0.00441	0.00864	1.03	02/10/2024 02:10	WG2223659
2-Butanone (MEK)	U	J3	0.110	0.173	1.03	02/10/2024 02:10	WG2223659
Methylene Chloride	0.0125	J	0.0115	0.0433	1.03	02/10/2024 02:10	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00394	0.0433	1.03	02/10/2024 02:10	WG2223659
Methyl tert-butyl ether	U		0.000606	0.00173	1.03	02/10/2024 02:10	WG2223659
Naphthalene	U		0.00844	0.0216	1.03	02/10/2024 02:10	WG2223659
n-Propylbenzene	U		0.00164	0.00864	1.03	02/10/2024 02:10	WG2223659
Styrene	U		0.000396	0.0216	1.03	02/10/2024 02:10	WG2223659
1,1,1,2-Tetrachloroethane	U		0.00164	0.00433	1.03	02/10/2024 02:10	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00120	0.00433	1.03	02/10/2024 02:10	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.00130	0.00433	1.03	02/10/2024 02:10	WG2223659
Tetrachloroethene	U		0.00155	0.00433	1.03	02/10/2024 02:10	WG2223659
Toluene	0.00502	J	0.00225	0.00864	1.03	02/10/2024 02:10	WG2223659
1,2,3-Trichlorobenzene	U		0.0127	0.0216	1.03	02/10/2024 02:10	WG2223659
1,2,4-Trichlorobenzene	U		0.00760	0.0216	1.03	02/10/2024 02:10	WG2223659
1,1,1-Trichloroethane	U		0.00160	0.00433	1.03	02/10/2024 02:10	WG2223659
1,1,2-Trichloroethane	U		0.00103	0.00433	1.03	02/10/2024 02:10	WG2223659
Trichloroethene	U		0.00101	0.00173	1.03	02/10/2024 02:10	WG2223659
Trichlorofluoromethane	U		0.00143	0.00433	1.03	02/10/2024 02:10	WG2223659
1,2,3-Trichloropropane	U		0.00280	0.0216	1.03	02/10/2024 02:10	WG2223659
1,2,4-Trimethylbenzene	U		0.00273	0.00864	1.03	02/10/2024 02:10	WG2223659
1,2,3-Trimethylbenzene	U		0.00273	0.00864	1.03	02/10/2024 02:10	WG2223659
1,3,5-Trimethylbenzene	U		0.00346	0.00864	1.03	02/10/2024 02:10	WG2223659
Vinyl chloride	U	C3 J3	0.00200	0.00433	1.03	02/10/2024 02:10	WG2223659
Xylenes, Total	0.0810		0.00152	0.0112	1.03	02/10/2024 02:10	WG2223659
(S) Toluene-d8	*99.4*			*75.0-131*		*02/10/2024 02:10*	WG2223659
(S) 4-Bromofluorobenzene	*94.9*			*67.0-138*		*02/10/2024 02:10*	WG2223659
(S) 1,2-Dichloroethane-d4	*81.4*			*70.0-130*		*02/10/2024 02:10*	WG2223659

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	6.46		1.79	5.37	1	02/07/2024 15:59	WG2221313
Residual Range Organics (RRO)	111		4.47	13.4	1	02/07/2024 15:59	WG2221313
(S) o-Terphenyl	*33.7*			*18.0-148*		*02/07/2024 15:59*	WG2221313

Sample Narrative:

L1701988-25 WG2221313: Sample resembles laboratory standard for Hydraulic Oil.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00309	0.00806	1	02/08/2024 05:31	WG2220596
Acenaphthene	U		0.00281	0.00806	1	02/08/2024 05:31	WG2220596
Acenaphthylene	U		0.00290	0.00806	1	02/08/2024 05:31	WG2220596
Benzo(a)anthracene	0.00334	J	0.00232	0.00806	1	02/08/2024 05:31	WG2220596
Benzo(a)pyrene	0.00318	J	0.00240	0.00806	1	02/08/2024 05:31	WG2220596
Benzo(b)fluoranthene	0.00247	J	0.00205	0.00806	1	02/08/2024 05:31	WG2220596
Benzo(g,h,i)perylene	0.00384	J	0.00238	0.00806	1	02/08/2024 05:31	WG2220596
Benzo(k)fluoranthene	U		0.00289	0.00806	1	02/08/2024 05:31	WG2220596
Chrysene	0.00369	J	0.00312	0.00806	1	02/08/2024 05:31	WG2220596
Dibenz(a,h)anthracene	U		0.00231	0.00806	1	02/08/2024 05:31	WG2220596
Fluoranthene	U		0.00305	0.00806	1	02/08/2024 05:31	WG2220596
Fluorene	U		0.00275	0.00806	1	02/08/2024 05:31	WG2220596
Indeno(1,2,3-cd)pyrene	U		0.00243	0.00806	1	02/08/2024 05:31	WG2220596
Naphthalene	U		0.00548	0.0269	1	02/08/2024 05:31	WG2220596
Phenanthrene	U		0.00310	0.00806	1	02/08/2024 05:31	WG2220596
Pyrene	0.00328	J	0.00269	0.00806	1	02/08/2024 05:31	WG2220596

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1-Methylnaphthalene	U		0.00603	0.0269	1	02/08/2024 05:31	WG2220596
2-Methylnaphthalene	U		0.00574	0.0269	1	02/08/2024 05:31	WG2220596
2-Chloronaphthalene	U		0.00626	0.0269	1	02/08/2024 05:31	WG2220596
(S) p-Terphenyl-d14	*80.7*			*23.0-120*		*02/08/2024 05:31*	WG2220596
(S) Nitrobenzene-d5	*88.4*			*14.0-149*		*02/08/2024 05:31*	WG2220596
(S) 2-Fluorobiphenyl	*73.4*			*34.0-125*		*02/08/2024 05:31*	WG2220596

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	74.2		1	02/06/2024 17:08	WG2220759

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	7.63		1.58	4.67	28.2	02/08/2024 21:19	WG2222741
(S) a,a,a-Trifluorotoluene(FID)	*97.1*			*77.0-120*		*02/08/2024 21:19*	WG2222741

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0682	0.0936	1.13	02/10/2024 02:31	WG2223659
Acrylonitrile	U		0.00676	0.0233	1.13	02/10/2024 02:31	WG2223659
Benzene	U		0.000874	0.00187	1.13	02/10/2024 02:31	WG2223659
Bromobenzene	U		0.00169	0.0233	1.13	02/10/2024 02:31	WG2223659
Bromodichloromethane	U		0.00136	0.00469	1.13	02/10/2024 02:31	WG2223659
Bromoform	U		0.00219	0.0469	1.13	02/10/2024 02:31	WG2223659
Bromomethane	U		0.00369	0.0233	1.13	02/10/2024 02:31	WG2223659
n-Butylbenzene	U		0.00982	0.0233	1.13	02/10/2024 02:31	WG2223659
sec-Butylbenzene	U		0.00538	0.0233	1.13	02/10/2024 02:31	WG2223659
tert-Butylbenzene	U	C3	0.00364	0.00936	1.13	02/10/2024 02:31	WG2223659
Carbon disulfide	U	C3	0.00131	0.0233	1.13	02/10/2024 02:31	WG2223659
Carbon tetrachloride	U		0.00167	0.00936	1.13	02/10/2024 02:31	WG2223659
Chlorobenzene	U		0.000392	0.00469	1.13	02/10/2024 02:31	WG2223659
Chlorodibromomethane	U		0.00115	0.00469	1.13	02/10/2024 02:31	WG2223659
Chloroethane	U		0.00318	0.00936	1.13	02/10/2024 02:31	WG2223659
Chloroform	U		0.00192	0.00469	1.13	02/10/2024 02:31	WG2223659
Chloromethane	U		0.00815	0.0233	1.13	02/10/2024 02:31	WG2223659
2-Chlorotoluene	U		0.00162	0.00469	1.13	02/10/2024 02:31	WG2223659
4-Chlorotoluene	U		0.000843	0.00936	1.13	02/10/2024 02:31	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.00730	0.0469	1.13	02/10/2024 02:31	WG2223659
1,2-Dibromoethane	U		0.00121	0.00469	1.13	02/10/2024 02:31	WG2223659
Dibromomethane	U		0.00140	0.00936	1.13	02/10/2024 02:31	WG2223659
1,2-Dichlorobenzene	U		0.000795	0.00936	1.13	02/10/2024 02:31	WG2223659
1,3-Dichlorobenzene	U		0.00112	0.00936	1.13	02/10/2024 02:31	WG2223659
1,4-Dichlorobenzene	U		0.00131	0.00936	1.13	02/10/2024 02:31	WG2223659
Dichlorodifluoromethane	U		0.00301	0.00936	1.13	02/10/2024 02:31	WG2223659
1,1-Dichloroethane	U		0.000919	0.00469	1.13	02/10/2024 02:31	WG2223659
1,2-Dichloroethane	U		0.00121	0.00469	1.13	02/10/2024 02:31	WG2223659
1,1-Dichloroethene	U		0.00113	0.00469	1.13	02/10/2024 02:31	WG2223659
cis-1,2-Dichloroethene	U		0.00137	0.00469	1.13	02/10/2024 02:31	WG2223659
trans-1,2-Dichloroethene	U		0.00195	0.00936	1.13	02/10/2024 02:31	WG2223659
1,2-Dichloropropane	U		0.00265	0.00936	1.13	02/10/2024 02:31	WG2223659
1,1-Dichloropropene	U		0.00151	0.00469	1.13	02/10/2024 02:31	WG2223659
1,3-Dichloropropane	U		0.000937	0.00936	1.13	02/10/2024 02:31	WG2223659
cis-1,3-Dichloropropene	U		0.00142	0.00469	1.13	02/10/2024 02:31	WG2223659
trans-1,3-Dichloropropene	U		0.00214	0.00936	1.13	02/10/2024 02:31	WG2223659
2,2-Dichloropropane	U		0.00258	0.00469	1.13	02/10/2024 02:31	WG2223659
Di-isopropyl ether	U		0.000767	0.00187	1.13	02/10/2024 02:31	WG2223659
Ethylbenzene	U		0.00138	0.00469	1.13	02/10/2024 02:31	WG2223659
Hexachloro-1,3-butadiene	U		0.0112	0.0469	1.13	02/10/2024 02:31	WG2223659
Isopropylbenzene	U		0.000795	0.00469	1.13	02/10/2024 02:31	WG2223659
p-Isopropyltoluene	U		0.00477	0.00936	1.13	02/10/2024 02:31	WG2223659
2-Butanone (MEK)	U	J3	0.119	0.187	1.13	02/10/2024 02:31	WG2223659
Methylene Chloride	0.0130	J	0.0124	0.0469	1.13	02/10/2024 02:31	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00427	0.0469	1.13	02/10/2024 02:31	WG2223659
Methyl tert-butyl ether	U		0.000656	0.00187	1.13	02/10/2024 02:31	WG2223659
Naphthalene	U		0.00912	0.0233	1.13	02/10/2024 02:31	WG2223659
n-Propylbenzene	U		0.00177	0.00936	1.13	02/10/2024 02:31	WG2223659
Styrene	U		0.000429	0.0233	1.13	02/10/2024 02:31	WG2223659
1,1,1,2-Tetrachloroethane	U		0.00177	0.00469	1.13	02/10/2024 02:31	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00130	0.00469	1.13	02/10/2024 02:31	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.00141	0.00469	1.13	02/10/2024 02:31	WG2223659
Tetrachloroethene	U		0.00167	0.00469	1.13	02/10/2024 02:31	WG2223659
Toluene	0.00874	J	0.00243	0.00936	1.13	02/10/2024 02:31	WG2223659
1,2,3-Trichlorobenzene	U		0.0137	0.0233	1.13	02/10/2024 02:31	WG2223659
1,2,4-Trichlorobenzene	U		0.00823	0.0233	1.13	02/10/2024 02:31	WG2223659
1,1,1-Trichloroethane	U		0.00172	0.00469	1.13	02/10/2024 02:31	WG2223659
1,1,2-Trichloroethane	U		0.00112	0.00469	1.13	02/10/2024 02:31	WG2223659
Trichloroethene	U		0.00109	0.00187	1.13	02/10/2024 02:31	WG2223659
Trichlorofluoromethane	U		0.00155	0.00469	1.13	02/10/2024 02:31	WG2223659
1,2,3-Trichloropropane	U		0.00303	0.0233	1.13	02/10/2024 02:31	WG2223659
1,2,4-Trimethylbenzene	U		0.00296	0.00936	1.13	02/10/2024 02:31	WG2223659
1,2,3-Trimethylbenzene	U		0.00296	0.00936	1.13	02/10/2024 02:31	WG2223659
1,3,5-Trimethylbenzene	U		0.00374	0.00936	1.13	02/10/2024 02:31	WG2223659
Vinyl chloride	U	C3 J3	0.00217	0.00469	1.13	02/10/2024 02:31	WG2223659
Xylenes, Total	U		0.00165	0.0122	1.13	02/10/2024 02:31	WG2223659
(S) Toluene-d8	*101*			*75.0-131*		*02/10/2024 02:31*	WG2223659
(S) 4-Bromofluorobenzene	*94.8*			*67.0-138*		*02/10/2024 02:31*	WG2223659
(S) 1,2-Dichloroethane-d4	*86.1*			*70.0-130*		*02/10/2024 02:31*	WG2223659

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	8.50		1.79	5.39	1	02/07/2024 15:45	WG2221313
Residual Range Organics (RRO)	8.11	J	4.49	13.5	1	02/07/2024 15:45	WG2221313
(S) o-Terphenyl	*38.5*			*18.0-148*		*02/07/2024 15:45*	WG2221313

Sample Narrative:

L1701988-30 WG2221313: Sample does not resemble laboratory standards.

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.0		1	02/06/2024 17:08	WG2220759

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cadmium	0.109	J	0.108	1.27	5	02/06/2024 19:48	WG2220616
Chromium	50.7		0.375	6.33	5	02/06/2024 19:48	WG2220616
Lead	15.3		0.125	2.53	5	02/06/2024 19:48	WG2220616

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	565		5.42	16.0	100	02/09/2024 08:29	WG2222381
(S) a,a,a-Trifluorotoluene(FID)	*90.1*			*77.0-120*		*02/09/2024 08:29*	WG2222381

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.467	0.640	8	02/10/2024 07:34	WG2223659
Acrylonitrile	U		0.0462	0.160	8	02/10/2024 07:34	WG2223659
Benzene	U		0.00598	0.0128	8	02/10/2024 07:34	WG2223659
Bromobenzene	U		0.0115	0.160	8	02/10/2024 07:34	WG2223659
Bromodichloromethane	U		0.00928	0.0320	8	02/10/2024 07:34	WG2223659
Bromoform	U		0.0150	0.320	8	02/10/2024 07:34	WG2223659
Bromomethane	U		0.0253	0.160	8	02/10/2024 07:34	WG2223659
n-Butylbenzene	0.200		0.0672	0.160	8	02/10/2024 07:34	WG2223659
sec-Butylbenzene	0.270		0.0368	0.160	8	02/10/2024 07:34	WG2223659
tert-Butylbenzene	U	C3	0.0250	0.0640	8	02/10/2024 07:34	WG2223659
Carbon disulfide	U	C3	0.00896	0.160	8	02/10/2024 07:34	WG2223659
Carbon tetrachloride	U		0.0115	0.0640	8	02/10/2024 07:34	WG2223659
Chlorobenzene	U		0.00269	0.0320	8	02/10/2024 07:34	WG2223659
Chlorodibromomethane	U		0.00784	0.0320	8	02/10/2024 07:34	WG2223659
Chloroethane	U		0.0218	0.0640	8	02/10/2024 07:34	WG2223659
Chloroform	U		0.0132	0.0320	8	02/10/2024 07:34	WG2223659
Chloromethane	U		0.0557	0.160	8	02/10/2024 07:34	WG2223659
2-Chlorotoluene	U		0.0111	0.0320	8	02/10/2024 07:34	WG2223659
4-Chlorotoluene	U		0.00576	0.0640	8	02/10/2024 07:34	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.0499	0.320	8	02/10/2024 07:34	WG2223659
1,2-Dibromoethane	U		0.00829	0.0320	8	02/10/2024 07:34	WG2223659
Dibromomethane	U		0.00960	0.0640	8	02/10/2024 07:34	WG2223659
1,2-Dichlorobenzene	U		0.00544	0.0640	8	02/10/2024 07:34	WG2223659
1,3-Dichlorobenzene	U		0.00768	0.0640	8	02/10/2024 07:34	WG2223659
1,4-Dichlorobenzene	U		0.00896	0.0640	8	02/10/2024 07:34	WG2223659
Dichlorodifluoromethane	U		0.0206	0.0640	8	02/10/2024 07:34	WG2223659
1,1-Dichloroethane	U		0.00629	0.0320	8	02/10/2024 07:34	WG2223659
1,2-Dichloroethane	U		0.00830	0.0320	8	02/10/2024 07:34	WG2223659
1,1-Dichloroethene	U		0.00776	0.0320	8	02/10/2024 07:34	WG2223659
cis-1,2-Dichloroethene	U		0.00939	0.0320	8	02/10/2024 07:34	WG2223659
trans-1,2-Dichloroethene	U		0.0133	0.0640	8	02/10/2024 07:34	WG2223659
1,2-Dichloropropane	U		0.0182	0.0640	8	02/10/2024 07:34	WG2223659
1,1-Dichloropropene	U		0.0103	0.0320	8	02/10/2024 07:34	WG2223659
1,3-Dichloropropane	U		0.00641	0.0640	8	02/10/2024 07:34	WG2223659
cis-1,3-Dichloropropene	U		0.00969	0.0320	8	02/10/2024 07:34	WG2223659
trans-1,3-Dichloropropene	U		0.0146	0.0640	8	02/10/2024 07:34	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,2-Dichloropropane	U		0.0176	0.0320	8	02/10/2024 07:34	WG2223659
Di-isopropyl ether	U		0.00525	0.0128	8	02/10/2024 07:34	WG2223659
Ethylbenzene	U		0.00944	0.0320	8	02/10/2024 07:34	WG2223659
Hexachloro-1,3-butadiene	U		0.0768	0.320	8	02/10/2024 07:34	WG2223659
Isopropylbenzene	U		0.00544	0.0320	8	02/10/2024 07:34	WG2223659
p-Isopropyltoluene	U		0.0326	0.0640	8	02/10/2024 07:34	WG2223659
2-Butanone (MEK)	U	J3	0.813	1.28	8	02/10/2024 07:34	WG2223659
Methylene Chloride	0.0867	J	0.0849	0.320	8	02/10/2024 07:34	WG2223659
4-Methyl-2-pentanone (MIBK)	U		0.0291	0.320	8	02/10/2024 07:34	WG2223659
Methyl tert-butyl ether	U		0.00448	0.0128	8	02/10/2024 07:34	WG2223659
Naphthalene	U		0.0624	0.160	8	02/10/2024 07:34	WG2223659
n-Propylbenzene	U		0.0122	0.0640	8	02/10/2024 07:34	WG2223659
Styrene	U		0.00293	0.160	8	02/10/2024 07:34	WG2223659
1,1,1,2-Tetrachloroethane	U		0.0121	0.0320	8	02/10/2024 07:34	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00889	0.0320	8	02/10/2024 07:34	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.00964	0.0320	8	02/10/2024 07:34	WG2223659
Tetrachloroethene	U		0.0115	0.0320	8	02/10/2024 07:34	WG2223659
Toluene	U		0.0166	0.0640	8	02/10/2024 07:34	WG2223659
1,2,3-Trichlorobenzene	U		0.0937	0.160	8	02/10/2024 07:34	WG2223659
1,2,4-Trichlorobenzene	U		0.0563	0.160	8	02/10/2024 07:34	WG2223659
1,1,1-Trichloroethane	U		0.0118	0.0320	8	02/10/2024 07:34	WG2223659
1,1,2-Trichloroethane	U		0.00765	0.0320	8	02/10/2024 07:34	WG2223659
Trichloroethene	U		0.00747	0.0128	8	02/10/2024 07:34	WG2223659
Trichlorofluoromethane	U		0.0106	0.0320	8	02/10/2024 07:34	WG2223659
1,2,3-Trichloropropane	U		0.0208	0.160	8	02/10/2024 07:34	WG2223659
1,2,4-Trimethylbenzene	U		0.0202	0.0640	8	02/10/2024 07:34	WG2223659
1,2,3-Trimethylbenzene	U		0.0202	0.0640	8	02/10/2024 07:34	WG2223659
1,3,5-Trimethylbenzene	U		0.0256	0.0640	8	02/10/2024 07:34	WG2223659
Vinyl chloride	U	C3 J3	0.0148	0.0320	8	02/10/2024 07:34	WG2223659
Xylenes, Total	U		0.0113	0.0832	8	02/10/2024 07:34	WG2223659
(S) Toluene-d8	*102*			*75.0-131*		*02/10/2024 07:34*	WG2223659
(S) 4-Bromofluorobenzene	*109*			*67.0-138*		*02/10/2024 07:34*	WG2223659
(S) 1,2-Dichloroethane-d4	*92.0*			*70.0-130*		*02/10/2024 07:34*	WG2223659

Sample Narrative:

L1701988-31 WG2223659: Non-target compounds too high to run at a lower dilution.

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	43.1		1.68	5.06	1	02/07/2024 15:45	WG2221313
Residual Range Organics (RRO)	6.10	J	4.22	12.7	1	02/07/2024 15:45	WG2221313
(S) o-Terphenyl	*43.2*			*18.0-148*		*02/07/2024 15:45*	WG2221313

Sample Narrative:

L1701988-31 WG2221313: Sample resembles laboratory standard for Kerosene.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00291	0.00760	1	02/08/2024 15:21	WG2221456
Acenaphthene	0.00379	J J3	0.00265	0.00760	1	02/08/2024 15:21	WG2221456
Acenaphthylene	U		0.00273	0.00760	1	02/08/2024 15:21	WG2221456
Benzo(a)anthracene	U		0.00219	0.00760	1	02/08/2024 15:21	WG2221456
Benzo(a)pyrene	U		0.00227	0.00760	1	02/08/2024 15:21	WG2221456

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzo(b)fluoranthene	U		0.00194	0.00760	1	02/08/2024 15:21	WG2221456
Benzo(g,h,i)perylene	U		0.00224	0.00760	1	02/08/2024 15:21	WG2221456
Benzo(k)fluoranthene	U		0.00272	0.00760	1	02/08/2024 15:21	WG2221456
Chrysene	U		0.00294	0.00760	1	02/08/2024 15:21	WG2221456
Dibenz(a,h)anthracene	U		0.00218	0.00760	1	02/08/2024 15:21	WG2221456
Fluoranthene	U		0.00287	0.00760	1	02/08/2024 15:21	WG2221456
Fluorene	0.00708	J	0.00260	0.00760	1	02/08/2024 15:21	WG2221456
Indeno(1,2,3-cd)pyrene	U		0.00229	0.00760	1	02/08/2024 15:21	WG2221456
Naphthalene	0.00539	J	0.00517	0.0253	1	02/08/2024 15:21	WG2221456
Phenanthrene	U		0.00292	0.00760	1	02/08/2024 15:21	WG2221456
Pyrene	U		0.00253	0.00760	1	02/08/2024 15:21	WG2221456
1-Methylnaphthalene	U	J3	0.00569	0.0253	1	02/08/2024 15:21	WG2221456
2-Methylnaphthalene	U	J3	0.00541	0.0253	1	02/08/2024 15:21	WG2221456
2-Chloronaphthalene	U		0.00590	0.0253	1	02/08/2024 15:21	WG2221456
(S) p-Terphenyl-d14	*49.1*			*23.0-120*		*02/08/2024 15:21*	WG2221456
(S) Nitrobenzene-d5	*64.5*			*14.0-149*		*02/08/2024 15:21*	WG2221456
(S) 2-Fluorobiphenyl	*47.9*			*34.0-125*		*02/08/2024 15:21*	WG2221456

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	72.0		1	02/06/2024 17:08	WG2220759

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	86.8		1.56	4.61	25	02/09/2024 04:00	WG2222381
(S) a,a,a-Trifluorotoluene(FID)	*88.7*			*77.0-120*		*02/09/2024 04:00*	WG2222381

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0673	0.0922	1	02/10/2024 02:53	WG2223659
Acrylonitrile	U		0.00666	0.0230	1	02/10/2024 02:53	WG2223659
Benzene	U		0.000861	0.00184	1	02/10/2024 02:53	WG2223659
Bromobenzene	U		0.00166	0.0230	1	02/10/2024 02:53	WG2223659
Bromodichloromethane	U		0.00134	0.00461	1	02/10/2024 02:53	WG2223659
Bromoform	U		0.00216	0.0461	1	02/10/2024 02:53	WG2223659
Bromomethane	U		0.00363	0.0230	1	02/10/2024 02:53	WG2223659
n-Butylbenzene	U		0.00968	0.0230	1	02/10/2024 02:53	WG2223659
sec-Butylbenzene	0.0134	J	0.00531	0.0230	1	02/10/2024 02:53	WG2223659
tert-Butylbenzene	U	C3	0.00360	0.00922	1	02/10/2024 02:53	WG2223659
Carbon disulfide	U	C3	0.00129	0.0230	1	02/10/2024 02:53	WG2223659
Carbon tetrachloride	U		0.00166	0.00922	1	02/10/2024 02:53	WG2223659
Chlorobenzene	U		0.000387	0.00461	1	02/10/2024 02:53	WG2223659
Chlorodibromomethane	U		0.00113	0.00461	1	02/10/2024 02:53	WG2223659
Chloroethane	U		0.00313	0.00922	1	02/10/2024 02:53	WG2223659
Chloroform	U		0.00190	0.00461	1	02/10/2024 02:53	WG2223659
Chloromethane	U		0.00802	0.0230	1	02/10/2024 02:53	WG2223659
2-Chlorotoluene	U		0.00159	0.00461	1	02/10/2024 02:53	WG2223659
4-Chlorotoluene	U		0.000830	0.00922	1	02/10/2024 02:53	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.00719	0.0461	1	02/10/2024 02:53	WG2223659
1,2-Dibromoethane	U		0.00119	0.00461	1	02/10/2024 02:53	WG2223659
Dibromomethane	U		0.00138	0.00922	1	02/10/2024 02:53	WG2223659
1,2-Dichlorobenzene	U		0.000784	0.00922	1	02/10/2024 02:53	WG2223659
1,3-Dichlorobenzene	U		0.00111	0.00922	1	02/10/2024 02:53	WG2223659
1,4-Dichlorobenzene	U		0.00129	0.00922	1	02/10/2024 02:53	WG2223659
Dichlorodifluoromethane	U		0.00297	0.00922	1	02/10/2024 02:53	WG2223659
1,1-Dichloroethane	U		0.000905	0.00461	1	02/10/2024 02:53	WG2223659
1,2-Dichloroethane	U		0.00120	0.00461	1	02/10/2024 02:53	WG2223659
1,1-Dichloroethene	U		0.00112	0.00461	1	02/10/2024 02:53	WG2223659
cis-1,2-Dichloroethene	U		0.00135	0.00461	1	02/10/2024 02:53	WG2223659
trans-1,2-Dichloroethene	U		0.00192	0.00922	1	02/10/2024 02:53	WG2223659
1,2-Dichloropropane	U		0.00262	0.00922	1	02/10/2024 02:53	WG2223659
1,1-Dichloropropene	U		0.00149	0.00461	1	02/10/2024 02:53	WG2223659
1,3-Dichloropropane	U		0.000924	0.00922	1	02/10/2024 02:53	WG2223659
cis-1,3-Dichloropropene	U		0.00140	0.00461	1	02/10/2024 02:53	WG2223659
trans-1,3-Dichloropropene	U		0.00210	0.00922	1	02/10/2024 02:53	WG2223659
2,2-Dichloropropane	U		0.00254	0.00461	1	02/10/2024 02:53	WG2223659
Di-isopropyl ether	U		0.000756	0.00184	1	02/10/2024 02:53	WG2223659
Ethylbenzene	U		0.00136	0.00461	1	02/10/2024 02:53	WG2223659
Hexachloro-1,3-butadiene	U		0.0111	0.0461	1	02/10/2024 02:53	WG2223659
Isopropylbenzene	U		0.000784	0.00461	1	02/10/2024 02:53	WG2223659
p-Isopropyltoluene	U		0.00470	0.00922	1	02/10/2024 02:53	WG2223659
2-Butanone (MEK)	U	J3	0.117	0.184	1	02/10/2024 02:53	WG2223659
Methylene Chloride	U		0.0122	0.0461	1	02/10/2024 02:53	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00420	0.0461	1	02/10/2024 02:53	WG2223659
Methyl tert-butyl ether	U		0.000645	0.00184	1	02/10/2024 02:53	WG2223659
Naphthalene	U		0.00900	0.0230	1	02/10/2024 02:53	WG2223659
n-Propylbenzene	U		0.00175	0.00922	1	02/10/2024 02:53	WG2223659
Styrene	U		0.000422	0.0230	1	02/10/2024 02:53	WG2223659
1,1,1,2-Tetrachloroethane	U		0.00175	0.00461	1	02/10/2024 02:53	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00128	0.00461	1	02/10/2024 02:53	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.00139	0.00461	1	02/10/2024 02:53	WG2223659
Tetrachloroethene	U		0.00165	0.00461	1	02/10/2024 02:53	WG2223659
Toluene	U		0.00240	0.00922	1	02/10/2024 02:53	WG2223659
1,2,3-Trichlorobenzene	U		0.0135	0.0230	1	02/10/2024 02:53	WG2223659
1,2,4-Trichlorobenzene	U		0.00811	0.0230	1	02/10/2024 02:53	WG2223659
1,1,1-Trichloroethane	U		0.00170	0.00461	1	02/10/2024 02:53	WG2223659
1,1,2-Trichloroethane	U		0.00110	0.00461	1	02/10/2024 02:53	WG2223659
Trichloroethene	U		0.00108	0.00184	1	02/10/2024 02:53	WG2223659
Trichlorofluoromethane	U		0.00152	0.00461	1	02/10/2024 02:53	WG2223659
1,2,3-Trichloropropane	U		0.00299	0.0230	1	02/10/2024 02:53	WG2223659
1,2,4-Trimethylbenzene	U		0.00291	0.00922	1	02/10/2024 02:53	WG2223659
1,2,3-Trimethylbenzene	U		0.00291	0.00922	1	02/10/2024 02:53	WG2223659
1,3,5-Trimethylbenzene	U		0.00369	0.00922	1	02/10/2024 02:53	WG2223659
Vinyl chloride	U	C3 J3	0.00214	0.00461	1	02/10/2024 02:53	WG2223659
Xylenes, Total	U		0.00162	0.0120	1	02/10/2024 02:53	WG2223659
(S) Toluene-d8	*98.6*			*75.0-131*		*02/10/2024 02:53*	WG2223659
(S) 4-Bromofluorobenzene	*96.7*			*67.0-138*		*02/10/2024 02:53*	WG2223659
(S) 1,2-Dichloroethane-d4	*84.2*			*70.0-130*		*02/10/2024 02:53*	WG2223659

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	67.8		1	02/06/2024 17:08	WG2220759

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	4.57	B J	1.69	4.97	25	02/09/2024 04:25	WG2222381
(S) a,a,a-Trifluorotoluene(FID)	*90.0*			*77.0-120*		*02/09/2024 04:25*	WG2222381

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0726	0.0994	1	02/10/2024 03:15	WG2223659
Acrylonitrile	U		0.00718	0.0249	1	02/10/2024 03:15	WG2223659
Benzene	U		0.000929	0.00199	1	02/10/2024 03:15	WG2223659
Bromobenzene	U		0.00179	0.0249	1	02/10/2024 03:15	WG2223659
Bromodichloromethane	U		0.00144	0.00497	1	02/10/2024 03:15	WG2223659
Bromoform	U		0.00233	0.0497	1	02/10/2024 03:15	WG2223659
Bromomethane	U		0.00392	0.0249	1	02/10/2024 03:15	WG2223659
n-Butylbenzene	U		0.0104	0.0249	1	02/10/2024 03:15	WG2223659
sec-Butylbenzene	U		0.00573	0.0249	1	02/10/2024 03:15	WG2223659
tert-Butylbenzene	U	C3	0.00388	0.00994	1	02/10/2024 03:15	WG2223659
Carbon disulfide	U	C3	0.00139	0.0249	1	02/10/2024 03:15	WG2223659
Carbon tetrachloride	U		0.00179	0.00994	1	02/10/2024 03:15	WG2223659
Chlorobenzene	U		0.000418	0.00497	1	02/10/2024 03:15	WG2223659
Chlorodibromomethane	U		0.00122	0.00497	1	02/10/2024 03:15	WG2223659
Chloroethane	U		0.00338	0.00994	1	02/10/2024 03:15	WG2223659
Chloroform	U		0.00205	0.00497	1	02/10/2024 03:15	WG2223659
Chloromethane	U		0.00865	0.0249	1	02/10/2024 03:15	WG2223659
2-Chlorotoluene	U		0.00172	0.00497	1	02/10/2024 03:15	WG2223659
4-Chlorotoluene	U		0.000895	0.00994	1	02/10/2024 03:15	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.00776	0.0497	1	02/10/2024 03:15	WG2223659
1,2-Dibromoethane	U		0.00129	0.00497	1	02/10/2024 03:15	WG2223659
Dibromomethane	U		0.00149	0.00994	1	02/10/2024 03:15	WG2223659
1,2-Dichlorobenzene	U		0.000845	0.00994	1	02/10/2024 03:15	WG2223659
1,3-Dichlorobenzene	U		0.00119	0.00994	1	02/10/2024 03:15	WG2223659
1,4-Dichlorobenzene	U		0.00139	0.00994	1	02/10/2024 03:15	WG2223659
Dichlorodifluoromethane	U		0.00320	0.00994	1	02/10/2024 03:15	WG2223659
1,1-Dichloroethane	U		0.000977	0.00497	1	02/10/2024 03:15	WG2223659
1,2-Dichloroethane	U		0.00129	0.00497	1	02/10/2024 03:15	WG2223659
1,1-Dichloroethene	U		0.00121	0.00497	1	02/10/2024 03:15	WG2223659
cis-1,2-Dichloroethene	U		0.00146	0.00497	1	02/10/2024 03:15	WG2223659
trans-1,2-Dichloroethene	U		0.00207	0.00994	1	02/10/2024 03:15	WG2223659
1,2-Dichloropropane	U		0.00282	0.00994	1	02/10/2024 03:15	WG2223659
1,1-Dichloropropene	U		0.00161	0.00497	1	02/10/2024 03:15	WG2223659
1,3-Dichloropropane	U		0.000996	0.00994	1	02/10/2024 03:15	WG2223659
cis-1,3-Dichloropropene	U		0.00151	0.00497	1	02/10/2024 03:15	WG2223659
trans-1,3-Dichloropropene	U		0.00227	0.00994	1	02/10/2024 03:15	WG2223659
2,2-Dichloropropane	U		0.00274	0.00497	1	02/10/2024 03:15	WG2223659
Di-isopropyl ether	U		0.000815	0.00199	1	02/10/2024 03:15	WG2223659
Ethylbenzene	U		0.00147	0.00497	1	02/10/2024 03:15	WG2223659
Hexachloro-1,3-butadiene	U		0.0119	0.0497	1	02/10/2024 03:15	WG2223659
Isopropylbenzene	U		0.000845	0.00497	1	02/10/2024 03:15	WG2223659
p-Isopropyltoluene	U		0.00507	0.00994	1	02/10/2024 03:15	WG2223659
2-Butanone (MEK)	U	J3	0.126	0.199	1	02/10/2024 03:15	WG2223659
Methylene Chloride	0.0145	J	0.0132	0.0497	1	02/10/2024 03:15	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00453	0.0497	1	02/10/2024 03:15	WG2223659
Methyl tert-butyl ether	U		0.000696	0.00199	1	02/10/2024 03:15	WG2223659
Naphthalene	U		0.00971	0.0249	1	02/10/2024 03:15	WG2223659
n-Propylbenzene	U		0.00189	0.00994	1	02/10/2024 03:15	WG2223659
Styrene	U		0.000455	0.0249	1	02/10/2024 03:15	WG2223659
1,1,1,2-Tetrachloroethane	U		0.00189	0.00497	1	02/10/2024 03:15	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00138	0.00497	1	02/10/2024 03:15	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.00150	0.00497	1	02/10/2024 03:15	WG2223659
Tetrachloroethene	U		0.00178	0.00497	1	02/10/2024 03:15	WG2223659
Toluene	U		0.00259	0.00994	1	02/10/2024 03:15	WG2223659
1,2,3-Trichlorobenzene	U		0.0146	0.0249	1	02/10/2024 03:15	WG2223659
1,2,4-Trichlorobenzene	U		0.00875	0.0249	1	02/10/2024 03:15	WG2223659
1,1,1-Trichloroethane	U		0.00184	0.00497	1	02/10/2024 03:15	WG2223659
1,1,2-Trichloroethane	U		0.00119	0.00497	1	02/10/2024 03:15	WG2223659
Trichloroethene	U		0.00116	0.00199	1	02/10/2024 03:15	WG2223659
Trichlorofluoromethane	U		0.00164	0.00497	1	02/10/2024 03:15	WG2223659
1,2,3-Trichloropropane	U		0.00322	0.0249	1	02/10/2024 03:15	WG2223659
1,2,4-Trimethylbenzene	U		0.00314	0.00994	1	02/10/2024 03:15	WG2223659
1,2,3-Trimethylbenzene	U		0.00314	0.00994	1	02/10/2024 03:15	WG2223659
1,3,5-Trimethylbenzene	U		0.00398	0.00994	1	02/10/2024 03:15	WG2223659
Vinyl chloride	U	C3 J3	0.00231	0.00497	1	02/10/2024 03:15	WG2223659
Xylenes, Total	U		0.00175	0.0129	1	02/10/2024 03:15	WG2223659
(S) Toluene-d8	*96.8*			*75.0-131*		*02/10/2024 03:15*	WG2223659
(S) 4-Bromofluorobenzene	*96.1*			*67.0-138*		*02/10/2024 03:15*	WG2223659
(S) 1,2-Dichloroethane-d4	*80.4*			*70.0-130*		*02/10/2024 03:15*	WG2223659

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.00339	0.00885	1	02/07/2024 20:34	WG2221364
Acenaphthene	U		0.00308	0.00885	1	02/07/2024 20:34	WG2221364
Acenaphthylene	0.00392	J	0.00319	0.00885	1	02/07/2024 20:34	WG2221364
Benzo(a)anthracene	0.00864	J	0.00255	0.00885	1	02/07/2024 20:34	WG2221364
Benzo(a)pyrene	0.0149		0.00264	0.00885	1	02/07/2024 20:34	WG2221364
Benzo(b)fluoranthene	0.0152		0.00226	0.00885	1	02/07/2024 20:34	WG2221364
Benzo(g,h,i)perylene	0.0189		0.00261	0.00885	1	02/07/2024 20:34	WG2221364
Benzo(k)fluoranthene	0.00416	J	0.00317	0.00885	1	02/07/2024 20:34	WG2221364
Chrysene	0.0102		0.00342	0.00885	1	02/07/2024 20:34	WG2221364
Dibenz(a,h)anthracene	0.00280	J	0.00254	0.00885	1	02/07/2024 20:34	WG2221364
Fluoranthene	0.0116		0.00335	0.00885	1	02/07/2024 20:34	WG2221364
Fluorene	U		0.00302	0.00885	1	02/07/2024 20:34	WG2221364
Indeno(1,2,3-cd)pyrene	0.0132		0.00267	0.00885	1	02/07/2024 20:34	WG2221364
Naphthalene	U		0.00602	0.0295	1	02/07/2024 20:34	WG2221364
Phenanthrene	0.00417	J	0.00341	0.00885	1	02/07/2024 20:34	WG2221364
Pyrene	0.0173		0.00295	0.00885	1	02/07/2024 20:34	WG2221364
1-Methylnaphthalene	U		0.00662	0.0295	1	02/07/2024 20:34	WG2221364
2-Methylnaphthalene	U		0.00630	0.0295	1	02/07/2024 20:34	WG2221364
2-Chloronaphthalene	U		0.00687	0.0295	1	02/07/2024 20:34	WG2221364
(S) p-Terphenyl-d14	*64.3*			*23.0-120*		*02/07/2024 20:34*	WG2221364
(S) Nitrobenzene-d5	*87.1*			*14.0-149*		*02/07/2024 20:34*	WG2221364
(S) 2-Fluorobiphenyl	*66.8*			*34.0-125*		*02/07/2024 20:34*	WG2221364

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	74.1		1	02/06/2024 17:08	WG2220759

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	23.4	B	1.48	4.36	25	02/09/2024 04:49	WG2222381
(S) a,a,a-Trifluorotoluene(FID)	*89.3*			*77.0-120*		*02/09/2024 04:49*	WG2222381

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0637	0.0872	1	02/10/2024 03:36	WG2223659
Acrylonitrile	U		0.00630	0.0218	1	02/10/2024 03:36	WG2223659
Benzene	U		0.000815	0.00174	1	02/10/2024 03:36	WG2223659
Bromobenzene	U		0.00157	0.0218	1	02/10/2024 03:36	WG2223659
Bromodichloromethane	U		0.00127	0.00436	1	02/10/2024 03:36	WG2223659
Bromoform	U		0.00204	0.0436	1	02/10/2024 03:36	WG2223659
Bromomethane	U		0.00344	0.0218	1	02/10/2024 03:36	WG2223659
n-Butylbenzene	U		0.00916	0.0218	1	02/10/2024 03:36	WG2223659
sec-Butylbenzene	0.0389		0.00503	0.0218	1	02/10/2024 03:36	WG2223659
tert-Butylbenzene	U	C3	0.00340	0.00872	1	02/10/2024 03:36	WG2223659
Carbon disulfide	U	C3	0.00122	0.0218	1	02/10/2024 03:36	WG2223659
Carbon tetrachloride	U		0.00157	0.00872	1	02/10/2024 03:36	WG2223659
Chlorobenzene	U		0.000366	0.00436	1	02/10/2024 03:36	WG2223659
Chlorodibromomethane	U		0.00107	0.00436	1	02/10/2024 03:36	WG2223659
Chloroethane	U		0.00297	0.00872	1	02/10/2024 03:36	WG2223659
Chloroform	U		0.00180	0.00436	1	02/10/2024 03:36	WG2223659
Chloromethane	U		0.00759	0.0218	1	02/10/2024 03:36	WG2223659
2-Chlorotoluene	U		0.00151	0.00436	1	02/10/2024 03:36	WG2223659
4-Chlorotoluene	U		0.000785	0.00872	1	02/10/2024 03:36	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.00680	0.0436	1	02/10/2024 03:36	WG2223659
1,2-Dibromoethane	U		0.00113	0.00436	1	02/10/2024 03:36	WG2223659
Dibromomethane	U		0.00131	0.00872	1	02/10/2024 03:36	WG2223659
1,2-Dichlorobenzene	U		0.000742	0.00872	1	02/10/2024 03:36	WG2223659
1,3-Dichlorobenzene	U		0.00105	0.00872	1	02/10/2024 03:36	WG2223659
1,4-Dichlorobenzene	U		0.00122	0.00872	1	02/10/2024 03:36	WG2223659
Dichlorodifluoromethane	U		0.00281	0.00872	1	02/10/2024 03:36	WG2223659
1,1-Dichloroethane	U		0.000857	0.00436	1	02/10/2024 03:36	WG2223659
1,2-Dichloroethane	U		0.00113	0.00436	1	02/10/2024 03:36	WG2223659
1,1-Dichloroethene	U		0.00106	0.00436	1	02/10/2024 03:36	WG2223659
cis-1,2-Dichloroethene	U		0.00128	0.00436	1	02/10/2024 03:36	WG2223659
trans-1,2-Dichloroethene	U		0.00181	0.00872	1	02/10/2024 03:36	WG2223659
1,2-Dichloropropane	U		0.00248	0.00872	1	02/10/2024 03:36	WG2223659
1,1-Dichloropropene	U		0.00141	0.00436	1	02/10/2024 03:36	WG2223659
1,3-Dichloropropane	U		0.000874	0.00872	1	02/10/2024 03:36	WG2223659
cis-1,3-Dichloropropene	U		0.00132	0.00436	1	02/10/2024 03:36	WG2223659
trans-1,3-Dichloropropene	U		0.00199	0.00872	1	02/10/2024 03:36	WG2223659
2,2-Dichloropropane	U		0.00241	0.00436	1	02/10/2024 03:36	WG2223659
Di-isopropyl ether	U		0.000715	0.00174	1	02/10/2024 03:36	WG2223659
Ethylbenzene	U		0.00129	0.00436	1	02/10/2024 03:36	WG2223659
Hexachloro-1,3-butadiene	U		0.0105	0.0436	1	02/10/2024 03:36	WG2223659
Isopropylbenzene	0.00368	J	0.000742	0.00436	1	02/10/2024 03:36	WG2223659
p-Isopropyltoluene	U		0.00445	0.00872	1	02/10/2024 03:36	WG2223659
2-Butanone (MEK)	U	J3	0.111	0.174	1	02/10/2024 03:36	WG2223659
Methylene Chloride	U		0.0116	0.0436	1	02/10/2024 03:36	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00398	0.0436	1	02/10/2024 03:36	WG2223659
Methyl tert-butyl ether	U		0.000611	0.00174	1	02/10/2024 03:36	WG2223659
Naphthalene	U		0.00851	0.0218	1	02/10/2024 03:36	WG2223659
n-Propylbenzene	0.0114		0.00166	0.00872	1	02/10/2024 03:36	WG2223659
Styrene	U		0.000400	0.0218	1	02/10/2024 03:36	WG2223659
1,1,1,2-Tetrachloroethane	U		0.00165	0.00436	1	02/10/2024 03:36	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00121	0.00436	1	02/10/2024 03:36	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.00132	0.00436	1	02/10/2024 03:36	WG2223659
Tetrachloroethene	U		0.00156	0.00436	1	02/10/2024 03:36	WG2223659
Toluene	0.00319	J	0.00227	0.00872	1	02/10/2024 03:36	WG2223659
1,2,3-Trichlorobenzene	U		0.0128	0.0218	1	02/10/2024 03:36	WG2223659
1,2,4-Trichlorobenzene	U		0.00768	0.0218	1	02/10/2024 03:36	WG2223659
1,1,1-Trichloroethane	U		0.00161	0.00436	1	02/10/2024 03:36	WG2223659
1,1,2-Trichloroethane	U		0.00104	0.00436	1	02/10/2024 03:36	WG2223659
Trichloroethene	U		0.00102	0.00174	1	02/10/2024 03:36	WG2223659
Trichlorofluoromethane	U		0.00144	0.00436	1	02/10/2024 03:36	WG2223659
1,2,3-Trichloropropane	U		0.00283	0.0218	1	02/10/2024 03:36	WG2223659
1,2,4-Trimethylbenzene	U		0.00276	0.00872	1	02/10/2024 03:36	WG2223659
1,2,3-Trimethylbenzene	U		0.00276	0.00872	1	02/10/2024 03:36	WG2223659
1,3,5-Trimethylbenzene	U		0.00349	0.00872	1	02/10/2024 03:36	WG2223659
Vinyl chloride	U	C3 J3	0.00202	0.00436	1	02/10/2024 03:36	WG2223659
Xylenes, Total	U		0.00154	0.0113	1	02/10/2024 03:36	WG2223659
(S) Toluene-d8	*98.0*			*75.0-131*		*02/10/2024 03:36*	WG2223659
(S) 4-Bromofluorobenzene	*92.7*			*67.0-138*		*02/10/2024 03:36*	WG2223659
(S) 1,2-Dichloroethane-d4	*82.4*			*70.0-130*		*02/10/2024 03:36*	WG2223659

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3.44	J	1.79	5.40	1	02/08/2024 00:51	WG2221315
Residual Range Organics (RRO)	U		4.49	13.5	1	02/08/2024 00:51	WG2221315
(S) o-Terphenyl	*53.4*			*18.0-148*		*02/08/2024 00:51*	WG2221315

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	26.3	62.5		1	WG2220187
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2220187
Benzene	71-43-2	78.10	0.200	0.639	3.80	12.1		1	WG2220187
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2220187
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2220187
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2220187
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2220187
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2220187
Carbon disulfide	75-15-0	76.10	0.200	0.622	5.25	16.3		1	WG2220187
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2220187
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2220187
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2220187
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2220187
Chloromethane	74-87-3	50.50	0.200	0.413	1.16	2.40		1	WG2220187
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2220187
Cyclohexane	110-82-7	84.20	0.200	0.689	1.87	6.44		1	WG2220187
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2220187
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2220187
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2220187
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2220187
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2220187
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2220187
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2220187
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	1.99	7.89		1	WG2220187
cis-1,2-Dichloroethene	156-59-2	96.90	4.00	15.9	109	432		20	WG2220829
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	39.5	157		1	WG2220187
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2220187
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2220187
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2220187
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2220187
Ethanol	64-17-5	46.10	2.50	4.71	30.8	58.1		1	WG2220187
Ethylbenzene	100-41-4	106	4.00	17.3	96.5	418		20	WG2220829
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.617	3.03		1	WG2220187
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	ND	ND		1	WG2220187
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.495	2.45	J3 J4	1	WG2220187
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2220187
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2220187
Heptane	142-82-5	100	0.200	0.818	4.09	16.7		1	WG2220187
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2220187
n-Hexane	110-54-3	86.20	0.630	2.22	7.36	25.9		1	WG2220187
Isopropylbenzene	98-82-8	120.20	0.200	0.983	2.09	10.3		1	WG2220187
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.568	1.97		1	WG2220187
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2220187
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	3.93	11.6		1	WG2220187
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2220187
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2220187
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2220187
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG2220187
2-Propanol	67-63-0	60.10	1.25	3.07	4.19	10.3		1	WG2220187
Propene	115-07-1	42.10	25.0	43.0	156	269		20	WG2220829
n-Propylbenzene	103-65-1	120	0.200	0.982	0.700	3.44		1	WG2220187
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG2220187
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2220187
Tetrachloroethylene	127-18-4	166	0.200	1.36	0.319	2.17		1	WG2220187
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG2220187
Toluene	108-88-3	92.10	0.500	1.88	10.3	38.8		1	WG2220187

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	WG2220187
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG2220187
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG2220187
Trichloroethylene	79-01-6	131	4.00	21.4	336	1800		20	WG2220829
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	2.26	11.1		1	WG2220187
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.521	2.56		1	WG2220187
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	1.66	7.75		1	WG2220187
Vinyl chloride	75-01-4	62.50	0.200	0.511	5.97	15.3		1	WG2220187
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG2220187
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	WG2220187
m&p-Xylene	179601-23-1	106	8.00	34.7	392	1700		20	WG2220829
o-Xylene	95-47-6	106	4.00	17.3	144	624		20	WG2220829
TPH (GC/MS) Low Fraction	8006-61-9	101	4000	16500	6200	25600	B	20	WG2220829
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*250*		J1		WG2220187
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*101*				WG2220829

Sample Narrative:

L1701988-37 WG2220187: Surrogate failure due to matrix interference

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	ND	ND		1	WG2220187
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG2220187
Benzene	71-43-2	78.10	0.200	0.639	5.83	18.6		1	WG2220187
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG2220187
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG2220187
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG2220187
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG2220187
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG2220187
Carbon disulfide	75-15-0	76.10	0.200	0.622	2.49	7.75		1	WG2220187
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG2220187
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG2220187
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG2220187
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG2220187
Chloromethane	74-87-3	50.50	0.200	0.413	0.596	1.23		1	WG2220187
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG2220187
Cyclohexane	110-82-7	84.20	0.200	0.689	9.06	31.2		1	WG2220187
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG2220187
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG2220187
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG2220187
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG2220187
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG2220187
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG2220187
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG2220187
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG2220187
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	0.286	1.13		1	WG2220187
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG2220187
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG2220187
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG2220187
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG2220187
1,4-Dioxane	123-91-1	88.10	0.630	2.27	ND	ND		1	WG2220187
Ethanol	64-17-5	46.10	2.50	4.71	16.1	30.4		1	WG2220187
Ethylbenzene	100-41-4	106	4.00	17.3	190	824		20	WG2220829
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.663	3.25		1	WG2220187
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.232	1.30		1	WG2220187
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.448	2.22	J3 J4	1	WG2220187
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG2220187
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG2220187
Heptane	142-82-5	100	0.200	0.818	11.0	45.0		1	WG2220187
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG2220187
n-Hexane	110-54-3	86.20	12.6	44.4	122	430		20	WG2220829
Isopropylbenzene	98-82-8	120.20	0.200	0.983	6.73	33.1		1	WG2220187
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.306	1.06		1	WG2220187
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG2220187
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	1.47	4.33		1	WG2220187
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG2220187
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG2220187
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG2220187
Naphthalene	91-20-3	128	0.630	3.30	1.14	5.97		1	WG2220187
2-Propanol	67-63-0	60.10	1.25	3.07	1.65	4.06		1	WG2220187
Propene	115-07-1	42.10	25.0	43.0	157	270		20	WG2220829
n-Propylbenzene	103-65-1	120	0.200	0.982	1.61	7.90		1	WG2220187
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG2220187
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG2220187
Tetrachloroethylene	127-18-4	166	0.200	1.36	ND	ND		1	WG2220187
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG2220187
Toluene	108-88-3	92.10	0.500	1.88	19.7	74.2		1	WG2220187

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	WG2220187
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG2220187
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG2220187
Trichloroethylene	79-01-6	131	0.200	1.07	1.33	7.13		1	WG2220187
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	1.94	9.52		1	WG2220187
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.729	3.58		1	WG2220187
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	7.40	34.6		1	WG2220187
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG2220187
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG2220187
Vinyl acetate	108-05-4	86.10	0.630	2.22	ND	ND		1	WG2220187
m&p-Xylene	179601-23-1	106	8.00	34.7	752	3260		20	WG2220829
o-Xylene	95-47-6	106	4.00	17.3	295	1280		20	WG2220829
TPH (GC/MS) Low Fraction	8006-61-9	101	4000	16500	21500	88800		20	WG2220829
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*719*		J1		WG2220187
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*112*				WG2220829

Sample Narrative:

L1701988-38 WG2220187: Surrogate failure due to matrix interference

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	U		0.849	2.00	1	02/07/2024 17:25	WG2219792

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	1590		31.6	100	1	02/08/2024 18:44	WG2222678
(S) a,a,a-Trifluorotoluene(FID)	*102*			*78.0-120*		*02/08/2024 18:44*	WG2222678

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	02/05/2024 23:33	WG2220512
Acrolein	U	C3	2.54	50.0	1	02/05/2024 23:33	WG2220512
Acrylonitrile	U		0.671	10.0	1	02/05/2024 23:33	WG2220512
Benzene	U		0.0941	1.00	1	02/05/2024 23:33	WG2220512
Bromobenzene	U		0.118	1.00	1	02/05/2024 23:33	WG2220512
Bromodichloromethane	U		0.136	1.00	1	02/05/2024 23:33	WG2220512
Bromoform	U		0.129	1.00	1	02/05/2024 23:33	WG2220512
Bromomethane	U		0.605	5.00	1	02/05/2024 23:33	WG2220512
n-Butylbenzene	U		0.157	1.00	1	02/05/2024 23:33	WG2220512
sec-Butylbenzene	5.16		0.125	1.00	1	02/05/2024 23:33	WG2220512
tert-Butylbenzene	U		0.127	1.00	1	02/05/2024 23:33	WG2220512
Carbon disulfide	U		0.0962	1.00	1	02/05/2024 23:33	WG2220512
Carbon tetrachloride	U	J4	0.128	1.00	1	02/05/2024 23:33	WG2220512
Chlorobenzene	U		0.116	1.00	1	02/05/2024 23:33	WG2220512
Chlorodibromomethane	U		0.140	1.00	1	02/05/2024 23:33	WG2220512
Chloroethane	U		0.192	5.00	1	02/05/2024 23:33	WG2220512
Chloroform	U		0.111	5.00	1	02/05/2024 23:33	WG2220512
Chloromethane	U		0.960	2.50	1	02/05/2024 23:33	WG2220512
2-Chlorotoluene	U		0.106	1.00	1	02/05/2024 23:33	WG2220512
4-Chlorotoluene	U		0.114	1.00	1	02/05/2024 23:33	WG2220512
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/05/2024 23:33	WG2220512
1,2-Dibromoethane	U		0.126	1.00	1	02/05/2024 23:33	WG2220512
Dibromomethane	U		0.122	1.00	1	02/05/2024 23:33	WG2220512
1,2-Dichlorobenzene	U		0.107	1.00	1	02/05/2024 23:33	WG2220512
1,3-Dichlorobenzene	U		0.110	1.00	1	02/05/2024 23:33	WG2220512
1,4-Dichlorobenzene	U		0.120	1.00	1	02/05/2024 23:33	WG2220512
Dichlorodifluoromethane	U		0.374	5.00	1	02/05/2024 23:33	WG2220512
1,1-Dichloroethane	U		0.100	1.00	1	02/05/2024 23:33	WG2220512
1,2-Dichloroethane	U		0.0819	1.00	1	02/05/2024 23:33	WG2220512
1,1-Dichloroethene	U		0.188	1.00	1	02/05/2024 23:33	WG2220512
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/05/2024 23:33	WG2220512
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/05/2024 23:33	WG2220512
1,2-Dichloropropane	U		0.149	1.00	1	02/05/2024 23:33	WG2220512
1,1-Dichloropropene	U		0.142	1.00	1	02/05/2024 23:33	WG2220512
1,3-Dichloropropane	U		0.110	1.00	1	02/05/2024 23:33	WG2220512
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/05/2024 23:33	WG2220512
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/05/2024 23:33	WG2220512
2,2-Dichloropropane	U		0.161	1.00	1	02/05/2024 23:33	WG2220512
Di-isopropyl ether	U		0.105	1.00	1	02/05/2024 23:33	WG2220512
Ethylbenzene	U		0.137	1.00	1	02/05/2024 23:33	WG2220512
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/05/2024 23:33	WG2220512
Isopropylbenzene	1.08		0.105	1.00	1	02/05/2024 23:33	WG2220512
p-Isopropyltoluene	U		0.120	1.00	1	02/05/2024 23:33	WG2220512

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	U		1.19	10.0	1	02/05/2024 23:33	WG2220512
Methylene Chloride	U		0.430	5.00	1	02/05/2024 23:33	WG2220512
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/05/2024 23:33	WG2220512
Methyl tert-butyl ether	U		0.101	1.00	1	02/05/2024 23:33	WG2220512
Naphthalene	U		1.00	5.00	1	02/05/2024 23:33	WG2220512
n-Propylbenzene	1.13		0.0993	1.00	1	02/05/2024 23:33	WG2220512
Styrene	U		0.118	1.00	1	02/05/2024 23:33	WG2220512
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/05/2024 23:33	WG2220512
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/05/2024 23:33	WG2220512
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/05/2024 23:33	WG2220512
Tetrachloroethene	U		0.300	1.00	1	02/05/2024 23:33	WG2220512
Toluene	U		0.278	1.00	1	02/05/2024 23:33	WG2220512
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/05/2024 23:33	WG2220512
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/05/2024 23:33	WG2220512
1,1,1-Trichloroethane	U		0.149	1.00	1	02/05/2024 23:33	WG2220512
1,1,2-Trichloroethane	U		0.158	1.00	1	02/05/2024 23:33	WG2220512
Trichloroethene	U		0.190	1.00	1	02/05/2024 23:33	WG2220512
Trichlorofluoromethane	U		0.160	5.00	1	02/05/2024 23:33	WG2220512
1,2,3-Trichloropropane	U		0.237	2.50	1	02/05/2024 23:33	WG2220512
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/05/2024 23:33	WG2220512
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 23:33	WG2220512
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 23:33	WG2220512
Vinyl chloride	U		0.234	1.00	1	02/05/2024 23:33	WG2220512
Xylenes, Total	0.201	J	0.174	3.00	1	02/05/2024 23:33	WG2220512
(S) Toluene-d8	*97.2*			*80.0-120*		*02/05/2024 23:33*	WG2220512
(S) 4-Bromofluorobenzene	*90.9*			*77.0-126*		*02/05/2024 23:33*	WG2220512
(S) 1,2-Dichloroethane-d4	*99.6*			*70.0-130*		*02/05/2024 23:33*	WG2220512

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	667		34.3	103	1.03	02/14/2024 12:37	WG2224397
Residual Range Organics (RRO)	U		85.8	258	1.03	02/14/2024 12:37	WG2224397
(S) o-Terphenyl	*39.7*			*31.0-160*		*02/14/2024 12:37*	WG2224397

Sample Narrative:

L1701988-39 WG2224397: Dilution due to sample volume.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	0.0673		0.0190	0.0500	1	02/05/2024 15:42	WG2219646
Acenaphthene	1.74		0.0190	0.0500	1	02/05/2024 15:42	WG2219646
Acenaphthylene	U		0.0171	0.0500	1	02/05/2024 15:42	WG2219646
Benzo(a)anthracene	U		0.0203	0.0500	1	02/05/2024 15:42	WG2219646
Benzo(a)pyrene	U		0.0184	0.0500	1	02/05/2024 15:42	WG2219646
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/05/2024 15:42	WG2219646
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/05/2024 15:42	WG2219646
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/05/2024 15:42	WG2219646
Chrysene	U		0.0179	0.0500	1	02/05/2024 15:42	WG2219646
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/05/2024 15:42	WG2219646
Fluoranthene	0.0314	J	0.0270	0.100	1	02/05/2024 15:42	WG2219646
Fluorene	1.63		0.0169	0.0500	1	02/05/2024 15:42	WG2219646
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/05/2024 15:42	WG2219646
Naphthalene	1.35		0.0917	0.250	1	02/05/2024 15:42	WG2219646

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Phenanthrene	0.0774		0.0180	0.0500	1	02/05/2024 15:42	WG2219646
Pyrene	0.0364	J	0.0169	0.0500	1	02/05/2024 15:42	WG2219646
1-Methylnaphthalene	0.827		0.0687	0.250	1	02/05/2024 15:42	WG2219646
2-Methylnaphthalene	U		0.0674	0.250	1	02/05/2024 15:42	WG2219646
2-Chloronaphthalene	U		0.0682	0.250	1	02/05/2024 15:42	WG2219646
(S) Nitrobenzene-d5	*168*	J1		*31.0-160*		*02/05/2024 15:42*	WG2219646
(S) 2-Fluorobiphenyl	*105*			*48.0-148*		*02/05/2024 15:42*	WG2219646
(S) p-Terphenyl-d14	*95.5*			*37.0-146*		*02/05/2024 15:42*	WG2219646

Sample Narrative:

L1701988-39 WG2219646: Surrogate failure due to matrix interference

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	U		0.849	2.00	1	02/07/2024 16:03	WG2219792

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	512		31.6	100	1	02/08/2024 19:05	WG2222678
(S) a,a,a-Trifluorotoluene(FID)	*97.1*			*78.0-120*		*02/08/2024 19:05*	WG2222678

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	02/05/2024 23:52	WG2220512
Acrolein	U	C3	2.54	50.0	1	02/05/2024 23:52	WG2220512
Acrylonitrile	U		0.671	10.0	1	02/05/2024 23:52	WG2220512
Benzene	U		0.0941	1.00	1	02/05/2024 23:52	WG2220512
Bromobenzene	U		0.118	1.00	1	02/05/2024 23:52	WG2220512
Bromodichloromethane	U		0.136	1.00	1	02/05/2024 23:52	WG2220512
Bromoform	U		0.129	1.00	1	02/05/2024 23:52	WG2220512
Bromomethane	U		0.605	5.00	1	02/05/2024 23:52	WG2220512
n-Butylbenzene	U		0.157	1.00	1	02/05/2024 23:52	WG2220512
sec-Butylbenzene	1.58		0.125	1.00	1	02/05/2024 23:52	WG2220512
tert-Butylbenzene	U		0.127	1.00	1	02/05/2024 23:52	WG2220512
Carbon disulfide	U		0.0962	1.00	1	02/05/2024 23:52	WG2220512
Carbon tetrachloride	U	J4	0.128	1.00	1	02/05/2024 23:52	WG2220512
Chlorobenzene	U		0.116	1.00	1	02/05/2024 23:52	WG2220512
Chlorodibromomethane	U		0.140	1.00	1	02/05/2024 23:52	WG2220512
Chloroethane	U		0.192	5.00	1	02/05/2024 23:52	WG2220512
Chloroform	U		0.111	5.00	1	02/05/2024 23:52	WG2220512
Chloromethane	U		0.960	2.50	1	02/05/2024 23:52	WG2220512
2-Chlorotoluene	U		0.106	1.00	1	02/05/2024 23:52	WG2220512
4-Chlorotoluene	U		0.114	1.00	1	02/05/2024 23:52	WG2220512
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/05/2024 23:52	WG2220512
1,2-Dibromoethane	U		0.126	1.00	1	02/05/2024 23:52	WG2220512
Dibromomethane	U		0.122	1.00	1	02/05/2024 23:52	WG2220512
1,2-Dichlorobenzene	U		0.107	1.00	1	02/05/2024 23:52	WG2220512
1,3-Dichlorobenzene	U		0.110	1.00	1	02/05/2024 23:52	WG2220512
1,4-Dichlorobenzene	U		0.120	1.00	1	02/05/2024 23:52	WG2220512
Dichlorodifluoromethane	U		0.374	5.00	1	02/05/2024 23:52	WG2220512
1,1-Dichloroethane	U		0.100	1.00	1	02/05/2024 23:52	WG2220512
1,2-Dichloroethane	U		0.0819	1.00	1	02/05/2024 23:52	WG2220512
1,1-Dichloroethene	U		0.188	1.00	1	02/05/2024 23:52	WG2220512
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/05/2024 23:52	WG2220512
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/05/2024 23:52	WG2220512
1,2-Dichloropropane	U		0.149	1.00	1	02/05/2024 23:52	WG2220512
1,1-Dichloropropene	U		0.142	1.00	1	02/05/2024 23:52	WG2220512
1,3-Dichloropropane	U		0.110	1.00	1	02/05/2024 23:52	WG2220512
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/05/2024 23:52	WG2220512
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/05/2024 23:52	WG2220512
2,2-Dichloropropane	U		0.161	1.00	1	02/05/2024 23:52	WG2220512
Di-isopropyl ether	U		0.105	1.00	1	02/05/2024 23:52	WG2220512
Ethylbenzene	U		0.137	1.00	1	02/05/2024 23:52	WG2220512
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/05/2024 23:52	WG2220512
Isopropylbenzene	0.196	J	0.105	1.00	1	02/05/2024 23:52	WG2220512
p-Isopropyltoluene	U		0.120	1.00	1	02/05/2024 23:52	WG2220512

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 ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	U		1.19	10.0	1	02/05/2024 23:52	WG2220512
Methylene Chloride	U		0.430	5.00	1	02/05/2024 23:52	WG2220512
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/05/2024 23:52	WG2220512
Methyl tert-butyl ether	U		0.101	1.00	1	02/05/2024 23:52	WG2220512
Naphthalene	U		1.00	5.00	1	02/05/2024 23:52	WG2220512
n-Propylbenzene	1.33		0.0993	1.00	1	02/05/2024 23:52	WG2220512
Styrene	U		0.118	1.00	1	02/05/2024 23:52	WG2220512
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/05/2024 23:52	WG2220512
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/05/2024 23:52	WG2220512
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/05/2024 23:52	WG2220512
Tetrachloroethene	U		0.300	1.00	1	02/05/2024 23:52	WG2220512
Toluene	U		0.278	1.00	1	02/05/2024 23:52	WG2220512
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/05/2024 23:52	WG2220512
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/05/2024 23:52	WG2220512
1,1,1-Trichloroethane	U		0.149	1.00	1	02/05/2024 23:52	WG2220512
1,1,2-Trichloroethane	U		0.158	1.00	1	02/05/2024 23:52	WG2220512
Trichloroethene	U		0.190	1.00	1	02/05/2024 23:52	WG2220512
Trichlorofluoromethane	U		0.160	5.00	1	02/05/2024 23:52	WG2220512
1,2,3-Trichloropropane	U		0.237	2.50	1	02/05/2024 23:52	WG2220512
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/05/2024 23:52	WG2220512
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 23:52	WG2220512
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/05/2024 23:52	WG2220512
Vinyl chloride	U		0.234	1.00	1	02/05/2024 23:52	WG2220512
Xylenes, Total	U		0.174	3.00	1	02/05/2024 23:52	WG2220512
(S) Toluene-d8	*102*			*80.0-120*		*02/05/2024 23:52*	WG2220512
(S) 4-Bromofluorobenzene	*104*			*77.0-126*		*02/05/2024 23:52*	WG2220512
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*02/05/2024 23:52*	WG2220512

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	843		34.0	102	1.02	02/14/2024 05:35	WG2224397
Residual Range Organics (RRO)	253	J	85.0	255	1.02	02/14/2024 05:35	WG2224397
(S) o-Terphenyl	*35.4*			*31.0-160*		*02/14/2024 05:35*	WG2224397

Sample Narrative:

L1701988-40 WG2224397: Dilution due to sample volume.

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Anthracene	U		0.0190	0.0500	1	02/05/2024 18:35	WG2219646
Acenaphthene	0.339		0.0190	0.0500	1	02/05/2024 18:35	WG2219646
Acenaphthylene	U		0.0171	0.0500	1	02/05/2024 18:35	WG2219646
Benzo(a)anthracene	U		0.0203	0.0500	1	02/05/2024 18:35	WG2219646
Benzo(a)pyrene	U		0.0184	0.0500	1	02/05/2024 18:35	WG2219646
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/05/2024 18:35	WG2219646
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/05/2024 18:35	WG2219646
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/05/2024 18:35	WG2219646
Chrysene	U		0.0179	0.0500	1	02/05/2024 18:35	WG2219646
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/05/2024 18:35	WG2219646
Fluoranthene	0.0455	J	0.0270	0.100	1	02/05/2024 18:35	WG2219646
Fluorene	0.562		0.0169	0.0500	1	02/05/2024 18:35	WG2219646
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/05/2024 18:35	WG2219646
Naphthalene	U		0.0917	0.250	1	02/05/2024 18:35	WG2219646

Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Phenanthrene	0.153		0.0180	0.0500	1	02/05/2024 18:35	WG2219646
Pyrene	U		0.0169	0.0500	1	02/05/2024 18:35	WG2219646
1-Methylnaphthalene	U		0.0687	0.250	1	02/05/2024 18:35	WG2219646
2-Methylnaphthalene	U		0.0674	0.250	1	02/05/2024 18:35	WG2219646
2-Chloronaphthalene	U		0.0682	0.250	1	02/05/2024 18:35	WG2219646
(S) Nitrobenzene-d5	*99.0*			*31.0-160*		*02/05/2024 18:35*	WG2219646
(S) 2-Fluorobiphenyl	*62.5*			*48.0-148*		*02/05/2024 18:35*	WG2219646
(S) p-Terphenyl-d14	*45.8*			*37.0-146*		*02/05/2024 18:35*	WG2219646

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	73.8		1	02/06/2024 17:08	WG2220759

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Cadmium	U		0.116	1.35	5	02/06/2024 19:51	WG2220616
Chromium	50.2		0.401	6.77	5	02/06/2024 19:51	WG2220616
Lead	14.7		0.134	2.71	5	02/06/2024 19:51	WG2220616

Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	38.6		1.46	4.29	25	02/09/2024 05:14	WG2222381
(S) a,a,a-Trifluorotoluene(FID)	*90.8*			*77.0-120*		*02/09/2024 05:14*	WG2222381

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.0626	0.0858	1	02/10/2024 03:57	WG2223659
Acrylonitrile	U		0.00619	0.0214	1	02/10/2024 03:57	WG2223659
Benzene	U		0.000801	0.00172	1	02/10/2024 03:57	WG2223659
Bromobenzene	U		0.00154	0.0214	1	02/10/2024 03:57	WG2223659
Bromodichloromethane	U		0.00124	0.00429	1	02/10/2024 03:57	WG2223659
Bromoform	U		0.00201	0.0429	1	02/10/2024 03:57	WG2223659
Bromomethane	U		0.00338	0.0214	1	02/10/2024 03:57	WG2223659
n-Butylbenzene	U		0.00901	0.0214	1	02/10/2024 03:57	WG2223659
sec-Butylbenzene	0.00606	J	0.00494	0.0214	1	02/10/2024 03:57	WG2223659
tert-Butylbenzene	U	C3	0.00335	0.00858	1	02/10/2024 03:57	WG2223659
Carbon disulfide	U	C3	0.00120	0.0214	1	02/10/2024 03:57	WG2223659
Carbon tetrachloride	U		0.00154	0.00858	1	02/10/2024 03:57	WG2223659
Chlorobenzene	U		0.000360	0.00429	1	02/10/2024 03:57	WG2223659
Chlorodibromomethane	U		0.00105	0.00429	1	02/10/2024 03:57	WG2223659
Chloroethane	U		0.00292	0.00858	1	02/10/2024 03:57	WG2223659
Chloroform	U		0.00177	0.00429	1	02/10/2024 03:57	WG2223659
Chloromethane	U		0.00746	0.0214	1	02/10/2024 03:57	WG2223659
2-Chlorotoluene	U		0.00148	0.00429	1	02/10/2024 03:57	WG2223659
4-Chlorotoluene	U		0.000772	0.00858	1	02/10/2024 03:57	WG2223659
1,2-Dibromo-3-Chloropropane	U		0.00669	0.0429	1	02/10/2024 03:57	WG2223659
1,2-Dibromoethane	U		0.00111	0.00429	1	02/10/2024 03:57	WG2223659
Dibromomethane	U		0.00129	0.00858	1	02/10/2024 03:57	WG2223659
1,2-Dichlorobenzene	U		0.000729	0.00858	1	02/10/2024 03:57	WG2223659
1,3-Dichlorobenzene	U		0.00103	0.00858	1	02/10/2024 03:57	WG2223659
1,4-Dichlorobenzene	U		0.00120	0.00858	1	02/10/2024 03:57	WG2223659
Dichlorodifluoromethane	U		0.00276	0.00858	1	02/10/2024 03:57	WG2223659
1,1-Dichloroethane	U		0.000843	0.00429	1	02/10/2024 03:57	WG2223659
1,2-Dichloroethane	U		0.00111	0.00429	1	02/10/2024 03:57	WG2223659
1,1-Dichloroethene	U		0.00104	0.00429	1	02/10/2024 03:57	WG2223659
cis-1,2-Dichloroethene	U		0.00126	0.00429	1	02/10/2024 03:57	WG2223659
trans-1,2-Dichloroethene	U		0.00178	0.00858	1	02/10/2024 03:57	WG2223659
1,2-Dichloropropane	U		0.00244	0.00858	1	02/10/2024 03:57	WG2223659
1,1-Dichloropropene	U		0.00139	0.00429	1	02/10/2024 03:57	WG2223659
1,3-Dichloropropane	U		0.000860	0.00858	1	02/10/2024 03:57	WG2223659
cis-1,3-Dichloropropene	U		0.00130	0.00429	1	02/10/2024 03:57	WG2223659
trans-1,3-Dichloropropene	U		0.00196	0.00858	1	02/10/2024 03:57	WG2223659

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
2,2-Dichloropropane	U		0.00237	0.00429	1	02/10/2024 03:57	WG2223659
Di-isopropyl ether	U		0.000704	0.00172	1	02/10/2024 03:57	WG2223659
Ethylbenzene	U		0.00126	0.00429	1	02/10/2024 03:57	WG2223659
Hexachloro-1,3-butadiene	U		0.0103	0.0429	1	02/10/2024 03:57	WG2223659
Isopropylbenzene	U		0.000729	0.00429	1	02/10/2024 03:57	WG2223659
p-Isopropyltoluene	U		0.00438	0.00858	1	02/10/2024 03:57	WG2223659
2-Butanone (MEK)	U	J3	0.109	0.172	1	02/10/2024 03:57	WG2223659
Methylene Chloride	U		0.0114	0.0429	1	02/10/2024 03:57	WG2223659
4-Methyl-2-pentanone (MIBK)	U		0.00391	0.0429	1	02/10/2024 03:57	WG2223659
Methyl tert-butyl ether	U		0.000601	0.00172	1	02/10/2024 03:57	WG2223659
Naphthalene	U		0.00837	0.0214	1	02/10/2024 03:57	WG2223659
n-Propylbenzene	U		0.00163	0.00858	1	02/10/2024 03:57	WG2223659
Styrene	U		0.000393	0.0214	1	02/10/2024 03:57	WG2223659
1,1,1,2-Tetrachloroethane	U		0.00163	0.00429	1	02/10/2024 03:57	WG2223659
1,1,2,2-Tetrachloroethane	U		0.00119	0.00429	1	02/10/2024 03:57	WG2223659
1,1,2-Trichlorotrifluoroethane	U		0.00129	0.00429	1	02/10/2024 03:57	WG2223659
Tetrachloroethene	U		0.00154	0.00429	1	02/10/2024 03:57	WG2223659
Toluene	0.00470	J	0.00223	0.00858	1	02/10/2024 03:57	WG2223659
1,2,3-Trichlorobenzene	U		0.0126	0.0214	1	02/10/2024 03:57	WG2223659
1,2,4-Trichlorobenzene	U		0.00755	0.0214	1	02/10/2024 03:57	WG2223659
1,1,1-Trichloroethane	U		0.00158	0.00429	1	02/10/2024 03:57	WG2223659
1,1,2-Trichloroethane	U		0.00102	0.00429	1	02/10/2024 03:57	WG2223659
Trichloroethene	U		0.00100	0.00172	1	02/10/2024 03:57	WG2223659
Trichlorofluoromethane	U		0.00142	0.00429	1	02/10/2024 03:57	WG2223659
1,2,3-Trichloropropane	U		0.00278	0.0214	1	02/10/2024 03:57	WG2223659
1,2,4-Trimethylbenzene	U		0.00271	0.00858	1	02/10/2024 03:57	WG2223659
1,2,3-Trimethylbenzene	U		0.00271	0.00858	1	02/10/2024 03:57	WG2223659
1,3,5-Trimethylbenzene	U		0.00343	0.00858	1	02/10/2024 03:57	WG2223659
Vinyl chloride	U	C3 J3	0.00199	0.00429	1	02/10/2024 03:57	WG2223659
Xylenes, Total	0.00261	J	0.00151	0.0112	1	02/10/2024 03:57	WG2223659
(S) Toluene-d8	*98.2*			*75.0-131*		*02/10/2024 03:57*	WG2223659
(S) 4-Bromofluorobenzene	*97.1*			*67.0-138*		*02/10/2024 03:57*	WG2223659
(S) 1,2-Dichloroethane-d4	*84.1*			*70.0-130*		*02/10/2024 03:57*	WG2223659

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	U		45.1	135	25	02/08/2024 13:10	WG2221315
Residual Range Organics (RRO)	404		113	339	25	02/08/2024 13:10	WG2221315
(S) o-Terphenyl	*65.0*	J7		*18.0-148*		*02/08/2024 13:10*	WG2221315

Sample Narrative:

L1701988-41 WG2221315: Cannot run at lower dilution due to viscosity of extract

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Cadmium,Dissolved	0.490	J	0.150	1.00	1	02/07/2024 17:28	WG2219792
Chromium,Dissolved	22.1		1.24	2.00	1	02/07/2024 17:28	WG2219792
Lead,Dissolved	32.1		0.849	2.00	1	02/07/2024 17:28	WG2219792

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	222		31.6	100	1	02/08/2024 19:27	WG2222678
(S) a,a,a-Trifluorotoluene(FID)	*105*			*78.0-120*		*02/08/2024 19:27*	WG2222678

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	02/06/2024 00:11	WG2220512
Acrolein	U	C3	2.54	50.0	1	02/06/2024 00:11	WG2220512
Acrylonitrile	U		0.671	10.0	1	02/06/2024 00:11	WG2220512
Benzene	U		0.0941	1.00	1	02/06/2024 00:11	WG2220512
Bromobenzene	U		0.118	1.00	1	02/06/2024 00:11	WG2220512
Bromodichloromethane	U		0.136	1.00	1	02/06/2024 00:11	WG2220512
Bromoform	U		0.129	1.00	1	02/06/2024 00:11	WG2220512
Bromomethane	U		0.605	5.00	1	02/06/2024 00:11	WG2220512
n-Butylbenzene	U		0.157	1.00	1	02/06/2024 00:11	WG2220512
sec-Butylbenzene	0.745	J	0.125	1.00	1	02/06/2024 00:11	WG2220512
tert-Butylbenzene	U		0.127	1.00	1	02/06/2024 00:11	WG2220512
Carbon disulfide	U		0.0962	1.00	1	02/06/2024 00:11	WG2220512
Carbon tetrachloride	U	J4	0.128	1.00	1	02/06/2024 00:11	WG2220512
Chlorobenzene	U		0.116	1.00	1	02/06/2024 00:11	WG2220512
Chlorodibromomethane	U		0.140	1.00	1	02/06/2024 00:11	WG2220512
Chloroethane	U		0.192	5.00	1	02/06/2024 00:11	WG2220512
Chloroform	U		0.111	5.00	1	02/06/2024 00:11	WG2220512
Chloromethane	U		0.960	2.50	1	02/06/2024 00:11	WG2220512
2-Chlorotoluene	U		0.106	1.00	1	02/06/2024 00:11	WG2220512
4-Chlorotoluene	U		0.114	1.00	1	02/06/2024 00:11	WG2220512
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/06/2024 00:11	WG2220512
1,2-Dibromoethane	U		0.126	1.00	1	02/06/2024 00:11	WG2220512
Dibromomethane	U		0.122	1.00	1	02/06/2024 00:11	WG2220512
1,2-Dichlorobenzene	U		0.107	1.00	1	02/06/2024 00:11	WG2220512
1,3-Dichlorobenzene	U		0.110	1.00	1	02/06/2024 00:11	WG2220512
1,4-Dichlorobenzene	U		0.120	1.00	1	02/06/2024 00:11	WG2220512
Dichlorodifluoromethane	U		0.374	5.00	1	02/06/2024 00:11	WG2220512
1,1-Dichloroethane	U		0.100	1.00	1	02/06/2024 00:11	WG2220512
1,2-Dichloroethane	U		0.0819	1.00	1	02/06/2024 00:11	WG2220512
1,1-Dichloroethene	U		0.188	1.00	1	02/06/2024 00:11	WG2220512
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/06/2024 00:11	WG2220512
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/06/2024 00:11	WG2220512
1,2-Dichloropropane	U		0.149	1.00	1	02/06/2024 00:11	WG2220512
1,1-Dichloropropene	U		0.142	1.00	1	02/06/2024 00:11	WG2220512
1,3-Dichloropropane	U		0.110	1.00	1	02/06/2024 00:11	WG2220512
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/06/2024 00:11	WG2220512
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/06/2024 00:11	WG2220512
2,2-Dichloropropane	U		0.161	1.00	1	02/06/2024 00:11	WG2220512
Di-isopropyl ether	U		0.105	1.00	1	02/06/2024 00:11	WG2220512
Ethylbenzene	U		0.137	1.00	1	02/06/2024 00:11	WG2220512
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/06/2024 00:11	WG2220512

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Isopropylbenzene	0.140	J	0.105	1.00	1	02/06/2024 00:11	WG2220512
p-Isopropyltoluene	U		0.120	1.00	1	02/06/2024 00:11	WG2220512
2-Butanone (MEK)	U		1.19	10.0	1	02/06/2024 00:11	WG2220512
Methylene Chloride	U		0.430	5.00	1	02/06/2024 00:11	WG2220512
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/06/2024 00:11	WG2220512
Methyl tert-butyl ether	U		0.101	1.00	1	02/06/2024 00:11	WG2220512
Naphthalene	U		1.00	5.00	1	02/06/2024 00:11	WG2220512
n-Propylbenzene	0.409	J	0.0993	1.00	1	02/06/2024 00:11	WG2220512
Styrene	U		0.118	1.00	1	02/06/2024 00:11	WG2220512
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/06/2024 00:11	WG2220512
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/06/2024 00:11	WG2220512
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/06/2024 00:11	WG2220512
Tetrachloroethene	U		0.300	1.00	1	02/06/2024 00:11	WG2220512
Toluene	U		0.278	1.00	1	02/06/2024 00:11	WG2220512
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/06/2024 00:11	WG2220512
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/06/2024 00:11	WG2220512
1,1,1-Trichloroethane	U		0.149	1.00	1	02/06/2024 00:11	WG2220512
1,1,2-Trichloroethane	U		0.158	1.00	1	02/06/2024 00:11	WG2220512
Trichloroethene	U		0.190	1.00	1	02/06/2024 00:11	WG2220512
Trichlorofluoromethane	U		0.160	5.00	1	02/06/2024 00:11	WG2220512
1,2,3-Trichloropropane	U		0.237	2.50	1	02/06/2024 00:11	WG2220512
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/06/2024 00:11	WG2220512
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/06/2024 00:11	WG2220512
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/06/2024 00:11	WG2220512
Vinyl chloride	U		0.234	1.00	1	02/06/2024 00:11	WG2220512
Xylenes, Total	0.339	J	0.174	3.00	1	02/06/2024 00:11	WG2220512
(S) Toluene-d8	*103*			*80.0-120*		*02/06/2024 00:11*	WG2220512
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*02/06/2024 00:11*	WG2220512
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*02/06/2024 00:11*	WG2220512

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	444		33.3	100	1	02/14/2024 05:55	WG2224397
Residual Range Organics (RRO)	320		83.3	250	1	02/14/2024 05:55	WG2224397
(S) o-Terphenyl	*20.3*	J2		*31.0-160*		*02/14/2024 05:55*	WG2224397

Sample Narrative:

L1701988-42 WG2224397: Sample produced emulsion during Extraction process, low surr/spike recoveries due to matrix.

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	U		31.6	100	1	02/08/2024 19:49	WG2222678
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*		*02/08/2024 19:49*	WG2222678

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	02/06/2024 00:30	WG2220512
Acrolein	U	C3	2.54	50.0	1	02/06/2024 00:30	WG2220512
Acrylonitrile	U		0.671	10.0	1	02/06/2024 00:30	WG2220512
Benzene	U		0.0941	1.00	1	02/06/2024 00:30	WG2220512
Bromobenzene	U		0.118	1.00	1	02/06/2024 00:30	WG2220512
Bromodichloromethane	U		0.136	1.00	1	02/06/2024 00:30	WG2220512
Bromoform	U		0.129	1.00	1	02/06/2024 00:30	WG2220512
Bromomethane	U		0.605	5.00	1	02/06/2024 00:30	WG2220512
n-Butylbenzene	U		0.157	1.00	1	02/06/2024 00:30	WG2220512
sec-Butylbenzene	U		0.125	1.00	1	02/06/2024 00:30	WG2220512
tert-Butylbenzene	U		0.127	1.00	1	02/06/2024 00:30	WG2220512
Carbon disulfide	U		0.0962	1.00	1	02/06/2024 00:30	WG2220512
Carbon tetrachloride	U	J4	0.128	1.00	1	02/06/2024 00:30	WG2220512
Chlorobenzene	U		0.116	1.00	1	02/06/2024 00:30	WG2220512
Chlorodibromomethane	U		0.140	1.00	1	02/06/2024 00:30	WG2220512
Chloroethane	U		0.192	5.00	1	02/06/2024 00:30	WG2220512
Chloroform	U		0.111	5.00	1	02/06/2024 00:30	WG2220512
Chloromethane	U		0.960	2.50	1	02/06/2024 00:30	WG2220512
2-Chlorotoluene	U		0.106	1.00	1	02/06/2024 00:30	WG2220512
4-Chlorotoluene	U		0.114	1.00	1	02/06/2024 00:30	WG2220512
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/06/2024 00:30	WG2220512
1,2-Dibromoethane	U		0.126	1.00	1	02/06/2024 00:30	WG2220512
Dibromomethane	U		0.122	1.00	1	02/06/2024 00:30	WG2220512
1,2-Dichlorobenzene	U		0.107	1.00	1	02/06/2024 00:30	WG2220512
1,3-Dichlorobenzene	U		0.110	1.00	1	02/06/2024 00:30	WG2220512
1,4-Dichlorobenzene	U		0.120	1.00	1	02/06/2024 00:30	WG2220512
Dichlorodifluoromethane	U		0.374	5.00	1	02/06/2024 00:30	WG2220512
1,1-Dichloroethane	U		0.100	1.00	1	02/06/2024 00:30	WG2220512
1,2-Dichloroethane	U		0.0819	1.00	1	02/06/2024 00:30	WG2220512
1,1-Dichloroethene	U		0.188	1.00	1	02/06/2024 00:30	WG2220512
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/06/2024 00:30	WG2220512
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/06/2024 00:30	WG2220512
1,2-Dichloropropane	U		0.149	1.00	1	02/06/2024 00:30	WG2220512
1,1-Dichloropropene	U		0.142	1.00	1	02/06/2024 00:30	WG2220512
1,3-Dichloropropane	U		0.110	1.00	1	02/06/2024 00:30	WG2220512
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/06/2024 00:30	WG2220512
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/06/2024 00:30	WG2220512
2,2-Dichloropropane	U		0.161	1.00	1	02/06/2024 00:30	WG2220512
Di-isopropyl ether	U		0.105	1.00	1	02/06/2024 00:30	WG2220512
Ethylbenzene	U		0.137	1.00	1	02/06/2024 00:30	WG2220512
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/06/2024 00:30	WG2220512
Isopropylbenzene	U		0.105	1.00	1	02/06/2024 00:30	WG2220512
p-Isopropyltoluene	U		0.120	1.00	1	02/06/2024 00:30	WG2220512
2-Butanone (MEK)	U		1.19	10.0	1	02/06/2024 00:30	WG2220512
Methylene Chloride	U		0.430	5.00	1	02/06/2024 00:30	WG2220512
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/06/2024 00:30	WG2220512
Methyl tert-butyl ether	U		0.101	1.00	1	02/06/2024 00:30	WG2220512
Naphthalene	U		1.00	5.00	1	02/06/2024 00:30	WG2220512

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	02/06/2024 00:30	WG2220512
Styrene	U		0.118	1.00	1	02/06/2024 00:30	WG2220512
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/06/2024 00:30	WG2220512
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/06/2024 00:30	WG2220512
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/06/2024 00:30	WG2220512
Tetrachloroethene	U		0.300	1.00	1	02/06/2024 00:30	WG2220512
Toluene	U		0.278	1.00	1	02/06/2024 00:30	WG2220512
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/06/2024 00:30	WG2220512
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/06/2024 00:30	WG2220512
1,1,1-Trichloroethane	U		0.149	1.00	1	02/06/2024 00:30	WG2220512
1,1,2-Trichloroethane	U		0.158	1.00	1	02/06/2024 00:30	WG2220512
Trichloroethene	U		0.190	1.00	1	02/06/2024 00:30	WG2220512
Trichlorofluoromethane	U		0.160	5.00	1	02/06/2024 00:30	WG2220512
1,2,3-Trichloropropane	U		0.237	2.50	1	02/06/2024 00:30	WG2220512
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/06/2024 00:30	WG2220512
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/06/2024 00:30	WG2220512
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/06/2024 00:30	WG2220512
Vinyl chloride	U		0.234	1.00	1	02/06/2024 00:30	WG2220512
Xylenes, Total	U		0.174	3.00	1	02/06/2024 00:30	WG2220512
(S) Toluene-d8	*103*			*80.0-120*		*02/06/2024 00:30*	WG2220512
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*02/06/2024 00:30*	WG2220512
(S) 1,2-Dichloroethane-d4	*99.1*			*70.0-130*		*02/06/2024 00:30*	WG2220512

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	172	B	37.0	111	1.11	02/07/2024 15:06	WG2220594
Diesel Range Organics (DRO)	62.3	B J Q	33.3	100	1	02/20/2024 09:58	WG2229012
Residual Range Organics (RRO)	143	B J	92.5	278	1.11	02/07/2024 15:06	WG2220594
Residual Range Organics (RRO)	U	Q	83.3	250	1	02/20/2024 09:58	WG2229012
(S) o-Terphenyl	*77.0*			*31.0-160*		*02/07/2024 15:06*	WG2220594
(S) o-Terphenyl	*76.0*			*31.0-160*		*02/20/2024 09:58*	WG2229012

Sample Narrative:

L1701988-43 WG2220594, WG2229012: Duplicate Analysis performed due to Blank contamination. Results don't confirm; both analyses report

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U	J4	11.3	50.0	1	02/24/2024 11:30	WG2233119
Acrolein	U		2.54	50.0	1	02/24/2024 11:30	WG2233119
Acrylonitrile	U		0.671	10.0	1	02/24/2024 11:30	WG2233119
Benzene	U		0.0941	1.00	1	02/24/2024 11:30	WG2233119
Bromobenzene	U	C3	0.118	1.00	1	02/24/2024 11:30	WG2233119
Bromodichloromethane	U		0.136	1.00	1	02/24/2024 11:30	WG2233119
Bromoform	U		0.129	1.00	1	02/24/2024 11:30	WG2233119
Bromomethane	U		0.605	5.00	1	02/24/2024 11:30	WG2233119
n-Butylbenzene	U		0.157	1.00	1	02/24/2024 11:30	WG2233119
sec-Butylbenzene	U		0.125	1.00	1	02/24/2024 11:30	WG2233119
tert-Butylbenzene	U		0.127	1.00	1	02/24/2024 11:30	WG2233119
Carbon disulfide	U		0.0962	1.00	1	02/24/2024 11:30	WG2233119
Carbon tetrachloride	U	J4	0.128	1.00	1	02/24/2024 11:30	WG2233119
Chlorobenzene	U		0.116	1.00	1	02/24/2024 11:30	WG2233119
Chlorodibromomethane	U		0.140	1.00	1	02/24/2024 11:30	WG2233119
Chloroethane	U		0.192	5.00	1	02/24/2024 11:30	WG2233119
Chloroform	U		0.111	5.00	1	02/24/2024 11:30	WG2233119
Chloromethane	U		0.960	2.50	1	02/24/2024 11:30	WG2233119
2-Chlorotoluene	U		0.106	1.00	1	02/24/2024 11:30	WG2233119
4-Chlorotoluene	U		0.114	1.00	1	02/24/2024 11:30	WG2233119
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/24/2024 11:30	WG2233119
1,2-Dibromoethane	U		0.126	1.00	1	02/24/2024 11:30	WG2233119
Dibromomethane	U		0.122	1.00	1	02/24/2024 11:30	WG2233119
1,2-Dichlorobenzene	U		0.107	1.00	1	02/24/2024 11:30	WG2233119
1,3-Dichlorobenzene	U		0.110	1.00	1	02/24/2024 11:30	WG2233119
1,4-Dichlorobenzene	U		0.120	1.00	1	02/24/2024 11:30	WG2233119
Dichlorodifluoromethane	U		0.374	5.00	1	02/24/2024 11:30	WG2233119
1,1-Dichloroethane	U		0.100	1.00	1	02/24/2024 11:30	WG2233119
1,2-Dichloroethane	U		0.0819	1.00	1	02/24/2024 11:30	WG2233119
1,1-Dichloroethene	U		0.188	1.00	1	02/24/2024 11:30	WG2233119
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/24/2024 11:30	WG2233119
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/24/2024 11:30	WG2233119
1,2-Dichloropropane	U		0.149	1.00	1	02/24/2024 11:30	WG2233119
1,1-Dichloropropene	U		0.142	1.00	1	02/24/2024 11:30	WG2233119
1,3-Dichloropropane	U		0.110	1.00	1	02/24/2024 11:30	WG2233119
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/24/2024 11:30	WG2233119
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/24/2024 11:30	WG2233119
2,2-Dichloropropane	U		0.161	1.00	1	02/24/2024 11:30	WG2233119
Di-isopropyl ether	U	C3	0.105	1.00	1	02/24/2024 11:30	WG2233119
Ethylbenzene	U		0.137	1.00	1	02/24/2024 11:30	WG2233119
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/24/2024 11:30	WG2233119
Isopropylbenzene	U		0.105	1.00	1	02/24/2024 11:30	WG2233119
p-Isopropyltoluene	U		0.120	1.00	1	02/24/2024 11:30	WG2233119
2-Butanone (MEK)	U		1.19	10.0	1	02/24/2024 11:30	WG2233119
Methylene Chloride	U		0.430	5.00	1	02/24/2024 11:30	WG2233119
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/24/2024 11:30	WG2233119
Methyl tert-butyl ether	U		0.101	1.00	1	02/24/2024 11:30	WG2233119
Naphthalene	U	C3	1.00	5.00	1	02/24/2024 11:30	WG2233119
n-Propylbenzene	U		0.0993	1.00	1	02/24/2024 11:30	WG2233119
Styrene	U		0.118	1.00	1	02/24/2024 11:30	WG2233119
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/24/2024 11:30	WG2233119
1,1,2,2-Tetrachloroethane	U	C3	0.133	1.00	1	02/24/2024 11:30	WG2233119
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/24/2024 11:30	WG2233119
Tetrachloroethene	U	J4	0.300	1.00	1	02/24/2024 11:30	WG2233119
Toluene	U		0.278	1.00	1	02/24/2024 11:30	WG2233119
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/24/2024 11:30	WG2233119

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/24/2024 11:30	WG2233119
1,1,1-Trichloroethane	U		0.149	1.00	1	02/24/2024 11:30	WG2233119
1,1,2-Trichloroethane	U		0.158	1.00	1	02/24/2024 11:30	WG2233119
Trichloroethene	U	J4	0.190	1.00	1	02/24/2024 11:30	WG2233119
Trichlorofluoromethane	U		0.160	5.00	1	02/24/2024 11:30	WG2233119
1,2,3-Trichloropropane	U		0.237	2.50	1	02/24/2024 11:30	WG2233119
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/24/2024 11:30	WG2233119
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/24/2024 11:30	WG2233119
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/24/2024 11:30	WG2233119
Vinyl chloride	U		0.234	1.00	1	02/24/2024 11:30	WG2233119
Xylenes, Total	U		0.174	3.00	1	02/24/2024 11:30	WG2233119
(S) Toluene-d8	*105*			*80.0-120*		*02/24/2024 11:30*	WG2233119
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*02/24/2024 11:30*	WG2233119
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*02/24/2024 11:30*	WG2233119

Method Blank (MB)

(MB) R4030926-1 02/07/24 08:37

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00300			

L1702049-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1702049-01 02/07/24 08:37 • (DUP) R4030926-3 02/07/24 08:37

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	79.9	79.0	1	1.11		10

Laboratory Control Sample (LCS)

(LCS) R4030926-2 02/07/24 08:37

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	90.0-110	

Method Blank (MB)

(MB) R4030923-1 02/07/24 08:18

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00300			

L1701325-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1701325-01 02/07/24 08:18 • (DUP) R4030923-3 02/07/24 08:18

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	79.4	79.9	1	0.588		10

Laboratory Control Sample (LCS)

(LCS) R4030923-2 02/07/24 08:18

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	90.0-110	

Method Blank (MB)

(MB) R4030833-1 02/06/24 17:08

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00300			

L1701988-25 Original Sample (OS) • Duplicate (DUP)

(OS) L1701988-25 02/06/24 17:08 • (DUP) R4030833-3 02/06/24 17:08

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	74.5	75.4	1	1.29		10

Laboratory Control Sample (LCS)

(LCS) R4030833-2 02/06/24 17:08

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	99.9	90.0-110	

Method Blank (MB)

(MB) R4031067-1 02/07/24 15:57

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Cadmium,Dissolved	U		0.150	1.00
Chromium,Dissolved	U		1.24	2.00
Lead,Dissolved	U		0.849	2.00

Laboratory Control Sample (LCS)

(LCS) R4031067-6 02/07/24 17:22

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium,Dissolved	50.0	55.5	111	80.0-120	
Chromium,Dissolved	50.0	59.6	119	80.0-120	
Lead,Dissolved	50.0	58.0	116	80.0-120	

L1701988-40 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1701988-40 02/07/24 16:03 • (MS) R4031067-4 02/07/24 16:10 • (MSD) R4031067-5 02/07/24 16:13

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium,Dissolved	50.0	U	54.8	53.8	110	108	1	75.0-125			1.97	20
Chromium,Dissolved	50.0	U	54.8	53.7	110	107	1	75.0-125			1.93	20
Lead,Dissolved	50.0	U	50.3	49.9	101	99.9	1	75.0-125			0.684	20

Method Blank (MB)

(MB) R4030545-1 02/06/24 18:54

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Cadmium	U		0.0855	1.00
Chromium	U		0.297	5.00
Lead	U		0.0990	2.00

Laboratory Control Sample (LCS)

(LCS) R4030545-2 02/06/24 18:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cadmium	100	98.6	98.6	80.0-120	
Chromium	100	98.0	98.0	80.0-120	
Lead	100	88.0	88.0	80.0-120	

L1702045-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1702045-12 02/06/24 19:01 • (MS) R4030545-5 02/06/24 19:11 • (MSD) R4030545-6 02/06/24 19:14

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cadmium	100	0.436	105	93.7	105	93.2	5	75.0-125			11.8	20
Chromium	100	13.1	112	101	98.6	88.2	5	75.0-125			9.82	20
Lead	100	30.7	143	136	112	106	5	75.0-125			4.42	20

Method Blank (MB)

(MB) R4029941-2 02/05/24 09:48

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	0.200
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	0.381	J	0.265	2.50
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
Isopropylbenzene	U		0.0777	0.200

Method Blank (MB)

(MB) R4029941-2 02/05/24 09:48

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
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
n-Propylbenzene	U		0.0773	0.200
Styrene	U		0.0788	0.200
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
(S) 1,4-Bromofluorobenzene	*97.5*			*60.0-140*

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

(LCS) R4029941-1 02/05/24 09:24 • (LCSD) R4029941-3 02/05/24 11:16

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	3.82	3.79	102	101	70.0-130			0.788	25
Allyl chloride	3.75	4.00	4.06	107	108	70.0-130			1.49	25
Benzene	3.75	4.01	4.02	107	107	70.0-130			0.249	25
Benzyl Chloride	3.75	4.25	4.12	113	110	70.0-152			3.11	25
Bromodichloromethane	3.75	3.99	4.02	106	107	70.0-130			0.749	25
Bromoform	3.75	3.85	3.87	103	103	70.0-130			0.518	25
Bromomethane	3.75	3.86	3.89	103	104	70.0-130			0.774	25
1,3-Butadiene	3.75	4.24	4.21	113	112	70.0-130			0.710	25

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

(LCS) R4029941-1 02/05/24 09:24 • (LCSD) R4029941-3 02/05/24 11:16

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Carbon disulfide	3.75	3.96	4.00	106	107	70.0-130			1.01	25
Carbon tetrachloride	3.75	3.99	3.98	106	106	70.0-130			0.251	25
Chlorobenzene	3.75	4.00	3.99	107	106	70.0-130			0.250	25
Chloroethane	3.75	3.83	3.96	102	106	70.0-130			3.34	25
Chloroform	3.75	4.03	4.06	107	108	70.0-130			0.742	25
Chloromethane	3.75	3.93	3.87	105	103	70.0-130			1.54	25
2-Chlorotoluene	3.75	4.09	4.05	109	108	70.0-130			0.983	25
Cyclohexane	3.75	4.03	3.96	107	106	70.0-130			1.75	25
Dibromochloromethane	3.75	3.98	4.07	106	109	70.0-130			2.24	25
1,2-Dibromoethane	3.75	4.09	4.13	109	110	70.0-130			0.973	25
1,2-Dichlorobenzene	3.75	4.04	4.04	108	108	70.0-130			0.000	25
1,3-Dichlorobenzene	3.75	4.14	4.08	110	109	70.0-130			1.46	25
1,4-Dichlorobenzene	3.75	4.10	4.15	109	111	70.0-130			1.21	25
1,2-Dichloroethane	3.75	3.99	4.04	106	108	70.0-130			1.25	25
1,1-Dichloroethane	3.75	4.00	3.99	107	106	70.0-130			0.250	25
1,1-Dichloroethene	3.75	3.96	3.99	106	106	70.0-130			0.755	25
cis-1,2-Dichloroethene	3.75	4.01	3.94	107	105	70.0-130			1.76	25
trans-1,2-Dichloroethene	3.75	4.05	4.02	108	107	70.0-130			0.743	25
1,2-Dichloropropane	3.75	4.01	4.02	107	107	70.0-130			0.249	25
cis-1,3-Dichloropropene	3.75	4.26	4.38	114	117	70.0-130			2.78	25
trans-1,3-Dichloropropene	3.75	3.93	3.95	105	105	70.0-130			0.508	25
1,4-Dioxane	3.75	4.06	4.06	108	108	70.0-140			0.000	25
Ethanol	3.75	3.80	3.40	101	90.7	55.0-148			11.1	25
4-Ethyltoluene	3.75	4.21	4.11	112	110	70.0-130			2.40	25
Trichlorofluoromethane	3.75	3.99	3.95	106	105	70.0-130			1.01	25
Dichlorodifluoromethane	3.75	4.04	1.94	108	51.7	64.0-139		J3 J4	70.2	25
1,1,2-Trichlorotrifluoroethane	3.75	3.91	3.95	104	105	70.0-130			1.02	25
1,2-Dichlorotetrafluoroethane	3.75	4.08	3.49	109	93.1	70.0-130			15.6	25
Heptane	3.75	4.11	4.05	110	108	70.0-130			1.47	25
Hexachloro-1,3-butadiene	3.75	4.02	4.00	107	107	70.0-151			0.499	25
n-Hexane	3.75	4.03	4.00	107	107	70.0-130			0.747	25
Isopropylbenzene	3.75	4.17	4.10	111	109	70.0-130			1.69	25
Methylene Chloride	3.75	3.98	3.97	106	106	70.0-130			0.252	25
Methyl Butyl Ketone	3.75	4.91	4.84	131	129	70.0-149			1.44	25
2-Butanone (MEK)	3.75	4.07	3.87	109	103	70.0-130			5.04	25
4-Methyl-2-pentanone (MIBK)	3.75	4.27	4.19	114	112	70.0-139			1.89	25
Methyl methacrylate	3.75	4.00	4.07	107	109	70.0-130			1.73	25
MTBE	3.75	4.10	4.07	109	109	70.0-130			0.734	25
Naphthalene	3.75	4.30	4.31	115	115	70.0-159			0.232	25
2-Propanol	3.75	4.32	4.31	115	115	70.0-139			0.232	25

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

(LCS) R4029941-1 02/05/24 09:24 • (LCSD) R4029941-3 02/05/24 11:16

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
n-Propylbenzene	3.75	4.19	4.14	112	110	70.0-130			1.20	25
Styrene	3.75	4.22	4.13	113	110	70.0-130			2.16	25
1,1,2,2-Tetrachloroethane	3.75	4.10	4.02	109	107	70.0-130			1.97	25
Tetrachloroethylene	3.75	3.98	3.99	106	106	70.0-130			0.251	25
Tetrahydrofuran	3.75	4.18	4.11	111	110	70.0-137			1.69	25
Toluene	3.75	4.07	4.01	109	107	70.0-130			1.49	25
1,2,4-Trichlorobenzene	3.75	4.14	4.19	110	112	70.0-160			1.20	25
1,1,1-Trichloroethane	3.75	3.97	3.97	106	106	70.0-130			0.000	25
1,1,2-Trichloroethane	3.75	3.97	4.00	106	107	70.0-130			0.753	25
Trichloroethylene	3.75	3.96	3.99	106	106	70.0-130			0.755	25
1,2,4-Trimethylbenzene	3.75	4.19	4.17	112	111	70.0-130			0.478	25
1,3,5-Trimethylbenzene	3.75	4.23	4.10	113	109	70.0-130			3.12	25
2,2,4-Trimethylpentane	3.75	4.04	4.01	108	107	70.0-130			0.745	25
Vinyl chloride	3.75	3.98	3.97	106	106	70.0-130			0.252	25
Vinyl Bromide	3.75	3.91	4.03	104	107	70.0-130			3.02	25
Vinyl acetate	3.75	4.01	4.02	107	107	70.0-130			0.249	25
(S) 1,4-Bromofluorobenzene				*100*	*100*	*60.0-140*				

Method Blank (MB)

(MB) R4030551-2 02/06/24 11:20

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
cis-1,2-Dichloroethene	U		0.0784	0.200
Ethylbenzene	U		0.0835	0.200
n-Hexane	U		0.206	0.630
Propene	0.0934	J	0.0932	1.25
Trichloroethylene	U		0.0680	0.200
m&p-Xylene	U		0.135	0.400
o-Xylene	U		0.0828	0.200
TPH (GC/MS) Low Fraction	41.2	J	39.7	200
(S) 1,4-Bromofluorobenzene	*96.7*			*60.0-140*

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

(LCS) R4030551-1 02/06/24 10:50 • (LCSD) R4030551-3 02/06/24 11:51

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
cis-1,2-Dichloroethene	3.75	3.80	3.70	101	98.7	70.0-130			2.67	25
Ethylbenzene	3.75	3.92	3.76	105	100	70.0-130			4.17	25
n-Hexane	3.75	3.87	3.76	103	100	70.0-130			2.88	25
Propene	3.75	3.62	3.43	96.5	91.5	64.0-144			5.39	25
Trichloroethylene	3.75	3.89	3.77	104	101	70.0-130			3.13	25
m&p-Xylene	7.50	7.80	7.80	104	104	70.0-130			0.000	25
o-Xylene	3.75	4.11	3.88	110	103	70.0-130			5.76	25
TPH (GC/MS) Low Fraction	188	179	177	95.2	94.1	70.0-130			1.12	25
(S) 1,4-Bromofluorobenzene				*100*	*101*	*60.0-140*				

Method Blank (MB)

(MB) R4031329-3 02/07/24 12:44

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	0.862	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*93.4*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R4031329-2 02/07/24 11:35

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.50	6.33	115	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*105*	*77.0-120*	

Method Blank (MB)

(MB) R4031414-4 02/08/24 03:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	0.874	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*93.9*			*77.0-120*

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

(LCS) R4031414-2 02/08/24 01:38 • (LCSD) R4031414-3 02/08/24 02:01

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	5.79	5.45	105	99.1	71.0-124			6.05	20
(S) a,a,a-Trifluorotoluene(FID)				*104*	*103*	*77.0-120*				

Method Blank (MB)

(MB) R4031830-2 02/09/24 00:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	1.44	J	0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*90.6*			*77.0-120*

Laboratory Control Sample (LCS)

(LCS) R4031830-1 02/08/24 23:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5.50	6.47	118	71.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*77.0-120*	

L1702036-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1702036-04 02/09/24 05:38 • (MS) R4031830-3 02/09/24 08:54 • (MSD) R4031830-4 02/09/24 09:18

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	224	2.29	232	223	102	98.4	31.5	50.0-150			3.99	27
(S) a,a,a-Trifluorotoluene(FID)					*97.9*	*98.1*		*77.0-120*				

Method Blank (MB)

(MB) R4031849-3 02/08/24 18:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*97.0*			*77.0-120*

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

(LCS) R4031849-1 02/08/24 15:52 • (LCSD) R4031849-2 02/08/24 17:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	4.28	4.69	77.8	85.3	71.0-124			9.14	20
(S) a,a,a-Trifluorotoluene(FID)				*103*	*103*	*77.0-120*				

Method Blank (MB)

(MB) R4031850-3 02/08/24 18:32

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Gasoline Range Organics-NWTPH	U		0.848	2.50
(S) a,a,a-Trifluorotoluene(FID)	*97.0*			*77.0-120*

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

(LCS) R4031850-1 02/08/24 15:52 • (LCSD) R4031850-2 02/08/24 17:34

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Gasoline Range Organics-NWTPH	5.50	4.28	4.69	77.8	85.3	71.0-124			9.14	20
(S) a,a,a-Trifluorotoluene(FID)				*103*	*103*	*77.0-120*				

Method Blank (MB)

(MB) R4031861-2 02/08/24 14:00

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

Laboratory Control Sample (LCS)

(LCS) R4031861-1 02/08/24 11:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5500	5330	96.9	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*78.0-120*	

Method Blank (MB)

(MB) R4030504-3 02/05/24 18:37

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) R4030504-3 02/05/24 18:37

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	*103*			*80.0-120*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*98.6*			*70.0-130*

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

(LCS) R4030504-1 02/05/24 17:40 • (LCSD) R4030504-2 02/05/24 17:59

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	27.7	27.6	111	110	19.0-160			0.362	27
Acrolein	25.0	16.8	16.9	67.2	67.6	10.0-160			0.593	26
Acrylonitrile	25.0	20.9	21.4	83.6	85.6	55.0-149			2.36	20

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

(LCS) R4030504-1 02/05/24 17:40 • (LCSD) R4030504-2 02/05/24 17:59

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	4.86	5.05	97.2	101	70.0-123			3.83	20
Bromobenzene	5.00	5.43	5.71	109	114	73.0-121			5.03	20
Bromodichloromethane	5.00	4.94	5.25	98.8	105	75.0-120			6.08	20
Bromoform	5.00	4.89	5.11	97.8	102	68.0-132			4.40	20
Bromomethane	5.00	5.21	5.49	104	110	10.0-160			5.23	25
n-Butylbenzene	5.00	4.99	5.35	99.8	107	73.0-125			6.96	20
sec-Butylbenzene	5.00	5.35	5.50	107	110	75.0-125			2.76	20
tert-Butylbenzene	5.00	5.22	5.54	104	111	76.0-124			5.95	20
Carbon disulfide	5.00	5.26	5.29	105	106	61.0-128			0.569	20
Carbon tetrachloride	5.00	6.73	6.23	135	125	68.0-126	J4		7.72	20
Chlorobenzene	5.00	5.03	5.27	101	105	80.0-121			4.66	20
Chlorodibromomethane	5.00	5.23	5.55	105	111	77.0-125			5.94	20
Chloroethane	5.00	5.17	5.14	103	103	47.0-150			0.582	20
Chloroform	5.00	4.89	5.16	97.8	103	73.0-120			5.37	20
Chloromethane	5.00	4.65	4.86	93.0	97.2	41.0-142			4.42	20
2-Chlorotoluene	5.00	5.20	5.22	104	104	76.0-123			0.384	20
4-Chlorotoluene	5.00	4.99	5.31	99.8	106	75.0-122			6.21	20
1,2-Dibromo-3-Chloropropane	5.00	4.98	5.03	99.6	101	58.0-134			0.999	20
1,2-Dibromoethane	5.00	5.09	5.41	102	108	80.0-122			6.10	20
Dibromomethane	5.00	5.02	5.36	100	107	80.0-120			6.55	20
1,2-Dichlorobenzene	5.00	4.75	5.24	95.0	105	79.0-121			9.81	20
1,3-Dichlorobenzene	5.00	5.05	5.35	101	107	79.0-120			5.77	20
1,4-Dichlorobenzene	5.00	4.93	5.29	98.6	106	79.0-120			7.05	20
Dichlorodifluoromethane	5.00	6.20	5.81	124	116	51.0-149			6.49	20
1,1-Dichloroethane	5.00	5.12	5.28	102	106	70.0-126			3.08	20
1,2-Dichloroethane	5.00	4.71	5.09	94.2	102	70.0-128			7.76	20
1,1-Dichloroethene	5.00	5.93	5.82	119	116	71.0-124			1.87	20
cis-1,2-Dichloroethene	5.00	4.92	5.12	98.4	102	73.0-120			3.98	20
trans-1,2-Dichloroethene	5.00	5.24	5.28	105	106	73.0-120			0.760	20
1,2-Dichloropropane	5.00	4.63	4.92	92.6	98.4	77.0-125			6.07	20
1,1-Dichloropropene	5.00	6.02	5.94	120	119	74.0-126			1.34	20
1,3-Dichloropropane	5.00	4.91	5.15	98.2	103	80.0-120			4.77	20
cis-1,3-Dichloropropene	5.00	4.83	5.10	96.6	102	80.0-123			5.44	20
trans-1,3-Dichloropropene	5.00	4.75	5.08	95.0	102	78.0-124			6.71	20
2,2-Dichloropropane	5.00	5.65	5.48	113	110	58.0-130			3.05	20
Di-isopropyl ether	5.00	4.48	4.75	89.6	95.0	58.0-138			5.85	20
Ethylbenzene	5.00	5.18	5.45	104	109	79.0-123			5.08	20
Hexachloro-1,3-butadiene	5.00	4.54	5.13	90.8	103	54.0-138			12.2	20
Isopropylbenzene	5.00	5.32	5.55	106	111	76.0-127			4.23	20
p-Isopropyltoluene	5.00	5.30	5.48	106	110	76.0-125			3.34	20

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

(LCS) R4030504-1 02/05/24 17:40 • (LCSD) R4030504-2 02/05/24 17:59

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	24.2	26.0	96.8	104	44.0-160			7.17	20
Methylene Chloride	5.00	4.69	4.63	93.8	92.6	67.0-120			1.29	20
4-Methyl-2-pentanone (MIBK)	25.0	24.6	26.4	98.4	106	68.0-142			7.06	20
Methyl tert-butyl ether	5.00	4.82	5.21	96.4	104	68.0-125			7.78	20
Naphthalene	5.00	4.27	4.99	85.4	99.8	54.0-135			15.6	20
n-Propylbenzene	5.00	5.42	5.72	108	114	77.0-124			5.39	20
Styrene	5.00	4.99	5.23	99.8	105	73.0-130			4.70	20
1,1,1,2-Tetrachloroethane	5.00	5.37	5.64	107	113	75.0-125			4.90	20
1,1,2,2-Tetrachloroethane	5.00	4.84	4.88	96.8	97.6	65.0-130			0.823	20
1,1,2-Trichlorotrifluoroethane	5.00	5.71	5.36	114	107	69.0-132			6.32	20
Tetrachloroethene	5.00	5.99	5.96	120	119	72.0-132			0.502	20
Toluene	5.00	5.13	5.14	103	103	79.0-120			0.195	20
1,2,3-Trichlorobenzene	5.00	4.61	5.07	92.2	101	50.0-138			9.50	20
1,2,4-Trichlorobenzene	5.00	4.29	4.93	85.8	98.6	57.0-137			13.9	20
1,1,1-Trichloroethane	5.00	5.72	5.79	114	116	73.0-124			1.22	20
1,1,2-Trichloroethane	5.00	5.03	5.27	101	105	80.0-120			4.66	20
Trichloroethene	5.00	5.36	5.48	107	110	78.0-124			2.21	20
Trichlorofluoromethane	5.00	5.59	5.57	112	111	59.0-147			0.358	20
1,2,3-Trichloropropane	5.00	5.09	5.40	102	108	73.0-130			5.91	20
1,2,4-Trimethylbenzene	5.00	4.87	5.24	97.4	105	76.0-121			7.32	20
1,2,3-Trimethylbenzene	5.00	4.80	5.20	96.0	104	77.0-120			8.00	20
1,3,5-Trimethylbenzene	5.00	5.08	5.27	102	105	76.0-122			3.67	20
Vinyl chloride	5.00	5.46	5.35	109	107	67.0-131			2.04	20
Xylenes, Total	15.0	15.2	16.1	101	107	79.0-123			5.75	20
(S) Toluene-d8				*103*	*101*	*80.0-120*				
(S) 4-Bromofluorobenzene				*101*	*101*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*101*	*101*	*70.0-130*				

L1702129-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1702129-07 02/06/24 03:21 • (MS) R4030504-4 02/06/24 03:40 • (MSD) R4030504-5 02/06/24 03:59

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	U	49.2	31.1	197	124	1	10.0-160	J5	J3	45.1	35
Acrolein	25.0	U	14.1	8.23	56.4	32.9	1	10.0-160		J3	52.6	39
Acrylonitrile	25.0	U	25.1	22.5	100	90.0	1	21.0-160			10.9	32
Benzene	5.00	U	4.59	4.45	91.8	89.0	1	17.0-158			3.10	27
Bromobenzene	5.00	U	5.43	5.38	109	108	1	30.0-149			0.925	28
Bromodichloromethane	5.00	U	5.36	5.30	107	106	1	31.0-150			1.13	27

L1702129-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1702129-07 02/06/24 03:21 • (MS) R4030504-4 02/06/24 03:40 • (MSD) R4030504-5 02/06/24 03:59

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	5.00	U	4.50	4.36	90.0	87.2	1	29.0-150			3.16	29
Bromomethane	5.00	U	3.70	3.48	74.0	69.6	1	10.0-160			6.13	38
n-Butylbenzene	5.00	U	5.03	4.75	101	95.0	1	31.0-150			5.73	30
sec-Butylbenzene	5.00	U	5.25	5.33	105	107	1	33.0-155			1.51	29
tert-Butylbenzene	5.00	U	5.23	5.43	105	109	1	34.0-153			3.75	28
Carbon disulfide	5.00	U	2.16	2.08	43.2	41.6	1	10.0-156			3.77	28
Carbon tetrachloride	5.00	U	6.31	6.14	126	123	1	23.0-159			2.73	28
Chlorobenzene	5.00	U	5.10	4.95	102	99.0	1	33.0-152			2.99	27
Chlorodibromomethane	5.00	U	5.01	5.01	100	100	1	37.0-149			0.000	27
Chloroethane	5.00	U	3.95	3.89	79.0	77.8	1	10.0-160			1.53	30
Chloroform	5.00	U	5.19	4.78	104	95.6	1	29.0-154			8.22	28
Chloromethane	5.00	U	3.09	2.92	61.8	58.4	1	10.0-160			5.66	29
2-Chlorotoluene	5.00	U	4.91	4.97	98.2	99.4	1	32.0-153			1.21	28
4-Chlorotoluene	5.00	U	4.87	5.03	97.4	101	1	32.0-150			3.23	28
1,2-Dibromo-3-Chloropropane	5.00	U	4.53	4.50	90.6	90.0	1	22.0-151			0.664	34
1,2-Dibromoethane	5.00	U	4.93	5.01	98.6	100	1	34.0-147			1.61	27
Dibromomethane	5.00	U	5.16	4.97	103	99.4	1	30.0-151			3.75	27
1,2-Dichlorobenzene	5.00	U	5.20	4.99	104	99.8	1	34.0-149			4.12	28
1,3-Dichlorobenzene	5.00	U	5.25	5.02	105	100	1	36.0-146			4.48	27
1,4-Dichlorobenzene	5.00	U	4.94	5.00	98.8	100	1	35.0-142			1.21	27
Dichlorodifluoromethane	5.00	U	4.02	3.39	80.4	67.8	1	10.0-160			17.0	29
1,1-Dichloroethane	5.00	U	5.11	4.83	102	96.6	1	25.0-158			5.63	27
1,2-Dichloroethane	5.00	U	4.99	4.63	99.8	92.6	1	29.0-151			7.48	27
1,1-Dichloroethene	5.00	U	5.00	4.49	100	89.8	1	11.0-160			10.7	29
cis-1,2-Dichloroethene	5.00	U	5.02	4.58	100	91.6	1	10.0-160			9.17	27
trans-1,2-Dichloroethene	5.00	U	4.09	4.00	81.8	80.0	1	17.0-153			2.22	27
1,2-Dichloropropane	5.00	U	4.80	4.49	96.0	89.8	1	30.0-156			6.67	27
1,1-Dichloropropene	5.00	U	5.10	5.02	102	100	1	25.0-158			1.58	27
1,3-Dichloropropane	5.00	U	4.99	4.98	99.8	99.6	1	38.0-147			0.201	27
cis-1,3-Dichloropropene	5.00	U	4.71	4.60	94.2	92.0	1	34.0-149			2.36	28
trans-1,3-Dichloropropene	5.00	U	4.43	4.59	88.6	91.8	1	32.0-149			3.55	28
2,2-Dichloropropane	5.00	U	5.38	5.05	108	101	1	24.0-152			6.33	29
Di-isopropyl ether	5.00	U	4.93	4.72	98.6	94.4	1	21.0-160			4.35	28
Ethylbenzene	5.00	U	4.85	4.86	97.0	97.2	1	30.0-155			0.206	27
Hexachloro-1,3-butadiene	5.00	U	4.94	4.25	98.8	85.0	1	20.0-154			15.0	34
Isopropylbenzene	5.00	U	5.39	5.32	108	106	1	28.0-157			1.31	27
p-Isopropyltoluene	5.00	U	4.98	5.09	99.6	102	1	30.0-154			2.18	29
2-Butanone (MEK)	25.0	U	26.6	23.2	106	92.8	1	10.0-160			13.7	32
Methylene Chloride	5.00	U	4.10	4.07	82.0	81.4	1	23.0-144			0.734	28
4-Methyl-2-pentanone (MIBK)	25.0	U	25.8	25.7	103	103	1	29.0-160			0.388	29

L1702129-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1702129-07 02/06/24 03:21 • (MS) R4030504-4 02/06/24 03:40 • (MSD) R4030504-5 02/06/24 03:59

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methyl tert-butyl ether	5.00	U	5.27	5.02	105	100	1	28.0-150			4.86	29
Naphthalene	5.00	U	4.21	4.44	84.2	88.8	1	12.0-156			5.32	35
n-Propylbenzene	5.00	U	5.15	5.22	103	104	1	31.0-154			1.35	28
Styrene	5.00	U	5.09	4.84	102	96.8	1	33.0-155			5.04	28
1,1,1,2-Tetrachloroethane	5.00	U	5.71	5.75	114	115	1	36.0-151			0.698	29
1,1,2,2-Tetrachloroethane	5.00	U	5.04	5.13	101	103	1	33.0-150			1.77	28
1,1,2-Trichlorotrifluoroethane	5.00	U	5.14	4.83	103	96.6	1	23.0-160			6.22	30
Tetrachloroethene	5.00	U	5.04	4.92	101	98.4	1	10.0-160			2.41	27
Toluene	5.00	U	4.62	4.65	92.4	93.0	1	26.0-154			0.647	28
1,2,3-Trichlorobenzene	5.00	U	4.08	4.47	81.6	89.4	1	17.0-150			9.12	36
1,2,4-Trichlorobenzene	5.00	U	4.50	4.17	90.0	83.4	1	24.0-150			7.61	33
1,1,1-Trichloroethane	5.00	U	6.23	5.82	125	116	1	23.0-160			6.80	28
1,1,2-Trichloroethane	5.00	U	5.41	5.40	108	108	1	35.0-147			0.185	27
Trichloroethene	5.00	U	5.05	4.70	101	94.0	1	10.0-160			7.18	25
Trichlorofluoromethane	5.00	U	4.87	4.76	97.4	95.2	1	17.0-160			2.28	31
1,2,3-Trichloropropane	5.00	U	5.26	5.58	105	112	1	34.0-151			5.90	29
1,2,4-Trimethylbenzene	5.00	U	4.79	4.83	95.8	96.6	1	26.0-154			0.832	27
1,2,3-Trimethylbenzene	5.00	U	4.78	4.84	95.6	96.8	1	32.0-149			1.25	28
1,3,5-Trimethylbenzene	5.00	U	4.96	5.03	99.2	101	1	28.0-153			1.40	27
Vinyl chloride	5.00	U	3.70	3.52	74.0	70.4	1	10.0-160			4.99	27
Xylenes, Total	15.0	U	14.9	14.6	99.3	97.3	1	29.0-154			2.03	28
(S) Toluene-d8					*99.1*	*101*		*80.0-120*				
(S) 4-Bromofluorobenzene					*101*	*102*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*104*	*99.8*		*70.0-130*				

Method Blank (MB)

(MB) R4038168-3 02/24/24 10:46

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) R4038168-3 02/24/24 10:46

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	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*104*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*115*			*70.0-130*

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

(LCS) R4038168-1 02/24/24 09:45 • (LCSD) R4038168-2 02/24/24 10:06

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	44.1	33.6	176	134	19.0-160	J4		27.0	27
Acrolein	25.0	20.9	20.7	83.6	82.8	10.0-160			0.962	26
Acrylonitrile	25.0	24.8	25.0	99.2	100	55.0-149			0.803	20

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

(LCS) R4038168-1 02/24/24 09:45 • (LCSD) R4038168-2 02/24/24 10:06

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	4.66	4.83	93.2	96.6	70.0-123			3.58	20
Bromobenzene	5.00	3.93	4.03	78.6	80.6	73.0-121			2.51	20
Bromodichloromethane	5.00	5.26	5.44	105	109	75.0-120			3.36	20
Bromoform	5.00	6.47	6.40	129	128	68.0-132			1.09	20
Bromomethane	5.00	5.43	5.68	109	114	10.0-160			4.50	25
n-Butylbenzene	5.00	4.50	4.61	90.0	92.2	73.0-125			2.41	20
sec-Butylbenzene	5.00	4.26	4.38	85.2	87.6	75.0-125			2.78	20
tert-Butylbenzene	5.00	4.50	4.55	90.0	91.0	76.0-124			1.10	20
Carbon disulfide	5.00	4.67	4.73	93.4	94.6	61.0-128			1.28	20
Carbon tetrachloride	5.00	6.21	6.50	124	130	68.0-126		J4	4.56	20
Chlorobenzene	5.00	5.65	5.70	113	114	80.0-121			0.881	20
Chlorodibromomethane	5.00	6.00	5.98	120	120	77.0-125			0.334	20
Chloroethane	5.00	4.60	4.73	92.0	94.6	47.0-150			2.79	20
Chloroform	5.00	5.28	5.35	106	107	73.0-120			1.32	20
Chloromethane	5.00	4.31	4.35	86.2	87.0	41.0-142			0.924	20
2-Chlorotoluene	5.00	4.23	4.26	84.6	85.2	76.0-123			0.707	20
4-Chlorotoluene	5.00	4.19	4.23	83.8	84.6	75.0-122			0.950	20
1,2-Dibromo-3-Chloropropane	5.00	4.47	4.61	89.4	92.2	58.0-134			3.08	20
1,2-Dibromoethane	5.00	5.53	5.42	111	108	80.0-122			2.01	20
Dibromomethane	5.00	5.49	5.57	110	111	80.0-120			1.45	20
1,2-Dichlorobenzene	5.00	5.04	4.93	101	98.6	79.0-121			2.21	20
1,3-Dichlorobenzene	5.00	4.95	5.01	99.0	100	79.0-120			1.20	20
1,4-Dichlorobenzene	5.00	5.04	5.00	101	100	79.0-120			0.797	20
Dichlorodifluoromethane	5.00	6.46	6.47	129	129	51.0-149			0.155	20
1,1-Dichloroethane	5.00	4.73	4.72	94.6	94.4	70.0-126			0.212	20
1,2-Dichloroethane	5.00	5.65	5.60	113	112	70.0-128			0.889	20
1,1-Dichloroethene	5.00	5.21	5.45	104	109	71.0-124			4.50	20
cis-1,2-Dichloroethene	5.00	5.13	5.31	103	106	73.0-120			3.45	20
trans-1,2-Dichloroethene	5.00	5.28	5.43	106	109	73.0-120			2.80	20
1,2-Dichloropropane	5.00	4.25	4.48	85.0	89.6	77.0-125			5.27	20
1,1-Dichloropropene	5.00	4.85	5.03	97.0	101	74.0-126			3.64	20
1,3-Dichloropropane	5.00	4.83	4.79	96.6	95.8	80.0-120			0.832	20
cis-1,3-Dichloropropene	5.00	4.65	4.68	93.0	93.6	80.0-123			0.643	20
trans-1,3-Dichloropropene	5.00	4.83	4.84	96.6	96.8	78.0-124			0.207	20
2,2-Dichloropropane	5.00	5.36	5.18	107	104	58.0-130			3.42	20
Di-isopropyl ether	5.00	3.86	3.86	77.2	77.2	58.0-138			0.000	20
Ethylbenzene	5.00	5.32	5.42	106	108	79.0-123			1.86	20
Hexachloro-1,3-butadiene	5.00	5.24	5.25	105	105	54.0-138			0.191	20
Isopropylbenzene	5.00	5.44	5.41	109	108	76.0-127			0.553	20
p-Isopropyltoluene	5.00	4.46	4.51	89.2	90.2	76.0-125			1.11	20

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

(LCS) R4038168-1 02/24/24 09:45 • (LCSD) R4038168-2 02/24/24 10:06

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	22.2	22.7	88.8	90.8	44.0-160			2.23	20
Methylene Chloride	5.00	5.02	5.12	100	102	67.0-120			1.97	20
4-Methyl-2-pentanone (MIBK)	25.0	20.2	20.3	80.8	81.2	68.0-142			0.494	20
Methyl tert-butyl ether	5.00	5.19	5.18	104	104	68.0-125			0.193	20
Naphthalene	5.00	3.67	3.82	73.4	76.4	54.0-135			4.01	20
n-Propylbenzene	5.00	4.09	4.15	81.8	83.0	77.0-124			1.46	20
Styrene	5.00	5.21	5.10	104	102	73.0-130			2.13	20
1,1,1,2-Tetrachloroethane	5.00	6.05	6.11	121	122	75.0-125			0.987	20
1,1,2,2-Tetrachloroethane	5.00	3.87	3.94	77.4	78.8	65.0-130			1.79	20
1,1,2-Trichlorotrifluoroethane	5.00	5.44	5.84	109	117	69.0-132			7.09	20
Tetrachloroethene	5.00	6.55	6.67	131	133	72.0-132		J4	1.82	20
Toluene	5.00	5.07	5.09	101	102	79.0-120			0.394	20
1,2,3-Trichlorobenzene	5.00	4.71	4.71	94.2	94.2	50.0-138			0.000	20
1,2,4-Trichlorobenzene	5.00	4.94	4.88	98.8	97.6	57.0-137			1.22	20
1,1,1-Trichloroethane	5.00	5.95	5.98	119	120	73.0-124			0.503	20
1,1,2-Trichloroethane	5.00	5.20	5.22	104	104	80.0-120			0.384	20
Trichloroethene	5.00	5.89	6.32	118	126	78.0-124		J4	7.04	20
Trichlorofluoromethane	5.00	6.94	7.23	139	145	59.0-147			4.09	20
1,2,3-Trichloropropane	5.00	4.67	5.01	93.4	100	73.0-130			7.02	20
1,2,4-Trimethylbenzene	5.00	4.37	4.37	87.4	87.4	76.0-121			0.000	20
1,2,3-Trimethylbenzene	5.00	4.42	4.42	88.4	88.4	77.0-120			0.000	20
1,3,5-Trimethylbenzene	5.00	4.46	4.53	89.2	90.6	76.0-122			1.56	20
Vinyl chloride	5.00	4.76	4.93	95.2	98.6	67.0-131			3.51	20
Xylenes, Total	15.0	16.4	16.4	109	109	79.0-123			0.000	20
(S) Toluene-d8				*105*	*104*	*80.0-120*				
(S) 4-Bromofluorobenzene				*104*	*102*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*112*	*112*	*70.0-130*				

L1707016-47 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1707016-47 02/24/24 14:54 • (MS) R4038168-4 02/24/24 18:17 • (MSD) R4038168-5 02/24/24 18:37

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	U	43.6	35.4	174	142	1	10.0-160	J5		20.8	35
Acrolein	25.0	U	47.2	38.4	189	154	1	10.0-160	J5		20.6	39
Acrylonitrile	25.0	U	28.3	25.6	113	102	1	21.0-160			10.0	32
Benzene	5.00	U	6.83	6.11	137	122	1	17.0-158			11.1	27
Bromobenzene	5.00	U	4.67	4.88	93.4	97.6	1	30.0-149			4.40	28
Bromodichloromethane	5.00	U	6.18	6.12	124	122	1	31.0-150			0.976	27

L1707016-47 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1707016-47 02/24/24 14:54 • (MS) R4038168-4 02/24/24 18:17 • (MSD) R4038168-5 02/24/24 18:37

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Bromoform	5.00	U	7.25	7.36	145	147	1	29.0-150			1.51	29
Bromomethane	5.00	U	6.04	6.08	121	122	1	10.0-160			0.660	38
n-Butylbenzene	5.00	U	5.88	5.50	118	110	1	31.0-150			6.68	30
sec-Butylbenzene	5.00	U	5.48	5.56	110	111	1	33.0-155			1.45	29
tert-Butylbenzene	5.00	U	5.64	5.87	113	117	1	34.0-153			4.00	28
Carbon disulfide	5.00	0.157	6.08	5.40	118	105	1	10.0-156			11.8	28
Carbon tetrachloride	5.00	U	7.76	7.66	155	153	1	23.0-159			1.30	28
Chlorobenzene	5.00	U	6.48	6.75	130	135	1	33.0-152			4.08	27
Chlorodibromomethane	5.00	U	6.78	6.88	136	138	1	37.0-149			1.46	27
Chloroethane	5.00	U	5.46	5.19	109	104	1	10.0-160			5.07	30
Chloroform	5.00	U	6.38	6.06	128	121	1	29.0-154			5.14	28
Chloromethane	5.00	U	4.62	4.50	92.4	90.0	1	10.0-160			2.63	29
2-Chlorotoluene	5.00	U	5.30	5.31	106	106	1	32.0-153			0.189	28
4-Chlorotoluene	5.00	U	4.83	5.13	96.6	103	1	32.0-150			6.02	28
1,2-Dibromo-3-Chloropropane	5.00	U	5.23	5.71	105	114	1	22.0-151			8.78	34
1,2-Dibromoethane	5.00	U	6.91	6.64	138	133	1	34.0-147			3.99	27
Dibromomethane	5.00	U	6.47	6.21	129	124	1	30.0-151			4.10	27
1,2-Dichlorobenzene	5.00	U	5.57	5.84	111	117	1	34.0-149			4.73	28
1,3-Dichlorobenzene	5.00	U	5.45	5.69	109	114	1	36.0-146			4.31	27
1,4-Dichlorobenzene	5.00	U	5.47	5.76	109	115	1	35.0-142			5.16	27
Dichlorodifluoromethane	5.00	U	7.72	7.50	154	150	1	10.0-160			2.89	29
1,1-Dichloroethane	5.00	U	5.57	5.49	111	110	1	25.0-158			1.45	27
1,2-Dichloroethane	5.00	0.607	6.49	6.21	118	112	1	29.0-151			4.41	27
1,1-Dichloroethene	5.00	U	6.71	6.64	134	133	1	11.0-160			1.05	29
cis-1,2-Dichloroethene	5.00	U	6.25	6.13	125	123	1	10.0-160			1.94	27
trans-1,2-Dichloroethene	5.00	U	6.53	6.38	131	128	1	17.0-153			2.32	27
1,2-Dichloropropane	5.00	U	5.39	5.18	108	104	1	30.0-156			3.97	27
1,1-Dichloropropene	5.00	U	6.23	6.14	125	123	1	25.0-158			1.46	27
1,3-Dichloropropane	5.00	U	5.69	5.77	114	115	1	38.0-147			1.40	27
cis-1,3-Dichloropropene	5.00	U	5.58	5.49	112	110	1	34.0-149			1.63	28
trans-1,3-Dichloropropene	5.00	U	5.71	5.79	114	116	1	32.0-149			1.39	28
2,2-Dichloropropane	5.00	U	6.73	6.18	135	124	1	24.0-152			8.52	29
Di-isopropyl ether	5.00	U	4.45	4.39	89.0	87.8	1	21.0-160			1.36	28
Ethylbenzene	5.00	U	9.71	7.59	194	152	1	30.0-155	J5		24.5	27
Hexachloro-1,3-butadiene	5.00	U	5.63	6.15	113	123	1	20.0-154			8.83	34
Isopropylbenzene	5.00	U	7.17	6.93	143	139	1	28.0-157			3.40	27
p-Isopropyltoluene	5.00	U	5.73	5.74	115	115	1	30.0-154			0.174	29
2-Butanone (MEK)	25.0	U	24.7	23.2	98.8	92.8	1	10.0-160			6.26	32
Methylene Chloride	5.00	U	5.90	5.86	118	117	1	23.0-144			0.680	28
4-Methyl-2-pentanone (MIBK)	25.0	U	23.4	22.8	93.6	91.2	1	29.0-160			2.60	29

L1707016-47 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1707016-47 02/24/24 14:54 • (MS) R4038168-4 02/24/24 18:17 • (MSD) R4038168-5 02/24/24 18:37

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Methyl tert-butyl ether	5.00	U	6.03	5.87	121	117	1	28.0-150			2.69	29
Naphthalene	5.00	U	32.1	8.50	642	170	1	12.0-156	J5	J3 J5	116	35
n-Propylbenzene	5.00	U	5.90	5.34	118	107	1	31.0-154			9.96	28
Styrene	5.00	U	5.58	5.78	112	116	1	33.0-155			3.52	28
1,1,1,2-Tetrachloroethane	5.00	U	7.13	7.15	143	143	1	36.0-151			0.280	29
1,1,2,2-Tetrachloroethane	5.00	U	4.88	4.95	97.6	99.0	1	33.0-150			1.42	28
1,1,2-Trichlorotrifluoroethane	5.00	U	7.34	7.14	147	143	1	23.0-160			2.76	30
Tetrachloroethene	5.00	U	7.80	7.97	156	159	1	10.0-160			2.16	27
Toluene	5.00	U	16.5	8.93	330	179	1	26.0-154	J5	J3 J5	59.5	28
1,2,3-Trichlorobenzene	5.00	U	4.71	5.38	94.2	108	1	17.0-150			13.3	36
1,2,4-Trichlorobenzene	5.00	U	5.06	5.50	101	110	1	24.0-150			8.33	33
1,1,1-Trichloroethane	5.00	U	7.45	7.17	149	143	1	23.0-160			3.83	28
1,1,2-Trichloroethane	5.00	U	6.22	6.34	124	127	1	35.0-147			1.91	27
Trichloroethene	5.00	U	6.97	7.06	139	141	1	10.0-160			1.28	25
Trichlorofluoromethane	5.00	U	8.47	8.33	169	167	1	17.0-160	J5	J5	1.67	31
1,2,3-Trichloropropane	5.00	U	5.89	6.00	118	120	1	34.0-151			1.85	29
1,2,4-Trimethylbenzene	5.00	U	16.1	7.60	322	152	1	26.0-154	J5	J3	71.7	27
1,2,3-Trimethylbenzene	5.00	U	8.40	6.18	168	124	1	32.0-149	J5	J3	30.5	28
1,3,5-Trimethylbenzene	5.00	U	8.22	6.18	164	124	1	28.0-153	J5	J3	28.3	27
Vinyl chloride	5.00	U	5.56	5.39	111	108	1	10.0-160			3.11	27
Xylenes, Total	15.0	U	39.5	24.5	263	163	1	29.0-154	J5	J3 J5	46.9	28
(S) Toluene-d8					*104*	*105*		*80.0-120*				
(S) 4-Bromofluorobenzene					*105*	*102*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*108*	*102*		*70.0-130*				

Method Blank (MB)

(MB) R4032988-3 02/10/24 00:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon disulfide	U		0.000700	0.0125
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00500
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250

Method Blank (MB)

(MB) R4032988-3 02/10/24 00:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Isopropylbenzene	U		0.000425	0.00250
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*98.1*			*75.0-131*
(S) 4-Bromofluorobenzene	*94.2*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*81.8*			*70.0-130*

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

(LCS) R4032988-1 02/09/24 22:15 • (LCSD) R4032988-2 02/09/24 22:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.739	0.832	118	133	10.0-160			11.8	31
Acrylonitrile	0.625	0.665	0.720	106	115	45.0-153			7.94	22
Benzene	0.125	0.118	0.122	94.4	97.6	70.0-123			3.33	20
Bromobenzene	0.125	0.118	0.118	94.4	94.4	73.0-121			0.000	20

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

(LCS) R4032988-1 02/09/24 22:15 • (LCSD) R4032988-2 02/09/24 22:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	0.125	0.122	0.127	97.6	102	73.0-121			4.02	20
Bromoform	0.125	0.119	0.130	95.2	104	64.0-132			8.84	20
Bromomethane	0.125	0.106	0.110	84.8	88.0	56.0-147			3.70	20
n-Butylbenzene	0.125	0.108	0.109	86.4	87.2	68.0-135			0.922	20
sec-Butylbenzene	0.125	0.116	0.121	92.8	96.8	74.0-130			4.22	20
tert-Butylbenzene	0.125	0.0942	0.0946	75.4	75.7	75.0-127			0.424	20
Carbon disulfide	0.125	0.0972	0.103	77.8	82.4	56.0-133			5.79	20
Carbon tetrachloride	0.125	0.115	0.125	92.0	100	66.0-128			8.33	20
Chlorobenzene	0.125	0.120	0.127	96.0	102	76.0-128			5.67	20
Chlorodibromomethane	0.125	0.110	0.122	88.0	97.6	74.0-127			10.3	20
Chloroethane	0.125	0.108	0.110	86.4	88.0	61.0-134			1.83	20
Chloroform	0.125	0.121	0.124	96.8	99.2	72.0-123			2.45	20
Chloromethane	0.125	0.114	0.116	91.2	92.8	51.0-138			1.74	20
2-Chlorotoluene	0.125	0.103	0.105	82.4	84.0	75.0-124			1.92	20
4-Chlorotoluene	0.125	0.121	0.123	96.8	98.4	75.0-124			1.64	20
1,2-Dibromo-3-Chloropropane	0.125	0.119	0.120	95.2	96.0	59.0-130			0.837	20
1,2-Dibromoethane	0.125	0.118	0.133	94.4	106	74.0-128			12.0	20
Dibromomethane	0.125	0.117	0.126	93.6	101	75.0-122			7.41	20
1,2-Dichlorobenzene	0.125	0.127	0.130	102	104	76.0-124			2.33	20
1,3-Dichlorobenzene	0.125	0.124	0.124	99.2	99.2	76.0-125			0.000	20
1,4-Dichlorobenzene	0.125	0.124	0.127	99.2	102	77.0-121			2.39	20
Dichlorodifluoromethane	0.125	0.104	0.108	83.2	86.4	43.0-156			3.77	20
1,1-Dichloroethane	0.125	0.126	0.133	101	106	70.0-127			5.41	20
1,2-Dichloroethane	0.125	0.121	0.126	96.8	101	65.0-131			4.05	20
1,1-Dichloroethene	0.125	0.118	0.128	94.4	102	65.0-131			8.13	20
cis-1,2-Dichloroethene	0.125	0.119	0.128	95.2	102	73.0-125			7.29	20
trans-1,2-Dichloroethene	0.125	0.123	0.125	98.4	100	71.0-125			1.61	20
1,2-Dichloropropane	0.125	0.119	0.129	95.2	103	74.0-125			8.06	20
1,1-Dichloropropene	0.125	0.113	0.124	90.4	99.2	73.0-125			9.28	20
1,3-Dichloropropane	0.125	0.118	0.127	94.4	102	80.0-125			7.35	20
cis-1,3-Dichloropropene	0.125	0.116	0.117	92.8	93.6	76.0-127			0.858	20
trans-1,3-Dichloropropene	0.125	0.111	0.119	88.8	95.2	73.0-127			6.96	20
2,2-Dichloropropane	0.125	0.110	0.116	88.0	92.8	59.0-135			5.31	20
Di-isopropyl ether	0.125	0.129	0.137	103	110	60.0-136			6.02	20
Ethylbenzene	0.125	0.123	0.128	98.4	102	74.0-126			3.98	20
Hexachloro-1,3-butadiene	0.125	0.103	0.125	82.4	100	57.0-150			19.3	20
Isopropylbenzene	0.125	0.128	0.135	102	108	72.0-127			5.32	20
p-Isopropyltoluene	0.125	0.115	0.124	92.0	99.2	72.0-133			7.53	20
2-Butanone (MEK)	0.625	0.528	0.725	84.5	116	30.0-160		J3	31.4	24
Methylene Chloride	0.125	0.111	0.117	88.8	93.6	68.0-123			5.26	20

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

(LCS) R4032988-1 02/09/24 22:15 • (LCSD) R4032988-2 02/09/24 22:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	0.625	0.697	0.726	112	116	56.0-143			4.08	20
Methyl tert-butyl ether	0.125	0.125	0.126	100	101	66.0-132			0.797	20
Naphthalene	0.125	0.124	0.131	99.2	105	59.0-130			5.49	20
n-Propylbenzene	0.125	0.113	0.117	90.4	93.6	74.0-126			3.48	20
Styrene	0.125	0.127	0.136	102	109	72.0-127			6.84	20
1,1,1,2-Tetrachloroethane	0.125	0.133	0.134	106	107	74.0-129			0.749	20
1,1,2,2-Tetrachloroethane	0.125	0.117	0.110	93.6	88.0	68.0-128			6.17	20
1,1,2-Trichlorotrifluoroethane	0.125	0.115	0.121	92.0	96.8	61.0-139			5.08	20
Tetrachloroethene	0.125	0.113	0.117	90.4	93.6	70.0-136			3.48	20
Toluene	0.125	0.116	0.120	92.8	96.0	75.0-121			3.39	20
1,2,3-Trichlorobenzene	0.125	0.121	0.130	96.8	104	59.0-139			7.17	20
1,2,4-Trichlorobenzene	0.125	0.124	0.128	99.2	102	62.0-137			3.17	20
1,1,1-Trichloroethane	0.125	0.126	0.130	101	104	69.0-126			3.12	20
1,1,2-Trichloroethane	0.125	0.123	0.128	98.4	102	78.0-123			3.98	20
Trichloroethene	0.125	0.127	0.129	102	103	76.0-126			1.56	20
Trichlorofluoromethane	0.125	0.109	0.118	87.2	94.4	61.0-142			7.93	20
1,2,3-Trichloropropane	0.125	0.121	0.121	96.8	96.8	67.0-129			0.000	20
1,2,4-Trimethylbenzene	0.125	0.117	0.122	93.6	97.6	70.0-126			4.18	20
1,2,3-Trimethylbenzene	0.125	0.122	0.122	97.6	97.6	74.0-124			0.000	20
1,3,5-Trimethylbenzene	0.125	0.118	0.118	94.4	94.4	73.0-127			0.000	20
Vinyl chloride	0.125	0.0988	0.121	79.0	96.8	63.0-134		J3	20.2	20
Xylenes, Total	0.375	0.372	0.391	99.2	104	72.0-127			4.98	20
(S) Toluene-d8				*97.8*	*96.9*	*75.0-131*				
(S) 4-Bromofluorobenzene				*97.1*	*105*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*96.5*	*95.9*	*70.0-130*				

Method Blank (MB)

(MB) R4032395-3 02/10/24 00:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0365	0.0500
Acrylonitrile	U		0.00361	0.0125
Benzene	U		0.000467	0.00100
Bromobenzene	U		0.000900	0.0125
Bromodichloromethane	U		0.000725	0.00250
Bromoform	U		0.00117	0.0250
Bromomethane	U		0.00197	0.0125
n-Butylbenzene	U		0.00525	0.0125
sec-Butylbenzene	U		0.00288	0.0125
tert-Butylbenzene	U		0.00195	0.00500
Carbon disulfide	U		0.000700	0.0125
Carbon tetrachloride	U		0.000898	0.00500
Chlorobenzene	U		0.000210	0.00250
Chlorodibromomethane	U		0.000612	0.00250
Chloroethane	U		0.00170	0.00500
Chloroform	U		0.00103	0.00250
Chloromethane	U		0.00435	0.0125
2-Chlorotoluene	U		0.000865	0.00250
4-Chlorotoluene	U		0.000450	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00390	0.0250
1,2-Dibromoethane	U		0.000648	0.00250
Dibromomethane	U		0.000750	0.00500
1,2-Dichlorobenzene	U		0.000425	0.00500
1,3-Dichlorobenzene	U		0.000600	0.00500
1,4-Dichlorobenzene	U		0.000700	0.00500
Dichlorodifluoromethane	U		0.00161	0.00500
1,1-Dichloroethane	U		0.000491	0.00250
1,2-Dichloroethane	U		0.000649	0.00250
1,1-Dichloroethene	U		0.000606	0.00250
cis-1,2-Dichloroethene	U		0.000734	0.00250
trans-1,2-Dichloroethene	U		0.00104	0.00500
1,2-Dichloropropane	U		0.00142	0.00500
1,1-Dichloropropene	U		0.000809	0.00250
1,3-Dichloropropane	U		0.000501	0.00500
cis-1,3-Dichloropropene	U		0.000757	0.00250
trans-1,3-Dichloropropene	U		0.00114	0.00500
2,2-Dichloropropane	U		0.00138	0.00250
Di-isopropyl ether	U		0.000410	0.00100
Ethylbenzene	U		0.000737	0.00250
Hexachloro-1,3-butadiene	U		0.00600	0.0250

Method Blank (MB)

(MB) R4032395-3 02/10/24 00:19

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Isopropylbenzene	U		0.000425	0.00250
p-Isopropyltoluene	U		0.00255	0.00500
2-Butanone (MEK)	U		0.0635	0.100
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.00228	0.0250
Methyl tert-butyl ether	U		0.000350	0.00100
Naphthalene	U		0.00488	0.0125
n-Propylbenzene	U		0.000950	0.00500
Styrene	U		0.000229	0.0125
1,1,1,2-Tetrachloroethane	U		0.000948	0.00250
1,1,2,2-Tetrachloroethane	U		0.000695	0.00250
1,1,2-Trichlorotrifluoroethane	U		0.000754	0.00250
Tetrachloroethene	U		0.000896	0.00250
Toluene	U		0.00130	0.00500
1,2,3-Trichlorobenzene	U		0.00733	0.0125
1,2,4-Trichlorobenzene	U		0.00440	0.0125
1,1,1-Trichloroethane	U		0.000923	0.00250
1,1,2-Trichloroethane	U		0.000597	0.00250
Trichloroethene	U		0.000584	0.00100
Trichlorofluoromethane	U		0.000827	0.00250
1,2,3-Trichloropropane	U		0.00162	0.0125
1,2,4-Trimethylbenzene	U		0.00158	0.00500
1,2,3-Trimethylbenzene	U		0.00158	0.00500
1,3,5-Trimethylbenzene	U		0.00200	0.00500
Vinyl chloride	U		0.00116	0.00250
Xylenes, Total	U		0.000880	0.00650
(S) Toluene-d8	*104*			*75.0-131*
(S) 4-Bromofluorobenzene	*103*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*

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

(LCS) R4032395-1 02/09/24 22:44 • (LCSD) R4032395-2 02/09/24 23:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.625	0.457	0.445	73.1	71.2	10.0-160			2.66	31
Acrylonitrile	0.625	0.611	0.626	97.8	100	45.0-153			2.43	22
Benzene	0.125	0.116	0.116	92.8	92.8	70.0-123			0.000	20
Bromobenzene	0.125	0.120	0.117	96.0	93.6	73.0-121			2.53	20

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

(LCS) R4032395-1 02/09/24 22:44 • (LCSD) R4032395-2 02/09/24 23:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	0.125	0.114	0.115	91.2	92.0	73.0-121			0.873	20
Bromoform	0.125	0.116	0.116	92.8	92.8	64.0-132			0.000	20
Bromomethane	0.125	0.122	0.119	97.6	95.2	56.0-147			2.49	20
n-Butylbenzene	0.125	0.118	0.118	94.4	94.4	68.0-135			0.000	20
sec-Butylbenzene	0.125	0.126	0.122	101	97.6	74.0-130			3.23	20
tert-Butylbenzene	0.125	0.123	0.126	98.4	101	75.0-127			2.41	20
Carbon disulfide	0.125	0.127	0.107	102	85.6	56.0-133			17.1	20
Carbon tetrachloride	0.125	0.137	0.132	110	106	66.0-128			3.72	20
Chlorobenzene	0.125	0.127	0.122	102	97.6	76.0-128			4.02	20
Chlorodibromomethane	0.125	0.124	0.125	99.2	100	74.0-127			0.803	20
Chloroethane	0.125	0.124	0.115	99.2	92.0	61.0-134			7.53	20
Chloroform	0.125	0.114	0.114	91.2	91.2	72.0-123			0.000	20
Chloromethane	0.125	0.119	0.115	95.2	92.0	51.0-138			3.42	20
2-Chlorotoluene	0.125	0.121	0.121	96.8	96.8	75.0-124			0.000	20
4-Chlorotoluene	0.125	0.114	0.121	91.2	96.8	75.0-124			5.96	20
1,2-Dibromo-3-Chloropropane	0.125	0.110	0.118	88.0	94.4	59.0-130			7.02	20
1,2-Dibromoethane	0.125	0.128	0.128	102	102	74.0-128			0.000	20
Dibromomethane	0.125	0.121	0.113	96.8	90.4	75.0-122			6.84	20
1,2-Dichlorobenzene	0.125	0.118	0.120	94.4	96.0	76.0-124			1.68	20
1,3-Dichlorobenzene	0.125	0.118	0.112	94.4	89.6	76.0-125			5.22	20
1,4-Dichlorobenzene	0.125	0.115	0.117	92.0	93.6	77.0-121			1.72	20
Dichlorodifluoromethane	0.125	0.151	0.133	121	106	43.0-156			12.7	20
1,1-Dichloroethane	0.125	0.115	0.118	92.0	94.4	70.0-127			2.58	20
1,2-Dichloroethane	0.125	0.130	0.117	104	93.6	65.0-131			10.5	20
1,1-Dichloroethene	0.125	0.136	0.127	109	102	65.0-131			6.84	20
cis-1,2-Dichloroethene	0.125	0.121	0.123	96.8	98.4	73.0-125			1.64	20
trans-1,2-Dichloroethene	0.125	0.127	0.121	102	96.8	71.0-125			4.84	20
1,2-Dichloropropane	0.125	0.115	0.113	92.0	90.4	74.0-125			1.75	20
1,1-Dichloropropene	0.125	0.133	0.124	106	99.2	73.0-125			7.00	20
1,3-Dichloropropane	0.125	0.120	0.126	96.0	101	80.0-125			4.88	20
cis-1,3-Dichloropropene	0.125	0.116	0.121	92.8	96.8	76.0-127			4.22	20
trans-1,3-Dichloropropene	0.125	0.123	0.126	98.4	101	73.0-127			2.41	20
2,2-Dichloropropane	0.125	0.117	0.118	93.6	94.4	59.0-135			0.851	20
Di-isopropyl ether	0.125	0.123	0.124	98.4	99.2	60.0-136			0.810	20
Ethylbenzene	0.125	0.128	0.125	102	100	74.0-126			2.37	20
Hexachloro-1,3-butadiene	0.125	0.111	0.120	88.8	96.0	57.0-150			7.79	20
Isopropylbenzene	0.125	0.134	0.131	107	105	72.0-127			2.26	20
p-Isopropyltoluene	0.125	0.121	0.125	96.8	100	72.0-133			3.25	20
2-Butanone (MEK)	0.625	0.614	0.580	98.2	92.8	30.0-160			5.70	24
Methylene Chloride	0.125	0.122	0.122	97.6	97.6	68.0-123			0.000	20

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

(LCS) R4032395-1 02/09/24 22:44 • (LCSD) R4032395-2 02/09/24 23:03

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Methyl-2-pentanone (MIBK)	0.625	0.642	0.636	103	102	56.0-143			0.939	20
Methyl tert-butyl ether	0.125	0.122	0.121	97.6	96.8	66.0-132			0.823	20
Naphthalene	0.125	0.119	0.120	95.2	96.0	59.0-130			0.837	20
n-Propylbenzene	0.125	0.121	0.121	96.8	96.8	74.0-126			0.000	20
Styrene	0.125	0.133	0.127	106	102	72.0-127			4.62	20
1,1,1,2-Tetrachloroethane	0.125	0.127	0.128	102	102	74.0-129			0.784	20
1,1,2,2-Tetrachloroethane	0.125	0.119	0.112	95.2	89.6	68.0-128			6.06	20
1,1,2-Trichlorotrifluoroethane	0.125	0.123	0.112	98.4	89.6	61.0-139			9.36	20
Tetrachloroethene	0.125	0.127	0.132	102	106	70.0-136			3.86	20
Toluene	0.125	0.126	0.125	101	100	75.0-121			0.797	20
1,2,3-Trichlorobenzene	0.125	0.120	0.130	96.0	104	59.0-139			8.00	20
1,2,4-Trichlorobenzene	0.125	0.118	0.124	94.4	99.2	62.0-137			4.96	20
1,1,1-Trichloroethane	0.125	0.124	0.117	99.2	93.6	69.0-126			5.81	20
1,1,2-Trichloroethane	0.125	0.127	0.129	102	103	78.0-123			1.56	20
Trichloroethene	0.125	0.125	0.133	100	106	76.0-126			6.20	20
Trichlorofluoromethane	0.125	0.122	0.114	97.6	91.2	61.0-142			6.78	20
1,2,3-Trichloropropane	0.125	0.125	0.124	100	99.2	67.0-129			0.803	20
1,2,4-Trimethylbenzene	0.125	0.123	0.126	98.4	101	70.0-126			2.41	20
1,2,3-Trimethylbenzene	0.125	0.124	0.124	99.2	99.2	74.0-124			0.000	20
1,3,5-Trimethylbenzene	0.125	0.123	0.121	98.4	96.8	73.0-127			1.64	20
Vinyl chloride	0.125	0.140	0.122	112	97.6	63.0-134			13.7	20
Xylenes, Total	0.375	0.383	0.368	102	98.1	72.0-127			3.99	20
(S) Toluene-d8				*103*	*103*	*75.0-131*				
(S) 4-Bromofluorobenzene				*108*	*103*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*105*	*103*	*70.0-130*				

Method Blank (MB)

(MB) R4030591-1 02/06/24 15:18

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	211		33.3	100
Residual Range Organics (RRO)	94.8	J	83.3	250
(S) o-Terphenyl	*78.0*			*31.0-160*

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

(LCS) R4030591-2 02/06/24 15:40 • (LCSD) R4030591-3 02/06/24 16:03

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 %
Diesel Range Organics (DRO)	1500	1120	1240	74.7	82.7	50.0-150			10.2	20
(S) o-Terphenyl				*61.5*	*77.0*	*31.0-160*				

Method Blank (MB)

(MB) R4034075-1 02/13/24 22:11

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		33.3	100
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	*71.5*			*31.0-160*

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

(LCS) R4034075-2 02/13/24 22:32 • (LCSD) R4034075-3 02/13/24 22:52

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Diesel Range Organics (DRO)	1500	1220	1260	81.3	84.0	50.0-150			3.23	20
(S) o-Terphenyl				*58.0*	*56.0*	*31.0-160*				

Method Blank (MB)

(MB) R4036223-1 02/20/24 08:56

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	86.7	J	33.3	100
Residual Range Organics (RRO)	243	J	83.3	250
(S) o-Terphenyl	*56.5*			*31.0-160*

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

(LCS) R4036223-2 02/20/24 09:16 • (LCSD) R4036223-3 02/20/24 09:36

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 %
Diesel Range Organics (DRO)	1500	1250	1080	83.3	72.0	50.0-150			14.6	20
(S) o-Terphenyl				*84.5*	*71.0*	*31.0-160*				

Method Blank (MB)

(MB) R4031097-1 02/07/24 14:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*60.7*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R4031097-2 02/07/24 14:49

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	38.0	76.0	50.0-150	
(S) o-Terphenyl			*61.0*	*18.0-148*	

Method Blank (MB)

(MB) R4031304-1 02/07/24 23:47

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Diesel Range Organics (DRO)	U		1.33	4.00
Residual Range Organics (RRO)	U		3.33	10.0
(S) o-Terphenyl	*64.6*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R4031304-2 02/08/24 00:00

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	28.2	56.4	50.0-150	
(S) o-Terphenyl			*63.7*	*18.0-148*	

L1701991-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1701991-10 02/08/24 04:18 • (MS) R4031304-3 02/08/24 04:31 • (MSD) R4031304-4 02/08/24 04:44

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Diesel Range Organics (DRO)	49.2	69500	66700	62600	0.000	0.000	250	50.0-150	V	V	6.34	20
(S) o-Terphenyl					*0.000*	*0.000*		*18.0-148*	J7	J7		

Method Blank (MB)

(MB) R4031021-3 02/05/24 19:07

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	*112*			*31.0-160*
(S) 2-Fluorobiphenyl	*123*			*48.0-148*
(S) p-Terphenyl-d14	*120*			*37.0-146*

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

(LCS) R4031021-1 02/05/24 18:28 • (LCSD) R4031021-2 02/05/24 18:47

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 %
Anthracene	2.00	2.47	2.13	123	106	67.0-150			14.8	20
Acenaphthene	2.00	2.65	2.27	132	114	65.0-138			15.4	20
Acenaphthylene	2.00	2.63	2.23	132	111	66.0-140			16.5	20
Benzo(a)anthracene	2.00	2.52	2.24	126	112	61.0-140			11.8	20
Benzo(a)pyrene	2.00	2.21	1.95	111	97.5	60.0-143			12.5	20
Benzo(b)fluoranthene	2.00	2.33	2.07	117	103	58.0-141			11.8	20
Benzo(g,h,i)perylene	2.00	2.11	1.85	105	92.5	52.0-153			13.1	20
Benzo(k)fluoranthene	2.00	2.04	1.80	102	90.0	58.0-148			12.5	20
Chrysene	2.00	2.61	2.31	131	115	64.0-144			12.2	20
Dibenz(a,h)anthracene	2.00	2.21	1.93	111	96.5	52.0-155			13.5	20
Fluoranthene	2.00	2.65	2.30	132	115	69.0-153			14.1	20

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

(LCS) R4031021-1 02/05/24 18:28 • (LCSD) R4031021-2 02/05/24 18:47

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 %
Fluorene	2.00	2.69	2.35	135	117	64.0-136			13.5	20
Indeno(1,2,3-cd)pyrene	2.00	2.29	2.02	114	101	54.0-153			12.5	20
Naphthalene	2.00	2.68	2.32	134	116	61.0-137			14.4	20
Phenanthrene	2.00	2.71	2.39	135	119	62.0-137			12.5	20
Pyrene	2.00	2.73	2.36	137	118	60.0-142			14.5	20
1-Methylnaphthalene	2.00	2.68	2.31	134	115	66.0-142			14.8	20
2-Methylnaphthalene	2.00	2.76	2.36	138	118	62.0-136	J4		15.6	20
2-Chloronaphthalene	2.00	2.80	2.39	140	119	64.0-140			15.8	20
(S) Nitrobenzene-d5				*131*	*113*	*31.0-160*				
(S) 2-Fluorobiphenyl				*140*	*122*	*48.0-148*				
(S) p-Terphenyl-d14				*122*	*110*	*37.0-146*				

Method Blank (MB)

(MB) R4031698-3 02/05/24 13:41

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Anthracene	U		0.0190	0.0500
Acenaphthene	U		0.0190	0.0500
Acenaphthylene	U		0.0171	0.0500
Benzo(a)anthracene	U		0.0203	0.0500
Benzo(a)pyrene	U		0.0184	0.0500
Benzo(b)fluoranthene	U		0.0168	0.0500
Benzo(g,h,i)perylene	U		0.0184	0.0500
Benzo(k)fluoranthene	U		0.0202	0.0500
Chrysene	U		0.0179	0.0500
Dibenz(a,h)anthracene	U		0.0160	0.0500
Fluoranthene	U		0.0270	0.100
Fluorene	U		0.0169	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500
Naphthalene	U		0.0917	0.250
Phenanthrene	U		0.0180	0.0500
Pyrene	U		0.0169	0.0500
1-Methylnaphthalene	U		0.0687	0.250
2-Methylnaphthalene	U		0.0674	0.250
2-Chloronaphthalene	U		0.0682	0.250
(S) Nitrobenzene-d5	*136*			*31.0-160*
(S) 2-Fluorobiphenyl	*126*			*48.0-148*
(S) p-Terphenyl-d14	*128*			*37.0-146*

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

(LCS) R4031698-1 02/05/24 13:06 • (LCSD) R4031698-2 02/05/24 13:23

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 %
Anthracene	2.00	2.47	2.54	123	127	67.0-150			2.79	20
Acenaphthene	2.00	2.21	2.25	111	112	65.0-138			1.79	20
Acenaphthylene	2.00	2.56	2.61	128	131	66.0-140			1.93	20
Benzo(a)anthracene	2.00	2.43	2.36	122	118	61.0-140			2.92	20
Benzo(a)pyrene	2.00	2.24	2.08	112	104	60.0-143			7.41	20
Benzo(b)fluoranthene	2.00	2.08	1.97	104	98.5	58.0-141			5.43	20
Benzo(g,h,i)perylene	2.00	2.07	1.84	104	92.0	52.0-153			11.8	20
Benzo(k)fluoranthene	2.00	2.06	1.92	103	96.0	58.0-148			7.04	20
Chrysene	2.00	2.33	2.24	117	112	64.0-144			3.94	20
Dibenz(a,h)anthracene	2.00	2.09	1.87	104	93.5	52.0-155			11.1	20
Fluoranthene	2.00	2.52	2.57	126	129	69.0-153			1.96	20

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

(LCS) R4031698-1 02/05/24 13:06 • (LCSD) R4031698-2 02/05/24 13:23

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 %
Fluorene	2.00	2.47	2.53	123	126	64.0-136			2.40	20
Indeno(1,2,3-cd)pyrene	2.00	2.17	2.01	108	100	54.0-153			7.66	20
Naphthalene	2.00	2.30	2.32	115	116	61.0-137			0.866	20
Phenanthrene	2.00	2.32	2.37	116	118	62.0-137			2.13	20
Pyrene	2.00	2.23	2.27	111	114	60.0-142			1.78	20
1-Methylnaphthalene	2.00	2.47	2.52	123	126	66.0-142			2.00	20
2-Methylnaphthalene	2.00	2.40	2.44	120	122	62.0-136			1.65	20
2-Chloronaphthalene	2.00	2.30	2.35	115	117	64.0-140			2.15	20
(S) Nitrobenzene-d5				*123*	*122*	*31.0-160*				
(S) 2-Fluorobiphenyl				*113*	*116*	*48.0-148*				
(S) p-Terphenyl-d14				*109*	*102*	*37.0-146*				

Method Blank (MB)

(MB) R4032245-2 02/07/24 23:56

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	*90.9*			*23.0-120*
(S) Nitrobenzene-d5	*88.1*			*14.0-149*
(S) 2-Fluorobiphenyl	*78.1*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4032245-1 02/07/24 23:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0831	104	50.0-126	
Acenaphthene	0.0800	0.0709	88.6	50.0-120	
Acenaphthylene	0.0800	0.0883	110	50.0-120	
Benzo(a)anthracene	0.0800	0.0876	110	45.0-120	
Benzo(a)pyrene	0.0800	0.0710	88.8	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0806	101	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0782	97.8	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0809	101	49.0-125	
Chrysene	0.0800	0.0818	102	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0845	106	47.0-125	
Fluoranthene	0.0800	0.0806	101	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4032245-1 02/07/24 23:37

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0834	104	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0887	111	46.0-125	
Naphthalene	0.0800	0.0771	96.4	50.0-120	
Phenanthrene	0.0800	0.0809	101	47.0-120	
Pyrene	0.0800	0.0806	101	43.0-123	
1-Methylnaphthalene	0.0800	0.0869	109	51.0-121	
2-Methylnaphthalene	0.0800	0.0906	113	50.0-120	
2-Chloronaphthalene	0.0800	0.0701	87.6	50.0-120	
(S) p-Terphenyl-d14			*93.8*	*23.0-120*	
(S) Nitrobenzene-d5			*98.4*	*14.0-149*	
(S) 2-Fluorobiphenyl			*83.2*	*34.0-125*	

L1701865-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1701865-12 02/08/24 01:34 • (MS) R4032245-3 02/08/24 01:54 • (MSD) R4032245-4 02/08/24 02:14

Analyte	Spike Amount (dry) mg/kg	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.100	U	0.0927	0.0923	92.4	92.9	1	10.0-145			0.413	30
Acenaphthene	0.100	U	0.0794	0.0787	79.2	79.2	1	14.0-127			0.966	27
Acenaphthylene	0.100	U	0.0988	0.0973	98.5	97.9	1	21.0-124			1.56	25
Benzo(a)anthracene	0.100	U	0.0955	0.0942	95.2	94.9	1	10.0-139			1.34	30
Benzo(a)pyrene	0.100	U	0.0966	0.0963	96.3	96.9	1	10.0-141			0.396	31
Benzo(b)fluoranthene	0.100	U	0.0871	0.0862	86.8	86.8	1	10.0-140			1.03	36
Benzo(g,h,i)perylene	0.100	U	0.0859	0.0867	85.7	87.3	1	10.0-140			0.885	33
Benzo(k)fluoranthene	0.100	U	0.0867	0.0862	86.4	86.8	1	10.0-137			0.589	31
Chrysene	0.100	U	0.0921	0.0903	91.8	90.9	1	10.0-145			1.96	30
Dibenz(a,h)anthracene	0.100	U	0.0887	0.0885	88.5	89.1	1	10.0-132			0.287	31
Fluoranthene	0.100	U	0.0900	0.0887	89.7	89.4	1	10.0-153			1.42	33
Fluorene	0.100	U	0.0923	0.0924	92.0	93.1	1	11.0-130			0.138	29
Indeno(1,2,3-cd)pyrene	0.100	U	0.0961	0.0956	95.8	96.3	1	10.0-137			0.531	32
Naphthalene	0.100	U	0.0862	0.0843	85.9	84.9	1	10.0-135			2.24	27
Phenanthrene	0.100	U	0.0898	0.0894	89.5	90.0	1	10.0-144			0.426	31
Pyrene	0.100	U	0.0918	0.0905	91.5	91.2	1	10.0-148			1.40	35
1-Methylnaphthalene	0.100	U	0.0982	0.0965	97.8	97.2	1	10.0-142			1.70	28
2-Methylnaphthalene	0.100	U	0.102	0.0999	101	101	1	10.0-137			1.77	28
2-Chloronaphthalene	0.100	U	0.0791	0.0782	78.8	78.7	1	29.0-120			1.13	24
(S) p-Terphenyl-d14					*82.7*	*81.8*		*23.0-120*				
(S) Nitrobenzene-d5					*84.7*	*85.5*		*14.0-149*				
(S) 2-Fluorobiphenyl					*73.8*	*74.2*		*34.0-125*				

Method Blank (MB)

(MB) R4032059-2 02/07/24 14:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	*74.7*			*23.0-120*
(S) Nitrobenzene-d5	*74.7*			*14.0-149*
(S) 2-Fluorobiphenyl	*71.7*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4032059-1 02/07/24 13:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0730	91.3	50.0-126	
Acenaphthene	0.0800	0.0695	86.9	50.0-120	
Acenaphthylene	0.0800	0.0757	94.6	50.0-120	
Benzo(a)anthracene	0.0800	0.0767	95.9	45.0-120	
Benzo(a)pyrene	0.0800	0.0639	79.9	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0750	93.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0736	92.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0695	86.9	49.0-125	
Chrysene	0.0800	0.0757	94.6	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0736	92.0	47.0-125	
Fluoranthene	0.0800	0.0778	97.3	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4032059-1 02/07/24 13:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0763	95.4	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0744	93.0	46.0-125	
Naphthalene	0.0800	0.0697	87.1	50.0-120	
Phenanthrene	0.0800	0.0724	90.5	47.0-120	
Pyrene	0.0800	0.0728	91.0	43.0-123	
1-Methylnaphthalene	0.0800	0.0750	93.8	51.0-121	
2-Methylnaphthalene	0.0800	0.0722	90.3	50.0-120	
2-Chloronaphthalene	0.0800	0.0717	89.6	50.0-120	
(S) p-Terphenyl-d14			*99.4*	*23.0-120*	
(S) Nitrobenzene-d5			*100*	*14.0-149*	
(S) 2-Fluorobiphenyl			*97.7*	*34.0-125*	

L1699578-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1699578-01 02/07/24 19:42 • (MS) R4032059-3 02/07/24 19:59 • (MSD) R4032059-4 02/07/24 20:17

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0760	U	0.0629	0.0638	82.8	79.8	1	10.0-145			1.42	30
Acenaphthene	0.0760	U	0.0614	0.0619	80.8	77.4	1	14.0-127			0.811	27
Acenaphthylene	0.0760	U	0.0657	0.0664	86.4	83.0	1	21.0-124			1.06	25
Benzo(a)anthracene	0.0760	U	0.0643	0.0647	84.6	80.9	1	10.0-139			0.620	30
Benzo(a)pyrene	0.0760	U	0.0645	0.0636	84.9	79.5	1	10.0-141			1.41	31
Benzo(b)fluoranthene	0.0760	U	0.0613	0.0617	80.7	77.1	1	10.0-140			0.650	36
Benzo(g,h,i)perylene	0.0760	0.00382	0.0680	0.0637	84.4	74.8	1	10.0-140			6.53	33
Benzo(k)fluoranthene	0.0760	U	0.0583	0.0578	76.7	72.3	1	10.0-137			0.861	31
Chrysene	0.0760	U	0.0648	0.0650	85.3	81.3	1	10.0-145			0.308	30
Dibenz(a,h)anthracene	0.0760	U	0.0595	0.0608	78.3	76.0	1	10.0-132			2.16	31
Fluoranthene	0.0760	U	0.0689	0.0689	90.7	86.1	1	10.0-153			0.000	33
Fluorene	0.0760	U	0.0664	0.0666	87.4	83.3	1	11.0-130			0.301	29
Indeno(1,2,3-cd)pyrene	0.0760	U	0.0615	0.0615	80.9	76.9	1	10.0-137			0.000	32
Naphthalene	0.0760	U	0.0618	0.0617	81.3	77.1	1	10.0-135			0.162	27
Phenanthrene	0.0760	U	0.0628	0.0624	82.6	78.0	1	10.0-144			0.639	31
Pyrene	0.0760	0.00278	0.0649	0.0652	81.7	78.0	1	10.0-148			0.461	35
1-Methylnaphthalene	0.0760	U	0.0671	0.0670	88.3	83.8	1	10.0-142			0.149	28
2-Methylnaphthalene	0.0760	U	0.0638	0.0644	83.9	80.5	1	10.0-137			0.936	28
2-Chloronaphthalene	0.0760	U	0.0647	0.0640	85.1	80.0	1	29.0-120			1.09	24
(S) p-Terphenyl-d14					*85.4*	*83.1*		*23.0-120*				
(S) Nitrobenzene-d5					*90.8*	*88.6*		*14.0-149*				
(S) 2-Fluorobiphenyl					*90.0*	*87.1*		*34.0-125*				

Method Blank (MB)

(MB) R4033150-2 02/08/24 14:10

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00230	0.00600
Acenaphthene	U		0.00209	0.00600
Acenaphthylene	U		0.00216	0.00600
Benzo(a)anthracene	U		0.00173	0.00600
Benzo(a)pyrene	U		0.00179	0.00600
Benzo(b)fluoranthene	U		0.00153	0.00600
Benzo(g,h,i)perylene	U		0.00177	0.00600
Benzo(k)fluoranthene	U		0.00215	0.00600
Chrysene	U		0.00232	0.00600
Dibenz(a,h)anthracene	U		0.00172	0.00600
Fluoranthene	U		0.00227	0.00600
Fluorene	U		0.00205	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00181	0.00600
Naphthalene	U		0.00408	0.0200
Phenanthrene	U		0.00231	0.00600
Pyrene	U		0.00200	0.00600
1-Methylnaphthalene	U		0.00449	0.0200
2-Methylnaphthalene	U		0.00427	0.0200
2-Chloronaphthalene	U		0.00466	0.0200
(S) p-Terphenyl-d14	*81.7*			*23.0-120*
(S) Nitrobenzene-d5	*81.8*			*14.0-149*
(S) 2-Fluorobiphenyl	*83.9*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4033150-1 02/08/24 13:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0699	87.4	50.0-126	
Acenaphthene	0.0800	0.0670	83.8	50.0-120	
Acenaphthylene	0.0800	0.0722	90.3	50.0-120	
Benzo(a)anthracene	0.0800	0.0725	90.6	45.0-120	
Benzo(a)pyrene	0.0800	0.0636	79.5	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0637	79.6	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0624	78.0	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0633	79.1	49.0-125	
Chrysene	0.0800	0.0703	87.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0660	82.5	47.0-125	
Fluoranthene	0.0800	0.0741	92.6	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4033150-1 02/08/24 13:52

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0742	92.8	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0663	82.9	46.0-125	
Naphthalene	0.0800	0.0666	83.3	50.0-120	
Phenanthrene	0.0800	0.0703	87.9	47.0-120	
Pyrene	0.0800	0.0690	86.3	43.0-123	
1-Methylnaphthalene	0.0800	0.0711	88.9	51.0-121	
2-Methylnaphthalene	0.0800	0.0694	86.8	50.0-120	
2-Chloronaphthalene	0.0800	0.0691	86.4	50.0-120	
(S) p-Terphenyl-d14			*88.5*	*23.0-120*	
(S) Nitrobenzene-d5			*93.2*	*14.0-149*	
(S) 2-Fluorobiphenyl			*91.4*	*34.0-125*	

L1701988-31 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1701988-31 02/08/24 15:21 • (MS) R4033150-3 02/08/24 15:39 • (MSD) R4033150-4 02/08/24 15:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0972	U	0.0501	0.0580	51.6	57.8	1	10.0-145			14.5	30
Acenaphthene	0.0972	0.00379	0.0522	0.0686	49.8	64.7	1	14.0-127		J3	27.3	27
Acenaphthylene	0.0972	U	0.0508	0.0629	52.2	62.8	1	21.0-124			21.4	25
Benzo(a)anthracene	0.0972	U	0.0485	0.0595	49.9	59.3	1	10.0-139			20.4	30
Benzo(a)pyrene	0.0972	U	0.0461	0.0562	47.4	56.1	1	10.0-141			19.8	31
Benzo(b)fluoranthene	0.0972	U	0.0424	0.0524	43.6	52.3	1	10.0-140			21.1	36
Benzo(g,h,i)perylene	0.0972	U	0.0423	0.0520	43.5	51.9	1	10.0-140			20.7	33
Benzo(k)fluoranthene	0.0972	U	0.0441	0.0519	45.3	51.8	1	10.0-137			16.4	31
Chrysene	0.0972	U	0.0491	0.0601	50.5	60.0	1	10.0-145			20.2	30
Dibenz(a,h)anthracene	0.0972	U	0.0462	0.0556	47.5	55.4	1	10.0-132			18.4	31
Fluoranthene	0.0972	U	0.0485	0.0589	49.9	58.7	1	10.0-153			19.3	33
Fluorene	0.0972	0.00708	0.0594	0.0791	53.8	71.9	1	11.0-130			28.5	29
Indeno(1,2,3-cd)pyrene	0.0972	U	0.0438	0.0529	45.1	52.8	1	10.0-137			18.8	32
Naphthalene	0.0972	0.00539	0.0667	0.0858	63.1	80.2	1	10.0-135			25.1	27
Phenanthrene	0.0972	U	0.0527	0.0698	54.2	69.6	1	10.0-144			27.9	31
Pyrene	0.0972	U	0.0475	0.0594	48.8	59.2	1	10.0-148			22.3	35
1-Methylnaphthalene	0.0972	U	0.0498	0.0679	51.2	67.7	1	10.0-142		J3	30.8	28
2-Methylnaphthalene	0.0972	U	0.0486	0.0651	50.0	64.9	1	10.0-137		J3	29.0	28
2-Chloronaphthalene	0.0972	U	0.0484	0.0590	49.7	58.8	1	29.0-120			19.8	24
(S) p-Terphenyl-d14					*44.4*	*62.2*		*23.0-120*				
(S) Nitrobenzene-d5					*61.0*	*82.7*		*14.0-149*				
(S) 2-Fluorobiphenyl					*47.3*	*58.7*		*34.0-125*				

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

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	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.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
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.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.

GLOSSARY OF TERMS

Qualifier	Description
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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.

State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: GSI Water Solutions for ODEQ

Send Lab Report To: Ellen Woods
Address: 700 NE Multnomah Street, Suite 600, Portland, OR 97232-4100
Tel. #: 541-606-0490
Email: ellen.woods@deq.or.gov, remst@gsiws.com, bwarner@gsiws.com

Contract Laboratory Name: Pace Analytical National
Lab Batch #:
Invoice: ODEQ/Business Office, 700 NE Multnomah Street, Suite 600, Portland, OR 97232
Email: DEQEXP@deq.state.or.us

Lab Selection Criteria:
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

Turn Around Time:
10 days (std.)
5 days
72 hours
48 hours
24 hours
Other _____

Project Name: Former City Texaco Station

Project #: 2060.012.006

Sampler Name: B. Warner, R. Kemp

L1701988

Sample ID#	Collection Date	Collection Time	Matrix	Number of Containers	Sample Preservative: Solids: Liquids:	Solids:	Solids: Liquids:	Solids: Liquids:						Comments
					Requested Analyses: TPH Gasoline by NWTPH-Gx	TPH as Diesel by NWTPH-Dx	VOCs (Full List) by EPA8260D	PAHs by EPA8270E-SIM	Dissolved Pb, Cr, or Cd by EPA 6020B (Field Filtered)	Total Pb, Cr, or Cd by EPA 6020B	GRO and VOCs by EPA TO-15			
P1	1/31/24	1210	W	12	X	X	X	X	X					-01
P2		1405	W	12	X	X	X	X	X					-02
P3		1530	W	12	X	X	X	X	X					-03
P4		1645	W	12	X	X	X	X	X					+Cd, Cr -04
P1-D		1211	W	12										-05
P1-S1		1215	S	2										-06
P1-S2		1220	S	2										-07
P1-S3		1225	S	2	X	X	X							-08
P1-S4		1230	S	2	X	X	X	X		X				-09
P1-S5		1235	S	2										-10
P1-S6		1240	S	2										-11
P1-S3-D		1226	S	2										-12
P2-S1		1335	S	2	X	X		X		X				-13
P2-S2		1340	S	2	X	X	ZX							-14
P2-S3		1345	S	2	X	X	X	X						-15

NOTES: Contact Rick Ernst (503.708.5945, remst@gsiws.com) or Braedon Warner (208.991.6713) with questions. Include DEQ EDD with final lab report.

Retain non-analyzed samples on hold.
WATER SAMPLE P4 analyzed for dissolved Pb, Cr, Cd. IDW-W, +04

Relinquished By: BRAEDON WARNER	Agency/Agent: GSI WATER SOL	Received By: Eli Dossett	Agency/Agent: Pace
Signature:	Time & Date: 2/2/24	Signature: Eli Dossett 17	Time & Date: 2-3-24 1900
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature:	Time & Date:

THIS PURCHASE IS SUBMITTED PURSUANT TO ST... ACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S &C'S) CONTAINED IN THE PRICE AGREEMENT ARE HEREBY INCORPORATED BY REFERENCE AND S... OR IMPLIED.

Sample Receipt Checklist

COC Seal Present/Intact:	Y N	If Applicable	
COC Signed/Accurate:	Y N	VOA Zero Headspace:	N
Bottles arrive intact:	Y N	Pres. Correct/Check:	Y N
Correct bottles used:	Y N	TLA8 2.5+0=2.5	
Sufficient volume sent:	Y N		
RA Screen <0.5 mR/hr:	Y N	7414 1417 9545	

G130

State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: GSI Water Solutions for ODEQ	**Contract Laboratory Name:** Pace Analytical National	**Lab Selection Criteria:** 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	**Turn Around Time:** 10 days (std.); 5 days; 72 hours; 48 hours; 24 hours; Other _____
Send Lab Report To: Ellen Woods Address: 700 NE Multnomah Street, Suite 600, Portland, OR 97232-4100 Tel. #: 541-606-0490 Email: ellen.woods@deq.or.gov, rernst@gsiws.com, bwarner@gsiws.com	**Lab Batch #:** **Invoice:** ODEQ/Business Office, 700 NE Multnomah Street, Suite 600, Portland, OR 97232 Email: DEQEXP@deq.state.or.us		

Project Name: Former City Texaco Station

Project #: 2060.012.006

Sampler Name: B. Warner, R. Kemp

L1701988

Sample ID#	Collection Date	Collection Time	Matrix	Number of Containers	Sample Preservative: Solids: Liquids:	Solids:	Solids: Liquids:	Solids: Liquids:						Comments
					Requested Analyses: TPH Gasoline by NWTPH-Gx	TPH as Diesel by NWTPH-Dx	VOCs (Full List) by EPA8260D	PAHs by EPA8270E-SIM	Dissolved Pb, Cr, or Cd by EPA 6020B (Field Filtered)	Total Pb, Cr, or Cd by EPA 6020B	GRO and VOCs by EPA TO-15			
P2-S4	1/31/24	1350	S	2										-16
P2-S5	1/31/24	1355	S	2										-17
P3-S1	1/31/24	1525	S	2										-18
P3-S2	1/31/24	1530	S	2	X	X	X	X		X				-19
P3-S3	1/31/24	1535	S	2	X	X	X							-20
P3-S4	1/31/24	1540	S	2										-21
P3-S2-D	1/31/24	1551	S	2	X	X	X	X		X				-22
P4-S1	1/31/24	1625	S	2										-23
P4-S2	1/31/24	1630	S	2										-24
P4-S3	1/31/24	1635	S	2	X	X	X	X						-25
P4-S4	1/31/24	1640	S	2										-26
P4-S5	1/31/24	1645	S	2										-27
P4-S6	1/31/24	1650	S	2										-28
P5-S1	2/1/24	1200	S	2										-29
P5-S2	2/1/24	1205	S	2	X	X	X							-30

NOTES: Contact Rick Ernst (503.708.5945, rernst@gsiws.com) or Braedon Warner (208.991.6713) with questions. Include DEQ EDD with final lab report.

Retain non-analyzed samples on hold

Relinquished By: BRAEDON WARNER	Agency/Agent: GSI WATER SOL.	Received By: Eli Dossett	Agency/Agent: Pace
Signature:	Time & Date: 2/2/24	Signature: Eli Dossett 17	Time & Date: 2-3-24/900
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature:	Time & Date:

State of Oregon Chain of Custody

Agency, Authorized Purchaser or Agent: GSI Water Solutions for ODEQ

Send Lab Report To: Ellen Woods
Address: 700 NE Multnomah Street, Suite 600, Portland, OR 97232-4100
Tel. #: 541-606-0490
Email: ellen.woods@deq.or.gov, rernst@gsiws.com, bwarner@gsiws.com

Contract Laboratory Name: Pace Analytical National
Lab Batch #:
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Turn Around Time:
10 days (std.)
5 days
72 hours
48 hours
24 hours
Other _____

Project Name: Former City Texaco Station

Project #: 2060.012.006

Sampler Name: B. Warner, R. Kemp

run trip blank for VOCs per request of Braedon Warner-bjf 02/20/24.

L1701988

Sample Preservative

Requested Analyses

Sample ID#	Collection Date	Collection Time	Matrix	Number of Containers	TPH Gasoline by NWTPH-Gx	TPH as Diesel by NWTPH-Dx	VOCs (Full List) by EPA8260D	PAHs by EPA8270E-SIM	Dissolved Pb, Cr, or Cd by EPA 6020B (Field Filtered)	Total Pb, Cr, or Cd by EPA 6020B	GRO and VOCs by EPA TO-15	Comments
P5-S3	2/1/24	1210	S	2	X	X	X	X		X		-31
P5-S4	2/1/24	1215	S	2	X		X					-32
P5-S5	2/1/24	1220	S	2								-33
P6-S1	2/1/24	1155	S	2	X		X	X				-34
P6-S2	2/1/24	1200	S	2								-35
P6-S3	2/1/24	1205	S	2	X	X	X					-36
SV1	2/1/24	931	G	1							X	-37
SV2	2/1/24	932	G	1							X	-38
SV2-D	2/1/24	1010	G	1								FIELD SAMPLE
SV3	2/1/24	1055	G	1								FIELD SAMPLE
P5	2/1/24	1210	W	12	X	X	X	X	X			-39
P6	2/1/24	1310	W	12	X	X	X	X	X			-40
IDW-S	2/1/24	1315	S	2	X	X	X			X		-41
IDW-W	2/1/24	1325	W	12	X	X	X		X			+ Co, Cr -41
RINSE	2/1/24	1355	W	12	X	X	X					-42

NOTES: Contact Rick Ernst (503.708.5945, rernst@gsiws.com) or Braedon Warner (208.991.6713) with questions. Include DEQ EDD with final lab report.

Retain non-analyzed samples on hold.

Relinquished By: BRAEDON WARNER	Agency/Agent: GSI WATER SOL.	Received By: Ei Dossett	Agency/Agent: PACE
Signature:	Time & Date: 2/2/24	Signature: Ei Dossett 17	Time & Date: 2-3-24 / 900
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature:	Time & Date:

C1701988

Tracking Numbers	Temperature
7914 1417 9545	TLA8 2.5+0=2.5
7914 1417 9486	TLA8 2.6+0=2.6
7914 1417 9497	TLA8 4.6+0=4.6
7210 2109 0872	TLA8 3.7+0=3.7

Ei Dawn 17
Name

2-3-24
Date