Oregon Department of Environmental Quality

Former Sumner Store Project Report

95646 Coos-Sumner Lane, Coos Bay, Oregon

LUST #06-94-0030

June 4, 2024

State of Oregon Department of Environmental Quality

DEQ

Prepared by:

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Abbreviations and Acronyms

µg/L	micrograms per liter
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
DEQ	Oregon Department of Environmental Quality
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
GSI	GSI Water Solutions, Inc.
HASP	Health and Safety Plan
HCID	hydrocarbon identification
HPAH	high molecular weight polycyclic aromatic hydrocarbon
IDW	investigation-derived waste
LOF	locality of the facility
LPAH	low molecular weight polycyclic aromatic hydrocarbon
LUST	leaking underground storage tank
MDL	method detection limit
mg/kg	milligrams per kilogram
MRL	method reporting limit
msl	mean sea level
MTBE	methyl tert-butyl ether
OAR	Oregon Administrative Rule
OWRD	Oregon Water Resources Department
Pace	Pace Analytical National
PAH	polycyclic aromatic hydrocarbon
PPE	personal protective equipment
QAPP	Quality Assurance Project Plan
QC	quality control
RBC	risk-based concentration
SHPO	State Historic Preservation Office
T&E	threatened and endangered
TPH	total petroleum hydrocarbons

UST	underground storage tank
VOC	volatile organic compound

Executive Summary

In February 2024, GSI Water Solutions, Inc. (GSI), performed investigation activities at the former Sumner Store property (the "site") near Coos Bay, Oregon (Figure 1). The purpose of the investigation was to assess subsurface conditions at the site and to evaluate the potential risks posed by chemical contamination, if discovered, 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 95646 Coos-Sumner Lane in the unincorporated community of Sumner about 10 miles southeast of Coos Bay, Oregon (Figure 1). The Sumner Store was constructed in 1947 straddling Wilson Creek. It operated for an unknown period, and as part of its operations, sold fuel. In 1994, four underground storage tanks (USTs), reported to have held gasoline, were removed from the front area of the former store (Figure 2). A release was reported to the Oregon Department of Environmental Quality (DEQ). Analysis on soil samples from the UST excavations, however, only found low concentrations of diesel-range hydrocarbons. Groundwater was not encountered.
- To obtain additional data on the site, GSI completed six push probe explorations along the storefront where the USTs had been located (Figure 2). The probes encountered asphalt pavement at or near the ground surface overlying silty sand and clayey silt to at least 10 feet below ground surface (bgs). In Probes P3 and P4, sand was encountered suggesting that sand was used as backfill for the UST excavations. Shallow groundwater was present between 0.6 to 1.1 feet bgs in all probes except Probe P6 where it stabilized at 5.5 feet bgs (Table 1). Field screening indicated petroleum contamination in soil from Probes P2 and P5 and in groundwater from Probes P5 and P6.
- Selected soil and groundwater samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline, diesel, and oil, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and lead (Table 2). The highest concentrations of TPH as gasoline and gasoline-associated VOCs were detected in soil from Probes P2 and P5 and in groundwater from Probe P5. TPH as oil was also relatively higher in Probes P3 and P4 with samples coming from sand perhaps used as UST excavation backfill. TPH as oil was also high in Probe P6. Analytical results are listed in Tables 3 through 9, with Figures 3 and 4 showing soil and groundwater results, respectively, 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 and ecological receptors (Figure 5). Chemical results were then screened against risk-based concentrations (RBCs) for identified exposure pathways and receptors. This risk screening identified TPH as gasoline and its associated constituents exceeding RBCs in soil and groundwater in primarily Probe P5, but also Probe P2, to current and future residents and future occupational workers from direct contact with soil; to residents and future occupational workers from volatilization to outdoor air and vapor intrusion; and to future construction/excavation workers with contact with groundwater in excavations. Groundwater from Probes P5 and P6 also posed a risk to aquatic receptors from TPH, several VOCs, low molecular weight PAHs, benzo(g,h,i)perylene, and/or dissolved lead. Other soil RBC exceedances included TPH as gasoline, TPH as diesel/oil, and naphthalene to plants and/or invertebrates, lead and high molecular weight PAHs to birds, and carcinogenic PAHs to residents.
- Upon further data review, TPH as gasoline and its associated VOCs in Probe P5 likely pose the greatest concern to people from vapor intrusion due to the proximity of Probe P5 to the store structure and that contaminated groundwater likely migrates beneath the building toward Wilson Creek. For ecological receptors, contaminated groundwater from the area of Probes P5 and P6 could migrate to Wilson Creek, resulting in exposure to aquatic receptors. Other potential soil exposures identified by RBC exceedances were considered relatively lower and/or less likely due to lack of habitat, presence of asphalt pavement, depth, and limited extent.

- To further assess if unacceptable risks are present to people or aquatic receptors, GSI recommends performing a vapor intrusion investigation and surface water sampling, respectively. A vapor intrusion investigation would likely include sub-slab soil vapor and/or indoor air sampling to provide empirical data for comparison to human health RBCs. Analysis of surface water samples from Wilson Creek upstream and downstream of the building would be used to assess if contaminants attributable to the site are present and result in aquatic receptor RBC exceedances downstream of the site.

1 Introduction

This Project Report presents the results of investigation activities completed in February 2024 at the former Sumner Store leaking underground storage tank (LUST) site #06-94-0030 near Coos Bay, 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 4 of Task Order 065-23-12.

1.1 Purpose

In 1994, four gasoline underground storage tanks (USTs) were decommissioned by removal at the site. Six soil samples were analyzed for hydrocarbon identification (HCID), which indicated diesel-range hydrocarbons in five samples. Follow-up quantification for diesel was conducted on three samples, with results detecting diesel up to 14 milligrams per kilogram (mg/kg). Because follow-up analysis was not performed on the two other samples as well as analyses for chemical constituents in diesel, the site had not been fully assessed.

The purpose of this project was to assess for subsurface contamination in the vicinity of the former USTs and fueling pumps at the site by obtaining and completing chemical analyses on soil and groundwater samples. Analytical results would be reviewed to determine whether contamination exists, and the data screened against DEQ risk-based concentrations (RBCs) to assess whether contamination at the site, if present, 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 9, 2024, Former Sumner Store Project Work Plan (GSI, 2024a). These activities consisted of the following tasks.

- Advancing six push probes with temporary groundwater monitoring wells to collect soil and groundwater samples.
- 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 and groundwater samples for petroleum hydrocarbons and 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 our activities at the site. References are provided in Section 8.

2.1 Site Location and Description

The former Sumner Store site is located at 95646 Coos-Sumner Lane (formerly 4333 Coos City-Sumner Road) in the unincorporated community of Sumner about 10 miles southeast of Coos Bay, Oregon (Figure 1). The site property (Map ID 26S1229DC tax lot 400) covers approximately 0.51 acres and is situated in the SE1/4 of the SW1/4 of Section 29, Township 26 South, Range 12 West, Willamette Meridian. Adjacent properties are residential, agricultural, and undeveloped land.

Two structures are located on the site property: the former Sumner Store by the road and an adjacent shed northwest of the store. The store straddles over Wilson Creek and is currently vacant; however, during sampling activities, a trailer in the back of the property was supplied with water piped from the community cooperative water supply. The dates of operation for the Sumner Store are unknown, but according to the Coos County assessor office, the store structure was built in 1947 (Coos County, 2023). As part of its operations, the store also sold fuel. Four USTs and two fueling pumps were located in a graveled/paved area between the road and the store. Figure 2 shows the approximate UST and pump locations based on a sketch from when the USTs were decommissioned by removal in 1994.

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 the February 2024 investigation activities and the Oregon Water Resources Department (OWRD) database (OWRD, 2024).

Topography. The site is at an elevation of approximately 11 feet mean sea level (msl) and situated within a valley incised by Catching and Wilson Creeks, which flow into Catching Slough north of Sumner (Figure 1). Wilson Creek flows through the site property and beneath the former Sumner Store. During GSI's February 2024 investigation activities, the creek was running high due to recent rainfall and was almost to the base of the former store. The ground surface at the site and valley bottom is level, sloping slightly towards Catching Creek. To the northwest and southeast, hills rise up to 400 feet msl above the valley floor. The site is mostly paved but blanketed by up to 6 inches of surface sediment.

Geology. Investigation activities in February 2024 encountered asphalt pavement or up to 0.5 foot of silty sand over the asphalt pavement at the ground surface at the site. Beneath the pavement, silty sand and clayey silt was present to 10 feet below ground surface (bgs), the maximum depth of exploration. In two probes (P3 and P4) (Figure 2), fine to medium sand was encountered suggesting that sand was used as backfill for the UST excavations. Nearby OWRD logs record clay and silt within approximately 30 feet bgs, underlain by claystone and sandstone. Bedrock in the vicinity of the site is likely marine feldspathic sandstone of the Coaledo Formation (Black and Madin, 1995).

Hydrogeology. Shallow groundwater in the push probe explorations completed in February 2024 stabilized between 0.6 to 1.1 feet bgs in all probes except Probe P6 where it stabilized at 5.5 feet bgs (Table 1). This indicates that groundwater in this area likely has a direct hydraulic connection with Wilson Creek, which was flowing at a similar elevation at the time. Groundwater levels are anticipated to be lower during drier times of the year, as no groundwater was reportedly encountered when the USTs were removed in May 1994. Petroleum contamination is deep as 5 to 7 feet, suggesting that typical low groundwater is at this depth.

OWRD logs for nearby water wells have recorded static water levels between 3 to 40 feet bgs (Appendix A). These wells are greater than 40 feet deep and tap deeper groundwater aquifers.

2.3 Previous Environmental Activities

In 1994, Pacific Coast Environmental decommissioned four USTs by removal from the front area of the former store (Figure 2). Two 500-gallon USTs and one 1,000-gallon UST were removed from along the southeast portion of the storefront, and another 1,000-gallon UST from the northwest portion. The USTs reportedly held gasoline.

During removal, petroleum odors were noted at three of the USTs, and approximately 10 cubic yards of surface soil with residual gasoline spillage was reportedly placed on plastic within a hay bale berm. A release was reported, with DEQ assigning the site as LUST #06-94-0030. Six soil samples were obtained from the excavation limits for analysis (estimated as one from each end of the UST as shown in Figure 2). Groundwater was not encountered in UST excavations. After completion, the excavations were reportedly backfilled with pit run. However, Probes P3 and P4 (near the two larger former USTs) encountered sand, unlike nearby probes, which had silty sand, suggesting sand may have been used as backfill.

The six samples were analyzed by HCID, with diesel-range hydrocarbons detected in five samples. Follow-up analysis for diesel was only performed on three of the samples with results ranging from 10 to 14 mg/kg diesel. There was no follow-up analysis on the two other samples to quantity the HCID diesel detections or for chemical constituents in diesel such as polycyclic aromatic hydrocarbons (PAHs). Reportedly, the bermed soil was also sampled with results below DEQ cleanup standards. No information about this sampling event or what became of the soil is present in DEQ's files.

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 project site 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 investigation findings, chemical contamination is present where the former USTs and pump island were presumably located. Based on detected contamination and to encompass current and future site uses, the LOF for the site was defined to include the area bounded by the property line, Coos City Sumner Road right-of-way, and the opposing bank of Wilson Creek. This partially includes the footprint of the Former Sumner store and the banks of Wilson Creek upon which it was built. The LOF is shown in Figure 2.

3.2 Land Use

Based on Coos County zoning maps, the site property is within the Coos Bay Estuary Management Plan boundary and specifically in the Catching Slough Shoreline District with zoning designation Rural Shorelines (Coos County, 2024). Except for the area across Coos-Sumner Lane, adjacent properties are also the same designation. The zoning district consists of generally diked farmland that is to be managed to maintain the present low-intensity, rural character and uses in a manner compatible with protection of the aquatic resources. Permitted uses include residential, agriculture, roadways, and recreation. While the site was once used for a store, the current zoning prohibits commercial use. Currently, the site has a mobile residential trailer on the southern corner of the property, which is used only during a portion of the year. Adjacent properties are undeveloped.

Across Coos-Sumner Lane to the northeast are three residences in an area of Sumner that is zoned as Rural Center. The intent of this designation is a commitment to rural residential, commercial, and public/semi-public uses. Other zoning designations in the area include Conservation Aquatic along Catching Creek to the west (for protecting aquatic resources) and Exclusive Farm Use to the south and across Catching Creek to the west. These lands are currently used for agricultural purposes.

Additionally, 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. The investigation area at the site had essentially no habitat, with spots of grass off the along the former store front and along the shoulder of Coos-Sumner Lane. Adjacent areas south and west of the site have open habitat and have been inventoried as wetlands (GSI, 2024c). Wilson Creek, which flows beneath the former store structure, is listed as a riverine wetland. During our investigation activities, birds were observed in the area.

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 that the entire

surrounding areas consisting of private residences are using a shared water system. Shallow groundwater near Wilson Creek is not used by the residents.

Cooperative Water Supply. In 1927, George Gray obtained a surface water right to pipe water to his residence from a dam on an unnamed stream just northeast of town (Permit No. 7927; OWRD, 2023). The water system was expanded to the community of Sumner in 1928, being transferred over to the Sumner Water Corporation in 1969 when the town had a population of 60 people (Permit No. 34481; OWRD, 2023). Currently, the Sumner Water Co-op has 15 connections serving 75 people (Oregon Health Authority, 2024).

Water Well Search. GSI conducted a search for water well logs within Sections 29 and 32, Township 24 South, Range 12 West, Willamette Meridian. Eleven water well records were identified in these sections (OWRD, 2024; Appendix A). All wells are domestic, range from 40 to 188 feet deep, and generally screened in claystone or sandstone (one in gravel), with the top of screens varying between 8 and 100 feet bgs. The records were reviewed, and the two nearest water wells that could be located were approximately 0.3 miles from the site. These wells are as follows (logs are included in Appendix A):

- COOS 2612 is located 0.3 miles north of the site and west of Catching Creek. The well was drilled in 1972 to 70 feet bgs and has 50 feet of casing, thus drawing groundwater from a claystone between 50 and 70 feet bgs.
- COOS 53625 is located on the hillside about 0.3 miles east of the site, along the east edge of Sumner. The well was drilled in 2006 to 188 feet bgs and is screened from 100 to 188 feet. The well location is at an elevation of approximately 210 feet msl, which puts its base higher in elevation than the site.

Findings from the water well search indicate that water wells are still being installed in the area, but not in close proximity to the site likely due to the availability of water from the Sumner Water Co-op. No water wells were identified within Sumner (old town extent). For productive groundwater, wells need to be drilled deeper into bedrock such as recent well COOS 53625.

Water Use Survey. In January 2024, GSI inquired of the site property owner regarding the source of water to the property and he confirmed that the site is connected to Co-op water supply. In February 2024, GSI personnel completed an in-person water use survey by interviewing available residents in the surrounding area. One contacted resident indicated they were on a Co-op water supply, did not have a water well, and did not plan on making changes to their water system. Mail-in questionnaires were left at other nearby residences where the residents were not present, but none have been returned to GSI. According to the distribution map for the Sumner Water Co-op water rights, nearby residences have water pipes extending to their properties.

Aquatic Resources. In preparation for site investigation, GSI gathered and reviewed federal and state threatened and endangered (T&E) species information for an Endangered Species Act (ESA) review to provide to the U.S. Environmental Protection Agency (EPA) for a “No Effect” determination (GSI, 2024b). Besides identifying Wilson Creek as a riverine wetland, documentation and agency interviews indicated that coho salmon (a threatened species) may pass through the site to spawn upstream and move downstream as fry/smolt. The creek could provide habitat for the northwestern pond turtle (a species of concern).

Summary. GSI’s water use determination indicates that the site and adjacent properties are connected to a cooperative water system with a source in the hills to the east/northeast. Water usage is not reasonably likely to change in the future. No water wells have been installed in the immediate surrounding area. Identified wells are 0.3 miles or more away and tap groundwater from bedrock (claystone and sandstone). Therefore, it is unlikely that impacted groundwater in the LOF would pose a human health risk. For ecological receptors, if contaminated groundwater were to emerge as surface water in Wilson Creek, aquatic organisms could be exposed as well as terrestrial receptors contacting and/or drinking from the creek.

4 Site Investigation Activities

On February 5, 2024, GSI performed investigation activities to assess subsurface conditions in the vicinity of the former USTs and fueling pumps at the former Sumner Store project site. Activities included completing push probe explorations and collecting soil and groundwater samples for chemical analysis. 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 a safety briefing with the drilling subcontractor prior to initiating field activities.

Endangered Species Act Information. GSI gathered and reviewed federal and state T&E species information for the 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 2, 2023, also provided observations regarding potential habitat. The result of this work was documented in a letter (GSI, 2024c) 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 December 2023, DEQ obtained an access agreement with the property owner to conduct investigative activities at the site. GSI also notified the property owner 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 had also called in a public locate prior to our November 2, 2023, site visit to assist in locating probe locations). GSI also had APS check proposed probe locations and mark utilities at and near the site prior to beginning field activities. A high pressure natural gas line is located along the southwest side of Coos-Sumner Lane and NW Natural indicated that if probes were conducted within 10 feet of the line, an employee from NW Natural would need to be present. Fortunately, probe locations were greater than 10 feet away from the line.

Cultural Resource Consultation. As assessment activities included soil sampling, GSI consulted with the State Historic Preservation Office (SHPO) to assess whether cultural or historic 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 consulting with the appropriate Tribes (SHPO, 2023). DEQ notified the

appropriate Tribes regarding the planned investigation. To be prepared if cultural resources were encountered during field activities, GSI prepared an Inadvertent Discovery Plan that presented standard operating procedures in the event of an inadvertent discovery (GSI, 2024b). No historical or cultural artifacts were observed during our investigation activities.

4.2 Push Probe Explorations and Sampling

On February 5, 2024, BB&A completed six push probes on the site for assessing subsurface soil and groundwater conditions. Probes were performed in accordance with OWRD regulations (OAR 690-240). GSI representatives were present to observe the push probe activities, document subsurface conditions, and collected 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 for assessing subsurface contamination at and downgradient (toward Wilson Creek) of the former USTs and fueling pumps at the site. Descriptions of the locations and any adjustments from the Work Plan target locations are as follows:

- **P1:** This probe was completed to assess subsurface conditions between the southernmost former UST and the former Sumner Store building. This location is also downgradient of the former UST.
- **P2:** This probe was completed to assess subsurface conditions in the area of the former fueling pumps and downgradient of the middle UST removed from the southeastern excavation.
- **P3:** This probe was completed to assess subsurface conditions downgradient of the northernmost former UST in the southeastern excavation. It was moved approximately 2 feet northeast relative to the Work Plan location to achieve overhead clearance from the Sumner Store roof.
- **P4:** This probe was completed to assess subsurface conditions downgradient of the removed UST in the northwestern excavation.
- **P5:** This probe was completed to assess subsurface conditions between the former UST excavations.
- **P6:** This probe was completed to assess subsurface conditions along another potential downgradient direction of the removed UST in the northwestern excavation.

4.2.2 Sampling Activities

Sampling activities were conducted in accordance with our Work Plan (GSI, 2024a) and DEQ's UST Quality Assurance Project Plan (QAPP; DEQ, 2016). The Work Plan included a contingency soil vapor sample should contamination be encountered; while field indications of contamination were present in Probes P2 and P5, the very shallow groundwater table near these probes (1.1 feet bgs and less) precluded soil vapor sampling.

Exploration Depth and Soil Sampling. All probes were completed using a direct-push drill rig. The probes were advanced to a depth of 10 feet except for P1 which was only completed to 5 feet as the borehole kept collapsing. Continuous soil cores were obtained using a 5-foot-long soil sampler. Upon retrieval, each core was opened for sampling, field screening, and description of lithology and other observations (e.g., odor, staining). Below surface materials (e.g., gravel, pavement), soils consisted of silty sand and clayey silt. Probes P3 and P4 had fine to medium sand suggesting that sand was used as UST backfill (the presence of buried asphalt within the sand in Probe P3 also attests to this). Strong field indications of contamination were noted in probe P2 (2.5 to 5 feet bgs) and P5 (1.7 to 7 feet bgs). Core intervals, recovery, field screening results, and lithologic observations are shown on the logs in Appendix C.

One soil sample was obtained from the first 5-foot drive below and to avoid surface materials. If recovery was sufficient, two soil samples were collected in subsequent 5-foot cores to represent material from the upper and lower portions of the core. Soil samples were transferred from the core into sampling jars. Soil samples for volatile organic compound (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 was generally between 0.6 and 1.1 feet bgs, except for Probe P6, which was at 5.5 feet bgs (Table 1).

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 except for Probe P6 which purged dry (it was allowed to recover prior to sample collection). Sheens were observed on purged water from Probes P5 and P6; a petroleum-like odor was also noted for Probe P5. 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. For most samples, groundwater was clear or almost clear; water from Probe P6 was turbid. For dissolved lead, groundwater was field filtered using a 0.45-micron filter. A duplicate groundwater sample (P2-D) was obtained from Probe P2.

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. Soil was placed on top of the bentonite to match the grade and material. 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 hand taped from site structures and documented photographically.

4.3 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.

4.4 Investigation-Derived Waste Management

IDW consisted of excess soil cuttings from push probes, purged groundwater from the 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 for off-site transport. In total, one drum for IDW soil and one drum for IDW water were generated. Samples of each drum were obtained. IDW soil was

profiled instead by using data on soil samples from the probes. The IDW water sample was analyzed for profiling. Both IDW soil and water were profiled as non-hazardous. ACTEnviro picked up the IDW from the site on March 28, 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 select soil 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

Based on reported storage of gasoline in the former USTs and the previous detections of diesel-range hydrocarbons, chemicals of potential concern (COPCs) at the site include gasoline, diesel, and their associated chemical constituents or additives (e.g., benzene, PAHs, and lead). The analytical methods that were used to test for these COPCs are as follows:

- Total petroleum hydrocarbons (TPH) as gasoline by Northwest Method NWTPH-Gx
- TPH as diesel/oil by Northwest Method NWTPH-Dx (a silica gel cleanup was used on soil samples to remove biogenic material)
- VOCs by EPA Method 8260D
- PAHs by EPA Method 8270E-SIM
- 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 with field indications of contamination were preferentially selected. Samples were also selected to delineate the vertical extent of apparent soil contamination, assess surface soils (0 to 3 feet bgs), and where no field indications were present, at the depth of former UST bottom (assumed around 5 feet bgs). Selected samples were analyzed for TPH as gasoline, TPH as diesel/oil, and VOCs. Four samples were also analyzed for PAHs and lead. A field duplicate sample (P2-S1-D) from Probe P2 was analyzed for the same samples as the primary sample (P2-S1).

Groundwater Samples. Groundwater samples were analyzed for TPH as gasoline, TPH as diesel/oil, VOCs, PAHs, and dissolved lead. A field duplicate from Probe P2 was analyzed for TPH and VOCs.

IDW Samples. Results on soil samples were used to profile IDW soil. As IDW water contained a mixture of purge water and decontamination, the IDW water sample underwent profiling analysis for TPH as gasoline, TPH as diesel/oil, VOCs, and total lead.

QC Samples. Besides the soil and groundwater field duplicates, the rinsate blank collected during decontamination (Section 4.3) was analyzed for TPH as gasoline, TPH as diesel/oil, VOCs, PAHs, and total lead. 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 data validation report are included in Appendix D. Chemical results were compiled in summary tables. Soil data are listed in Tables 3 through 5, and groundwater data are listed in Tables 6 through 8. 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 the probe samples, including field duplicate, is described below. Figure 3 presents TPH results as well as COPCs that had RBC exceedances after screening in Section 7.

TPH. TPH was detected in every sample (Table 3). The highest gasoline concentrations were detected in Probes P2 (up to 1,230 mg/kg) and P5 (up to 1,600 mg/kg). Probe P2 was in the location of the former fuel pumps. Based on a sketch of the former UST locations, Probe P5 was not located near former USTs and so this detection could be the result of a pipe or surface release. TPH as oil was also relatively higher in Probes P3 and P4 at 280 and 560 mg/kg, respectively, with samples coming from sand perhaps used as UST excavation backfill.

VOCs. VOCs were detected in samples from Probes P1, P2, and P5 (Table 4). As expected, VOCs concentrations were highest in Probes P2 and P5 where the highest gasoline concentrations were detected. Additionally, the VOCs present are typically of gasoline, such as benzene, toluene, ethylbenzene, and total xylenes (BTEX). Methyl tert-butyl ether (MTBE) was detected in Probe P5 (up to 0.0189 mg/kg); its presence indicates a release in 1979 or later as MTBE was only used as an octane enhancer since 1979 (EPA, 2024a).

PAHs. PAHs were detected in samples from Probes P1, P2, and P5 (Table 5). PAHs in Probe P1 consist of both low and high molecular weight PAHs (essential equivalent to the non-carcinogenic and carcinogenic PAHs (cPAHs), respectively in Table 5). As this was a shallow sample, it could have been affected by UST releases (gasoline), road runoff (oils), and/or asphalt pavement (cPAHs). Probes P2 and P5 have PAHs typical of gasoline including naphthalene and other non-carcinogenic PAHs.

Lead. Lead was detected ranging from 10.2 to 39.5 mg/kg (Table 3). Of these, the highest concentrations were in Probes P1 and P2. Only the 39.5 mg/kg lead in sample P1-S1 (1 to 5 feet bgs) exceeded the published natural background lead concentration of 34 mg/kg (DEQ, 2018).

5.2.2 Groundwater Chemical Results

A summary of the groundwater results on the probe samples, including field duplicate, is described below. Figure 4 presents TPH, BTEX, naphthalene, and dissolved lead results.

TPH. TPH was detected in groundwater from Probes P4, P5, and P6 (Table 6). TPH as gasoline was only detected in the sample from Probe P5 with a concentration of 58,300 micrograms per liter (µg/L). Diesel-range hydrocarbons were also detected in Probe P5 at 2,000 µg/L, likely from heavier gasoline hydrocarbons. TPH as oil was highest in Probe P6 at 1,120 µg/L. While Probe P2 had a high gasoline concentration in soil, TPH as gasoline was not detected in groundwater. This may be due to where sampling occurred: groundwater in Probe P2 was sampled at approximately 1.5 feet bgs, and the soil sample was obtained from 2.5 to 5 feet bgs.

VOCs. VOCs were detected in Probes P2, P3, P5, and P6 (Table 7). However, only the sample Probe P5 had the high VOC concentrations, with up to 650 µg/L benzene. MTBE was not detected, possibly due to elevated detection limits and/or it had dissipated as it is very soluble.

PAHs. PAHs were detected in Probes P2, P3, P5, and P6 (Table 8). Probe P5 had the highest PAH concentrations, with 404 µg/L naphthalene, 47.0 µg/L 1-methylnaphthalene, and 118 µg/L 2-methylnapthalene. These compounds would be expected in gasoline-contaminated groundwater.

Lead. Dissolved lead was detected in Probes P5 and P6 at 6.68 and 1.01 µg/L, respectively. The relatively higher concentration of 6.68 µg/L lead in Probe P5, with the associated high gasoline concentrations, suggests that lead is due to additives in the gasoline and not from natural background conditions.

5.2.3 Investigation-Derived Waste and Blank Samples

Analytical results on IDW water and blank samples are listed in Table 9. For the IDW water sample, TPH and VOCs were detected, consistent with primary groundwater samples. Total lead was detected at 32.4 µg/L, slightly more than dissolved lead in the primary samples and probably due to turbidity. These results were sufficient for profiling the IDW water for treatment and disposal (Section 4.4).

For the rinsate blank, minor detections of benzene, 1,2,3-trimethylbenzene, and acenaphthene were detected (Table 9). These detections were considered during data validation (Appendix D), and no associated sample data were flagged. For the trip blank, no VOCs were detected.

6 Conceptual Site Model

Based on the data gathered from sampling activities, a 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 could pose an unacceptable risk to human or ecological receptors.

6.1 Sources and Extent of Contamination

Chemical results identified relatively high gasoline concentrations in soil and/or groundwater from Probes P2 and P5. The source of this contamination is the former UST system at the site, presumably the fueling pumps and piping, respectively. This contamination extends from near the ground surface to 5 feet bgs lessening between 5 and 7 feet bgs. The two highest oil-range TPH detections were present at 5 to 7 feet in sand in Probes P3 and P4 (shallower soil was not analyzed). It is possible that this sand is backfill used to fill the UST excavations as surrounding soils at this depth are silty sand and/or clayey silt; buried asphalt was also encountered in Probe P3. Oil-range TPH was highest in groundwater from Probe P6, although soil samples only had slight detections of oil-range TPH.

Based on available data, sources of contamination are associated with the former UST system and its removal. Other sources could be road runoff or historical oil leaks from automobiles that had parked at Sumner Store. PAH contamination in Probe P1 possibly includes particles from asphalt pavement. The extent of petroleum contamination extends in front of the former Sumner Store from the former UST nests and likely downgradient toward Wilson Creek. This area is encompassed by the LOF shown in Figure 2.

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 5.

6.2.1 Receptors

Currently, residents at the site are present only during portions of the year and live in the trailer further back onto the property. Residential use of the property is reasonably anticipated in the future. While the former Sumner Store was used as a commercial site prior to its closure, current zoning prohibits commercial use. GSI, however, cannot conclude that the property will not be used for commercial purposes as it was in the past and a zoning variance might be granted; thus, occupational workers could be potential receptors. Additionally, future earthwork activities conducted in front of the former store (i.e., utility installations) might expose construction and excavation workers to subsurface contamination.

The ecological scoping checklist and a review of T&E species and habitat were completed as part of investigation activities for the site (Appendix A and GSI, 2024b, respectively). While the ground surface between the former store and Coos-Sumner Lane essentially has no terrestrial habitat (except for spots of grass), Wilson Creek does. Wilson Creek, listed as a riverine wetland, is downgradient of detected site contamination. Groundwater migration into the creek could result in exposures to freshwater aquatic life, including migrating coho salmon (a threatened species) and, if present, the northwestern pond turtle (a species of concern). Significant vegetation grows along the banks of Wilson Creek. Birds and mammals may contact and consume surface water from Wilson Creek at and downstream of the site.

6.2.2 Exposure Pathways

We evaluated various exposure pathways for human and ecological receptors based on DEQ's Risk-Based Decision Making for the Remediation of Contaminated Sites (DEQ, 2017b) and Conducting Ecological Risk Assessments (DEQ, 2020). 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 our 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). Field screening and chemical results on soil from the push probes indicate that contamination is present in shallow soil (Probes P2 and P5) and deep soil (Probes P3 and P4). While asphalt pavement exists at or near the ground surface, site activities or pavement removal could expose current and future residents, future occupational workers (if commercial use is allowed), future construction workers, and future excavation workers to shallow soils. Construction and excavation workers could also contact deep soil. Shallow soil exposure to terrestrial ecological receptors is possible but is considered limited due to the lack of habitat being essentially a shoulder to a main thoroughfare. As such, this pathway is complete to human receptors and possibly to terrestrial ecological receptors.

Contact with contaminated soils can also occur through wind erosion of surfaces soils with subsequent exposure to receptors. Due to the generally hard packed or paved ground surface in front of the former store, this exposure route is not present or considered negligible. Nonetheless, inhalation of contaminated particulates is still considered in the DEQ's derivation of RBCs for the direct contact pathway.

Uptake of Contaminants in Soil by Biota. This pathway involves the update of contaminants in surface soil at the site by vegetation or invertebrates (e.g., worms), and the subsequent consumption by a terrestrial receptor. Currently, the area within the front of the store has hard packed and paved surfaces with minimal vegetation present in soil if present over asphalt pavement. With the lack of food sources and habitat for terrestrial receptors, 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, particularly in Probe P5. VOCs could migrate to outdoor air and, given the close proximity of the former store structure, into the building. As such, this pathway is complete.

Leaching from Soil to Groundwater. This pathway involves both leaching of contaminants to groundwater and then the subsequent use of groundwater. At this site, chemical analysis on groundwater has shown that historical releases have impacted groundwater, and thus groundwater data are more applicated to assess

exposure via groundwater use. However, because the water use determination for the site found that groundwater is not currently used or reasonably likely to be used, this pathway is not complete.

Groundwater Use. This pathway consists of pumping groundwater to the surface where it may be ingested or used. Based on the water use determination for the site, groundwater is not currently used at the site or nearby vicinity as municipal water is readily available. As such, this pathway is considered incomplete.

Groundwater Contact by Construction or Excavation Workers. The shallow groundwater table is anticipated to be typically in the range of 5 to 7 feet based on chemical results on soil and the lack of groundwater during the 1994 UST removals. In February 2024 during a rainy period of time, it was encountered in most probes at the site at approximately 1 foot bgs. Based on these depths and that contaminated groundwater is present, this groundwater contact pathway for construction or excavation workers is complete.

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. Contaminated groundwater is present in front of the former store and the assumed groundwater gradient is toward Wilson Creek, which due to its close proximity may receive contaminated groundwater resulting in ecological exposures. As such, this pathway may be complete. For soil, stormwater erosion is unlikely as the site is mostly paved, flat, and vegetation exists toward the creek, all of which limit contaminated soil particles (if present at the surface) from eroding into the creek.

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.” Possibly complete pathways are indicated by an “O.” These pathways include the following:

- Direct contact with shallow soil by current and future residents, future occupational workers (if commercial use is allowed), future construction workers, future excavation workers, and terrestrial ecological receptors on the site.
- Direct contact with deep soil and groundwater by future construction workers and future excavation workers on the site.
- Inhalation of VOCs by current residents, future residents, and future 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.
- Surface water use by aquatic and terrestrial ecological receptors in and along Wilson Creek.

7 Risk-Based Screening

To evaluate the potential risks posed by contamination at the site to human and ecological 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, 2024). Future human receptors at 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, 2024b). 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, we compared the summation of both diesel and oil results to diesel RBCs in this report. Because lead is naturally present in soil, only results that were detected above the natural background lead concentration for the Coast Range physiographic province (DEQ, 2018) were screened against its RBCs.

Ecological Receptors. DEQ has published guidance on ecological risk assessment (DEQ, 2020), which includes soil RBCs for plants, invertebrates, birds, and mammals. DEQ also provides soil RBCs for birds and mammals for both T&E and non-T&E species and as ground-feeding and top consumers. Because terrestrial T&E species are not present at the site and general vicinity, data were screened against non-T&E RBCs. The lower RBCs for the lower ground-feeding wildlife were also used for screening. For aquatic receptors, DEQ has developed both chronic and acute freshwater RBCs (DEQ, 2021). The lower chronic RBCs were used.

Data Reduction and Summations. Some RBCs apply to summations of groups of analytes, such as high molecular weight PAHs (HPAHs). 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 also used for deriving a TPH as diesel/oil concentration.

For 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.

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 elevating an MDL above its RBC for a given contaminant. Upon review and validation, the data are sufficient and suitable for assessing potential unacceptable risks to human health and the environment.

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 (for lead in soil, the concentration first required exceedance of its natural background concentration). RBC exceedances are discussed below.

Soil. Chemical analyses detected the following contaminants in surface soil or subsurface soil exceeding RBCs for human or ecological receptors:

- TPH as gasoline in Probes P2 and P5 exceeded residential RBCs for direct contact and plant and invertebrate RBCs.
- TPH as diesel/oil in Probes P3 and P4 exceeded plant and invertebrate RBCs.
- Naphthalene in Probe P5 exceeded residential RBCs for direct contact and volatilization to outdoor air.
- Naphthalene in Probes P2 and P5 exceeded its plant RBC.
- 1-Methylnaphthalene in Probe P2 exceeded its residential RBC for direct contact, and in Probe P5, it exceeded both residential and occupational RBCs for direct contact.
- Lead and HPAHs in Probe P1 exceeded bird RBCs.
- cPAHs in Probe P1 exceeded its residential RBC for direct contact.

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

- TPH as gasoline in Probe P5 exceeded residential and occupational RBCs for vapor intrusion, the contact RBC for groundwater in an excavation, and its aquatic receptor RBC.
- TPH as diesel/oil in Probes P5 and P6 exceeded residential and/or occupational RBCs for vapor intrusion and its aquatic receptor RBC.
- Several VOCs (e.g., benzene, ethylbenzene), low-molecular weight PAHs (LPAHs) (e.g., naphthalene) in Probe P5 exceeded residential and occupational RBCs for vapor intrusion and aquatic receptor RBCs.
- Benzo(g,h,i)perylene in Probe P5 exceeded its aquatic receptor RBC.
- Dissolved lead in Probes P5 and P6 exceeded its aquatic receptor RBC.

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 or ecological receptors.

Contamination posing the greatest risk at the site is gasoline and its associated constituents (VOCs and LPAHs, specifically naphthalene and methylnaphthalenes) detected in Probes P2 and P5. Gasoline contamination in soil from these probes is between 2 and 5 feet bgs and was present in groundwater from Probe P5. This contamination potentially could pose unacceptable risks to the following human receptors:

- Current and future residents through direct contact with soil (P2 and P5) and VOC migration to outdoor air and vapor intrusion from soil and groundwater (P5)

- Future occupational workers through direct contact with soil (P5) and VOC migration to outdoor air and vapor intrusion from groundwater (P5)
- Future construction/excavations workers through contact with groundwater (P5)

Of these pathways, vapor intrusion poses the greatest concern due to the proximity of Probe P5 to the store structure and that gasoline, benzene, ethylbenzene, and naphthalene in groundwater were significantly over RBCs (exceedance ratios, the concentration divided by the RBC, were up to 486). Due to high groundwater, sampling of soil vapor to better assess vapor intrusion could not be conducted (DEQ eliminated volatilization-pathway RBCs for soil in 2023 in favor of sampling soil vapor). Direct contact pathways for the gasoline contamination and for cPAHs in Probe P1 do not pose as great a risk as exceedances are slight (exceedance ratios of up to 2.4), beneath asphalt pavement, and limited to a few probe locations. Future exposures can be mitigated by notification and use of personnel protection.

For aquatic receptors, contaminated groundwater from Probes P5 and P6 could pose an ecological concern should groundwater emerge in Wilson Creek. Probe P5 had TPH as gasoline and diesel/oil, lead, several VOCs, and naphthalene compounds at significant concentrations (exceedance ratios of up to 132). Probe P6 had lower levels of contamination from TPH as diesel/oil and lead. As the creek is approximately 20 to 25 feet away from these probes, some attenuation through biodegradation, adsorption, diffusion, and dispersion is anticipated so concentrations entering the creek would be less.

There were several RBC exceedances in soil for terrestrial ecological receptors, such as gasoline and naphthalene to plants and/or invertebrates in Probes P2 and P5. It is unlikely these exceedances pose an ecological concern primarily because there is essentially no terrestrial habitat between the former store and Coos-Sumner Lane where exceedances are present. Furthermore, asphalt pavement is currently present at or near the ground surface, and in the case of TPH as diesel/oil in Probes P3 and P4, the detected contamination is greater than 5 feet deep (however, if the TPH is in sand backfill, it may be shallower). Lead and HPAHs were identified above bird RBCs only at Probe P1, suggesting only a limited area for exposure (if pavement were removed) in the broader home range of birds.

8 Conclusions and Recommendations

In February 2024, GSI completed investigation activities at the former Sumner Store near Coos Bay, Oregon, to assess for subsurface contamination in the vicinity of the decommissioned USTs and fueling pumps at the site. Six push probes were completed for the collection of soil and groundwater samples. Additionally, GSI conducted a land and beneficial water use survey and completed an ecological scoping checklist.

Field observations and chemical analyses on soil samples found residual gasoline contamination from the former UST system at Probes P2 and P5. TPH as diesel/oil was also detected in sand in Probes P3 and P4 in the area from which the larger USTs were removed. Higher lead and PAH concentrations were also found in surface/near surface soil from Probe P1. Analyses on groundwater found gasoline, associated VOCs and LPAHs, and dissolved lead in Probe P5. Groundwater from Probe P6 had TPH as diesel/oil. These results confirmed that residual contamination from the former UST system was present at the site.

GSI developed a CSM to identify potentially complete exposure pathways whereby site contamination could potentially pose an unacceptable risk to human and ecological receptors. 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, TPH as gasoline and its associated VOCs in Probes P2 and P5 pose unacceptable risks by the following exposure pathways:

- Direct contact with soil by current/future residents (P2 and P5) and future occupational workers (P5)
- VOC migration to outdoor air and vapor intrusion to current/future residents and future occupational workers (P5)
- Contact with groundwater by future construction/excavation workers (P5)
- Groundwater migration to Wilson Creek with exposure to aquatic receptors (P5)

Vapor intrusion likely poses the greatest concern to people due to the proximity of Probe P5 to the store structure and that contaminated groundwater likely migrates beneath the building. For aquatic receptors, additional groundwater contaminants exceeding RBCs included dissolved lead in Probes P5 and P6 and TPH as diesel/oil in Probe P6. Other RBC exceedances were identified (e.g., PAHs) but were considered relatively lower and/or less likely due to lack of habitat, presence of asphalt pavement, depth, and limited extent.

To further assess if unacceptable risks are present to people or aquatic receptors, GSI recommends performing a vapor intrusion investigation and surface water sampling, respectively. For a vapor intrusion investigation, sub-slab soil vapor and/or indoor air sampling would be appropriate to provide empirical data for comparison to human health RBCs. Although groundwater levels might be lower, soil vapor probes near the building (e.g., Probes P2 and P5) would likely encounter contamination and, thus, would not be representative measure of contaminants entering the building. Surface water sampling of Wilson Creek would be conducted upstream (as background) and downstream of the building to assess if contaminants attributable to the site are present and are above RBCs for aquatic receptors.

9 References

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Table 1. Groundwater Elevations and Field Parameters
Former Sumner Store, Coos Bay, Oregon

Sample Location	Date of Measurement	Depth to Water (ft bgs)	Temperature (°C)	pH	Conductivity (µS/cm)	ORP (mV)	DO (mg/L)
P1	2/5/24	0.60	8.9	7.40	226	34.8	9.02
P2	2/5/24	0.60	9.2	9.96	184	148.2	8.57
P3	2/5/24	0.75	10.8	7.08	366	-52.3	5.75
P4	2/5/24	0.85	10.5	7.19	276	77.2	7.41
P5	2/5/24	1.1	10.8	6.71	770	-53.5	2.50
P6	2/5/24	5.5	10.8	6.93	309	-60.2	3.22

Notes, Acronyms, and Abbreviations
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 Sumner Store, Coos Bay, Oregon

Probe	Sample ID	Sample Depth (ft bgs)	Analysis						Analysis Rationale
			TPH-G	TPH-Dx w/ SGC	VOCs	PAHs	Total Lead	Dissolved Lead[1]	
Soil Samples									
P1	P1-S1	1-5	X	X	X	X	X	--	Near surface sample with odor
P2	P2-S1	2.5-5	X	X	X	X	X	--	Near surface sample with odor and high PID reading
	P2-S1-D	2.5-5	X	X	X	X	X	--	QA/QC requirement
	P2-S2	5-10	X	X	X	--	--	--	Potential for vertical delineation
P3	P3-S1	1-5	--	--	--	--	--	--	--
	P3-S2	5-7	X	X	X	--	--	--	Depth aligned with prior UST
	P3-S3	8.7-10	--	--	--	--	--	--	--
P4	P4-S1	1.3-3.7	--	--	--	--	--	--	--
	P4-S2	5-7	X	X	X	--	--	--	Depth aligned with prior UST
	P4-S3	8-10	--	--	--	--	--	--	--
P5	P5-S1	1.7-5	X	X	X	X	X	--	Near surface sample with high PID reading
	P5-S2	5-7	X	X	X	--	--	--	Near surface sample with high PID reading
	P5-S3	8-10	X	X	X	--	--	--	Potential for vertical delineation
P6	P6-S1	1-3	X	X	X	X	X	--	Near surface sample
	P6-S2	5-7	X	X	X	--	--	--	Depth aligned with prior UST
	P6-S3	8-10	--	--	--	--	--	--	--
Groundwater Samples									
P1		1.5	X	X	X	X	--	X	Run per work plan
P2		1.6	X	X	X	X	--	X	Run per work plan
P2-D		1.6	X	X	X	--	--	--	QA/QC requirement
P3		1.75	X	X	X	X	--	X	Run per work plan
P4		1.9	X	X	X	X	--	X	Run per work plan
P5		2.5	X	X	X	X	--	X	Run per work plan
P6		8.8	X	X	X	X	--	X	Run per work plan
Investigation-Derived Waste									
IDW Soil Drum	IDW-S	--	--	--	--	--	--	--	--
IDW Water Drum	IDW-W	--	X	X	X	--	X	--	Disposal characterization
Blanks									
Rinsate Blank	RINSE	--	X	X	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

ft bgs = feet below ground surface

IDW = investigation-derived waste

PAHs = polycyclic aromatic hydrocarbons

PID = photoionization detector

QA/QC = quality assurance/quality control

SGC = silica gel cleanup

TPH-G = total petroleum hydrocrabons as gasoline

TPH-Dx = total petroleum hydrocrabons as diesel and oil

UST = underground storage tank

VOCs = volatile organic compounds

Table 3. Soil Chemical Analyses Results: TPH and Lead
Former Sumner Store, Coos Bay, Oregon

Sample	Depth (ft bgs)	Date	TPH				Lead
			Gasoline-Range	Diesel-Range	Oil-Range	Total Diesel/Oil	
Previous Investigation			Concentrations in mg/kg				
#1 (940570-001-01)	–	5/26/94	10 U	**13**	100 U	**13**	--
#2 (940570-002-01)	--	5/26/94	10 U	10 U	100 U	100 U	--
#3 (940570-003-01)	--	5/26/94	10 U	10 U	100 U	100 U	--
#4 (940570-004-01)	--	5/26/94	10 U	**14**	100 U	**14**	--
#5 (940570-005-01)	--	5/26/94	10 U	10 U	100 U	100 U	--
#6 (940570-006-01)	--	5/26/94	10 U	**10**	100 U	**10**	--
Current Investigation			Concentrations in mg/kg				
P1-S1	1-5	2/5/24	**44.3**	**2.21 NJ**	**23.3 NJ**	**25.5 NJ**	**39.5**
P2-S1	2.5-5	2/5/24	**1,230 J**	**12.9 NJ**	5.47 U	**15.6 NJ**	**11.2 J**
P2-S1-D	2.5-5	2/5/24	**237 J**	**20.7 NJ**	**7.41 NJ**	**28.1 NJ**	**28.3 J**
P2-S2	5-10	2/5/24	**9.84**	2.48 U	6.21 U	6.21 U	--
P3-S2	5-7	2/5/24	**1.51 J**	**31.4 NJ**	**280 NJ**	**280 NJ**	--
P4-S2	5-7	2/5/24	1.26 U	40.7 U	**560 NJ**	**580 NJ**	--
P5-S1	1.7-5	2/5/24	**1,600**	**38.4 NJ**	**50.7 NJ**	**89.1 NJ**	**10.2**
P5-S2	5-7	2/5/24	**64.6**	**7.43 NJ**	**21.9 NJ**	**29.3 NJ**	--
P5-S3	8-10	2/5/24	**5.66 J**	2.46 U	6.17 U	6.17 U	--
P6-S1	1-3	2/5/24	**1.68 J**	**3.71 NJ**	**34.6 NJ**	**38.3 NJ**	**16.7**
P6-S2	5-7	2/5/24	**3.11 J**	1.98 U	**7.96 J**	**8.95 J**	--
Background Values			–	–	–	–	34
Human Health RBCs							
Direct Contact - Residential			1,200		1,100		"100"
Direct Contact - Occupational Worker			20,000		14,000		800
Direct Contact - Construction Worker			9,700		4,600		800
Direct Contact - Excavation Worker			>Max		>Max		800
Volatilization to Outdoor Air - Residential			5,900		>Max		NV
Volatilization to Outdoor Air - Occupational			69,000		>Max		NV
Ecological RBCs							
Plants			120	–	–	260	120
Invertebrates			120	–	–	260	1,700
Ground-feeding birds (Non-T&E)			5,000	–	–	6,000	23
Ground-feeding mammals (Non-T&E)			5,000	–	–	6,000	170

Notes

Current investigation utilized Northwest Method NWTPH-Gx for gasoline, and NWTPH-Dx for diesel and oil with a silica gel cleanup. Previous investigation used Oregon DEQ TPH-HCID for hydrocarbon identification and DEQ TPH-D for diesel.

Total lead by EPA Method 6020B.

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.

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) and ecological RBCs from DEQ (2020; Table 1a). The lead RBC in quotes ("") is for residential soil where other sources of lead (e.g., lead-based paint) may be present (EPA, 2024b). Background lead value from DEQ regional background values (2018).

Light blue (human health RBCs) or orange shading (ecological RBCs) denotes a detected analyte concentration exceeding a DEQ RBC, whichever is the lowest. The exceeded RBC is also shaded. For lead, the background level has to be first exceeded (DEQ, 2018).

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

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
>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 tenatively identified or presumtively as present, and the associated value is estimated
NV = not volatile
RBC = risk-based concentration
TPH = total petroleum hydrocarbons
U = not detected

Table 4. Soil Chemical Analyses Results: VOCs
Former Sumner Store, Coos Bay, 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	Acetone	*n*-Butylbenzene	sec-Butylbenzene	*tert*-Butylbenzene	1,2-Dichloropropane	p-Isopropyltoluene	4-Methyl-2-pentanone (MIBK)	1,2,3-Trimethylbenzene
Current Investigation			Concentrations in mg/kg																			
P1-S1	1-5	2/5/24	0.000864 U	**0.00254 J**	0.00136 U	**0.00300 J**	0.00120 U	0.00120 U	**0.0132**	0.000646 U	**0.0252**	**0.0298**	0.00293 U	0.00370 U	**0.079 J**	**0.171**	**0.0194 J**	0.00360 U	0.00262 U	**0.0160**	0.00421 U	0.00293 U
P2-S1	2.5-5	2/5/24	0.0226 U	0.0630 U	**0.169**	**0.0734 J**	0.0315 U	0.0315 U	**0.479 J**	0.0170 U	**0.814 J**	**1.53 J**	0.0765 U	**0.142 J**	1.77 UJ	**5.47 J**	**0.649**	**0.215 J**	0.0688 U	**0.714 J**	**0.0419 J**	**0.898 J**
P2-S1-D	2.5-5	2/5/24	0.00132 U	0.00367 U	**0.00945**	**0.00722 J**	0.00183 U	0.00183 U	**0.0434 J**	0.000987 U	**0.111 J**	**0.138 J**	**0.00615 J**	0.00564 U	0.103 UJ	**0.384 J**	**0.0612**	**0.0139 J**	0.00401 U	**0.0508 J**	**0.0245 J**	**0.0604 J**
P2-S2	5-10	2/5/24	0.00132 U	**0.00882 J**	0.00208 U	**0.0238**	0.00183 U	0.00183 U	**0.0194**	0.000990 U	0.0138 U	**0.0111 J**	**0.00557 J**	0.00565 U	**0.194 J-**	**0.0793**	**0.0102 J**	**0.0124 J**	0.00262 U	**0.00783 J**	0.00643 U	**0.0309**
P3-S2	5-7	2/5/24	0.000751 U	0.00209 U	0.00118 U	0.00141 U	0.00104 U	0.00104 U	0.000683 U	0.000563 U	0.00784 U	0.00153 U	0.00254 U	0.00321 U	0.0587 UJ	0.00844 U	0.00463 U	0.00313 U	0.00228 U	0.00410 U	0.00366 U	0.00254 U
P4-S2	5-7	2/5/24	0.00234 U	0.00234 U	0.00096 U	0.000962 U	0.00296 U	0.0941 U	0.000692 U	0.00109 U	0.000630 U	0.000519 U	0.00778 U	0.00141 U	0.0541 UJ	0.00723 U	0.00378 U	0.00427 U	0.00210 U	0.00289 U	0.00338 U	0.00130 U
P5-S1	1.7-5	2/5/24	**1.17**	**0.131 J**	**7.94**	**0.0590 J**	0.0301 U	0.0301 U	**3.03**	0.0162 U	**11.0**	**8.80**	**0.131 J**	**0.472**	1.69 UJ	**13.1**	**1.32**	**0.936**	0.0658 U	**0.894**	**0.445 J**	**20.1**
P5-S2	5-7	2/5/24	**0.0354**	**0.0499**	**0.231**	**0.200**	0.00356 U	0.00356 U	**0.403**	**0.0189**	**0.386**	**0.805**	**0.0169 J**	**0.0300**	**1.85 J-**	**0.410**	**0.0564 J**	**0.0233 J**	**0.0167 J**	**0.0393**	0.0125 U	**1.06**
P5-S3	8-10	2/5/24	**0.00240**	**0.00938 J**	**0.0155**	**0.0384**	0.00215 U	0.00215 U	**0.00606 J**	**0.0150**	**0.0249 J**	**0.0128 J**	0.00524 U	0.00664 U	**0.404 J-**	**0.0254 J**	0.00955 U	0.00646 U	0.00472 U	0.00846 U	0.00756 U	**0.108**
P6-S1	1-3	2/5/24	0.000917 U	0.00255 U	0.00145 U	0.00173 U	0.00127 U	0.00127 U	0.000835 U	0.000688 U	0.00959 U	0.00186 U	0.00310 U	0.00393 U	0.0717 UJ	0.0103 U	0.00566 U	0.00382 U	0.00280 U	0.00501 U	0.00448 U	0.00310 U
P6-S2	5-7	2/5/24	0.000926 U	0.00258 U	0.00146 U	0.00174 U	0.00128 U	0.00129 U	0.000843 U	0.000694 U	0.00967 U	0.00188 U	0.00313 U	0.00396 U	0.0724 U	0.0104 U	0.00571 U	0.00387 U	0.00282 U	0.00506 U	0.00452 U	0.00313 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	"70,000"	"3,900"	"7,800"	"7,800"	"2.5"	—	"33,000"	"34"
Direct Contact - Occupational Worker			37	88,000	150	25,000	0.73	16	57,000	1,100	23	"24,000"	6,900	6,900	"1,100,000"	"58,000"	"120,000"	"120,000"	"11"	—	"140,000"	"200"
Direct Contact - Construction Worker			380	28,000	1,700	20,000	9.0	200	27,000	12,00	580	—	2,900	2,900	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—
Volatilization to Outdoor Air - Residential			11	>Csat	36	>Csat	0.15	3.4	>Csat	340	6.4	—	>Csat	>Max	—	—	—	—	—	—	—	—
Volatilization to Outdoor Air - Occupational			50	>Csat	160	>Csat	0.65	15	>Csat	1,500	83	—	>Csat	>Max	—	—	—	—	—	—	—	—
Ecological RBCs																						
Plants			—	200	—	100	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
Invertebrates			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ground-feeding birds (Non-T&E)			—	—	—	410	—	1.6	—	—	—	—	—	—	75	—	—	—	—	—	—	—
Ground-feeding mammals (Non-T&E)			240	230	—	1.8	—	270	—	—	—	—	—	—	6.3	—	—	—	—	—	97	—

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 at the MDL.
Bold denotes a detected concentration.
Human health RBCs from DEQ (2023) and ecological RBCs from DEQ (2020; Table 1a). RBCs in quotes ("") are for residential and industrial soil from EPA (2024b).
Light blue (human health RBCs) or orange (ecological RBCs) shading denotes a detected analyte concentration exceeding a DEQ RBC, whichever is the lowest. The exceeded RBC are also shaded.

Acronyms and Abbreviations
— = not analyzed or 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
J- = estimated value, biased low
>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
TPH = total petroleum hydrocarbons
U = not detected
VOC = volatile organic compound

Table 5. Soil Chemical Analyses Results: PAHs
Former Sumner Store, Coos Bay, Oregon

Sample	Depth (ft bgs)	Date	Non-Carcinogenic PAHs										Carcinogenic PAHs											
			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	LPAHs	HPAHs	Total Carcinogenic PAHs (BaP Eq)
Current Investigation			Concentrations in mg/kg																					
P1-S1	1-5	2/5/24	0.00296 U	**0.00822 J**	**0.0184**	0.00661 U	**0.181**	**0.00337 J**	0.00637 U	0.00605 U	**0.0809**	**0.198**	**0.0784**	**0.103**	**0.101**	**0.0899**	**0.0376**	**0.0910**	**0.0107**	**0.0756**	**0.00610 J**	**0.136 J**	**0.966**	**0.141**
P2-S1	2.5-5	2/5/24	0.00343 U	0.00355 U	0.00378 U	0.00765 U	0.00373 U	0.00337 U	**0.0243 J**	**0.0455 J**	0.00379 U	0.00328 U	0.00284 U	0.00294 U	0.00251 U	0.00291 U	0.00353 U	0.00381 U	0.00282 U	0.00297 U	**0.0565 J**	**0.139 J**	0.00381 U	0.00333 U
P2-S1-D	2.5-5	2/5/24	**0.00556 J-**	0.00407 UJ	0.00434 UJ	0.00879 UJ	**0.0102 J-**	**0.00666 J-**	**0.430 J-**	**0.826 J-**	**0.0180 J-**	**0.0119 J-**	0.00326 UJ	0.00338 UJ	0.00289 UJ	0.00334 UJ	0.00406 UJ	0.00438 UJ	0.00324 UJ	0.00341 UJ	**1.03 J-**	**2.32 J**	**0.0361 J**	0.00383 U
P5-S1	1.7-5	2/5/24	**0.0177 J-**	0.00351 UJ	0.00374 UJ	0.00758 UJ	**0.00631 J-**	**0.0268 J-**	**1.63**	**3.71 J-**	**0.0407 J-**	**0.00839 J-**	0.00281 UJ	0.00291 UJ	0.00249 UJ	**0.00335 J-**	0.0035 UJ	0.00377 UJ	0.0028 UJ	0.00294 UJ	**5.16 J-**	**10.6 J**	**0.0270 J**	0.00330 U
P6-S1	1-3	2/5/24	0.00294 U	0.00303 U	0.00323 U	0.00655 U	0.00319 U	0.00288 U	0.00631 U	0.006 U	0.00325 U	0.00281 U	0.00243 U	0.00251 U	0.00215 U	0.00249 U	0.00302 U	0.00326 U	0.00242 U	0.00254 U	0.00573 U	0.00655 U	0.00326 U	0.00285 U
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
Ecological RBCs																								
Plants			0.25	–	6.8	–	–	–	–	–	–	–	18	–	18	–	–	–	–	–	1	–	–	–
Invertebrates			–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	29	18	–
Ground-feeding birds (Non-T&E)			–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	67	0.55	–
Ground-feeding mammals (Non-T&E)			–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	540	5.9	–

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) and ecological RBCs from DEQ (2020; Table 1a). RBCs in quotes ("") are for residential and industrial soil from EPA (2024b).
Light blue (human health RBCs) or orange (ecological RBCs) shading denotes a detected analyte concentration exceeding a DEQ RBC, whichever is the lowest. The exceeded RBC is also shaded.
LPAHs consist of 3 or less carbon rings and include noncarginogenic PAHs (except fluoranthene and pyrene) and napthalene.
HPAHs consist of 4 or more carbon rings and include carcinogenic PAHs (except napthalene), and fluoranthene and pyrene.
Total PAHs are the sum of LPAH and HPAH values.
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.

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
HPAHs = high molecular weight PAHs
J = Estimated value, typically below laboratory MRL
J- = Estimated value, biased low
LPAHs = low molecular weight PAHs
>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
NV = not volatile
PAH = polycyclic aromatic hydrocarbon
RBC = risk-based concentration
TEF = toxicity equivalency factors
U = Not detected

Table 6. Groundwater Chemical Analyses Results: TPH and Lead
Former Sumner Store, Coos Bay, Oregon

Sample	Date	TPH				Dissolved Lead
		Gasoline-Range	Diesel-Range	Oil-Range	Total Diesel/Oil	
Current Investigation		Concentrations in µg/L				
P1	2/5/24	31.6 U	40.0 U	100 U	100 U	0.849 U
P2	2/5/24	149 U	38.0 U	95.0 U	95.0 U	0.849 U
P2-D	2/5/24	100 U	33.3 U	83.3 U	83.3 U	–
P3	2/5/24	31.6 U	44.0 U	110 U	110 U	0.849 U
P4	2/5/24	31.6 U	33.3 U	**249 J**	**266 J**	0.849 U
P5	2/5/24	**58,300**	**2,000 NJ**	**379 NJ**	**2,379**	**6.68**
P6	2/5/24	31.6 U	**45.8 NJ**	**1,120 NJ**	**1,166 NJ**	**1.01 J**
Human Health RBCs						
Vapor Intrusion into Building - Residential		120	520			NV
Vapor Intrusion into Building - Commercial		400	1,700			NV
Volatilization to Outdoor Air - Residential		>S	>S			NV
Volatilization to Outdoor Air - Occupational		>S	>S			NV
Groundwater in Excavation		14,000	>S			>S
Ecological Receptor RBCs						
Aquatic Receptors		440	—	—	640	0.54
Birds		—	—	—	—	640,000
Mammals		—	—	—	—	16,000

Notes

TPH by Northwest Method NWTPH-Gx for gasoline and NWTPH-Dx for diesel and oil with a silica gel cleanup.
Dissolved lead by EPA Method 6020B.
Results reported at the MDL unless modified to the MRL by data validation (see Appendix D).
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, 2024), aquatic RBCs from DEQ (2021; Table 2), and terrestrial RBCs from DEQ (2020; Table 1b).
Light blue (human health RBCs) or orange (ecological RBCs) shading denotes a detected analyte concentration exceeding a DEQ RBC, whichever is the lowest. The exceeded RBC is also shaded.
Diesel and/or oil concentrations screened conservatively against the human health RBC for diesel.

Acronyms and Abbreviations

— = not analyzed or not available
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 = rhe analyte has been tenatively identified or presumtively as present, and the associated value is estimated
NV = not volatile
RBC = risk-based concentration
>S = the groundwater RBC exceeds the solubility limit.
TPH = total petroleum hydrocarbons
U = Not detected

Table 7. Groundwater Chemical Analyses Results: VOCs
Former Sumner Store, Coos Bay, 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	*n*-Butylbenzene	sec-Butylbenzene	*tert*-Butylbenzene	p-Isopropyltoluene	2-Butanone (MEK)	1,2,3-Trimethylbenzene
Current Investigation		Concentrations in µg/L																		
P1	2/5/24	0.0941 U	0.278 U	0.137 U	0.174 U	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	0.157 U	0.125 U	0.127 U	0.120 U	1.19 U	0.104 U
P2	2/5/24	0.0941 U	0.278 U	0.137 U	0.174 U	0.126 U	0.0819 U	**0.238 J**	0.101 U	1.00 U	**0.680 J**	0.322 U	0.104 U	11.3 U	0.157 U	**0.146 J**	0.127 U	**0.161 J**	1.19 U	**0.303 J**
P2-D	2/5/24	0.0941 U	0.278 U	0.137 U	0.174 U	0.126 U	0.0819 U	**0.143 J**	0.101 U	1.00 U	**0.439 J**	0.322 U	0.104 U	11.3 U	0.157 U	0.125 U	0.127 U	**0.138 J**	1.19 U	**0.218 J**
P3	2/5/24	0.0941 U	0.278 U	0.137 U	0.174 U	0.126 U	0.0819 U	0.105 U	0.101 U	1.00 U	**0.101 J**	0.322 U	0.104 U	11.3 U	0.157 U	0.125 U	0.127 U	0.120 U	1.19 U	**0.186 J**
P4	2/5/24	0.0941 U	0.278 U	0.137 U	0.174 U	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	0.157 U	0.125 U	0.127 U	0.120 U	1.19 U	0.104 U
P5	2/5/24	**650**	**27.9**	**606**	**34.4 J**	2.52 U	1.64 U	**134**	2.02 U	**377**	**310**	6.44 U	**16.7 J**	226 U	**25.1**	**22.1**	**22.0**	**16.0 J**	23.8 U	**726**
P6	2/5/24	**0.105 J**	0.278 U	**0.872 J**	0.174 U	0.126 U	0.0819 U	**0.148 J**	0.101 U	1.00 U	**0.320 J**	0.322 U	0.104 U	**12.7 J**	0.157 U	0.125 U	0.127 U	0.120 U	**3.26 J**	**0.675 J**
Human Health RBCs																				
Vapor Intrusion into Building - Residential		2.8	36,000	7	780	0.34	4.0	2,200	740	11	5,300	560	400	NITI	NITI	NITI	NITI	—	4,000,000	990
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	NITI	NITI	—	17,000,000	4,100
Volatilization to Outdoor Air - Residential		3100	>S	9,900	>S	180	2,100	>S	350,000	3,600	—	>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	—	—	—	—	—	—	—
Ecological Receptor RBCs																				
Aquatic Receptors		160	62	61	27	—	2,000	4.8	730	21	—	15	26	1,700	—	—	—	16	22,000	—
Birds		—	—	—	4,400,000	—	37,000	—	—	570	—	—	—	8,300,000	—	—	—	—	—	—
Mammals		1,100,000	1,100,000	—	1,100,000	—	2,200,000	—	—	22,000	—	—	—	220,000	—	—	—	—	20,000,000	—

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 at the MDL.

Bold denotes a detected concentration.

Human health RBCs from DEQ (2023, 2024), aquatic RBCs from DEQ (2021; Table 2), and terrestrial RBCs from DEQ (2020; Table 1b).

Light blue (human health RBCs) or orange (ecological RBCs) shading denotes a detected analyte concentration exceeding a DEQ RBC, whichever is the lowest. The exceeded RBC is also shaded.

Acronyms and Abbreviations

— = not available
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
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
VOC = volatile organic compound

Table 8. Groundwater Chemical Analyses Results: PAHs
Former Sumner Store, Coos Bay, 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	
Current Investigation		Concentrations in µg/L																			
P1	2/5/24	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	2/5/24	0.0190 U	0.0171 U	0.0190 U	0.0682 U	0.0270 U	0.0169 U	0.0687 U	**0.104 J**	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	**0.206 J**	0.0200 U
P3	2/5/24	0.0190 U	0.0171 U	0.0190 U	0.0682 U	0.0270 U	0.0169 U	**0.0992 J**	**0.0875 J**	**0.0314 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	**0.125 J**	0.0200 U
P4	2/5/24	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	2/5/24	**0.265 J-**	**0.0424 J-**	0.0190 UJ	0.0682 UJ	**0.0457 J-**	**0.341 J-**	**47.0 J-**	**118 J-**	**0.284 J-**	**0.0502 J-**	0.0203 UJ	0.0184 UJ	0.0168 UJ	**0.0204 J-**	0.0202 UJ	0.0179 UJ	0.0160 UJ	0.0158 UJ	**404 J-**	**0.0202 J**
P6	2/5/24	0.0190 U	0.0171 U	0.0190 U	0.0682 U	0.0270 U	0.0169 U	0.0687 U	**0.0736 J**	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	**0.216 J**	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
Ecological Receptor RBCs																					
Aquatic Receptors		15	13	0.02	–	0.8	19	6.1	4.7	2.3	4.6	4.7	0.06	2.6	0.012	0.06	4.7	0.012	0.012	21	–
Birds		–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	570	–
Mammals		3,100,000	3,100,000	4,400,000	–	560,000	1,100,000	–	710,000	230,000	330,000	7,600	44,000	170,000	320,000	320,000	7,600	59,000	320,000	22,000	–

Notes
PAHs by EPA Method 8270E-SIM.
Results reported 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, 2024), aquatic RBCs from DEQ (2021; Table 2), and terrestrial RBCs from DEQ (2020; Table 1b).
Light blue (human health RBCs) or orange (ecological RBCs) shading denotes a detected analyte concentration exceeding a DEQ RBC, whichever is the lowest. The exceeded RBC is also shaded.
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.

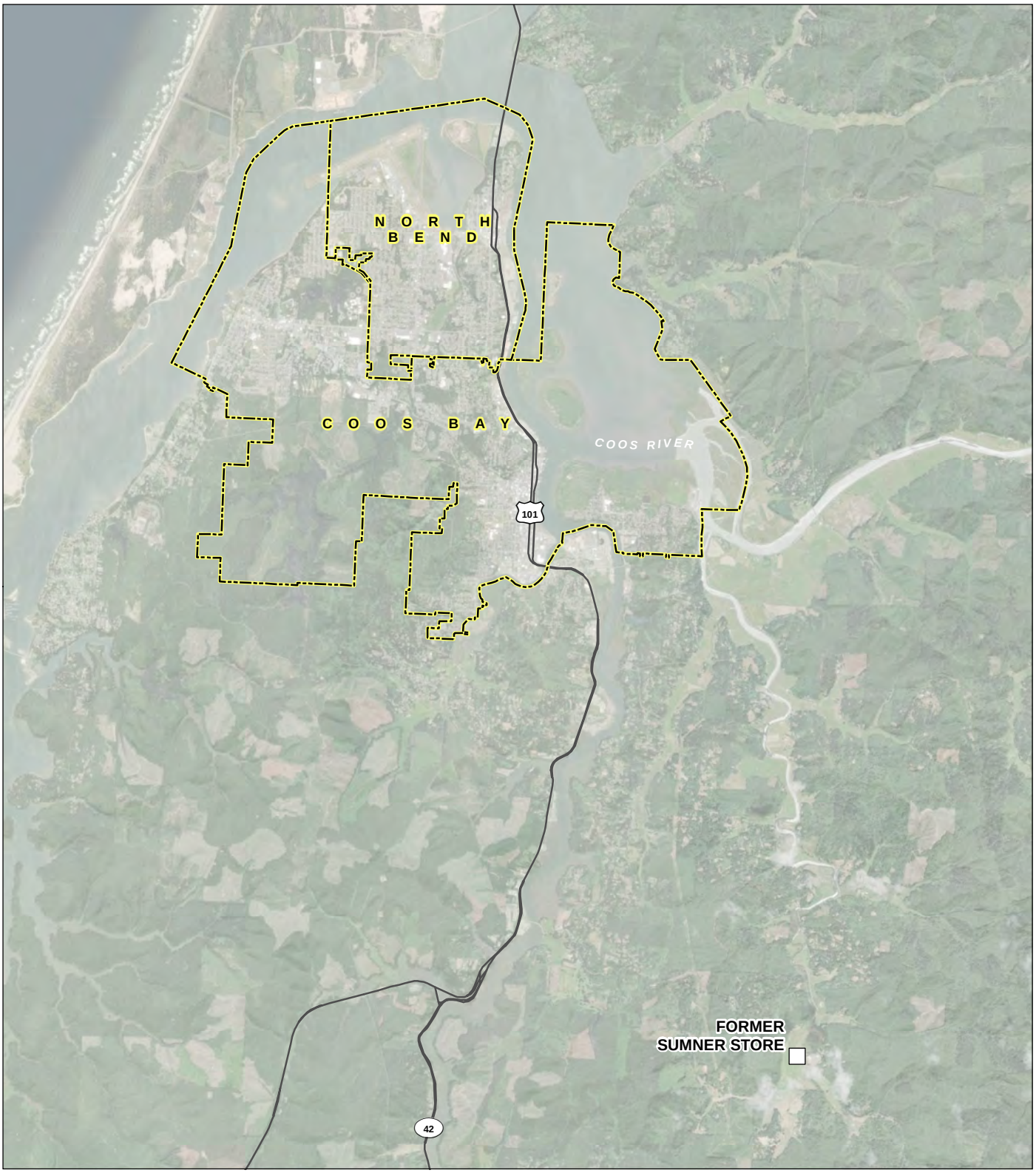
Acronyms and Abbreviations
– = not available
µg/L = micrograms per liter
BaP Eq = benzo(a)pyrene equivalence per human health risk assessment guidance (DEQ, 2010).
DEQ = Oregon Department of Environmental Quality
EPA = U.S. Environmental Protection Agency
J = estimated value, typically below laboratory MRL
J- = estimated value, biased low
MDL = method detection limit
MRL = method reporting limit
NV = not volatile
PAH = polycyclic aromatic hydrocarbon
TEF = toxicity equivalency factor
U = not detected

Table 9. Chemical Analyses Results: IDW and Blanks
Former Sumner Store, Coos Bay, Oregon

Chemical Compound / Sample: Date:	IDW-W 2/5/24	RINSE 2/5/24	TRIP 2/5/24
TPH	Concentrations in µg/L		
Gasoline-Range	**1,800**	100 U	—
Diesel-Range	**207 NJ**	33.3 U	—
Oil-Range	**279 NJ**	100 U	—
VOCs			
BTEX			
Benzene	**48.7**	**0.105 J**	0.0941 UJ
Toluene	**2.56**	0.278 U	0.278 UJ
Ethylbenzene	**58.9**	0.137 U	0.137 UJ
Total Xylenes	**3.36**	0.174 U	0.174 UJ
RBDM VOCs			
1,2-Dibromoethane (EDB)	0.126 U	0.126 U	0.126 UJ
1,2-Dichloroethane (EDC)	0.0819 U	0.0819 U	0.0819 UJ
Isopropylbenzene	**13.7**	0.105 U	0.105 UJ
Methyl tert-butyl ether	0.101 U	0.101 U	0.101 UJ
Naphthalene	**36.4**	1.00 U	1.00 UJ
n -Propylbenzene	**32.4**	0.0993 U	0.0993 UJ
1,2,4-Trimethylbenzene	0.322 U	0.322 U	0.322 UJ
1,3,5-Trimethylbenzene	**2.09**	0.104 U	0.104 UJ
Other VOCs			
sec -Butylbenzene	**3.10**	0.125 U	0.125 UJ
tert -Butylbenzene	**2.69**	0.127 U	0.127 UJ
p -Isopropyltoluene	**2.20**	0.120 U	0.120 UJ
1,2,3-Trimethylbenzene	**67.5**	**0.257 J**	0.104 UJ
PAHs			
Acenaphthene	—	**0.0515**	—
Acenaphthylene	—	0.0171 U	—
Anthracene	—	0.0190 U	—
2-Chloronaphthalene	—	0.0682 U	—
Fluoranthene	—	0.0270 U	—
Fluorene	—	0.0169 U	—
2-Methylnaphthalene	—	0.0674 U	—
Phenanthrene	—	0.0180 U	—
Pyrene	—	0.0169 U	—
Benz(a)anthracene	—	0.0203 U	—
Benzo(a)pyrene	—	0.0184 U	—
Benzo(b)fluoranthene	—	0.0168 U	—
Benzo(g,h,i)perylene	—	0.0184 U	—
Benzo(k)fluoranthene	—	0.0202 U	—
Chrysene	—	0.0179 U	—
Dibenz(a,h)anthracene	—	0.0160 U	—
Indeno(1,2,3-cd)pyrene	—	0.0158 U	—
1-Methylnaphthalene	—	0.0687 U	—
Naphthalene	—	0.0917 U	—
Lead			
Total Lead	**32.4**	0.849 U	—

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.
PAHs by EPA Method 8270E-SIM.
Lead by EPA Method 6020B.
Results reported at the MDL unless modified to the MRL by data validation (see Appendix D).
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
MDL = method detection limit
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
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 Sumner Store

N

0 4,000 8,000

Feet

Date: March 21, 2024

Data Sources: BLM, ESRI, ODOT, USGS, Aerial Photo 2020

GSI Water Solutions, Inc.

Document Path: Y:\2060_DEQ\012_LUST_Sites\Source_Figures\Figure1_Sumner_Site_Map.mxd, iramos

LEGEND

- Push Probe Location
- Soil Sample (1994)
- Former LUST
- Excavation Area (1994)
- Former Pump
- Locality of the Facility
- Property Boundary
- Tax Lot
- Assumed Groundwater Flow Direction
- Watercourse

NOTE
All features are approximate.

Date: April 22, 2024
Data Sources: BLM, ESRI, ODOT, USGS, Aerial Photo 2020

FIGURE 2

Sample Locations
Former Sumner Store

0 10 20
Feet

GSI Water Solutions, Inc.

Document Path: Y:\2060_DEQ\012_LUST_Sites\Source_Figures\Sumner\Figure2_Sumner_Samp_Locs.mxd, iramos

NOTES
All features are approximate.
Soil results reported in milligrams per kilogram (mg/kg).
Highlighting indicates a chemical or concentration exceeding a human health and/or ecological RBC.

cPAHs = carcinogenic polycyclic aromatic hydrocarbons
HPAHs = high molecular weight polycyclic aromatic hydrocarbons
Pb = lead
(D) = duplicate sample
RBC = risk-based concentration
J = estimated concentration
NJ = estimated concentration of tentatively or presumptively present analyte
U = not detected above the indicated MDL or MRL

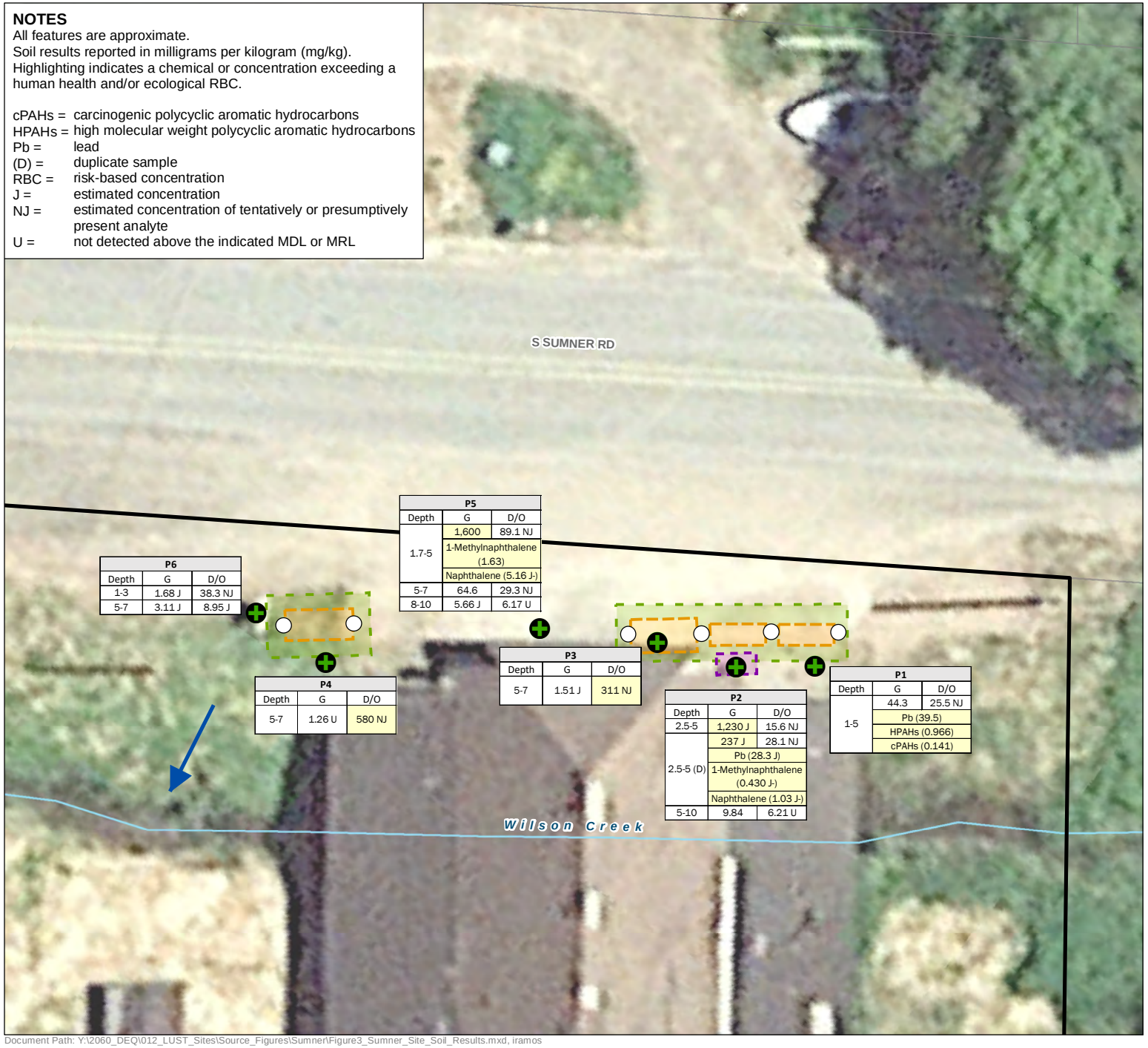


FIGURE 3

Soil Results and Exceedances

Former Sumner Store

LEGEND

- Push Probe Location
- Soil Sample (1994)
- Former LUST
- Excavation Area (1994)
- Former Pump
- Property Boundary
- Tax Lot
- Assumed Groundwater Flow Direction
- Watercourse

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

N

0 8 16
Feet

Date: May 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\Sumner\Figure3_Sumner_Site_Soil_Results.mxd, iramos

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

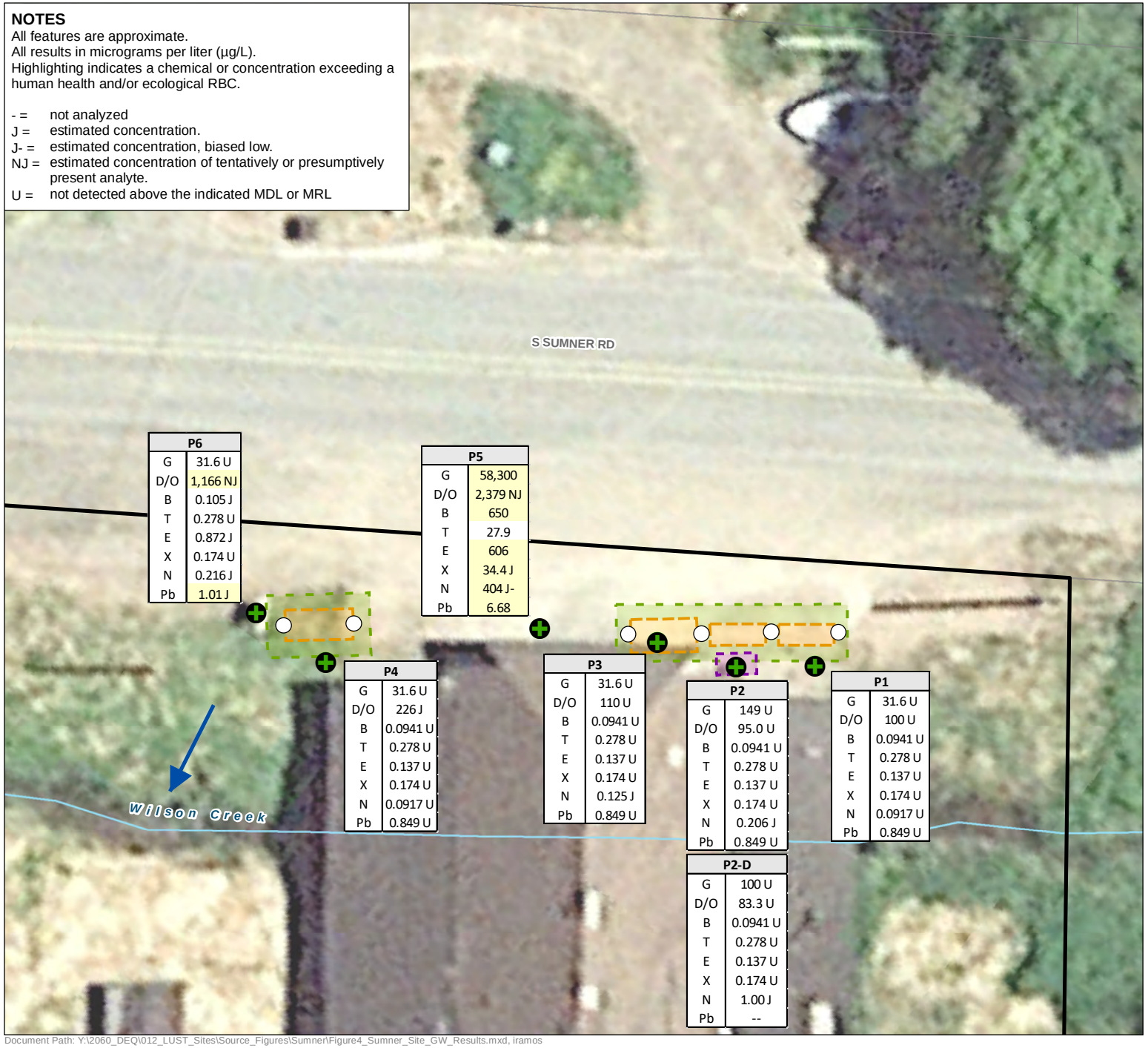


FIGURE 4

Groundwater Results and Exceedances

Former Sumner Store

LEGEND

- Push Probe Location
- Soil Sample (1994)
- Former LUST
- Excavation Area (1994)
- Former Pump
- Property Boundary
- Tax Lot
- Assumed Groundwater Flow Direction

Probe Number	
G	TPH as Gasoline
D/O	TPH as Diesel/Oil
B	Benzene
T	Toluene
E	Ethylbenzene
X	Total Xylenes
N	Naphthalene
Pb	Dissolved Lead

N

0 8 16
Feet

Date: March 22, 2024
Data Sources: BLM, ESRI, ODOT, USGS, Aerial Photo 2020

GSI Water Solutions, Inc.

Document Path: Y:\2060_DEQ\012_LUST_Sites\Source_Figures\Sumner\Figure4_Sumner_Site_GW_Results.mxd, iramos

				HUMAN RECEPTORS				ECOLOGICAL RECEPTORS	
				Current and Future Residents	Future Occupational Workers	Future Construction Workers	Future Excavation Workers	Terrestrial	Aquatic
UST SYSTEMS → LEAKS AND RELEASES → SOIL	Volatilization	INSIDE AIR	INHALATION	X	O				
	Windblown Dust	OUTSIDE AIR	INHALATION	X	O	X	X		
	Uptake	BIOTA	INGESTION						
	Direct Exposure	SHALLOW SOIL (≤3 FEET)	INGESTION	X	O	X	X	O	
			DERMAL CONTACT	X	O	X	X	O	
		DEEP SOIL (>3 FEET)	INGESTION			X	X		
			DERMAL CONTACT			X	X		
	Erosion	SURFACE WATER	INGESTION					O	X
			DERMAL CONTACT					O	X
	Migration → Infiltration	GROUNDWATER	INGESTION						
			DERMAL CONTACT			X	X		
	Volatilization	INSIDE AIR	INHALATION	X	O				
		OUTSIDE AIR	INHALATION	X	O	X	X		

Uptake or Direct Exposure Ingestion

LEGEND

- X Potentially Complete Exposure Pathway
- O Possible but Negligible Exposure Pathway
- --→ Contaminant Pathway not Present or Complete

FIGURE 5

Conceptual Site Model

Former Sumner Store

GSI Water Solutions, Inc.

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APPENDIX A

Land and Water Use Documentation

Coos County Zoning

Oregon Coastal Atlas

Disclaimer: The spatial information hosted at this website was derived from a variety of sources. Care was taken in the creation of these themes, but they are provided "as is". The state of Oregon, or any of the data providers cannot accept any responsibility for errors, omissions, or positional accuracy in the digital data or underlying records. There are no warranties, expressed or implied, including the warranty of merchantability or fitness for a particular purpose, accompanying any of these products. However, notification of any errors would be appreciated. The data are clearly not intended to indicate the authoritative location of property boundaries, the precise shape or contour of the earth or the precise location of fixed works of humans.

Printed 3 / 18 / 2024

GENERAL LOCATION:	CATCHING SLOUGH
ZONING DESIGNATION:	21-RS
ZONING DISTRICT:	21-RURAL SHORELANDS
SPECIFIC BOUNDARIES:	This district is both banks of Catching Slough to 1,000-feet above the extent of tidal influence south of Sumner. Western Boundary: At Coos River Road Bridge Eastern Boundary: At the junction of East Catching Slough Road and Gunnell Road, at the south end of the large diked pasture.

SECTION 3.2.595. MANAGEMENT OBJECTIVE:

This shoreland district of generally diked farm land shall be managed to maintain the present low-intensity, rural character and uses in a manner compatible with protection of the aquatic resources. An existing heron rookery located in the district shall be preserved by protecting those trees in the rookery which are used by the birds. This district contains a number of designated mitigation sites. The following are "high" or "medium" priority, and must be protected, as required by Policy #22: U-28, U-29(b), U-30(b), U-32(a) and (b), U-33, U-34(c) and (d). The following are "low" priority sites, and received no special protections: U-21(b), U-22, U-23, U-24, U-26, U-27, U-29(a), U-32(c) and U-34(a) and (b).

SECTION 3.2.596. USES, ACTIVITIES AND SPECIAL CONDITIONS.

Table 21-RS sets forth the uses and activities which are permitted, which may be permitted as conditional uses, or which are prohibited in this zoning district. Table 21-RS also sets forth special conditions which may restrict certain uses or activities, or modify the manner in which certain uses or activities may occur. Reference to “policy numbers” refers to Plan Policies set forth in the Coos Bay Estuary Management Plan.

A. Uses

1.	Agriculture	P-G
2.	Airports	N
3.	Aquaculture	P-G
4.	Commercial	N
5.	Dryland moorage	N
6.	Industrial & Port facilities	N
7.	Land transportation facilities	P-G
8.	Log storage/sorting yard (land)	N
9.	Marinas	N
10.	Mining/mineral extraction	N
11.	Recreation facilities	
	a. Low-intensity	P-G
	b. High-intensity	P-G
12.	Residential	P-G

13.	Solid waste disposal		N
14.	Timber farming/harvesting		P-G
15.	Utilities		
	a.	Low-intensity	P-G
	b.	High-intensity	N

B. Activities

1.	Stream alteration		P-G
2.	Dikes		
	a.	New construction	ACU-S, G
	b.	Maintenance/repair	ACU-S, G
3.	Dredged material disposal		ACU-S, G
4.	Excavation to create new water surface		ACU-S, G
5.	Fill		ACU-S, G
6.	Shoreline stabilization		
	a.	Vegetative	P-G
	b.	Riprap	ACU-S, G
	c.	Retaining wall	ACU-S, G
7.	Navigation aids		P-G
8.	Mitigation		P-G
9.	Restoration		
	a.	Active	ACU-S, G
	b.	Passive	P-G
10.	Land divisions		
	a.	Partition	ACU-S, G
	b.	Subdivision	ACU-S, G
	c.	Planned Unit Development	ACU-S, G
	d.	Recreation PUD	N

GENERAL CONDITIONS (the following conditions apply to all uses and activities):

1. Inventoried resources requiring mandatory protection in this district are subject to Policies #17 and #18.

2. All permitted uses and activities shall be consistent with Policy #23, requiring protection of riparian vegetation.

The following conditions apply to all permitted uses:

3. Where "agricultural lands" or "forest lands" occur within this district, as identified in the "Special Considerations Map", uses in these areas shall be limited to those permitted in Policies #28 and #34.

4. Uses in this district are only permitted as stated in Policy #14 "General Policy on Uses within Rural Coastal Shorelands". Except as permitted outright, or where findings are made in this Plan, uses are only allowed subject to the findings in this policy.

5. All permitted uses shall be consistent with the respective flood regulations of local governments, as required in Policy #27.

6. On designated "medium" or "high" priority mitigation/restoration sites, all uses/activities shall only be permitted subject to the conditions in Policy #22.

7. In rural areas (outside of UGBs) utilities, public facilities and services shall only be provided subject to Policies #49, #50, and #51.

SPECIAL CONDITIONS:

Activities:

2a.,2b. These activities shall not be permitted at "high priority" mitigation sites U-30(b) and U-32(b).

3. Dredge material disposal shall be allowed when consistent with Policy #20.

4. Creation of new water surfaces for mitigation or aquaculture uses only shall be allowed.

5. This activity shall not be allowed in areas of "wet meadow" wetland, as identified in the "Special Considerations Map", except as otherwise allowed in Policy #19.

6b.,6c. These activities are permitted subject to the findings required by Policy #9, "Solutions to Erosion and Flooding Problems".

9a. Active restoration shall be allowed only when consistent with Policy #22b.

10. Land divisions are only permitted where they meet the conditions in Policy #15.

SECTION 3.2.597. LAND DEVELOPMENT STANDARDS.

The requirements set forth in Table 3.2 shall govern development in the 21-RS district.

General Site Information	
ECSI File No. or LUST File No.:	06-94-0030
Site Name:	Sumner
Site Location (address, city, and/or county):	95646 Sumner - Fairview Ln
Latitude/Longitude or other location documentation for site:	
Current and Historical Site Use (gas station, dry cleaner, jet hangar, etc.) [1]:	Gas station
Zoning:	Commercial
Site[2] Features:	Structure built over a creek, former UST pits
Chemicals of Interest[3]:	gas/ or diesel

[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

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

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

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

Corrected: Wilson Creek listed as a riverine wetlands.
Wetland inventory map attached.

____ ✓ **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.

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

____ ✓ **Impermeable Surface:** Pavement, structures.

Documentation

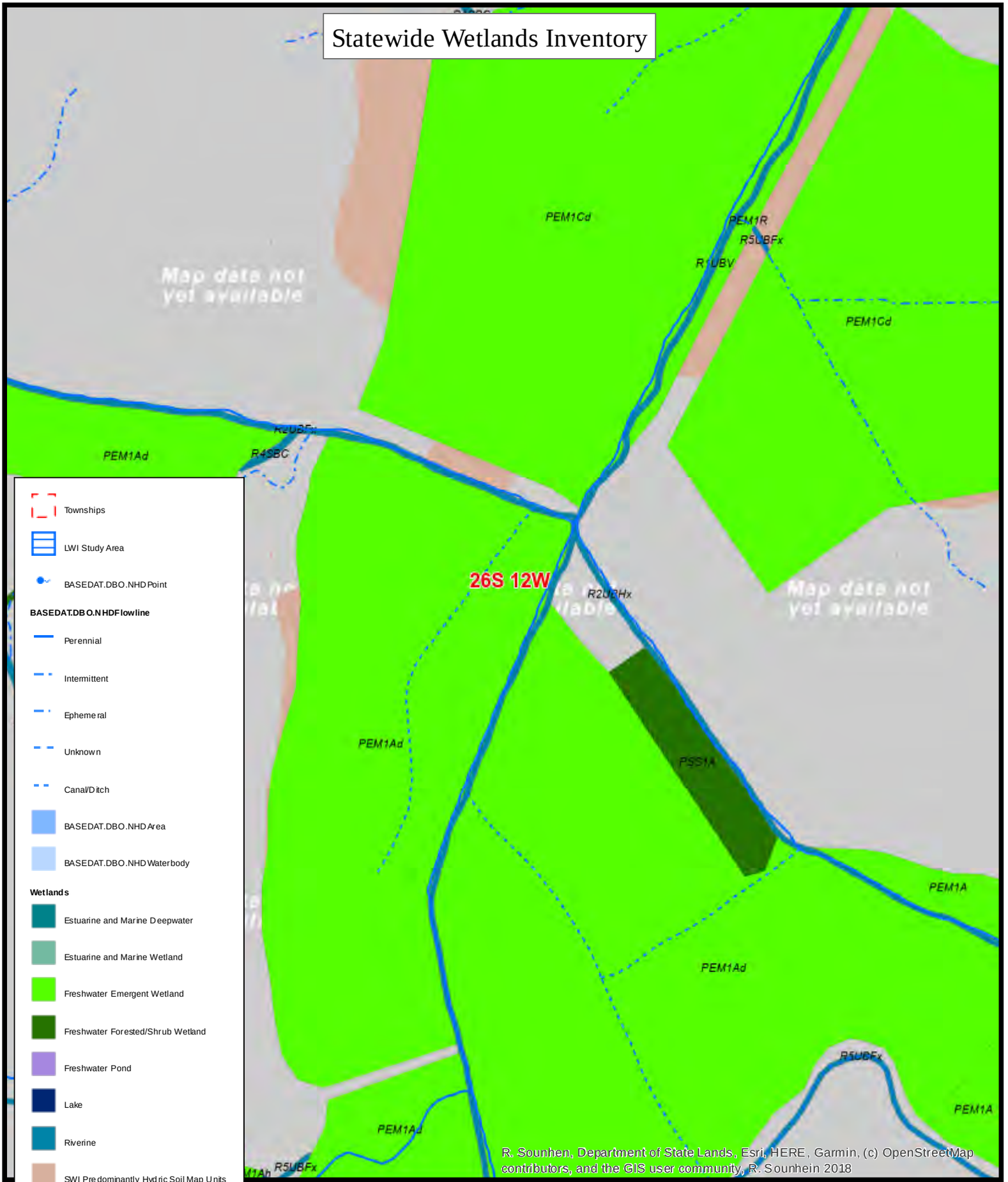
- Aerial Site Vicinity Map(s) identifying zoning and Site features. Include topographic map.
- Summarize known or potential contaminated soil, groundwater, migration pathways.
- Figure illustrating source/release areas, sample locations, estimated areas of contamination, and surface features such as 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.

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: BRENDON WARNER (name and title/expertise) GEOLOGIST	Date: 4/15/24

Statewide Wetlands Inventory



Townships

LWI Study Area

BASEDAT.DBO.NHDPoint

BASEDAT.DBO.NHDFlowline

Perennial

Intermittent

Ephemeral

Unknown

Canal/Ditch

BASEDAT.DBO.NHDArea

BASEDAT.DBO.NHDWaterbody

Wetlands

Estuarine and Marine Deepwater

Estuarine and Marine Wetland

Freshwater Emergent Wetland

Freshwater Forested/Shrub Wetland

Freshwater Pond

Lake

Riverine

SWI Predominantly Hydric Soil Map Units

SWI Agate-Winlo Soils

0 0.0275 0.055 0.11 0.165 0.22 mi

1 inch = 0.07 miles

N

Date: 3/21/2024

State of Oregon
Department of State Lands
775 Summer Street, NE, Ste 100
Salem, OR. 97301-1279
(503) 986-5200

https://www.oregon.gov/dsl/WW/Pages/SWI.aspx

The Statewide Wetlands Inventory (SWI) represents the best data available at the time this map was published and is updated as new data becomes available. In all cases, actual field conditions determine the presence, absence and boundaries of wetlands and waters (such as creeks and ponds). An onsite investigation by a wetland professional can verify actual field conditions.

ATTACHMENT 1
Ecological Scoping Checklist

Site Name	Former Summer Store
Date of Site Visit	2/5/2024
Site Location	95646 COOS-SUMMER LAKE, COOS BAY, OR
Site Visit Conducted by	Brandon Parmer, Riley Salzbrenner-Kemp

Part ❶

CONTAMINANTS OF INTEREST IN LOCALITY OF FACILITY† Types, Classes, Or Specific Hazardous Substances ‡ Known Or Suspected	Upland	Aquatic
~~bs~~ Gas or diesel	X	
plus constituents	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 (**N**one, **L**imited, **E**xtensive)	N
Vegetation in the locality of the site (**N**one, **L**imited, **E**xtensive)	N
Onsite wildlife such as macroinvertebrates, reptiles, amphibians, birds, mammals, other (**N**one, **L**imited, **E**xtensive)	N
Wildlife such as macroinvertebrates, reptiles, amphibians, birds, mammals, other in the locality of the site (**N**one, **L**imited, **E**xtensive)	N
Other readily observable impacts (**N**one, **D**iscuss below)	N
Discussion:	

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, **L**agoon, **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, **S**urface 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	10
Type of water bodies (**R**ivers, **S**treams, **I**ntermittent Streams, **D**ry wash, **A**rroyo, **D**itches, **C**hannel waterway)	S
Size (acres), average depth (feet), approximate flow rate (cfs) of water bodies	SEE PHOTOS P
Bank environment (cover: **V**egetated, **B**are / slope: **S**teep, **G**radual / height (in feet))	V

SPECIFIC EVALUATION OF ECOLOGICAL RECEPTORS / HABITAT	Finding
Source water (**R**iver, **S**tream, **G**roundwater, **I**ndustrial discharge, **S**urface water runoff)	S
Tidal influence (**Y**es / **N**o)	No
Water discharge point (**N**one, **R**iver, **S**tream, **G**roundwater, **W**etlands impoundment)	S
Nature of bottom (**M**uddy, **R**ocky, **S**and, **C**oncrete, **O**ther)	M
Vegetation present (**S**ubmerged, **E**mergent, **F**loating)	📷
Obvious wetlands present (**Y**es / **N**o)	N
Evidence / observation of wildlife (**M**acroinvertebrates, **R**eptiles, **A**mphibians, **B**irds, **M**ammals, **O**ther)	B
Aquatic - Wetlands	
Obvious or designated wetlands present (**Y**es / **N**o)	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

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?**	X		
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.			
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")

* Permit No. 7927 CERTIFICATE NO. 7367

APPLICATION FOR A PERMIT

To Appropriate the Public Waters of the State of Oregon

I, George R. Gray *(Name of applicant)*

of Sumner, *(Postoffice)* *County of* Coos,

State of Oregon, *do hereby make application for a permit to appropriate the following described public waters of the State of Oregon, subject to existing rights:*

If the applicant is a corporation, give date and place of incorporation .....

.....

1. *The source of the proposed appropriation is* Small stream (unnamed) *(Name of stream)*, *tributary of* Catching Slough

2. *The amount of water which the applicant intends to apply to beneficial use is* ..... one ..... *cubic feet per second.*

3. *The use to which the water is to be applied is* Domestic *(Irrigation, power, mining, manufacturing, domestic supplies, etc.)*

.....

4. *The point of division is located* S. 17° 15' E. 210 feet from the northwest *(Give distance and bearing to section corner)* corner of the SE¼ of the SE¼ of Section 29, Tp. 26 S.R. 12 W.W.Mer. Coos County, Oregon.

.....

being within the SE¼SE¼ *(Give smallest legal subdivision)* *of Sec.* 29, *Tp.* 26S *(No. N. or S.)*, *R.* 12 W. *(No. E. or W.)*, *W. M., in the county of* Coos

5. *The* Pipe Line (2") *(Main ditch, canal or pipe line)* *to be* 0.25 *miles in length, terminating in the* Lot 5, Blk, 6, Town of Sumner *(Smallest legal subdivision)* *of Sec.* 29, *Tp.* 26 S. *(No. N. or S.)*, *R.* 12 W. *(No. E. or W.)*, *W. M., the proposed location being shown throughout on the accompanying map.*

6. *The name of the ditch, canal or other works is* .....

.....

DESCRIPTION OF WORKS

DIVERSION WORKS—

7. (a) *Height of dam* approx. 4 *feet, length on top* Approx. 12 *feet, length at bottom* 5 *feet; material to be used and character of construction* timber crib *(Loose rock, concrete, masonry, rock and brush, timber crib, etc., wasteway over or around dam)*

.....

(b) *Description of headgate* ..... *(Timber, concrete, etc., number and size of openings)*

.....

* A different form of application is provided where storage works are contemplated. These forms can be secured without charge, together with instructions, by addressing the State Engineer, Salem, Oregon.

CANAL SYSTEM—

8. (a) Give dimensions at each point of canal where materially changed in size, stating miles from headgate. At headgate: Width on top (at water line) ..... feet; width on bottom ..... feet; depth of water ..... feet; grade ..... feet fall per one thousand feet.

(b) At ..... miles from headgate: Width on top (at water line) ..... feet; width on bottom ..... feet; depth of water ..... feet; grade ..... feet fall per one thousand feet.

.....

.....

.....

FILL IN THE FOLLOWING INFORMATION WHERE THE WATER IS USED FOR IRRIGATION—

9. The land to be irrigated has a total area of ..... acres, located in each smallest legal subdivision, as follows: .....
(Give area of land in each smallest legal subdivision which you intend to irrigate)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(If more space required, attach separate sheet)

POWER, MINING, MANUFACTURING, OR TRANSPORTATION PURPOSES—

10. (a) Total amount of power to be developed ..... theoretical horsepower.

(b) Total fall to be utilized ..... *feet.*
(Head)

(c) The nature of the works by means of which the power is to be developed .....

.....

(d) Such works to be located in ..... *of Sec.*.....,
(Legal subdivision)

Tp......, *R.*....., *W. M.*
(No. N. or S.) (No. E. or W.)

(e) Is water to be returned to any stream? .....
(Yes or No)

(f) If so, name stream and locate point of return .....

....., *Sec.*....., *Tp.*....., *R.* ....., *W. M.*
(No. N. or S.) (No. E. or W.)

(g) The use to which power is to be applied is .....

.....

(h) The nature of the mines to be served.....

.....

MUNICIPAL SUPPLY—

11. To supply the city of .....

..... *County, having a present population of* .....,
(Name of)

and an estimated population of ..... *in 192*.....

(Answer questions 12, 13, 14, and 15 in all cases)

12. Estimated cost of proposed works, $ $200.00

13. Construction work will begin on or before May 30, 1927

14. Construction work will be completed on or before May 30, 1927

15. The water will be completely applied to the proposed use on or before May 30, 1927

.....

Duplicate maps of the proposed ditch or other works, prepared in accordance with the rules of the State Engineer, accompany this application.

George R. Gray
(Name of applicant)

.....

.....

Signed in the presence of us as witnesses:

(1) William M. Kramer (Name), Sumner, Ore. (Address of witness)

(2) Grace L. Gray (Name), Sumner, Oregon (Address of witness)

Remarks: .....

.....

.....

.....

.....

.....

.....

.....

.....

STATE OF OREGON, }
County of Marion, } *ss.*

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for correction or completion, as follows: .....

.....

.....

.....

In order to retain its priority, this application must be returned to the State Engineer, with corrections, on or before ....., *192*.....

WITNESS my hand this ..... *day of* ....., *192*.....

.....
STATE ENGINEER.

7927(c)

17 *Application No.* 11476

Permit No. 7927

PERMIT

TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF OREGON

District No......

This instrument was first received in the office of the State Engineer at Salem, Oregon,

on the 14th *day of* May,

*192*7, *at* 1:00 *o'clock* P. *M.*

Returned to applicant for correction:

.....

Corrected application received:

.....

Approved:

May 26th, 1927

Recorded in Book No. 26 *of Permits, on page* 7927.

RHEA LUPER

STATE ENGINEER.

1 map ACFP $8.00

STATE OF OREGON,
County of Marion, } ss.

This is to certify that I have examined the foregoing application and do hereby grant the same, subject to the following limitations and conditions: If for irrigation, this appropriation shall be limited to one-eightieth of one cubic foot per second, or its equivalent, for each acre irrigated, and shall be subject to such reasonable rotation system as may be ordered by the proper state officer.

The right herein granted is limited to the appropriation of water from An Unnamed Stream for domestic purposes.

The amount of water appropriated shall be limited to the amount which can be applied to beneficial use and not to exceed 0.1 *cubic feet per second, or its equivalent in case of rotation. The priority date of this permit is* May 14, 1927.

Actual construction work shall begin on or before May 26, 1928 *and shall thereafter be prosecuted with reasonable diligence and be completed on or before* June 1, 1929

Complete application of the water to the proposed use shall be made on or before October 1, 1930

WITNESS my hand this 26th *day of* May, *192*7.

RHEA LUPER

STATE ENGINEER.

Permits for power development are subject to the limitation of franchise as provided in Section 5728, Oregon Laws, and the payment of annual fees as provided in Section 5803, Oregon Laws.

This form approved by the State Water Board, March 11, 1909.

5M-

RECEIVED
JUN 24 1969
STATE ENGINEER
SALEM, OREGON

Permit No. 34481

*APPLICATION FOR PERMIT

CERTIFICATE NO. 43124

To Appropriate the Public Waters of the State of Oregon

I, Sumner Water Corporation (Name of applicant)

of Rt. 3, Box 165, Coos Bay (Mailing address),

State of Oregon, do hereby make application for a permit to appropriate the following described public waters of the State of Oregon, SUBJECT TO EXISTING RIGHTS:

If the applicant is a corporation, give date and place of incorporation Unincorporated

1. The source of the proposed appropriation is unnamed stream (Name of stream), a tributary of Catching Slough

2. The amount of water which the applicant intends to apply to beneficial use is 0.1 cubic feet per second. (If water is to be used from more than one source, give quantity from each)

**3. The use to which the water is to be applied is Domestic (Irrigation, power, mining, manufacturing, domestic supplies, etc.)

4. The point of diversion is located 200.6 ft. S (N. or S.) and 62.3 ft. E (E. or W.) from the NW corner of SE¼, SE¼ (Section or subdivision)

(If preferable, give distance and bearing to section corner)

(If there is more than one point of diversion, each must be described. Use separate sheet if necessary)

being within the (Give smallest legal subdivision) of Sec. 29, Tp. 26 S. (N. or S.), R. 12 W. (E. or W.), W. M., in the county of COOS

5. The Pipeline (Main ditch, canal or pipe line) to be 1600 (Miles or feet) in length, terminating in the SE¼, SW¼ (Smallest legal subdivision) of Sec. 29, Tp. 26 S (N. or S.), R. 12 W (E. or W.), W. M., the proposed location being shown throughout on the accompanying map.

DESCRIPTION OF WORKS

Diversion Works—

6. (a) Height of dam 4 feet, length on top 16 feet, length at bottom ..... feet; material to be used and character of construction concrete (Loose rock, concrete, masonry, rock and brush, timber crib, etc., wasteway over or around dam)

(b) Description of headgate concrete - OG Section (Timber, concrete, etc., number and size of openings)

(c) If water is to be pumped give general description ..... (Size and type of pump)

(Size and type of engine or motor to be used, total head water is to be lifted, etc.)

*A different form of application is provided where storage works are contemplated.

**Application for permits to appropriate water for the generation of electricity, with the exception of municipalities, must be made to the Hydroelectric Commission. Either of the above forms may be secured, without cost, together with instructions by addressing the State Engineer, Salem, Oregon.

34481

Canal System or Pipe Line—

7. (a) Give dimensions at each point of canal where materially changed in size, stating miles from headgate. At headgate: width on top (at water line) ..... feet; width on bottom ..... feet; depth of water ..... feet; grade ..... feet fall per one thousand feet.

(b) At ..... miles from headgate: width on top (at water line) ..... feet; width on bottom ..... feet; depth of water ..... feet; grade ..... feet fall per one thousand feet.

(c) Length of pipe, 1600 ft.; size at intake, 4" in.; size at 1600 ft. from intake 2" in.; size at place of use 2", 1" &3/4 in.; difference in elevation between intake and place of use, 132 ft. Is grade uniform? No Estimated capacity, 0.056 (25 GPM) sec. ft.

8. Location of area to be irrigated, or place of use Sumner, Oregon

Township North or South	Range E. or W. of Willamette Meridian	Section	Forty-acre Tract	Number Acres To Be Irrigated
26 S	12 W	29	NW¼ SE¼	
			SW¼ SE¼	
			SE¼ SE¼	
			SE¼ SW¼	

(If more space required, attach separate sheet)

(a) Character of soil .....

(b) Kind of crops raised .....

Power or Mining Purposes—

9. (a) Total amount of power to be developed ..... theoretical horsepower.

(b) Quantity of water to be used for power ..... sec. ft.

(c) Total fall to be utilized ..... (Head) feet.

(d) The nature of the works by means of which the power is to be developed .....

.....

(e) Such works to be located in ..... (Legal subdivision) of Sec. ....., ..., Tp. ..... (No. N. or S.), R. ..... (No. E. or W.), W. M.

(f) Is water to be returned to any stream? ..... (Yes or No)

(g) If so, name stream and locate point of return .....

....., Sec. ....., Tp. ..... (No. N. or S.), R. ..... (No. E. or W.), W. M.

(h) The use to which power is to be applied is .....

(i) The nature of the mines to be served .....

Municipal or Domestic Supply—

34481

10. (a) To supply the city of Unincorporated town of Sumner, Oregon

Coos (Name of) County, having a present population of 60

and an estimated population of 80 in 1980

(b) If for domestic use state number of families to be supplied 14 present, 25 Future.

(Answer questions 11, 12, 13, and 14 in all cases)

11. Estimated cost of proposed works, $ 2500.00

12. Construction work will begin on or before 1 August 1969

13. Construction work will be completed on or before 1 August 1970

14. The water will be completely applied to the proposed use on or before Water is now being acquired for beneficial use.

(Signature of applicant)

President.

Remarks: This application submitted by the Sumner Water Corporation is to replace the permit #7927 issued to Mr. George R. Gray in September 26, 1927. This water right has been in use by the community of Sunmer since November 1928, at which time Mr. Gray allowed several persons to acquire water from this source and from that date, November 1928 to present has been used as a community system.

STATE OF OREGON, }
County of Marion, } ss.

This is to certify that I have examined the foregoing application, together with the accompanying maps and data, and return the same for .....

In order to retain its priority, this application must be returned to the State Engineer, with corrections on or before ....., 19.....

WITNESS my hand this ..... day of ....., 19.....

.....
STATE ENGINEER

By .....
ASSISTANT

PERMIT

STATE OF OREGON,
County of Marion, } *ss.*

This is to certify that I have examined the foregoing application and do hereby grant the same, SUBJECT TO EXISTING RIGHTS and the following limitations and conditions:

The right herein granted is limited to the amount of water which can be applied to beneficial use and shall not exceed 0.1 *cubic feet per second measured at the point of diversion from the stream, or its equivalent in case of rotation with other water users, from* an unnamed stream

The use to which this water is to be applied is group domestic

If for irrigation, this appropriation shall be limited to ..... *of one cubic foot per second or its equivalent for each acre irrigated* .....

and shall be subject to such reasonable rotation system as may be ordered by the proper state officer.

The priority date of this permit is June 24, 1969

Actual construction work shall begin on or before March 16, 1971 *and shall thereafter be prosecuted with reasonable diligence and be completed on or before October 1, 19*71.

Complete application of the water to the proposed use shall be made on or before October 1, 1972.

WITNESS my hand this 16th *day of* March, *1970.*

Chris L. Wheeler
STATE ENGINEER

Application No. 46154
Permit No. 34481

PERMIT
TO APPROPRIATE THE PUBLIC WATERS OF THE STATE OF OREGON

This instrument was first received in the office of the State Engineer at Salem, Oregon, on the 24th *day of* June, *1969, at* 1:20 *o'clock* P *M.*

Returned to applicant:

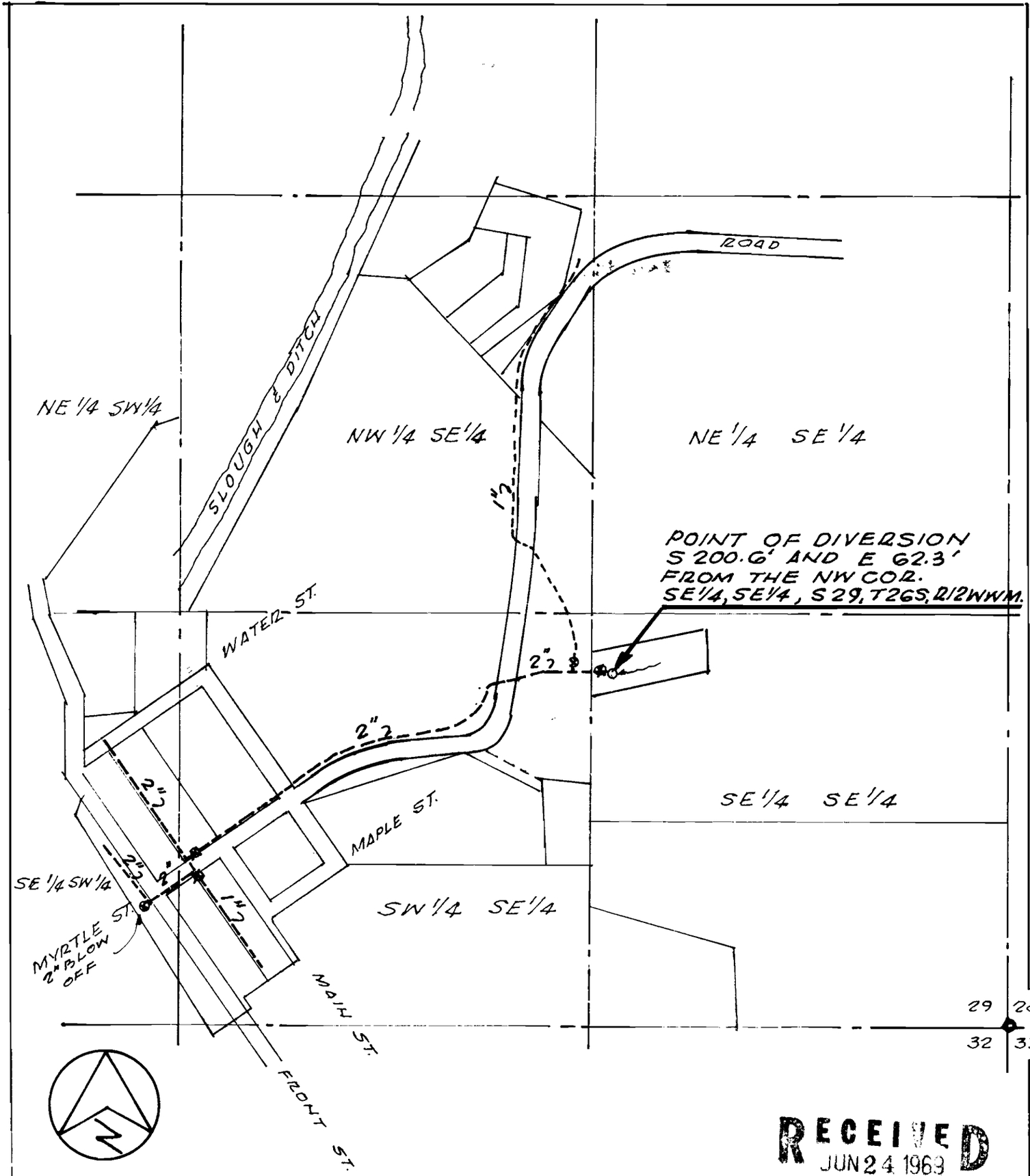
Approved:
March 16, 1970

Recorded in book No. ..... *of Permits on page* 34481

CHRIS L. WHEELER
STATE ENGINEER

Drainage Basin No. 17 *page* 10Z
Fees $ 20.00 Rec'd 4/1/70

State Printing 98137



100 0 100 200 300 400

1"=400'

SCALE.

RECEIVED
JUN 24 1969
STATE ENGINEER
SALEM, OREGON

REGISTERED PROFESSIONAL ENGINEER
2682
OREGON
MAY 9, 1947
EDWARD W. RILEY

WATER RIGHTS MAP

SE 1/4 & SW 1/4, SECTION 29, T 26 S, R 12 W W M, COOS COUNTY, OREGON

FOR THE

SUMNER WATER CORPORATION
RTE 3 BOX 165 COOS BAY, ORE. 97420

Application No. G-154

34481

edward w. riley
PROFESSIONAL ENGINEER
AIRPORT TERMINAL BLDG.
NORTH BEND, OREGON

6-21-69

OHA Drinking Water Services

OR41 00209 **SUMNER WATER CO-OP** **Classification**: COMMUNITY

WATER ADVISORY: BOIL WATER - Treatment Failure, Filtration - *See details*

Contact:	RICHARD SMITH	**Phone:** 541-297-2481	View on Map
	PO BOX 1404	**County:** COOS	
	COOS BAY, OR 97420	**Activity Status:** ACTIVE -- History	
Population: 75		**Number of Connections:** 15	
Operating Period: January 1 to December 31		**Regulating Agency:** REGION 2	
Certified Operator(s)		**Owner Type:** PRIVATE	
	Required: Y	**Licensed By:** N/A	
	Distribution class: 1	**Approved Drinking Water Protection Plan:** No	
	Treatment class: 1	**Source Water Assessment:** No	
	Filtration Endorsement Required: No	**Last Survey Date:** May 09, 2019	

Sources

Facility ID	Facility Name	Activity Status	Availability	Source Type
EP-A	**EP for SPRING**	**A**		**SW**
SRC-AA	SPRING	A	Permanent	**SW**

Find Purchasers/Sellers

Treatment

Facility ID	Facility Name	Filter Type	Giardia Removal Credit	Treatment Process	Treatment Objective
WTP-A	TP FOR SPRING	Unfiltered	N/A	UNFILTERED, MUST INSTALL FILT.	OTHER

Consumer Confidence Reports (Last 5 Years)

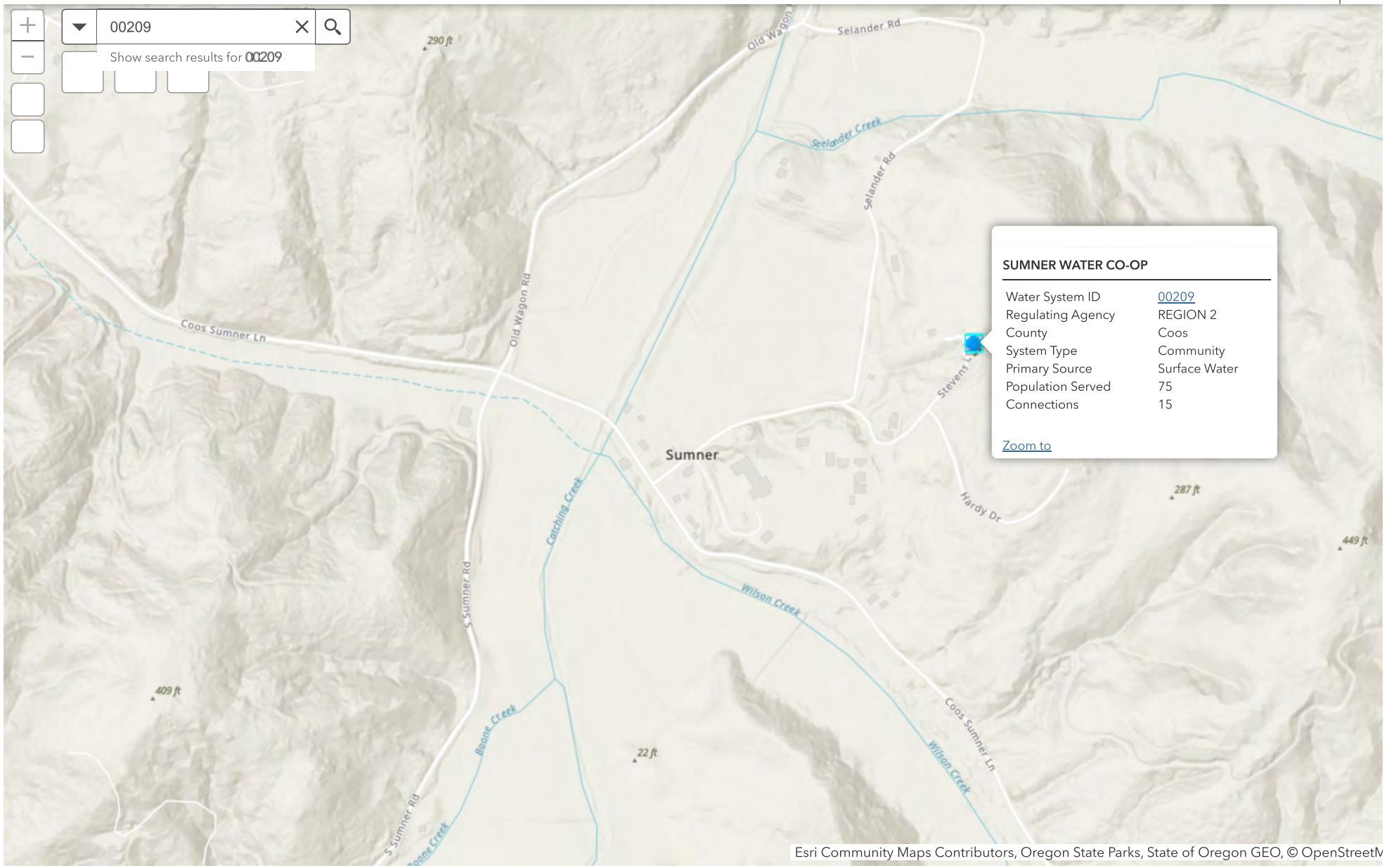
For Year	Date Received	Date Certified
2023	**Due 7/1/2024**	**Due 10/1/2024**
2022	*Not received*	*Not received*
2021	*Not received*	*Not received*
2020	*Not received*	*Not received*
2019	*Not received*	*Not received*

Cross Connection/Backflow Prevention Information (Last 3 Records)

Enabling Authority Received	Annual Summary Report Received	Cross Connection Fee Status
No		

Oregon Public Water Systems

OHA Drinking Water Services Data Online



600ft

-124.147 43.281 Degrees

Oregon Water Resources Department
Well Report Query

Well Report Query Results

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

Township: 26 S, Range: 12 W, Sections: 29,32

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
COOS 157	Details	26.00S-12.00W-32 -			CULVERT, JIM 1141 SOUTH SUMMER NE COOS BAY OR 97420			W	7.00	100.00	6.00	5.0	05/27/1983	07/06/1983	BARRINGTON, DONALD E BARRINGTON WELL DRILLING			✓					✓										
COOS 426	Details	26.00S-12.00W-29 SE-NE	200	660 SALANDER RD	PIERSON, REGINA 660 SALANDER RD COOS BAY OR 97420			W	45.00	102.00	38.00	25.0	08/20/1991	09/09/1991	BARRINGTON, RON	33084	34524	✓					✓										
COOS 561	Details	26.00S-12.00W-32 NE-SW	1000	949 SUMNER RD, COOS BAY	TIBBITS, TIM 649 COLORADO NORTH BEND OR 97459			W	85.00	115.00	65.00	10.0	05/20/1992	06/15/1992	BARRINGTON, RON	42888		✓					✓										
COOS 810 Groundwater Info	Details	26.00S-12.00W-29 SW-NW	606	94722 ALEXANDER DR	HOOTMAN, WARREN 100 ALEXANDER WAY COOS BAY OR 97420			W	75.00	150.00	35.00	10.0	09/14/1993	09/23/1993	BARRINGTON, RON	55839	120403	✓					✓										43.2886, -124.1591
COOS 2609	Details	26.00S-12.00W-29 -			SHAW, PATSY ANN 55 STEVES LANE COOS BAY OR			W	65.00	150.00	20.00	4.0	04/17/1982	05/17/1982	BARRINGTON, DONALD			✓					✓										
COOS 2610	Details	26.00S-12.00W-29 -			PERRY, ALBERT RT 3 BOX 177 COOS BAY OR			W	0.00	66.00	3.00	10.0	12/05/1969	12/18/1969	JONES, DELBERT S			✓					✓										
COOS 2611	Details	26.00S-12.00W-29 -				JERRYS PAINT AND BODY SHOP 135 WEST HALL COOS BAY OR		W	0.00	60.00	25.00	8.0	09/13/1969	09/18/1969	JONES, DELBERT S			✓					✓										
COOS 2612	Details	26.00S-12.00W-29 NE-SW			MESSERKE, FRED R RT 3 BOX 34 COOS BAY OR			W	60.00	70.00	40.00	20.0	01/15/1972	01/24/1972	MILLER, GEORGE R			✓					✓										
COOS 2638	Details	26.00S-12.00W-32 SW-NW			SMITH, T J RT 3 BOX 255 COOS BAY OR			W		40.00	16.00	3.5	01/18/1964	03/10/1964	LIVINGSTON, W J			✓					✓										
COOS 50785	Details	26.00S-12.00W-29 -	800	1935 WRISTON SPRINGS	SAMAYOA, ODILIA 1935 WRISTON SPRINGS COOS BAY OR 97420			W					12/31/1974	08/21/1997	WELL ID APPLICATION		19122																
COOS 53625	Details	26.00S-12.00W-29 SE-SE	1800	95052 STEVENS LANE	THOMPSON, ELTON PO BOX 565 COOS BAY OR 97420			W	88.00	188.00	88.00	7.0	06/15/2006	07/19/2006	WRIGHT JR, JOHN N WRIGHTS ARTESIAN	179708	83415	✓					✓										
COOS 53858	Details	26.00S-12.00W-29 SE-NW	100	70667 KELLOGG RD	ANDERSON, BRYAN PO BOX 1437 NORTH BEND OR 97459	Log indicates well address in North Bend, OR		W	35.00	220.00	20.00	7.0	02/09/2007	03/06/2007	BARRINGTON, RONALD L BARRINGTON WELL DRILLING LLC	187994	88508	✓					✓										

Download Data

NOTICE TO WATER WELL CONTRACTOR
The original and first copy of this report are to be filed with the STATE ENGINEER, SALEM, OREGON 97310 within 30 days from the date of well completion.

RECEIVED
JAN 24 1972
STATE ENGINEER
SALEM, OREGON

WATER WELL REPORT
STATE OF OREGON
(Please type or print)
(Do not write above this line)

Coos
2612

State Well No. 26/12W-29ca

State Permit No. .....

(1) OWNER:
Name Fred R. Messerle
Address Route 3, Box 34 Coos Bay Oregon

(2) TYPE OF WORK (check):
New Well [X] Deepening [ ] Reconditioning [ ] Abandon [ ]
If abandonment, describe material and procedure in Item 12.

(3) TYPE OF WELL:
Rotary [ ] Driven [ ]
Cable [X] Jetted [ ]
Dug [ ] Bored [ ]

(4) PROPOSED USE (check):
Domestic [X] Industrial [ ] Municipal [ ]
Irrigation [ ] Test Well [ ] Other [ ]

(5) CASING INSTALLED:
Threaded [ ] Welded [X]
6 " Diam. from 0 ft. to 50 ft. Gage .250
..... " Diam. from ..... ft. to ..... ft. Gage .....
..... " Diam. from ..... ft. to ..... ft. Gage .....

(6) PERFORATIONS:
Perforated? [ ] Yes [X] No
Type of perforator used
Size of perforations in. by in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

(7) SCREENS:
Well screen installed? [ ] Yes [X] No
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... Set from ..... ft. to ..... ft.
Diam. ..... Slot size ..... Set from ..... ft. to ..... ft.

(8) WELL TESTS:
Drawdown is amount water level is lowered below static level
Was a pump test made? [ ] Yes [X] No If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " "
" " "
Bailer test 20 gal./min. with 15 ft. drawdown after 1 hrs.
Artesian flow g.p.m.
Temperature of water 52 Depth artesian flow encountered ..... ft.

(9) CONSTRUCTION:
Well seal—Material used Bentonite
Well sealed from land surface to 18 ft.
Diameter of well bore to bottom of seal 10 in.
Diameter of well bore below seal 6 in.
Number of sacks of cement used in well seal 0 sacks
Number of sacks of bentonite used in well seal 2½ sacks
Brand name of bentonite National baroid
Number of pounds of bentonite per 100 gallons of water ------ lbs./100 gals.
Was a drive shoe used? [ ] Yes [X] No Plugs ..... Size: location ..... ft.
Did any strata contain unusable water? [ ] Yes [X] No
Type of water? depth of strata
Method of sealing strata off
Was well gravel packed? [ ] Yes [X] No Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

(10) LOCATION OF WELL:
County Coos Driller's well number
NE ¼ SW ¼ Section 29 T. 26S R. 12W W.M.
Bearing and distance from section or subdivision corner

(11) WATER LEVEL: Completed well.
Depth at which water was first found 60 ft.
Static level 40 ft. below land surface. Date 1-15-72
Artesian pressure lbs. per square inch. Date

(12) WELL LOG:
Diameter of well below casing 6
Depth drilled 70 ft. Depth of completed well 70 ft.

Formation: Describe color, texture, grain size and structure of materials; and show thickness and nature of each stratum and aquifer penetrated, with at least one entry for each change of formation. *Report each change in position of Static Water Level and indicate principal water-bearing strata.*

MATERIAL	From	To	SWL
Bulldozed area			
Soft claystone brown	0	8	
Claystone silty gray with brown & blue streaks	8	70	

Work started January 13 1972 Completed January 15 1972
Date well drilling machine moved off of well January 15 1972

Drilling Machine Operator's Certification:
This well was constructed under my direct supervision. Materials used and information reported above are true to my best knowledge and belief.
[Signed] Andrew A. Miller (Drilling Machine Operator) Date 1-19-, 1972
Drilling Machine Operator's License No. 469

Water Well Contractor's Certification:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.
Name George R. Miller & Son Well Drilling (Person, firm or corporation) (Type or print)
Address Route 1, Box 561 Bandon, Oregon
[Signed] George R Miller (Water Well Contractor)
Contractor's License No. 322 Date January 19, 1972

(USE ADDITIONAL SHEETS IF NECESSARY)

SP*45656-119

COOS 53625

COOS 53625

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

WELL I.D. # L 83415

START CARD # 179708

Instructions for completing this report are on the last page of this form.

(1) LAND OWNER Well Number
Name ELTON THOMPSON
Address PO BOX 565
City COOS BAY State OR Zip 97420

(2) TYPE OF WORK ☑ New Well
☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment ☐ Conversion

(3) DRILL METHOD
☑ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger ☐ Cable Mud
☐ Other

(4) PROPOSED USE
☑ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION Special Construction: ☐ Yes ☑ No
Depth of Completed Well 188 ft.
Explosives used: ☐ Yes ☑ No Type Amount

BORE HOLE Diameter	From	To	SEAL Material	From	To	Sacks or Pounds
10"	0	18	BENTONITE	0	18	SACKS
6"	18	188				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E
☑ Other POURED FROM SURFACE
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"	+2	20	.250	☑	☐	☑	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:	4 1/2"	0	188	sdr26	☐	☑	☑	☐
					☐	☐	☐	☐

Drive Shoe used ☐ Inside ☐ Outside ☑ None
Final location of shoe(s)

(7) PERFORATIONS/SCREENS
☑ Perforations Method SKILSAW
☐ Screens Type Material

From	To	Slot Size	Number	Diameter	Tele/pipe size	Casing	Liner
100	188	1/4X6	80	4 1/2"		☐	☑
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☑ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
7	TOTAL	185	1 HR

Temperature of water 52 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:

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FEB 14 2007
WATER RESOURCES DEPT
SALEM, OREGON

(9) LOCATION OF WELL (legal description)
County COOS
Tax Lot 1800 Lot
Township 26S S Range 12 W WM
Section 29 SE 1/4 SE 1/4
Lat ° ' " or (degrees or decimal)
Long ° ' " or (degrees or decimal)
Street Address of Well (or nearest address) 95052 STEVENS LN

(10) STATIC WATER LEVEL
88 ft. below land surface. Date 6/15/06
ft. below land surface. Date
Artesian pressure lb. per square inch Date

(11) WATER BEARING ZONES
Depth at which water was first found 88

From	To	Estimated Flow Rate	SWL
88	89	1	88
128	129	1	88
148	149	3	88
179	180	3	88

(12) WELL LOG Ground Elevation 200'

Material	From	To	SWL
BROWN SILTY CLAY	0	14	
GRAY CLAY STONE	14	52	
ORANGE SANDSTONE	52	66	
GRAY SANDSTONE	66	69	
GRAYSILTSTONEW/CLAY	69	83	
GRAY SANDSTONE	83	153	88
ORANGE SANDSTONE	153	168	88
GRAY SANDSTONE	168	188	88

RECEIVED
JUL 19 2006
WATER RESOURCES DEPT
SALEM, OREGON

Date Started 6/14/06 Completed 6/15/06

(unbonded) Water Well Constructor Certification
I certify that the work I performed on the construction, deepening, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

WWC Number 10328 Date 6/30/06
Signed

(bonded) Water Well Constructor Certification
I accept responsibility for the construction, deepening, 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 water supply well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 1736 Date 6/30/06
Signed WRIGHT'S ARTESIAN Coos Bay, Oregon 541-269-5343

ORIGINAL – WATER RESOURCES DEPARTMENT FIRST COPY – CONSTRUCTOR SECOND COPY – CUSTOMER 06/16/2004

Rick Ernst

Subject: FW: Question about Water Source at your Sumner, Oregon, Property

From: Jong Han
Sent: Friday, January 5, 2024 8:40 AM
To: Braedon Warner
Subject: Re: Question about Water Source at your Sumner, Oregon, Property

Hi,
we are getting water from Sumner Water Corporation thru subsurface piping system.
I understand that rain water is collected in a small dam at a nearby high area and then the water is distributed by gravity to each house.
we pay $15 per month.

Jong Han

On Tue, Jan 2, 2024 at 4:02 PM Braedon Warner wrote:

> Mr. Han,
>
> We will be completing the environmental sampling work at your property in the coming weeks. We have not been able to identify a water source for your property. Can you confirm whether the structure receives water from an onsite well, the town Co-Op piping, or another source?
>
> We will be reaching out with more information as the work is scheduled.
>
> Thank you!
>
> Braedon

Braedon Warner, GIT
Geologist
mobile: 208.991.6713
650 NE Holladay Street, Suite 900, Portland, OR 97232
GSI Water Solutions, Inc. | www.gsiws.com

In-Person Land and Water Use Interview Form

Name: N/A			
Property Address: 45673 Fairview-Sumner Lane			
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) Co-op		X	
Water Use			
Drinking Water		X	
Irrigation/Landscape			
Vegetable Garden			
Industrial Process			
Livestock			
Other (Describe)			
Water Source			
Public Water Supply			
Shared Well (<5 Residences)		X	
On-Site Well			
Surface Water			
Other (Describe)			

Note: The resident incorrectly believed the Co-op source was a well.

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.

APPENDIX B

Photograph Log

1.

2.

1:
Placement of push probe locations with private locator approval.
Photograph facing northwest.

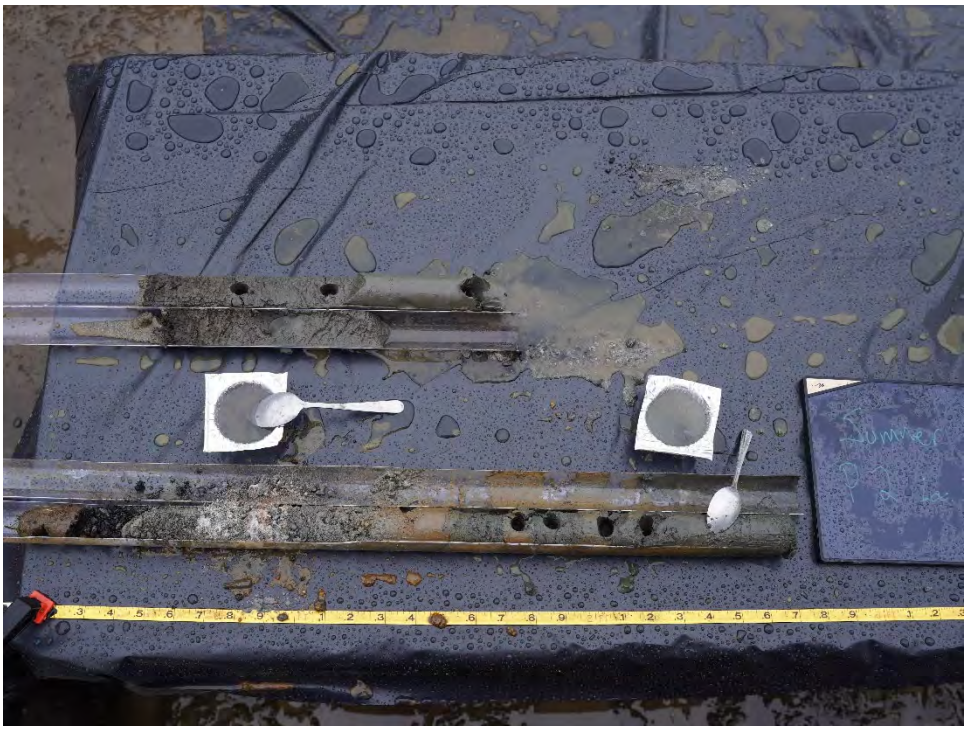
2:
Soil core from Probe P1.

Appendix B
Photograph Log
Former Sumner Store

GSI Water Solutions, Inc.

File Path:

3.



4.

3:
Soil cores from Probe P2. For this and following photographs, first 5-foot drive (0-5 feet bgs) is at bottom of photograph. Second core drive (5-10 feet bgs) is in center of photograph.

4:
Soil cores from Probe P3. Note buried asphalt layer by spoon that is below brown sand (core from 0-5 feet bgs).

5.

6.

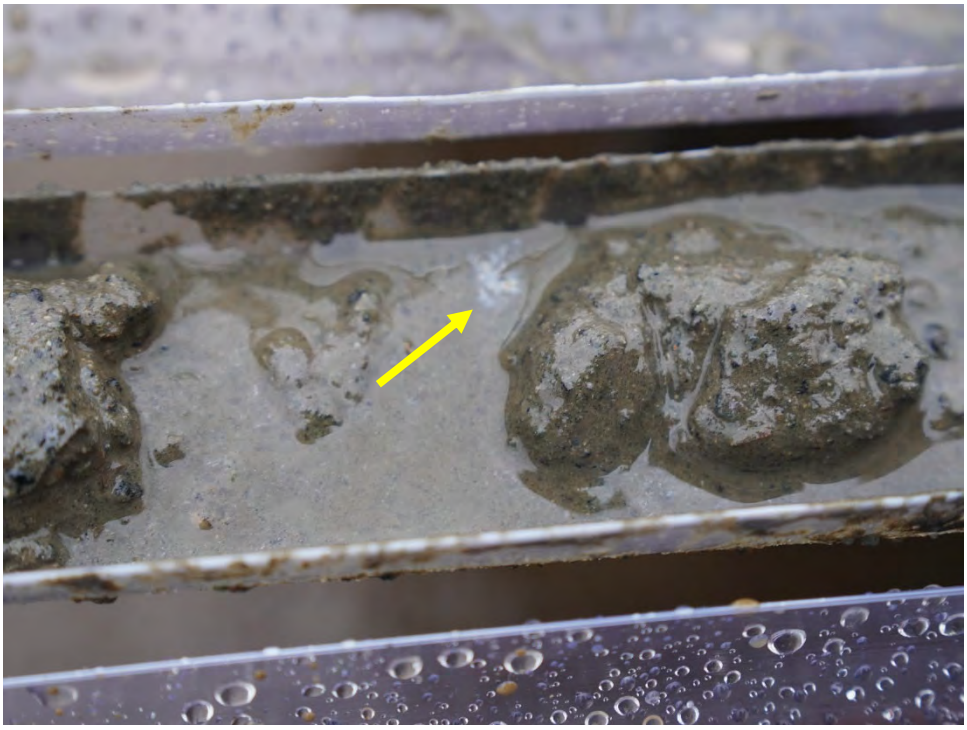
5:
Soil cores from Probe P4. Note brown sand as in Probe P3.

6:
Soil cores from Probe P5.

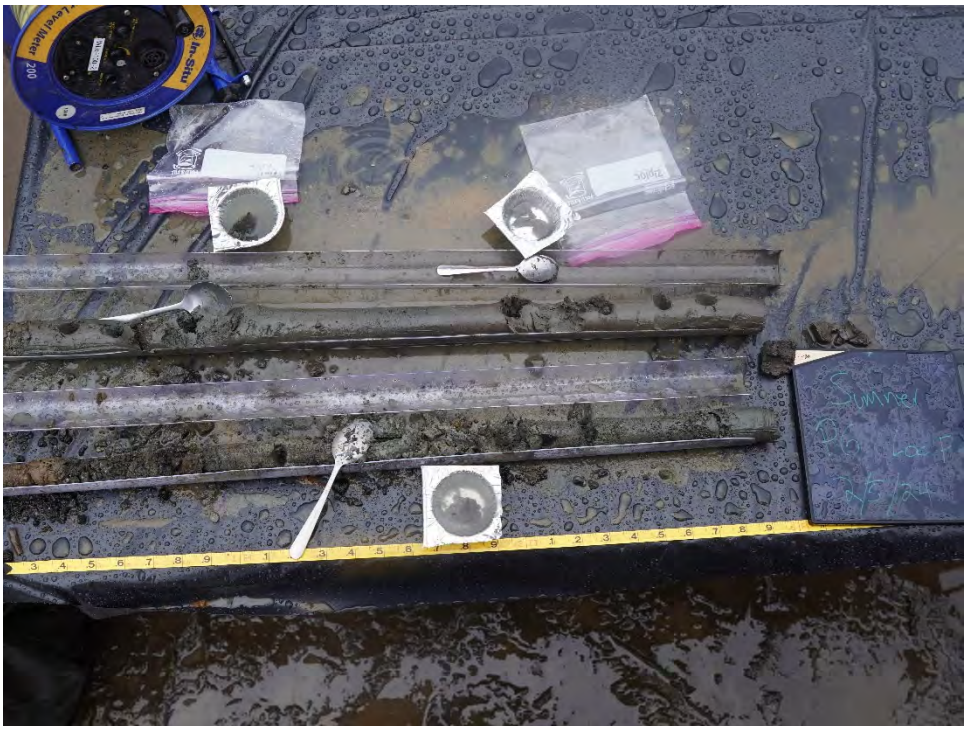
GSI Water Solutions, Inc.

File Path:

7.



8.



7:
Yellow arrow points to sheen on soil core from Probe P5.

8:
Soil cores from Probe P6.

Appendix B
Photograph Log
Former Sumner Store

GSI Water Solutions, Inc.

File Path:

9.

10.

9:
Water level in Wilson Creek at time of sampling (February 5, 2024).

10:
Front of former Sumner Store with drums for investigation-derived waste staged in front.

Appendix B
Photograph Log
Former Sumner Store

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 February 5, 2024, at the former Sumner Store project site near Coos Bay, 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
- Sample management
- Decontamination procedures
- Handling of investigation-derived waste (IDW)

1.1 Push Probe Explorations

On February 5, 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 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. Each probe was advanced to a depth of 10 feet except for P1 which was only completed to 5 feet as the borehole kept collapsing.

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). One or two soil samples were collected from each core, with each sample representing no more than 2 feet of retrieved soil. Sampled depth intervals varied to target zones with field evidence of contamination, changes in lithology, and the top of the groundwater table. 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. If the well exhibited low groundwater productivity, the pump rate was slowed and/or the inlet point dropped lower to keep below the groundwater table. Groundwater field parameters (i.e., pH, electrical conductivity, and temperature) were measured by means of a static sampling container. Purging was considered complete when three casing volumes of water had been removed, field parameters stabilized to within 10 percent, or the well purged dry. If pumped dry, the well was allowed to recharge.

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 lead 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 or gravel was placed on top of the bentonite to match the surrounding grade and surface material.

1.2 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. A sample label was affixed to each sample container and marked with a unique sample number, date and time of collection, and project number. These samples were placed in a cooler with ice until delivered to Pace by overnight shipping. Chain of custody was maintained and documented throughout the sample handling process.

1.3 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) were 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.

1.4 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 was 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. Analyses on soil samples from the probes and the IDW water sample were used to profile IDW for disposal. ACTenviro/Advanced Chemical Transport, LLC, picked up the IDW from the site on March 28, 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. 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, soil and groundwater duplicates (P2-S1-D and P2-D, respectively) were collected from probe P-2 and analyzed for the same analyses as their respective primary samples (i.e., P2-S1 and P2, respectively), with the exception of polycyclic aromatic hydrocarbons (PAHs) and dissolved lead for P2-D as indicated in the Work Plan (GSI, 2024a). Analytical results on field duplicates are 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, VOCs, PAHs, and total lead. 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 9, and a QA review of the data are included in the validation report in Appendix D.

GSI Water Solutions, Inc.

PROBE ID: P1

PROJECT:	Former Sumner Store	**DATE:** 2/5/2024	
BORING LOCATION:	Coos Bay, OR	**PROJECT NUMBER:** 2060.012.004	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 0.60	
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	2.2'	P1-S1	0.6	No	40% / 60% / 100% / 40% / 60%	Sand (SM) - Dark brown, wet, soft, silty sand with organic material. Asphalt Sand (SM) - Orange, brown, tan, and dark gray (below 2.3'), soft, wet, silty sand with odor.
5							
10							

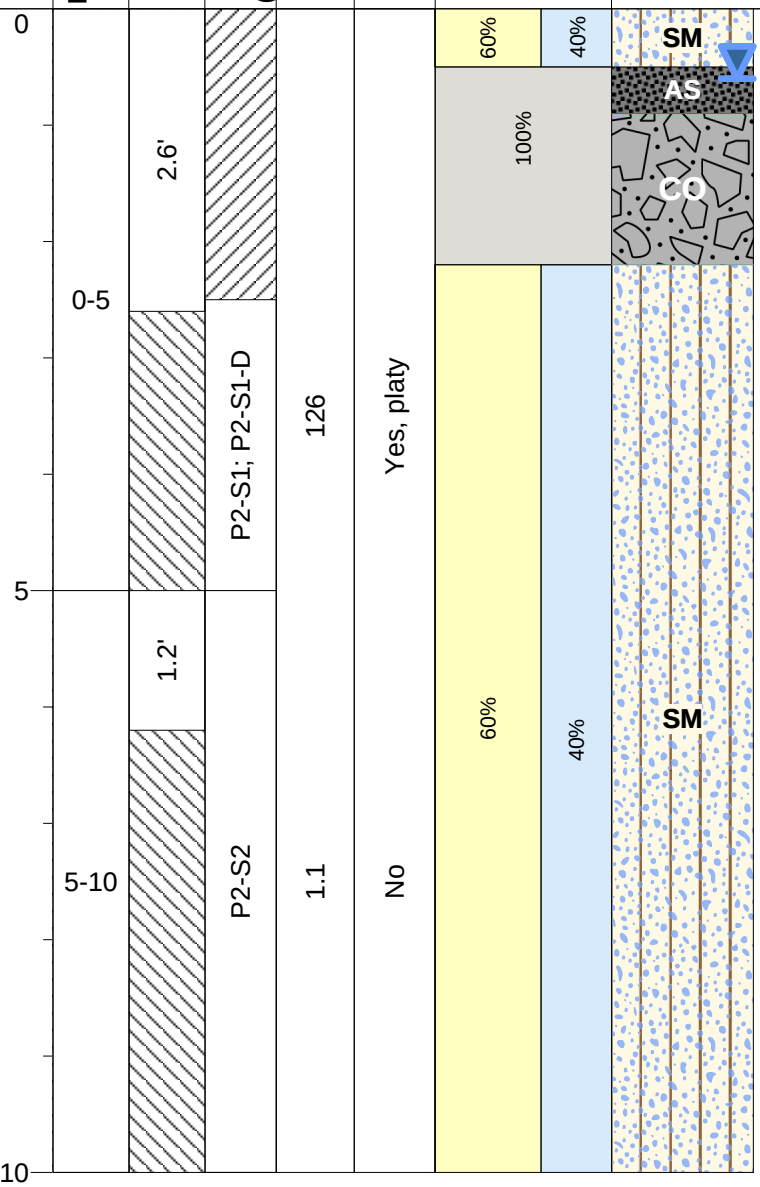
SAMPLING NOTES:
Hole collapsed after first drive, unable to clean out and collect 5-10'.

GSI Water Solutions, Inc.

PROBE ID: P2

PROJECT:	Former Sumner Store	**DATE:** 2/5/2024	
BORING LOCATION:	Coos Bay, OR	**PROJECT NUMBER:** 2060.012.004	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 0.60	
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	2.6'	P2-S1; P2-S1-D	126	Yes, platy	60% / 40%	Sand (SM) - Dark brown, wet, soft, silty sand.
							Asphalt
						100%	(Cobble) - Shattered cobble material.
5	5-10	1.2'	P2-S2	1.1	No	60% / 40%	Sand (SM) - Gray brown, wet, soft, silty sand with strong odor.
10							



SAMPLING NOTES:

GSI Water Solutions, Inc.

PROBE ID: P3

PROJECT:	Former Sumner Store	**DATE:** 2/5/2024	
BORING LOCATION:	Coos Bay, OR	**PROJECT NUMBER:** 2060.012.004	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 0.75	
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	2.2'	P3-S1	0.4	Yes, small plates	100% AS	Asphalt
						60% SP / 40% SP	Sand (SP) - Light brown fine to medium sand.
						100% AS	Asphalt
						60% SP / 40% SP	Sand (SP) -Gray, fine to medium sand. Sharp lower contact.
5	5-10	3.0'	P3-S2	0.3	No		
				1.1	No	10% / 90% ML	Silt (ML) - Dark gray, wet, soft, slightly clayey silt.
10			P3-S3				

SAMPLING NOTES:
Free fall drives.

GSI Water Solutions, Inc.

PROBE ID: P4

PROJECT:	Former Sumner Store	**DATE:** 2/5/2024	
BORING LOCATION:	Coos Bay, OR	**PROJECT NUMBER:** 2060.012.004	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 0.85	
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	2.7'	P4-S1	0.4	No	60% / 100% / 40%	Sand (SP) - Brown, wet, soft, sand.
							Asphalt
							Light brown, wet, soft, fine to medium sand.
5	5-10	2.8'	P4-S2	0.5	No	60% / 40%	- (4.5') - Gradually becomes gray.
			P4-S3	0.4	No		
10							

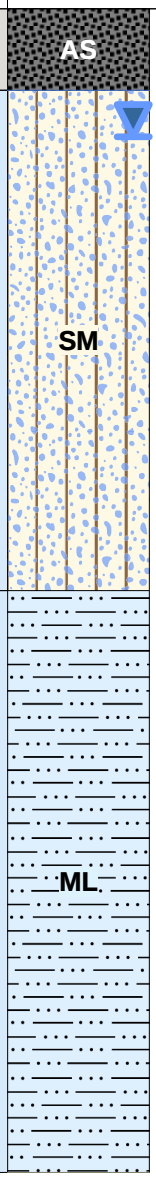
SAMPLING NOTES:

GSI Water Solutions, Inc.

PROBE ID: P5

PROJECT:	Former Sumner Store	**DATE:** 2/5/2024	
BORING LOCATION:	Coos Bay, OR	**PROJECT NUMBER:** 2060.012.004	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 1.10	
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	2.1'	P5-S1	267	Yes, platy	100%	Asphalt
						60% / 40%	Sand (SM) - Dark gray and black, wet, soft, silty sand.
5	5-10	2.4'	P5-S2	124	Yes, platy	30% / 70%	Silt (ML) - Gray, wet, soft, clayey silt.
			P5-S3	2.1	No		
10							

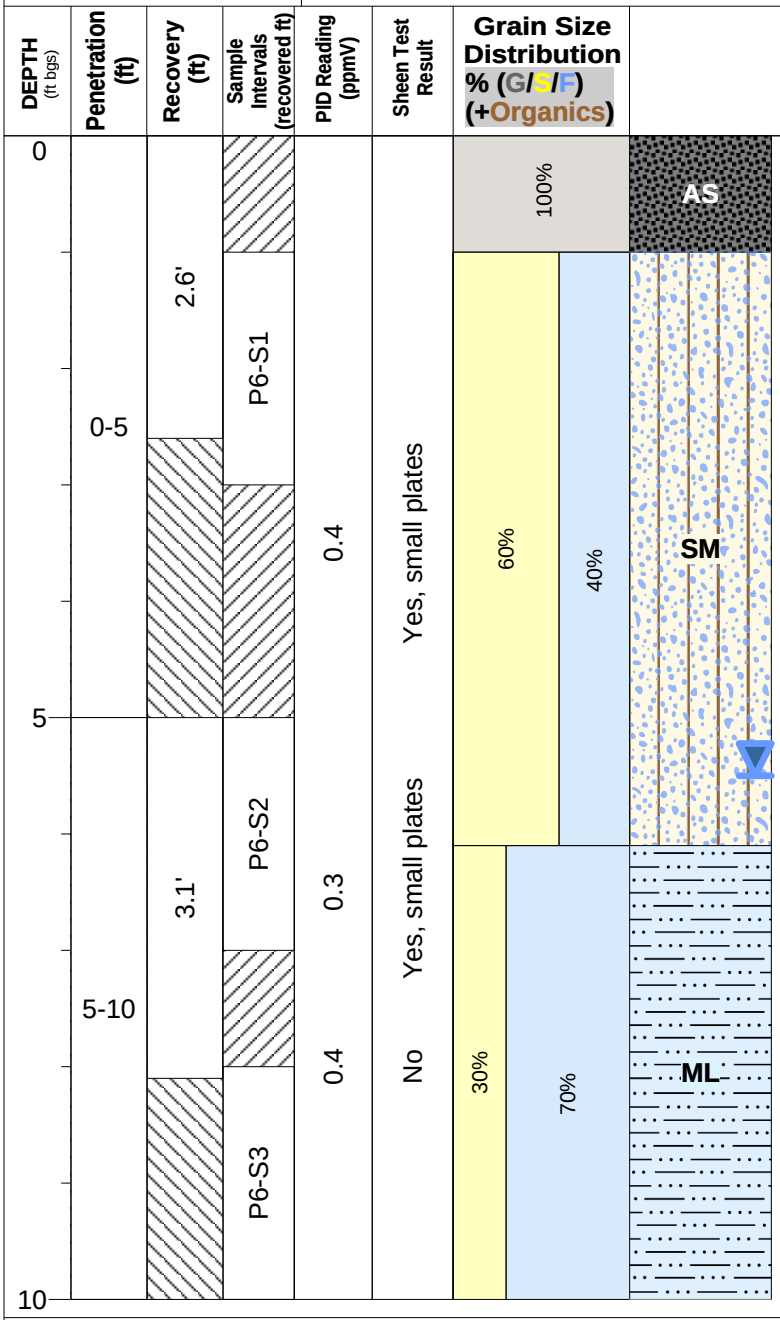


SAMPLING NOTES:

GSI Water Solutions, Inc.

PROBE ID: P6

PROJECT:	Former Sumner Store	**DATE:** 2/5/2024	
BORING LOCATION:	Coos Bay, OR	**PROJECT NUMBER:** 2060.012.004	
DRILLING CONTRACTOR:	BB&A	**WATER LEVEL DEPTH (ft BGS):** 5.50	
SAMPLING METHOD:	Geoprobe with Macrocore		
LOGGED BY:	B. Warner, R. Kemp		



SAMPLE DESCRIPTION

Asphalt

Sand (SM) - Gray brown, wet, soft, silty sand.

Silt (ML) - Gray, wet, soft, clayey silt.

SAMPLING NOTES:

APPENDIX D

Analytical Laboratory Documentation and Data Validation Report

Data Validation Report

DEQ LUST #06-94-0030

Former Sumner Store

March 11, 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
L1707571	Pace Analytical	02/07/2024	02/26/2024
L1703299	Pace Analytical	02/07/2024	02/16/2024

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

Sample Delivery Group: L1707571

Sample Delivery Group L1707571 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 one trip blank was included in this sample delivery group:

Field Sample ID	Lab Sample ID	Sample Date	Matrix	Sample Type
TRIP	L1707571-01	02/05/24 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 not used. Samples were received intact, and the bottle labels agreed with the COC. No anomalies were noted except for the sample TRIP was re-logged by the lab and was not included in the original COC.

Holding Time/Preservation

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

Field Sample ID	Method	Reason	Qualifier
TRIP	EPA 8260D	Holding time exceeded	J

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
WG2233119	EPA 8260D	1,1,2,2-Tetrachloroethane	CCV < LCL	J-
WG2233119	EPA 8260D	Bromobenzene	CCV < LCL	J-
WG2233119	EPA 8260D	Di-isopropyl ether	CCV < LCL	J-
WG2233119	EPA 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.

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.

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.

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

An LCS was analyzed for each batch and all recoveries were within QC acceptance criteria or did not affect qualification of samples.

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.

Field QA/QC

Field Duplicates

Field duplicates were not collected or analyzed as part of this SDG.

Equipment Blanks

Equipment blanks were not collected or analyzed as part of this SDG.

Trip Blanks

The sole sample in this delivery group was a trip blank. There were no detections.

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
TRIP	1,1,1,2-Tetrachloroethane	0.147	UJ	HTE
TRIP	1,1,1-Trichloroethane	0.149	UJ	HTE
TRIP	1,1,2,2-Tetrachloroethane	0.133	UJ	HTE, CCV
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	Bromobenzene	0.118	UJ	HTE, CCV
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	Di-isopropyl ether	0.105	UJ	HTE, CCV
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	Naphthalene	1.00	UJ	HTE, CCV
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

Sample Delivery Group: L1703299

Sample Delivery Group L1703299 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 twelve field samples were included in this sample delivery group:

Field Sample ID	Lab Sample ID	Sample Date	Matrix	Sample Type
P1-S1	L1703299-01	02/05/24 09:00	Soil	Primary
P1	L1703299-02	02/05/24 10:20	Groundwater	Primary
P2-S1	L1703299-03	02/05/24 09:30	Soil	Primary
P2-S2	L1703299-04	02/05/24 09:35	Soil	Primary
P2-S1-D	L1703299-05	02/05/24 09:31	Soil	Duplicate
P2-D	L1703299-06	02/05/24 10:16	Groundwater	Duplicate
P2	L1703299-07	02/05/24 10:15	Groundwater	Primary
P3-S2	L1703299-09	02/05/24 10:50	Soil	Primary
P3	L1703299-11	02/05/24 12:50	Groundwater	Primary
P4-S2	L1703299-13	02/05/24 12:20	Soil	Primary
P4	L1703299-15	02/05/24 13:25	Groundwater	Primary
P5-S1	L1703299-16	02/05/24 13:20	Soil	Primary
P5-S2	L1703299-18	02/05/24 13:25	Soil	Primary
P5-S3	L1703299-19	02/05/24 13:30	Soil	Primary
P5	L1703299-20	02/05/24 14:15	Groundwater	Primary
P6-S1	L1703299-21	02/05/24 14:35	Soil	Primary
P6-S2	L1703299-22	02/05/24 14:40	Soil	Primary
P6	L1703299-24	02/05/24 15:50	Groundwater	Primary
IDW-W	L1703299-26	02/05/24 16:20	Groundwater	Primary
RINSE	L1703299-27	02/05/24 15:20	Aqueous QC	Rinse 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.

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
WG2223329	EPA 8260D	Acrolein	CCV < LCL	J-
WG2224373	EPA 8260D	Acetone	CCV < LCL	J-
WG2224373	EPA 8260D	Acrylonitrile	CCV < LCL	J-
WG2224373	EPA 8260D	Bromomethane	CCV < LCL	J-
WG2224373	EPA 8260D	Chloromethane	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
P2-D	NWTPHGX	Gasoline Range Organics-NWTPH	Result < RL	U
P2	NWTPHGX	Gasoline Range Organics-NWTPH	Result < 5X MB	U
RINSE	NWTPHGX	Gasoline Range Organics-NWTPH	Result < RL	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 the following:

Batch	Field Sample ID	Method	Reason	Qualifier
WG2223119	P5	8270E-SIM	SUR < LCL	J-
WG2224064	P2-S1-D	8270E-SIM	SUR < LCL	J-
WG2224064	P5-S1	8270E-SIM	SUR < LCL	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.

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
WG2224373	EPA 8260D	Acrylonitrile	LCSD RPD > Limit	J
WG2224373	EPA 8260D	Carbon disulfide	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
P1-S1	NWTPHDX-SGT	Diesel Range Organics (DRO)	Sample resembles Hydraulic Oil,	NJ
P1-S1	NWTPHDX-SGT	Residual Range Organics (RRO)	Sample resembles Hydraulic Oil	NJ
P2-S1	NWTPHDX-SGT	Diesel Range Organics (DRO)	Sample resembles Mineral Spirits	NJ
P2-S1-D	NWTPHDX-SGT	Diesel Range Organics (DRO)	Sample resembles Mineral Spirits	NJ
P2-S1-D	NWTPHDX-SGT	Residual Range Organics (RRO)	Sample resembles Mineral Spirits	NJ
P3-S2	NWTPHDX-SGT	Diesel Range Organics (DRO)	Sample resembles Hydraulic Oil	NJ
P3-S2	NWTPHDX-SGT	Residual Range Organics (RRO)	Sample resembles Hydraulic Oil	NJ
P4-S2	NWTPHDX-SGT	Residual Range Organics (RRO)	Sample resembles Hydraulic Oil	NJ
P5-S1	NWTPHDX-SGT	Diesel Range Organics (DRO)	Sample resembles Mineral Spirits and Hydraulic Oil	NJ
P5-S1	NWTPHDX-SGT	Residual Range Organics (RRO)	Sample resembles Mineral Spirits and Hydraulic Oil	NJ

P5-S2	NWTPHDX-SGT	Diesel Range Organics (DRO)	Sample resembles Hydraulic Oil	NJ
P5-S2	NWTPHDX-SGT	Residual Range Organics (RRO)	Sample resembles Hydraulic Oil	NJ
P5	NWTPHDX-SGT	Diesel Range Organics (DRO)	Sample resembles Kerosene	NJ
P5	NWTPHDX-SGT	Residual Range Organics (RRO)	Sample resembles Kerosene	NJ
P6-S1	NWTPHDX-SGT	Diesel Range Organics (DRO)	Sample resembles Hydraulic Oil	NJ
P6-S1	NWTPHDX-SGT	Residual Range Organics (RRO)	Sample resembles Hydraulic Oil	NJ
P6	NWTPHDX-SGT	Diesel Range Organics (DRO)	Sample resembles Motor Oil	NJ
P6	NWTPHDX-SGT	Residual Range Organics (RRO)	Sample resembles Motor Oil	NJ
IDW-W	NWTPHDX-SGT	Diesel Range Organics (DRO)	Sample resembles Mineral Spirits	NJ
IDW-W	NWTPHDX-SGT	Residual Range Organics (RRO)	Sample resembles Mineral Spirits	NJ

Field QA/QC

Field Duplicates

Field Duplicates RPDs were within control limits except for:

Field Sample ID	Method	Analyte	Reason	Qualifier
P2-S1	6020B	Lead	ABS DIF > 2X RL	J
P2-S1	8260D	1,2,3-Trimethylbenzene	ABS DIF > 2X RL	J
P2-S1	8260D	Isopropylbenzene	ABS DIF > 2X RL	J
P2-S1	8260D	n-Butylbenzene	FD RPD > Limit	J
P2-S1	8260D	n-Propylbenzene	FD RPD > Limit	J
P2-S1	8260D	Naphthalene	ABS DIF > 2X RL	J
P2-S1	8260D	p-Isopropyltoluene	ABS DIF > 2X RL	J
P2-S1	8270E-SIM	1-Methylnaphthalene	ABS DIF > 2X RL	J
P2-S1	8270E-SIM	2-Methylnaphthalene	ABS DIF > 2X RL	J
P2-S1	8270E-SIM	Naphthalene	ABS DIF > 2X RL	J
P2-S1	NWTPHGX	Gasoline Range Organics-NWTPH	FD RPD > Limit	J

Equipment Blanks

One rinse blank was analyzed as part of this SDG. Four results were detected, but one was qualified as non-detect due to method blank contamination. No results were qualified due to equipment blank contamination.

Field Sample ID	Method	Analyte	Result	Qualifier
RINSE	8260D	1,2,3-Trimethylbenzene	0.257	J
RINSE	8260D	Benzene	0.105	J
RINSE	8270E-SIM	Acenaphthene	0.0515	
RINSE	NWTPHGX	Gasoline Range Organics-NWTPH	100	U

Soil samples had low level detection in this SDG for analytes detected in the rinse blank. Due to matrix and reporting unit differences, soil samples were not qualified due to rinse blank detections, but data users should be aware of this.

Trip Blanks

A trip blank associated with this SDG was analyzed in SDG L1707571. No analytes 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. There were no results 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-S1	Acetone	0.0787	J-	CCV, BRL
P1-S1	Acrylonitrile	0.00668	UJ	CCV, LCS
P1-S1	Bromomethane	0.00364	UJ	CCV
P1-S1	Carbon disulfide	0.00129	UJ	LCS
P1-S1	Chloromethane	0.00803	UJ	CCV
P1-S1	sec-Butylbenzene	0.0194	J	BRL
P1-S1	Toluene	0.00254	J	BRL
P1-S1	Xylenes, Total	0.00300	J	BRL
P1-S1	Acenaphthylene	0.00822	J	BRL
P1-S1	Fluorene	0.00337	J	BRL
P1-S1	Naphthalene	0.00610	J	BRL
P1-S1	Diesel Range Organics (DRO)	2.21	NJ	TIC, BRL
P1-S1	Residual Range Organics (RRO)	23.3	NJ	TIC
P1	Acrolein	2.54	UJ	CCV
P2-S1	Lead	11.2	J	FDP
P2-S1	1,2,3-Trimethylbenzene	0.898	J	FDP

P2-S1	1,3,5-Trimethylbenzene	0.142	J	BRL
P2-S1	4-Methyl-2-pentanone (MIBK)	0.419	J	BRL
P2-S1	Acetone	1.77	UJ	CCV
P2-S1	Acrylonitrile	0.175	UJ	CCV, LCS
P2-S1	Bromomethane	0.0954	UJ	CCV
P2-S1	Carbon disulfide	0.0339	UJ	LCS
P2-S1	Chloromethane	0.211	UJ	CCV
P2-S1	Isopropylbenzene	0.479	J	FDP
P2-S1	n-Butylbenzene	5.47	J	FDP
P2-S1	n-Propylbenzene	1.53	J	FDP
P2-S1	Naphthalene	0.814	J	FDP
P2-S1	p-Isopropyltoluene	0.714	J	FDP
P2-S1	tert-Butylbenzene	0.215	J	BRL
P2-S1	Xylenes, Total	0.0734	J	BRL
P2-S1	1-Methylnaphthalene	0.0243	J	FDP, BRL
P2-S1	2-Methylnaphthalene	0.0455	J	FDP
P2-S1	Naphthalene	0.0565	J	FDP
P2-S1	Diesel Range Organics (DRO)	12.9	NJ	TIC
P2-S1	Gasoline Range Organics-NWTPH	1230	J	FDP
P2-S2	1,2,4-Trimethylbenzene	0.00557	J	BRL
P2-S2	Acetone	0.194	J-	CCV
P2-S2	Acrylonitrile	0.0102	UJ	CCV, LCS
P2-S2	Bromomethane	0.00557	UJ	CCV
P2-S2	Carbon disulfide	0.00198	UJ	LCS
P2-S2	Chloromethane	0.0123	UJ	CCV
P2-S2	n-Propylbenzene	0.0111	J	BRL
P2-S2	p-Isopropyltoluene	0.00783	J	BRL
P2-S2	sec-Butylbenzene	0.0102	J	BRL
P2-S2	tert-Butylbenzene	0.0124	J	BRL
P2-S2	Toluene	0.00882	J	BRL
P2-S1-D	Lead	28.3	J	FDP
P2-S1-D	1,2,3-Trimethylbenzene	0.0604	J	FDP
P2-S1-D	1,2,4-Trimethylbenzene	0.00615	J	BRL
P2-S1-D	4-Methyl-2-pentanone (MIBK)	0.0245	J	BRL
P2-S1-D	Acetone	0.103	UJ	CCV
P2-S1-D	Acrylonitrile	0.0102	UJ	CCV, LCS
P2-S1-D	Bromomethane	0.00556	UJ	CCV
P2-S1-D	Carbon disulfide	0.00197	UJ	LCS
P2-S1-D	Chloromethane	0.0123	UJ	CCV
P2-S1-D	Isopropylbenzene	0.0434	J	FDP
P2-S1-D	n-Butylbenzene	0.384	J	FDP

P2-S1-D	n-Propylbenzene	0.138	J	FDP
P2-S1-D	Naphthalene	0.111	J	FDP
P2-S1-D	p-Isopropyltoluene	0.0508	J	FDP
P2-S1-D	tert-Butylbenzene	0.0139	J	BRL
P2-S1-D	Xylenes, Total	0.00722	J	BRL
P2-S1-D	1-Methylnaphthalene	0.430	J-	SUR, FDP
P2-S1-D	2-Chloronaphthalene	0.00879	UJ	SUR
P2-S1-D	2-Methylnaphthalene	0.826	J-	SUR, FDP
P2-S1-D	Acenaphthene	0.00556	J-	SUR, BRL
P2-S1-D	Acenaphthylene	0.00407	UJ	SUR
P2-S1-D	Anthracene	0.00434	UJ	SUR
P2-S1-D	Benzo(a)anthracene	0.00326	UJ	SUR
P2-S1-D	Benzo(a)pyrene	0.00338	UJ	SUR
P2-S1-D	Benzo(b)fluoranthene	0.00289	UJ	SUR
P2-S1-D	Benzo(g,h,i)perylene	0.00334	UJ	SUR
P2-S1-D	Benzo(k)fluoranthene	0.00406	UJ	SUR
P2-S1-D	Chrysene	0.00438	UJ	SUR
P2-S1-D	Dibenz(a,h)anthracene	0.00324	UJ	SUR
P2-S1-D	Fluoranthene	0.0102	J-	SUR, BRL
P2-S1-D	Fluorene	0.00666	J-	SUR, BRL
P2-S1-D	Indeno(1,2,3-cd)pyrene	0.00341	UJ	SUR
P2-S1-D	Naphthalene	1.03	J-	SUR, FDP
P2-S1-D	Phenanthrene	0.0180	J-	SUR
P2-S1-D	Pyrene	0.0119	J-	SUR
P2-S1-D	Diesel Range Organics (DRO)	20.7	NJ	TIC
P2-S1-D	Residual Range Organics (RRO)	7.41	NJ	TIC, BRL
P2-S1-D	Gasoline Range Organics-NWTPH	237	J	FDP
P2-D	1,2,3-Trimethylbenzene	0.218	J	BRL
P2-D	Acrolein	2.54	UJ	CCV
P2-D	Isopropylbenzene	0.143	J	BRL
P2-D	n-Propylbenzene	0.439	J	BRL
P2-D	p-Isopropyltoluene	0.138	J	BRL
P2-D	Gasoline Range Organics-NWTPH	100	U	MBK
P2	1,2,3-Trimethylbenzene	0.303	J	BRL
P2	Acrolein	2.54	UJ	CCV
P2	Isopropylbenzene	0.238	J	BRL
P2	n-Propylbenzene	0.680	J	BRL
P2	p-Isopropyltoluene	0.161	J	BRL
P2	sec-Butylbenzene	0.146	J	BRL
P2	2-Methylnaphthalene	0.104	J	BRL
P2	Naphthalene	0.206	J	BRL

P2	Gasoline Range Organics-NWTPH	149	U	MBK
P3-S2	Acetone	0.0587	UJ	CCV
P3-S2	Acrylonitrile	0.00580	UJ	CCV, LCS
P3-S2	Bromomethane	0.00317	UJ	CCV
P3-S2	Carbon disulfide	0.00113	UJ	LCS
P3-S2	Chloromethane	0.00699	UJ	CCV
P3-S2	Diesel Range Organics (DRO)	31.4	NJ	TIC
P3-S2	Residual Range Organics (RRO)	280	NJ	TIC
P3-S2	Gasoline Range Organics-NWTPH	1.51	J	BRL
P3	1,2,3-Trimethylbenzene	0.186	J	BRL
P3	Acrolein	2.54	UJ	CCV
P3	n-Propylbenzene	0.101	J	BRL
P3	1-Methylnaphthalene	0.0992	J	BRL
P3	2-Methylnaphthalene	0.0875	J	BRL
P3	Naphthalene	0.125	J	BRL
P3	Phenanthrene	0.0314	J	BRL
P4-S2	Acetone	0.0541	UJ	CCV
P4-S2	Acrylonitrile	0.00535	UJ	CCV, LCS
P4-S2	Bromomethane	0.00292	UJ	CCV
P4-S2	Carbon disulfide	0.00104	UJ	LCS
P4-S2	Chloromethane	0.00645	UJ	CCV
P4-S2	Residual Range Organics (RRO)	560	NJ	TIC
P4	Acrolein	2.54	UJ	CCV
P4	Residual Range Organics (RRO)	249	J	BRL
P5-S1	1,2,4-Trimethylbenzene	0.131	J	BRL
P5-S1	4-Methyl-2-pentanone (MIBK)	0.445	J	BRL
P5-S1	Acetone	1.69	UJ	CCV
P5-S1	Acrylonitrile	0.167	UJ	CCV, LCS
P5-S1	Bromomethane	0.0912	UJ	CCV
P5-S1	Carbon disulfide	0.0324	UJ	LCS
P5-S1	Chloromethane	0.201	UJ	CCV
P5-S1	Toluene	0.131	J	BRL
P5-S1	Xylenes, Total	0.0590	J	BRL
P5-S1	1-Methylnaphthalene	1.63	J-	SUR
P5-S1	2-Chloronaphthalene	0.00758	UJ	SUR
P5-S1	2-Methylnaphthalene	3.71	J-	SUR
P5-S1	Acenaphthene	0.0177	J-	SUR
P5-S1	Acenaphthylene	0.00351	UJ	SUR
P5-S1	Anthracene	0.00374	UJ	SUR
P5-S1	Benzo(a)anthracene	0.00281	UJ	SUR
P5-S1	Benzo(a)pyrene	0.00291	UJ	SUR

P5-S1	Benzo(b)fluoranthene	0.00249	UJ	SUR
P5-S1	Benzo(g,h,i)perylene	0.00335	J-	SUR, BRL
P5-S1	Benzo(k)fluoranthene	0.00350	UJ	SUR
P5-S1	Chrysene	0.00377	UJ	SUR
P5-S1	Dibenz(a,h)anthracene	0.00280	UJ	SUR
P5-S1	Fluoranthene	0.00631	J-	SUR, BRL
P5-S1	Fluorene	0.0268	J-	SUR
P5-S1	Indeno(1,2,3-cd)pyrene	0.00294	UJ	SUR
P5-S1	Naphthalene	5.16	J-	SUR
P5-S1	Phenanthrene	0.0407	J-	SUR
P5-S1	Pyrene	0.00839	J-	SUR, BRL
P5-S1	Diesel Range Organics (DRO)	38.4	NJ	TIC
P5-S1	Residual Range Organics (RRO)	50.7	NJ	TIC
P5-S2	1,2,4-Trimethylbenzene	0.0169	J	BRL
P5-S2	1,2-Dichloropropane	0.0167	J	BRL
P5-S2	Acetone	1.85	J-	CCV
P5-S2	Acrylonitrile	0.0198	UJ	CCV, LCS
P5-S2	Bromomethane	0.0108	UJ	CCV
P5-S2	Carbon disulfide	0.00384	UJ	LCS
P5-S2	Chloromethane	0.0239	UJ	CCV
P5-S2	sec-Butylbenzene	0.0564	J	BRL
P5-S2	tert-Butylbenzene	0.0233	J	BRL
P5-S2	Diesel Range Organics (DRO)	7.43	NJ	TIC, BRL
P5-S2	Residual Range Organics (RRO)	21.9	NJ	TIC
P5-S3	Acetone	0.404	J-	CCV
P5-S3	Acrylonitrile	0.0120	UJ	CCV, LCS
P5-S3	Benzene	0.00240	J	BRL
P5-S3	Bromomethane	0.00654	UJ	CCV
P5-S3	Carbon disulfide	0.00232	UJ	LCS
P5-S3	Chloromethane	0.0144	UJ	CCV
P5-S3	Isopropylbenzene	0.00606	J	BRL
P5-S3	n-Butylbenzene	0.0254	J	BRL
P5-S3	n-Propylbenzene	0.0128	J	BRL
P5-S3	Naphthalene	0.0249	J	BRL
P5-S3	Toluene	0.00938	J	BRL
P5-S3	Gasoline Range Organics-NWTPH	5.66	J	BRL
P5	1,3,5-Trimethylbenzene	16.7	J	BRL
P5	Acrolein	50.8	UJ	CCV
P5	p-Isopropyltoluene	16.0	J	BRL
P5	Xylenes, Total	34.4	J	BRL
P5	1-Methylnaphthalene	47.0	J-	SUR

P5	2-Chloronaphthalene	0.0682	UJ	SUR
P5	Acenaphthene	0.265	J-	SUR
P5	Acenaphthylene	0.0424	J-	SUR, BRL
P5	Anthracene	0.0190	UJ	SUR
P5	Benzo(a)anthracene	0.0203	UJ	SUR
P5	Benzo(a)pyrene	0.0184	UJ	SUR
P5	Benzo(b)fluoranthene	0.0168	UJ	SUR
P5	Benzo(g,h,i)perylene	0.0204	J-	SUR, BRL
P5	Benzo(k)fluoranthene	0.0202	UJ	SUR
P5	Chrysene	0.0179	UJ	SUR
P5	Dibenz(a,h)anthracene	0.0160	UJ	SUR
P5	Fluoranthene	0.0457	J-	SUR, BRL
P5	Fluorene	0.341	J-	SUR
P5	Indeno(1,2,3-cd)pyrene	0.0158	UJ	SUR
P5	Phenanthrene	0.284	J-	SUR
P5	Pyrene	0.0502	J-	SUR
P5	2-Methylnaphthalene	118	J-	SUR
P5	Naphthalene	404	J-	SUR
P5	Diesel Range Organics (DRO)	2000	NJ	TIC
P5	Residual Range Organics (RRO)	379	NJ	TIC
P6-S1	Acetone	0.0717	UJ	CCV
P6-S1	Acrylonitrile	0.00710	UJ	CCV, LCS
P6-S1	Bromomethane	0.00388	UJ	CCV
P6-S1	Carbon disulfide	0.00138	UJ	LCS
P6-S1	Chloromethane	0.00855	UJ	CCV
P6-S1	Diesel Range Organics (DRO)	3.71	NJ	TIC, BRL
P6-S1	Residual Range Organics (RRO)	34.6	NJ	TIC
P6-S1	Gasoline Range Organics-NWTPH	1.68	J	BRL
P6-S2	Acetone	0.0724	UJ	CCV
P6-S2	Acrylonitrile	0.00716	UJ	CCV, LCS
P6-S2	Bromomethane	0.00391	UJ	CCV
P6-S2	Carbon disulfide	0.00139	UJ	LCS
P6-S2	Chloromethane	0.00862	UJ	CCV
P6-S2	Residual Range Organics (RRO)	7.96	J	BRL
P6-S2	Gasoline Range Organics-NWTPH	3.11	J	BRL
P6	Lead,Dissolved	1.01	J	BRL
P6	1,2,3-Trimethylbenzene	0.675	J	BRL
P6	2-Butanone (MEK)	3.26	J	BRL
P6	Acetone	12.7	J	BRL
P6	Acrolein	2.54	UJ	CCV
P6	Benzene	0.105	J	BRL

P6	Ethylbenzene	0.872	J	BRL
P6	Isopropylbenzene	0.148	J	BRL
P6	n-Propylbenzene	0.320	J	BRL
P6	2-Methylnaphthalene	0.0736	J	BRL
P6	Naphthalene	0.216	J	BRL
P6	Diesel Range Organics (DRO)	45.8	NJ	TIC, BRL
P6	Residual Range Organics (RRO)	1120	NJ	TIC
IDW-W	Acrolein	2.54	UJ	CCV
IDW-W	Diesel Range Organics (DRO)	207	NJ	TIC
IDW-W	Residual Range Organics (RRO)	279	NJ	TIC
RINSE	1,2,3-Trimethylbenzene	0.257	J	BRL
RINSE	Acrolein	2.54	UJ	CCV
RINSE	Benzene	0.105	J	BRL
RINSE	Gasoline Range Organics-NWTPH	100	U	MBK

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, 1,708 results were reviewed from two sample delivery groups. The overall completeness for this event was 100%.

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
ERL	Elevated reporting limit
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 16, 2024

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group:	L1703299
Samples Received:	02/07/2024
Project Number:	2060.012.004
Description:	Former Sumner Store

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-S1 L1703299-01 Solid

Collected by: BW/RK | Collected date/time: 02/05/24 09:00 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2223140	1	02/09/24 10:02	02/09/24 10:17	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2223355	5	02/12/24 15:23	02/13/24 12:41	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224020	25.3	02/05/24 09:00	02/11/24 03:24	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2224373	1.01	02/05/24 09:00	02/12/24 01:22	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2221443	1	02/09/24 06:00	02/10/24 11:14	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2223109	1	02/09/24 07:15	02/09/24 17:29	LS	Mt. Juliet, TN

P1 L1703299-02 GW

Collected by: BW/RK | Collected date/time: 02/05/24 10:20 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2223477	1	02/12/24 10:08	02/12/24 18:04	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224051	1	02/12/24 17:42	02/12/24 17:42	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223329	1	02/09/24 13:23	02/09/24 13:23	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2224153	1.2	02/12/24 07:31	02/13/24 01:14	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2224154	1	02/12/24 06:58	02/12/24 23:10	LS	Mt. Juliet, TN

P2-S1 L1703299-03 Solid

Collected by: BW/RK | Collected date/time: 02/05/24 09:30 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2223140	1	02/09/24 10:02	02/09/24 10:17	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2223355	5	02/12/24 15:23	02/13/24 12:44	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224020	250	02/05/24 09:30	02/11/24 05:40	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2224373	20	02/05/24 09:30	02/12/24 04:50	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2221443	1	02/09/24 06:00	02/10/24 10:37	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2223109	1	02/09/24 07:15	02/09/24 16:01	LS	Mt. Juliet, TN

P2-S2 L1703299-04 Solid

Collected by: BW/RK | Collected date/time: 02/05/24 09:35 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2223140	1	02/09/24 10:02	02/09/24 10:17	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224020	26.3	02/05/24 09:35	02/11/24 03:43	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2224373	1.05	02/05/24 09:35	02/12/24 01:41	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2221443	1	02/09/24 06:00	02/10/24 10:25	JAS	Mt. Juliet, TN

P2-S1-D L1703299-05 Solid

Collected by: BW/RK | Collected date/time: 02/05/24 09:31 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2223140	1	02/09/24 10:02	02/09/24 10:17	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2223355	5	02/12/24 15:23	02/13/24 12:47	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224020	25	02/05/24 09:31	02/11/24 04:03	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2224373	1	02/05/24 09:31	02/12/24 02:00	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2221443	1	02/09/24 06:00	02/10/24 10:50	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2224064	1	02/11/24 11:28	02/12/24 14:20	AGW	Mt. Juliet, TN

P2-D L1703299-06 GW

Collected by: BW/RK | Collected date/time: 02/05/24 10:16 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224051	1	02/12/24 18:30	02/12/24 18:30	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223329	1	02/09/24 13:41	02/09/24 13:41	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2224153	1	02/12/24 07:31	02/13/24 01:34	MAA	Mt. Juliet, TN

P2 L1703299-07 GW

Collected by: BW/RK | Collected date/time: 02/05/24 10:15 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2223477	1	02/12/24 10:08	02/12/24 18:07	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224051	1	02/12/24 18:53	02/12/24 18:53	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223329	1	02/09/24 14:00	02/09/24 14:00	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2224153	1.14	02/12/24 07:31	02/13/24 01:54	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2223119	1	02/10/24 06:13	02/10/24 15:43	MKM	Mt. Juliet, TN

P3-S2 L1703299-09 Solid

Collected by: BW/RK | Collected date/time: 02/05/24 10:50 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2223140	1	02/09/24 10:02	02/09/24 10:17	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224020	25	02/05/24 10:50	02/11/24 04:22	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2224373	1	02/05/24 10:50	02/12/24 02:19	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2221443	5	02/09/24 06:00	02/10/24 11:39	JAS	Mt. Juliet, TN

P3 L1703299-11 GW

Collected by: BW/RK | Collected date/time: 02/05/24 12:50 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2223477	1	02/12/24 10:08	02/12/24 18:11	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224051	1	02/12/24 19:16	02/12/24 19:16	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223329	1	02/09/24 14:18	02/09/24 14:18	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2224153	1.32	02/12/24 07:31	02/13/24 02:15	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2223119	1	02/10/24 06:13	02/10/24 16:01	MKM	Mt. Juliet, TN

P4-S2 L1703299-13 Solid

Collected by: BW/RK | Collected date/time: 02/05/24 12:20 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2223140	1	02/09/24 10:02	02/09/24 10:17	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224020	25	02/05/24 12:20	02/11/24 04:41	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2224373	1	02/05/24 12:20	02/12/24 02:38	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2221443	25	02/09/24 06:00	02/10/24 11:39	JAS	Mt. Juliet, TN

P4 L1703299-15 GW

Collected by: BW/RK | Collected date/time: 02/05/24 13:25 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2223477	1	02/12/24 10:08	02/12/24 18:14	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224051	1	02/12/24 19:52	02/12/24 19:52	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223329	1	02/09/24 14:37	02/09/24 14:37	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2224153	1	02/12/24 07:31	02/13/24 02:35	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2223119	1	02/10/24 06:13	02/10/24 16:18	MKM	Mt. Juliet, TN

P5-S1 L1703299-16 Solid

Collected by: BW/RK | Collected date/time: 02/05/24 13:20 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2223140	1	02/09/24 10:02	02/09/24 10:17	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2223355	5	02/12/24 15:23	02/13/24 13:00	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224137	250	02/05/24 13:20	02/12/24 03:30	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2224373	20	02/05/24 13:20	02/12/24 05:08	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2221443	1	02/09/24 06:00	02/10/24 11:27	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2224064	1	02/11/24 11:28	02/12/24 16:44	JRM	Mt. Juliet, TN

P5-S2 L1703299-18 Solid

Collected by: BW/RK | Collected date/time: 02/05/24 13:25 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2223140	1	02/09/24 10:02	02/09/24 10:17	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224137	58.5	02/05/24 13:25	02/12/24 01:16	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2224373	2.34	02/05/24 13:25	02/12/24 02:57	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2221443	1	02/09/24 06:00	02/10/24 11:02	JAS	Mt. Juliet, TN

P5-S3 L1703299-19 Solid

Collected by: BW/RK | Collected date/time: 02/05/24 13:30 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2223140	1	02/09/24 10:02	02/09/24 10:17	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224137	33.3	02/05/24 13:30	02/12/24 01:35	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2224373	1.33	02/05/24 13:30	02/12/24 03:16	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2221443	1	02/09/24 06:00	02/10/24 10:25	JAS	Mt. Juliet, TN

P5 L1703299-20 GW

Collected by: BW/RK | Collected date/time: 02/05/24 14:15 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2223477	1	02/12/24 10:08	02/12/24 18:17	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224051	20	02/12/24 21:21	02/12/24 21:21	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223329	20	02/09/24 17:25	02/09/24 17:25	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2224153	1.22	02/12/24 07:31	02/13/24 02:55	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2223119	1	02/10/24 06:13	02/10/24 16:36	MKM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2223119	20	02/10/24 06:13	02/14/24 21:04	LS	Mt. Juliet, TN

P6-S1 L1703299-21 Solid

Collected by: BW/RK | Collected date/time: 02/05/24 14:35 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2223141	1	02/09/24 09:43	02/09/24 10:00	KDW	Mt. Juliet, TN
Metals (ICPMS) by Method 6020B	WG2223355	5	02/12/24 15:23	02/13/24 13:03	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224137	27.8	02/05/24 14:35	02/12/24 01:55	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2224373	1.11	02/05/24 14:35	02/12/24 03:34	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2221443	1	02/09/24 06:00	02/10/24 11:27	JAS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2224064	1	02/11/24 11:28	02/12/24 16:26	AGW	Mt. Juliet, TN

P6-S2 L1703299-22 Solid

Collected by: BW/RK | Collected date/time: 02/05/24 14:40 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2223141	1	02/09/24 09:43	02/09/24 10:00	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224137	25	02/05/24 14:40	02/12/24 02:14	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2224373	1	02/05/24 14:40	02/12/24 03:53	KSD	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2221443	1	02/09/24 06:00	02/10/24 10:37	JAS	Mt. Juliet, TN

P6 L1703299-24 GW

Collected by: BW/RK | Collected date/time: 02/05/24 15:50 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2223477	1	02/12/24 10:08	02/12/24 18:20	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224145	1	02/11/24 19:01	02/11/24 19:01	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223329	1	02/09/24 14:56	02/09/24 14:56	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2224153	1.2	02/12/24 07:31	02/13/24 03:15	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2223119	1	02/10/24 06:13	02/10/24 16:54	MKM	Mt. Juliet, TN

IDW-W L1703299-26 GW

Collected by: BW/RK | Collected date/time: 02/05/24 16:20 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2222725	1	02/09/24 03:24	02/09/24 19:44	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224145	1	02/11/24 19:23	02/11/24 19:23	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223329	1	02/09/24 15:14	02/09/24 15:14	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2224153	1	02/12/24 07:31	02/13/24 03:36	MAA	Mt. Juliet, TN

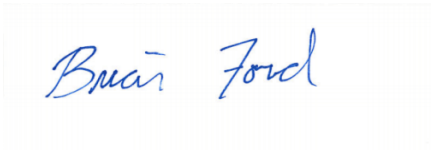
RINSE L1703299-27 GW

Collected by: BW/RK | Collected date/time: 02/05/24 15:20 | Received date/time: 02/07/24 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020B	WG2223477	1	02/12/24 10:08	02/12/24 18:23	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method NWTPHGX	WG2224145	1	02/11/24 19:46	02/11/24 19:46	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2223329	1	02/09/24 15:33	02/09/24 15:33	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT	WG2224153	1	02/12/24 07:31	02/13/24 03:56	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270E-SIM	WG2223119	1	02/10/24 06:13	02/10/24 17:12	MKM	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

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	70.5		1	02/09/2024 10:17	WG2223140

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	39.5		0.140	2.84	5	02/13/2024 12:41	WG2223355

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	44.3		1.57	4.63	25.3	02/11/2024 03:24	WG2224020
(S) a,a,a-Trifluorotoluene(FID)	*98.2*			*77.0-120*		*02/11/2024 03:24*	WG2224020

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	0.0787	C3 J	0.0675	0.0924	1.01	02/12/2024 01:22	WG2224373
Acrylonitrile	U	C3 J3	0.00668	0.0231	1.01	02/12/2024 01:22	WG2224373
Benzene	U		0.000864	0.00185	1.01	02/12/2024 01:22	WG2224373
Bromobenzene	U		0.00166	0.0231	1.01	02/12/2024 01:22	WG2224373
Bromodichloromethane	U		0.00134	0.00463	1.01	02/12/2024 01:22	WG2224373
Bromoform	U		0.00216	0.0463	1.01	02/12/2024 01:22	WG2224373
Bromomethane	U	C3	0.00364	0.0231	1.01	02/12/2024 01:22	WG2224373
n-Butylbenzene	0.171		0.00970	0.0231	1.01	02/12/2024 01:22	WG2224373
sec-Butylbenzene	0.0194	J	0.00532	0.0231	1.01	02/12/2024 01:22	WG2224373
tert-Butylbenzene	U		0.00360	0.00924	1.01	02/12/2024 01:22	WG2224373
Carbon disulfide	U	J3	0.00129	0.0231	1.01	02/12/2024 01:22	WG2224373
Carbon tetrachloride	U		0.00166	0.00924	1.01	02/12/2024 01:22	WG2224373
Chlorobenzene	U		0.000388	0.00463	1.01	02/12/2024 01:22	WG2224373
Chlorodibromomethane	U		0.00113	0.00463	1.01	02/12/2024 01:22	WG2224373
Chloroethane	U		0.00315	0.00924	1.01	02/12/2024 01:22	WG2224373
Chloroform	U		0.00190	0.00463	1.01	02/12/2024 01:22	WG2224373
Chloromethane	U	C3	0.00803	0.0231	1.01	02/12/2024 01:22	WG2224373
2-Chlorotoluene	U		0.00160	0.00463	1.01	02/12/2024 01:22	WG2224373
4-Chlorotoluene	U		0.000832	0.00924	1.01	02/12/2024 01:22	WG2224373
1,2-Dibromo-3-Chloropropane	U		0.00721	0.0463	1.01	02/12/2024 01:22	WG2224373
1,2-Dibromoethane	U		0.00120	0.00463	1.01	02/12/2024 01:22	WG2224373
Dibromomethane	U		0.00138	0.00924	1.01	02/12/2024 01:22	WG2224373
1,2-Dichlorobenzene	U		0.000785	0.00924	1.01	02/12/2024 01:22	WG2224373
1,3-Dichlorobenzene	U		0.00111	0.00924	1.01	02/12/2024 01:22	WG2224373
1,4-Dichlorobenzene	U		0.00129	0.00924	1.01	02/12/2024 01:22	WG2224373
Dichlorodifluoromethane	U		0.00298	0.00924	1.01	02/12/2024 01:22	WG2224373
1,1-Dichloroethane	U		0.000907	0.00463	1.01	02/12/2024 01:22	WG2224373
1,2-Dichloroethane	U		0.00120	0.00463	1.01	02/12/2024 01:22	WG2224373
1,1-Dichloroethene	U		0.00112	0.00463	1.01	02/12/2024 01:22	WG2224373
cis-1,2-Dichloroethene	U		0.00136	0.00463	1.01	02/12/2024 01:22	WG2224373
trans-1,2-Dichloroethene	U		0.00192	0.00924	1.01	02/12/2024 01:22	WG2224373
1,2-Dichloropropane	U		0.00262	0.00924	1.01	02/12/2024 01:22	WG2224373
1,1-Dichloropropene	U		0.00149	0.00463	1.01	02/12/2024 01:22	WG2224373
1,3-Dichloropropane	U		0.000926	0.00924	1.01	02/12/2024 01:22	WG2224373
cis-1,3-Dichloropropene	U		0.00140	0.00463	1.01	02/12/2024 01:22	WG2224373
trans-1,3-Dichloropropene	U		0.00210	0.00924	1.01	02/12/2024 01:22	WG2224373
2,2-Dichloropropane	U		0.00254	0.00463	1.01	02/12/2024 01:22	WG2224373
Di-isopropyl ether	U		0.000757	0.00185	1.01	02/12/2024 01:22	WG2224373

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
Ethylbenzene	U		0.00136	0.00463	1.01	02/12/2024 01:22	WG2224373
Hexachloro-1,3-butadiene	U		0.0111	0.0463	1.01	02/12/2024 01:22	WG2224373
Isopropylbenzene	0.0132		0.000785	0.00463	1.01	02/12/2024 01:22	WG2224373
p-Isopropyltoluene	0.0160		0.00472	0.00924	1.01	02/12/2024 01:22	WG2224373
2-Butanone (MEK)	U		0.117	0.185	1.01	02/12/2024 01:22	WG2224373
Methylene Chloride	U		0.0123	0.0463	1.01	02/12/2024 01:22	WG2224373
4-Methyl-2-pentanone (MIBK)	U		0.00421	0.0463	1.01	02/12/2024 01:22	WG2224373
Methyl tert-butyl ether	U		0.000646	0.00185	1.01	02/12/2024 01:22	WG2224373
Naphthalene	0.0252		0.00902	0.0231	1.01	02/12/2024 01:22	WG2224373
n-Propylbenzene	0.0298		0.00175	0.00924	1.01	02/12/2024 01:22	WG2224373
Styrene	U		0.000423	0.0231	1.01	02/12/2024 01:22	WG2224373
1,1,1,2-Tetrachloroethane	U		0.00175	0.00463	1.01	02/12/2024 01:22	WG2224373
1,1,2,2-Tetrachloroethane	U		0.00128	0.00463	1.01	02/12/2024 01:22	WG2224373
1,1,2-Trichlorotrifluoroethane	U		0.00139	0.00463	1.01	02/12/2024 01:22	WG2224373
Tetrachloroethene	U		0.00166	0.00463	1.01	02/12/2024 01:22	WG2224373
Toluene	0.00254	J	0.00240	0.00924	1.01	02/12/2024 01:22	WG2224373
1,2,3-Trichlorobenzene	U		0.0135	0.0231	1.01	02/12/2024 01:22	WG2224373
1,2,4-Trichlorobenzene	U		0.00812	0.0231	1.01	02/12/2024 01:22	WG2224373
1,1,1-Trichloroethane	U		0.00171	0.00463	1.01	02/12/2024 01:22	WG2224373
1,1,2-Trichloroethane	U		0.00110	0.00463	1.01	02/12/2024 01:22	WG2224373
Trichloroethene	U		0.00108	0.00185	1.01	02/12/2024 01:22	WG2224373
Trichlorofluoromethane	U		0.00153	0.00463	1.01	02/12/2024 01:22	WG2224373
1,2,3-Trichloropropane	U		0.00300	0.0231	1.01	02/12/2024 01:22	WG2224373
1,2,4-Trimethylbenzene	U		0.00293	0.00924	1.01	02/12/2024 01:22	WG2224373
1,2,3-Trimethylbenzene	U		0.00293	0.00924	1.01	02/12/2024 01:22	WG2224373
1,3,5-Trimethylbenzene	U		0.00370	0.00924	1.01	02/12/2024 01:22	WG2224373
Vinyl chloride	U		0.00214	0.00463	1.01	02/12/2024 01:22	WG2224373
Xylenes, Total	0.00300	J	0.00163	0.0120	1.01	02/12/2024 01:22	WG2224373
(S) Toluene-d8	*103*			*75.0-131*		*02/12/2024 01:22*	WG2224373
(S) 4-Bromofluorobenzene	*109*			*67.0-138*		*02/12/2024 01:22*	WG2224373
(S) 1,2-Dichloroethane-d4	*96.6*			*70.0-130*		*02/12/2024 01:22*	WG2224373

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2.21	J	1.89	5.67	1	02/10/2024 11:14	WG2221443
Residual Range Organics (RRO)	23.3		4.72	14.2	1	02/10/2024 11:14	WG2221443
(S) o-Terphenyl	*35.0*			*18.0-148*		*02/10/2024 11:14*	WG2221443

Sample Narrative:

L1703299-01 WG2221443: 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	0.0184		0.00326	0.00851	1	02/09/2024 17:29	WG2223109
Acenaphthene	U		0.00296	0.00851	1	02/09/2024 17:29	WG2223109
Acenaphthylene	0.00822	J	0.00306	0.00851	1	02/09/2024 17:29	WG2223109
Benzo(a)anthracene	0.0784		0.00245	0.00851	1	02/09/2024 17:29	WG2223109
Benzo(a)pyrene	0.103		0.00254	0.00851	1	02/09/2024 17:29	WG2223109
Benzo(b)fluoranthene	0.101		0.00217	0.00851	1	02/09/2024 17:29	WG2223109
Benzo(g,h,i)perylene	0.0899		0.00251	0.00851	1	02/09/2024 17:29	WG2223109
Benzo(k)fluoranthene	0.0376		0.00305	0.00851	1	02/09/2024 17:29	WG2223109
Chrysene	0.0910		0.00329	0.00851	1	02/09/2024 17:29	WG2223109
Dibenz(a,h)anthracene	0.0107		0.00244	0.00851	1	02/09/2024 17:29	WG2223109

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
Fluoranthene	0.181		0.00322	0.00851	1	02/09/2024 17:29	WG2223109
Fluorene	0.00337	J	0.00291	0.00851	1	02/09/2024 17:29	WG2223109
Indeno(1,2,3-cd)pyrene	0.0756		0.00257	0.00851	1	02/09/2024 17:29	WG2223109
Naphthalene	0.00610	J	0.00578	0.0284	1	02/09/2024 17:29	WG2223109
Phenanthrene	0.0809		0.00327	0.00851	1	02/09/2024 17:29	WG2223109
Pyrene	0.198		0.00284	0.00851	1	02/09/2024 17:29	WG2223109
1-Methylnaphthalene	U		0.00637	0.0284	1	02/09/2024 17:29	WG2223109
2-Methylnaphthalene	U		0.00605	0.0284	1	02/09/2024 17:29	WG2223109
2-Chloronaphthalene	U		0.00661	0.0284	1	02/09/2024 17:29	WG2223109
(S) p-Terphenyl-d14	*90.0*			*23.0-120*		*02/09/2024 17:29*	WG2223109
(S) Nitrobenzene-d5	*90.7*			*14.0-149*		*02/09/2024 17:29*	WG2223109
(S) 2-Fluorobiphenyl	*80.8*			*34.0-125*		*02/09/2024 17:29*	WG2223109

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	02/12/2024 18:04	WG2223477

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	02/12/2024 17:42	WG2224051
(S) a,a,a-Trifluorotoluene(FID)	*97.4*			*78.0-120*		*02/12/2024 17:42*	WG2224051

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	02/09/2024 13:23	WG2223329
Acrolein	U	C3	2.54	50.0	1	02/09/2024 13:23	WG2223329
Acrylonitrile	U		0.671	10.0	1	02/09/2024 13:23	WG2223329
Benzene	U		0.0941	1.00	1	02/09/2024 13:23	WG2223329
Bromobenzene	U		0.118	1.00	1	02/09/2024 13:23	WG2223329
Bromodichloromethane	U		0.136	1.00	1	02/09/2024 13:23	WG2223329
Bromoform	U		0.129	1.00	1	02/09/2024 13:23	WG2223329
Bromomethane	U		0.605	5.00	1	02/09/2024 13:23	WG2223329
n-Butylbenzene	U		0.157	1.00	1	02/09/2024 13:23	WG2223329
sec-Butylbenzene	U		0.125	1.00	1	02/09/2024 13:23	WG2223329
tert-Butylbenzene	U		0.127	1.00	1	02/09/2024 13:23	WG2223329
Carbon disulfide	U		0.0962	1.00	1	02/09/2024 13:23	WG2223329
Carbon tetrachloride	U		0.128	1.00	1	02/09/2024 13:23	WG2223329
Chlorobenzene	U		0.116	1.00	1	02/09/2024 13:23	WG2223329
Chlorodibromomethane	U		0.140	1.00	1	02/09/2024 13:23	WG2223329
Chloroethane	U		0.192	5.00	1	02/09/2024 13:23	WG2223329
Chloroform	U		0.111	5.00	1	02/09/2024 13:23	WG2223329
Chloromethane	U		0.960	2.50	1	02/09/2024 13:23	WG2223329
2-Chlorotoluene	U		0.106	1.00	1	02/09/2024 13:23	WG2223329
4-Chlorotoluene	U		0.114	1.00	1	02/09/2024 13:23	WG2223329
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/09/2024 13:23	WG2223329
1,2-Dibromoethane	U		0.126	1.00	1	02/09/2024 13:23	WG2223329
Dibromomethane	U		0.122	1.00	1	02/09/2024 13:23	WG2223329
1,2-Dichlorobenzene	U		0.107	1.00	1	02/09/2024 13:23	WG2223329
1,3-Dichlorobenzene	U		0.110	1.00	1	02/09/2024 13:23	WG2223329
1,4-Dichlorobenzene	U		0.120	1.00	1	02/09/2024 13:23	WG2223329
Dichlorodifluoromethane	U		0.374	5.00	1	02/09/2024 13:23	WG2223329
1,1-Dichloroethane	U		0.100	1.00	1	02/09/2024 13:23	WG2223329
1,2-Dichloroethane	U		0.0819	1.00	1	02/09/2024 13:23	WG2223329
1,1-Dichloroethene	U		0.188	1.00	1	02/09/2024 13:23	WG2223329
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/09/2024 13:23	WG2223329
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/09/2024 13:23	WG2223329
1,2-Dichloropropane	U		0.149	1.00	1	02/09/2024 13:23	WG2223329
1,1-Dichloropropene	U		0.142	1.00	1	02/09/2024 13:23	WG2223329
1,3-Dichloropropane	U		0.110	1.00	1	02/09/2024 13:23	WG2223329
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/09/2024 13:23	WG2223329
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/09/2024 13:23	WG2223329
2,2-Dichloropropane	U		0.161	1.00	1	02/09/2024 13:23	WG2223329
Di-isopropyl ether	U		0.105	1.00	1	02/09/2024 13:23	WG2223329
Ethylbenzene	U		0.137	1.00	1	02/09/2024 13:23	WG2223329
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/09/2024 13:23	WG2223329
Isopropylbenzene	U		0.105	1.00	1	02/09/2024 13:23	WG2223329
p-Isopropyltoluene	U		0.120	1.00	1	02/09/2024 13:23	WG2223329

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2-Butanone (MEK)	U		1.19	10.0	1	02/09/2024 13:23	WG2223329
Methylene Chloride	U		0.430	5.00	1	02/09/2024 13:23	WG2223329
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/09/2024 13:23	WG2223329
Methyl tert-butyl ether	U		0.101	1.00	1	02/09/2024 13:23	WG2223329
Naphthalene	U		1.00	5.00	1	02/09/2024 13:23	WG2223329
n-Propylbenzene	U		0.0993	1.00	1	02/09/2024 13:23	WG2223329
Styrene	U		0.118	1.00	1	02/09/2024 13:23	WG2223329
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/09/2024 13:23	WG2223329
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/09/2024 13:23	WG2223329
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/09/2024 13:23	WG2223329
Tetrachloroethene	U		0.300	1.00	1	02/09/2024 13:23	WG2223329
Toluene	U		0.278	1.00	1	02/09/2024 13:23	WG2223329
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/09/2024 13:23	WG2223329
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/09/2024 13:23	WG2223329
1,1,1-Trichloroethane	U		0.149	1.00	1	02/09/2024 13:23	WG2223329
1,1,2-Trichloroethane	U		0.158	1.00	1	02/09/2024 13:23	WG2223329
Trichloroethene	U		0.190	1.00	1	02/09/2024 13:23	WG2223329
Trichlorofluoromethane	U		0.160	5.00	1	02/09/2024 13:23	WG2223329
1,2,3-Trichloropropane	U		0.237	2.50	1	02/09/2024 13:23	WG2223329
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/09/2024 13:23	WG2223329
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/09/2024 13:23	WG2223329
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/09/2024 13:23	WG2223329
Vinyl chloride	U		0.234	1.00	1	02/09/2024 13:23	WG2223329
Xylenes, Total	U		0.174	3.00	1	02/09/2024 13:23	WG2223329
(S) Toluene-d8	*99.9*			*80.0-120*		*02/09/2024 13:23*	WG2223329
(S) 4-Bromofluorobenzene	*96.5*			*77.0-126*		*02/09/2024 13:23*	WG2223329
(S) 1,2-Dichloroethane-d4	*84.5*			*70.0-130*		*02/09/2024 13:23*	WG2223329

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	U		40.0	120	1.2	02/13/2024 01:14	WG2224153
Residual Range Organics (RRO)	U		100	300	1.2	02/13/2024 01:14	WG2224153
(S) o-Terphenyl	*58.5*			*31.0-160*		*02/13/2024 01:14*	WG2224153

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	
Anthracene	U		0.0190	0.0500	1	02/12/2024 23:10	WG2224154
Acenaphthene	U		0.0190	0.0500	1	02/12/2024 23:10	WG2224154
Acenaphthylene	U		0.0171	0.0500	1	02/12/2024 23:10	WG2224154
Benzo(a)anthracene	U		0.0203	0.0500	1	02/12/2024 23:10	WG2224154
Benzo(a)pyrene	U		0.0184	0.0500	1	02/12/2024 23:10	WG2224154
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/12/2024 23:10	WG2224154
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/12/2024 23:10	WG2224154
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/12/2024 23:10	WG2224154
Chrysene	U		0.0179	0.0500	1	02/12/2024 23:10	WG2224154
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/12/2024 23:10	WG2224154
Fluoranthene	U		0.0270	0.100	1	02/12/2024 23:10	WG2224154
Fluorene	U		0.0169	0.0500	1	02/12/2024 23:10	WG2224154
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/12/2024 23:10	WG2224154
Naphthalene	U		0.0917	0.250	1	02/12/2024 23:10	WG2224154
Phenanthrene	U		0.0180	0.0500	1	02/12/2024 23:10	WG2224154
Pyrene	U		0.0169	0.0500	1	02/12/2024 23:10	WG2224154
1-Methylnaphthalene	U		0.0687	0.250	1	02/12/2024 23:10	WG2224154

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	
2-Methylnaphthalene	U		0.0674	0.250	1	02/12/2024 23:10	WG2224154
2-Chloronaphthalene	U		0.0682	0.250	1	02/12/2024 23:10	WG2224154
(S) Nitrobenzene-d5	*102*			*31.0-160*		*02/12/2024 23:10*	WG2224154
(S) 2-Fluorobiphenyl	*86.8*			*48.0-148*		*02/12/2024 23:10*	WG2224154
(S) p-Terphenyl-d14	*93.2*			*37.0-146*		*02/12/2024 23:10*	WG2224154

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	60.9		1	02/09/2024 10:17	WG2223140

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	11.2		0.163	3.28	5	02/13/2024 12:44	WG2223355

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	1230		20.5	60.5	250	02/11/2024 05:40	WG2224020
(S) a,a,a-Trifluorotoluene(FID)	*98.2*			*77.0-120*		*02/11/2024 05:40*	WG2224020

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	1.77	2.42	20	02/12/2024 04:50	WG2224373
Acrylonitrile	U	C3 J3	0.175	0.605	20	02/12/2024 04:50	WG2224373
Benzene	U		0.0226	0.0484	20	02/12/2024 04:50	WG2224373
Bromobenzene	U		0.0436	0.605	20	02/12/2024 04:50	WG2224373
Bromodichloromethane	U		0.0351	0.121	20	02/12/2024 04:50	WG2224373
Bromoform	U		0.0567	1.21	20	02/12/2024 04:50	WG2224373
Bromomethane	U	C3	0.0954	0.605	20	02/12/2024 04:50	WG2224373
n-Butylbenzene	5.47		0.254	0.605	20	02/12/2024 04:50	WG2224373
sec-Butylbenzene	0.649		0.139	0.605	20	02/12/2024 04:50	WG2224373
tert-Butylbenzene	0.215	J	0.0944	0.242	20	02/12/2024 04:50	WG2224373
Carbon disulfide	U	J3	0.0339	0.605	20	02/12/2024 04:50	WG2224373
Carbon tetrachloride	U		0.0436	0.242	20	02/12/2024 04:50	WG2224373
Chlorobenzene	U		0.0102	0.121	20	02/12/2024 04:50	WG2224373
Chlorodibromomethane	U		0.0295	0.121	20	02/12/2024 04:50	WG2224373
Chloroethane	U		0.0823	0.242	20	02/12/2024 04:50	WG2224373
Chloroform	U		0.0499	0.121	20	02/12/2024 04:50	WG2224373
Chloromethane	U	C3	0.211	0.605	20	02/12/2024 04:50	WG2224373
2-Chlorotoluene	U		0.0419	0.121	20	02/12/2024 04:50	WG2224373
4-Chlorotoluene	U		0.0218	0.242	20	02/12/2024 04:50	WG2224373
1,2-Dibromo-3-Chloropropane	U		0.189	1.21	20	02/12/2024 04:50	WG2224373
1,2-Dibromoethane	U		0.0315	0.121	20	02/12/2024 04:50	WG2224373
Dibromomethane	U		0.0363	0.242	20	02/12/2024 04:50	WG2224373
1,2-Dichlorobenzene	U		0.0206	0.242	20	02/12/2024 04:50	WG2224373
1,3-Dichlorobenzene	U		0.0291	0.242	20	02/12/2024 04:50	WG2224373
1,4-Dichlorobenzene	U		0.0339	0.242	20	02/12/2024 04:50	WG2224373
Dichlorodifluoromethane	U		0.0780	0.242	20	02/12/2024 04:50	WG2224373
1,1-Dichloroethane	U		0.0238	0.121	20	02/12/2024 04:50	WG2224373
1,2-Dichloroethane	U		0.0315	0.121	20	02/12/2024 04:50	WG2224373
1,1-Dichloroethene	U		0.0293	0.121	20	02/12/2024 04:50	WG2224373
cis-1,2-Dichloroethene	U		0.0356	0.121	20	02/12/2024 04:50	WG2224373
trans-1,2-Dichloroethene	U		0.0504	0.242	20	02/12/2024 04:50	WG2224373
1,2-Dichloropropane	U		0.0688	0.242	20	02/12/2024 04:50	WG2224373
1,1-Dichloropropene	U		0.0392	0.121	20	02/12/2024 04:50	WG2224373
1,3-Dichloropropane	U		0.0242	0.242	20	02/12/2024 04:50	WG2224373
cis-1,3-Dichloropropene	U		0.0366	0.121	20	02/12/2024 04:50	WG2224373
trans-1,3-Dichloropropene	U		0.0552	0.242	20	02/12/2024 04:50	WG2224373
2,2-Dichloropropane	U		0.0668	0.121	20	02/12/2024 04:50	WG2224373
Di-isopropyl ether	U		0.0199	0.0484	20	02/12/2024 04:50	WG2224373

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
Ethylbenzene	0.169		0.0356	0.121	20	02/12/2024 04:50	WG2224373
Hexachloro-1,3-butadiene	U		0.291	1.21	20	02/12/2024 04:50	WG2224373
Isopropylbenzene	0.479		0.0206	0.121	20	02/12/2024 04:50	WG2224373
p-Isopropyltoluene	0.714		0.123	0.242	20	02/12/2024 04:50	WG2224373
2-Butanone (MEK)	U		3.08	4.84	20	02/12/2024 04:50	WG2224373
Methylene Chloride	U		0.322	1.21	20	02/12/2024 04:50	WG2224373
4-Methyl-2-pentanone (MIBK)	0.419	J	0.110	1.21	20	02/12/2024 04:50	WG2224373
Methyl tert-butyl ether	U		0.0170	0.0484	20	02/12/2024 04:50	WG2224373
Naphthalene	0.814		0.236	0.605	20	02/12/2024 04:50	WG2224373
n-Propylbenzene	1.53		0.0460	0.242	20	02/12/2024 04:50	WG2224373
Styrene	U		0.0111	0.605	20	02/12/2024 04:50	WG2224373
1,1,1,2-Tetrachloroethane	U		0.0460	0.121	20	02/12/2024 04:50	WG2224373
1,1,2,2-Tetrachloroethane	U		0.0337	0.121	20	02/12/2024 04:50	WG2224373
1,1,2-Trichlorotrifluoroethane	U		0.0366	0.121	20	02/12/2024 04:50	WG2224373
Tetrachloroethene	U		0.0433	0.121	20	02/12/2024 04:50	WG2224373
Toluene	U		0.0630	0.242	20	02/12/2024 04:50	WG2224373
1,2,3-Trichlorobenzene	U		0.356	0.605	20	02/12/2024 04:50	WG2224373
1,2,4-Trichlorobenzene	U		0.213	0.605	20	02/12/2024 04:50	WG2224373
1,1,1-Trichloroethane	U		0.0448	0.121	20	02/12/2024 04:50	WG2224373
1,1,2-Trichloroethane	U		0.0288	0.121	20	02/12/2024 04:50	WG2224373
Trichloroethene	U		0.0283	0.0484	20	02/12/2024 04:50	WG2224373
Trichlorofluoromethane	U		0.0400	0.121	20	02/12/2024 04:50	WG2224373
1,2,3-Trichloropropane	U		0.0785	0.605	20	02/12/2024 04:50	WG2224373
1,2,4-Trimethylbenzene	U		0.0765	0.242	20	02/12/2024 04:50	WG2224373
1,2,3-Trimethylbenzene	0.898		0.0765	0.242	20	02/12/2024 04:50	WG2224373
1,3,5-Trimethylbenzene	0.142	J	0.0969	0.242	20	02/12/2024 04:50	WG2224373
Vinyl chloride	U		0.0562	0.121	20	02/12/2024 04:50	WG2224373
Xylenes, Total	0.0734	J	0.0426	0.315	20	02/12/2024 04:50	WG2224373
(S) Toluene-d8	*104*			*75.0-131*		*02/12/2024 04:50*	WG2224373
(S) 4-Bromofluorobenzene	*112*			*67.0-138*		*02/12/2024 04:50*	WG2224373
(S) 1,2-Dichloroethane-d4	*94.6*			*70.0-130*		*02/12/2024 04:50*	WG2224373

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	12.9		2.18	6.57	1	02/10/2024 10:37	WG2221443
Residual Range Organics (RRO)	U		5.47	16.4	1	02/10/2024 10:37	WG2221443
(S) o-Terphenyl	*50.9*			*18.0-148*		*02/10/2024 10:37*	WG2221443

Sample Narrative:

L1703299-03 WG2221443: Sample resembles laboratory standard for Mineral Spirits

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		0.00378	0.00985	1	02/09/2024 16:01	WG2223109
Acenaphthene	U		0.00343	0.00985	1	02/09/2024 16:01	WG2223109
Acenaphthylene	U		0.00355	0.00985	1	02/09/2024 16:01	WG2223109
Benzo(a)anthracene	U		0.00284	0.00985	1	02/09/2024 16:01	WG2223109
Benzo(a)pyrene	U		0.00294	0.00985	1	02/09/2024 16:01	WG2223109
Benzo(b)fluoranthene	U		0.00251	0.00985	1	02/09/2024 16:01	WG2223109
Benzo(g,h,i)perylene	U		0.00291	0.00985	1	02/09/2024 16:01	WG2223109
Benzo(k)fluoranthene	U		0.00353	0.00985	1	02/09/2024 16:01	WG2223109
Chrysene	U		0.00381	0.00985	1	02/09/2024 16:01	WG2223109
Dibenz(a,h)anthracene	U		0.00282	0.00985	1	02/09/2024 16:01	WG2223109

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
Fluoranthene	U		0.00373	0.00985	1	02/09/2024 16:01	WG2223109
Fluorene	U		0.00337	0.00985	1	02/09/2024 16:01	WG2223109
Indeno(1,2,3-cd)pyrene	U		0.00297	0.00985	1	02/09/2024 16:01	WG2223109
Naphthalene	0.0565		0.00670	0.0328	1	02/09/2024 16:01	WG2223109
Phenanthrene	U		0.00379	0.00985	1	02/09/2024 16:01	WG2223109
Pyrene	U		0.00328	0.00985	1	02/09/2024 16:01	WG2223109
1-Methylnaphthalene	0.0243	J	0.00737	0.0328	1	02/09/2024 16:01	WG2223109
2-Methylnaphthalene	0.0455		0.00701	0.0328	1	02/09/2024 16:01	WG2223109
2-Chloronaphthalene	U		0.00765	0.0328	1	02/09/2024 16:01	WG2223109
(S) p-Terphenyl-d14	*95.9*			*23.0-120*		*02/09/2024 16:01*	WG2223109
(S) Nitrobenzene-d5	*84.7*			*14.0-149*		*02/09/2024 16:01*	WG2223109
(S) 2-Fluorobiphenyl	*93.4*			*34.0-125*		*02/09/2024 16:01*	WG2223109

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	53.6		1	02/09/2024 10:17	WG2223140

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	9.84		2.40	7.07	26.3	02/11/2024 03:43	WG2224020
(S) a,a,a-Trifluorotoluene(FID)	*96.4*			*77.0-120*		*02/11/2024 03:43*	WG2224020

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	0.194	C3	0.103	0.141	1.05	02/12/2024 01:41	WG2224373
Acrylonitrile	U	C3 J3	0.0102	0.0352	1.05	02/12/2024 01:41	WG2224373
Benzene	U		0.00132	0.00282	1.05	02/12/2024 01:41	WG2224373
Bromobenzene	U		0.00254	0.0352	1.05	02/12/2024 01:41	WG2224373
Bromodichloromethane	U		0.00205	0.00707	1.05	02/12/2024 01:41	WG2224373
Bromoform	U		0.00331	0.0707	1.05	02/12/2024 01:41	WG2224373
Bromomethane	U	C3	0.00557	0.0352	1.05	02/12/2024 01:41	WG2224373
n-Butylbenzene	0.0793		0.0148	0.0352	1.05	02/12/2024 01:41	WG2224373
sec-Butylbenzene	0.0102	J	0.00812	0.0352	1.05	02/12/2024 01:41	WG2224373
tert-Butylbenzene	0.0124	J	0.00551	0.0141	1.05	02/12/2024 01:41	WG2224373
Carbon disulfide	U	J3	0.00198	0.0352	1.05	02/12/2024 01:41	WG2224373
Carbon tetrachloride	U		0.00254	0.0141	1.05	02/12/2024 01:41	WG2224373
Chlorobenzene	U		0.000594	0.00707	1.05	02/12/2024 01:41	WG2224373
Chlorodibromomethane	U		0.00173	0.00707	1.05	02/12/2024 01:41	WG2224373
Chloroethane	U		0.00481	0.0141	1.05	02/12/2024 01:41	WG2224373
Chloroform	U		0.00290	0.00707	1.05	02/12/2024 01:41	WG2224373
Chloromethane	U	C3	0.0123	0.0352	1.05	02/12/2024 01:41	WG2224373
2-Chlorotoluene	U		0.00244	0.00707	1.05	02/12/2024 01:41	WG2224373
4-Chlorotoluene	U		0.00127	0.0141	1.05	02/12/2024 01:41	WG2224373
1,2-Dibromo-3-Chloropropane	U		0.0110	0.0707	1.05	02/12/2024 01:41	WG2224373
1,2-Dibromoethane	U		0.00183	0.00707	1.05	02/12/2024 01:41	WG2224373
Dibromomethane	U		0.00212	0.0141	1.05	02/12/2024 01:41	WG2224373
1,2-Dichlorobenzene	U		0.00120	0.0141	1.05	02/12/2024 01:41	WG2224373
1,3-Dichlorobenzene	U		0.00169	0.0141	1.05	02/12/2024 01:41	WG2224373
1,4-Dichlorobenzene	U		0.00198	0.0141	1.05	02/12/2024 01:41	WG2224373
Dichlorodifluoromethane	U		0.00454	0.0141	1.05	02/12/2024 01:41	WG2224373
1,1-Dichloroethane	U		0.00139	0.00707	1.05	02/12/2024 01:41	WG2224373
1,2-Dichloroethane	U		0.00183	0.00707	1.05	02/12/2024 01:41	WG2224373
1,1-Dichloroethene	U		0.00171	0.00707	1.05	02/12/2024 01:41	WG2224373
cis-1,2-Dichloroethene	U		0.00207	0.00707	1.05	02/12/2024 01:41	WG2224373
trans-1,2-Dichloroethene	U		0.00293	0.0141	1.05	02/12/2024 01:41	WG2224373
1,2-Dichloropropane	U		0.00401	0.0141	1.05	02/12/2024 01:41	WG2224373
1,1-Dichloropropene	U		0.00228	0.00707	1.05	02/12/2024 01:41	WG2224373
1,3-Dichloropropane	U		0.00141	0.0141	1.05	02/12/2024 01:41	WG2224373
cis-1,3-Dichloropropene	U		0.00214	0.00707	1.05	02/12/2024 01:41	WG2224373
trans-1,3-Dichloropropene	U		0.00323	0.0141	1.05	02/12/2024 01:41	WG2224373
2,2-Dichloropropane	U		0.00390	0.00707	1.05	02/12/2024 01:41	WG2224373
Di-isopropyl ether	U		0.00116	0.00282	1.05	02/12/2024 01:41	WG2224373
Ethylbenzene	U		0.00208	0.00707	1.05	02/12/2024 01:41	WG2224373
Hexachloro-1,3-butadiene	U		0.0169	0.0707	1.05	02/12/2024 01:41	WG2224373
Isopropylbenzene	0.0194		0.00120	0.00707	1.05	02/12/2024 01:41	WG2224373
p-Isopropyltoluene	0.00783	J	0.00721	0.0141	1.05	02/12/2024 01:41	WG2224373
2-Butanone (MEK)	U		0.179	0.282	1.05	02/12/2024 01:41	WG2224373
Methylene Chloride	U		0.0187	0.0707	1.05	02/12/2024 01:41	WG2224373

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		0.00643	0.0707	1.05	02/12/2024 01:41	WG2224373
Methyl tert-butyl ether	U		0.000990	0.00282	1.05	02/12/2024 01:41	WG2224373
Naphthalene	U		0.0138	0.0352	1.05	02/12/2024 01:41	WG2224373
n-Propylbenzene	0.0111	J	0.00268	0.0141	1.05	02/12/2024 01:41	WG2224373
Styrene	U		0.000645	0.0352	1.05	02/12/2024 01:41	WG2224373
1,1,1,2-Tetrachloroethane	U		0.00268	0.00707	1.05	02/12/2024 01:41	WG2224373
1,1,2,2-Tetrachloroethane	U		0.00196	0.00707	1.05	02/12/2024 01:41	WG2224373
1,1,2-Trichlorotrifluoroethane	U		0.00213	0.00707	1.05	02/12/2024 01:41	WG2224373
Tetrachloroethene	U		0.00253	0.00707	1.05	02/12/2024 01:41	WG2224373
Toluene	0.00882	J	0.00366	0.0141	1.05	02/12/2024 01:41	WG2224373
1,2,3-Trichlorobenzene	U		0.0207	0.0352	1.05	02/12/2024 01:41	WG2224373
1,2,4-Trichlorobenzene	U		0.0124	0.0352	1.05	02/12/2024 01:41	WG2224373
1,1,1-Trichloroethane	U		0.00261	0.00707	1.05	02/12/2024 01:41	WG2224373
1,1,2-Trichloroethane	U		0.00169	0.00707	1.05	02/12/2024 01:41	WG2224373
Trichloroethene	U		0.00165	0.00282	1.05	02/12/2024 01:41	WG2224373
Trichlorofluoromethane	U		0.00233	0.00707	1.05	02/12/2024 01:41	WG2224373
1,2,3-Trichloropropane	U		0.00457	0.0352	1.05	02/12/2024 01:41	WG2224373
1,2,4-Trimethylbenzene	0.00557	J	0.00446	0.0141	1.05	02/12/2024 01:41	WG2224373
1,2,3-Trimethylbenzene	0.0309		0.00446	0.0141	1.05	02/12/2024 01:41	WG2224373
1,3,5-Trimethylbenzene	U		0.00565	0.0141	1.05	02/12/2024 01:41	WG2224373
Vinyl chloride	U		0.00328	0.00707	1.05	02/12/2024 01:41	WG2224373
Xylenes, Total	0.0238		0.00248	0.0184	1.05	02/12/2024 01:41	WG2224373
(S) Toluene-d8	*103*			*75.0-131*		*02/12/2024 01:41*	WG2224373
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*02/12/2024 01:41*	WG2224373
(S) 1,2-Dichloroethane-d4	*95.1*			*70.0-130*		*02/12/2024 01:41*	WG2224373

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-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		2.48	7.47	1	02/10/2024 10:25	WG2221443
Residual Range Organics (RRO)	U		6.21	18.7	1	02/10/2024 10:25	WG2221443
(S) o-Terphenyl	*19.8*			*18.0-148*		*02/10/2024 10:25*	WG2221443

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	53.0		1	02/09/2024 10:17	WG2223140

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	28.3		0.187	3.77	5	02/13/2024 12:47	WG2223355

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	237		2.39	7.05	25	02/11/2024 04:03	WG2224020
(S) a,a,a-Trifluorotoluene(FID)	*99.5*			*77.0-120*		*02/11/2024 04:03*	WG2224020

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	0.103	0.141	1	02/12/2024 02:00	WG2224373
Acrylonitrile	U	C3 J3	0.0102	0.0353	1	02/12/2024 02:00	WG2224373
Benzene	U		0.00132	0.00282	1	02/12/2024 02:00	WG2224373
Bromobenzene	U		0.00254	0.0353	1	02/12/2024 02:00	WG2224373
Bromodichloromethane	U		0.00204	0.00705	1	02/12/2024 02:00	WG2224373
Bromoform	U		0.00330	0.0705	1	02/12/2024 02:00	WG2224373
Bromomethane	U	C3	0.00556	0.0353	1	02/12/2024 02:00	WG2224373
n-Butylbenzene	0.384		0.0148	0.0353	1	02/12/2024 02:00	WG2224373
sec-Butylbenzene	0.0612		0.00812	0.0353	1	02/12/2024 02:00	WG2224373
tert-Butylbenzene	0.0139	J	0.00550	0.0141	1	02/12/2024 02:00	WG2224373
Carbon disulfide	U	J3	0.00197	0.0353	1	02/12/2024 02:00	WG2224373
Carbon tetrachloride	U		0.00253	0.0141	1	02/12/2024 02:00	WG2224373
Chlorobenzene	U		0.000592	0.00705	1	02/12/2024 02:00	WG2224373
Chlorodibromomethane	U		0.00173	0.00705	1	02/12/2024 02:00	WG2224373
Chloroethane	U		0.00479	0.0141	1	02/12/2024 02:00	WG2224373
Chloroform	U		0.00291	0.00705	1	02/12/2024 02:00	WG2224373
Chloromethane	U	C3	0.0123	0.0353	1	02/12/2024 02:00	WG2224373
2-Chlorotoluene	U		0.00244	0.00705	1	02/12/2024 02:00	WG2224373
4-Chlorotoluene	U		0.00127	0.0141	1	02/12/2024 02:00	WG2224373
1,2-Dibromo-3-Chloropropane	U		0.0110	0.0705	1	02/12/2024 02:00	WG2224373
1,2-Dibromoethane	U		0.00183	0.00705	1	02/12/2024 02:00	WG2224373
Dibromomethane	U		0.00212	0.0141	1	02/12/2024 02:00	WG2224373
1,2-Dichlorobenzene	U		0.00120	0.0141	1	02/12/2024 02:00	WG2224373
1,3-Dichlorobenzene	U		0.00169	0.0141	1	02/12/2024 02:00	WG2224373
1,4-Dichlorobenzene	U		0.00197	0.0141	1	02/12/2024 02:00	WG2224373
Dichlorodifluoromethane	U		0.00454	0.0141	1	02/12/2024 02:00	WG2224373
1,1-Dichloroethane	U		0.00138	0.00705	1	02/12/2024 02:00	WG2224373
1,2-Dichloroethane	U		0.00183	0.00705	1	02/12/2024 02:00	WG2224373
1,1-Dichloroethene	U		0.00171	0.00705	1	02/12/2024 02:00	WG2224373
cis-1,2-Dichloroethene	U		0.00207	0.00705	1	02/12/2024 02:00	WG2224373
trans-1,2-Dichloroethene	U		0.00293	0.0141	1	02/12/2024 02:00	WG2224373
1,2-Dichloropropane	U		0.00401	0.0141	1	02/12/2024 02:00	WG2224373
1,1-Dichloropropene	U		0.00228	0.00705	1	02/12/2024 02:00	WG2224373
1,3-Dichloropropane	U		0.00141	0.0141	1	02/12/2024 02:00	WG2224373
cis-1,3-Dichloropropene	U		0.00214	0.00705	1	02/12/2024 02:00	WG2224373
trans-1,3-Dichloropropene	U		0.00322	0.0141	1	02/12/2024 02:00	WG2224373
2,2-Dichloropropane	U		0.00389	0.00705	1	02/12/2024 02:00	WG2224373
Di-isopropyl ether	U		0.00116	0.00282	1	02/12/2024 02:00	WG2224373

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
Ethylbenzene	0.00945		0.00208	0.00705	1	02/12/2024 02:00	WG2224373
Hexachloro-1,3-butadiene	U		0.0169	0.0705	1	02/12/2024 02:00	WG2224373
Isopropylbenzene	0.0434		0.00120	0.00705	1	02/12/2024 02:00	WG2224373
p-Isopropyltoluene	0.0508		0.00719	0.0141	1	02/12/2024 02:00	WG2224373
2-Butanone (MEK)	U		0.179	0.282	1	02/12/2024 02:00	WG2224373
Methylene Chloride	U		0.0187	0.0705	1	02/12/2024 02:00	WG2224373
4-Methyl-2-pentanone (MIBK)	0.0245	J	0.00643	0.0705	1	02/12/2024 02:00	WG2224373
Methyl tert-butyl ether	U		0.000987	0.00282	1	02/12/2024 02:00	WG2224373
Naphthalene	0.111		0.0138	0.0353	1	02/12/2024 02:00	WG2224373
n-Propylbenzene	0.138		0.00268	0.0141	1	02/12/2024 02:00	WG2224373
Styrene	U		0.000646	0.0353	1	02/12/2024 02:00	WG2224373
1,1,1,2-Tetrachloroethane	U		0.00267	0.00705	1	02/12/2024 02:00	WG2224373
1,1,2,2-Tetrachloroethane	U		0.00196	0.00705	1	02/12/2024 02:00	WG2224373
1,1,2-Trichlorotrifluoroethane	U		0.00213	0.00705	1	02/12/2024 02:00	WG2224373
Tetrachloroethene	U		0.00253	0.00705	1	02/12/2024 02:00	WG2224373
Toluene	U		0.00367	0.0141	1	02/12/2024 02:00	WG2224373
1,2,3-Trichlorobenzene	U		0.0207	0.0353	1	02/12/2024 02:00	WG2224373
1,2,4-Trichlorobenzene	U		0.0124	0.0353	1	02/12/2024 02:00	WG2224373
1,1,1-Trichloroethane	U		0.00260	0.00705	1	02/12/2024 02:00	WG2224373
1,1,2-Trichloroethane	U		0.00168	0.00705	1	02/12/2024 02:00	WG2224373
Trichloroethene	U		0.00165	0.00282	1	02/12/2024 02:00	WG2224373
Trichlorofluoromethane	U		0.00233	0.00705	1	02/12/2024 02:00	WG2224373
1,2,3-Trichloropropane	U		0.00457	0.0353	1	02/12/2024 02:00	WG2224373
1,2,4-Trimethylbenzene	0.00615	J	0.00446	0.0141	1	02/12/2024 02:00	WG2224373
1,2,3-Trimethylbenzene	0.0604		0.00446	0.0141	1	02/12/2024 02:00	WG2224373
1,3,5-Trimethylbenzene	U		0.00564	0.0141	1	02/12/2024 02:00	WG2224373
Vinyl chloride	U		0.00327	0.00705	1	02/12/2024 02:00	WG2224373
Xylenes, Total	0.00722	J	0.00248	0.0183	1	02/12/2024 02:00	WG2224373
(S) Toluene-d8	*104*			*75.0-131*		*02/12/2024 02:00*	WG2224373
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*02/12/2024 02:00*	WG2224373
(S) 1,2-Dichloroethane-d4	*90.1*			*70.0-130*		*02/12/2024 02:00*	WG2224373

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	20.7		2.51	7.55	1	02/10/2024 10:50	WG2221443
Residual Range Organics (RRO)	7.41	J	6.28	18.9	1	02/10/2024 10:50	WG2221443
(S) o-Terphenyl	*39.4*			*18.0-148*		*02/10/2024 10:50*	WG2221443

Sample Narrative:

L1703299-05 WG2221443: Sample resembles laboratory standard for Mineral Spirits

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		0.00434	0.0113	1	02/12/2024 14:20	WG2224064
Acenaphthene	0.00556	J	0.00394	0.0113	1	02/12/2024 14:20	WG2224064
Acenaphthylene	U		0.00407	0.0113	1	02/12/2024 14:20	WG2224064
Benzo(a)anthracene	U		0.00326	0.0113	1	02/12/2024 14:20	WG2224064
Benzo(a)pyrene	U		0.00338	0.0113	1	02/12/2024 14:20	WG2224064
Benzo(b)fluoranthene	U		0.00289	0.0113	1	02/12/2024 14:20	WG2224064
Benzo(g,h,i)perylene	U		0.00334	0.0113	1	02/12/2024 14:20	WG2224064
Benzo(k)fluoranthene	U		0.00406	0.0113	1	02/12/2024 14:20	WG2224064
Chrysene	U		0.00438	0.0113	1	02/12/2024 14:20	WG2224064
Dibenz(a,h)anthracene	U		0.00324	0.0113	1	02/12/2024 14:20	WG2224064

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
Fluoranthene	0.0102	J	0.00428	0.0113	1	02/12/2024 14:20	WG2224064
Fluorene	0.00666	J	0.00387	0.0113	1	02/12/2024 14:20	WG2224064
Indeno(1,2,3-cd)pyrene	U		0.00341	0.0113	1	02/12/2024 14:20	WG2224064
Naphthalene	1.03		0.00770	0.0377	1	02/12/2024 14:20	WG2224064
Phenanthrene	0.0180		0.00436	0.0113	1	02/12/2024 14:20	WG2224064
Pyrene	0.0119		0.00377	0.0113	1	02/12/2024 14:20	WG2224064
1-Methylnaphthalene	0.430		0.00847	0.0377	1	02/12/2024 14:20	WG2224064
2-Methylnaphthalene	0.826		0.00805	0.0377	1	02/12/2024 14:20	WG2224064
2-Chloronaphthalene	U		0.00879	0.0377	1	02/12/2024 14:20	WG2224064
(S) p-Terphenyl-d14	*70.3*			*23.0-120*		*02/12/2024 14:20*	WG2224064
(S) Nitrobenzene-d5	*0.000*	J2		*14.0-149*		*02/12/2024 14:20*	WG2224064
(S) 2-Fluorobiphenyl	*53.3*			*34.0-125*		*02/12/2024 14:20*	WG2224064

Sample Narrative:

L1703299-05 WG2224064: Surrogate failure due to matrix interference.

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	78.0	B J	31.6	100	1	02/12/2024 18:30	WG2224051
(S) a,a,a-Trifluorotoluene(FID)	*93.5*			*78.0-120*		*02/12/2024 18:30*	WG2224051

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	02/09/2024 13:41	WG2223329
Acrolein	U	C3	2.54	50.0	1	02/09/2024 13:41	WG2223329
Acrylonitrile	U		0.671	10.0	1	02/09/2024 13:41	WG2223329
Benzene	U		0.0941	1.00	1	02/09/2024 13:41	WG2223329
Bromobenzene	U		0.118	1.00	1	02/09/2024 13:41	WG2223329
Bromodichloromethane	U		0.136	1.00	1	02/09/2024 13:41	WG2223329
Bromoform	U		0.129	1.00	1	02/09/2024 13:41	WG2223329
Bromomethane	U		0.605	5.00	1	02/09/2024 13:41	WG2223329
n-Butylbenzene	U		0.157	1.00	1	02/09/2024 13:41	WG2223329
sec-Butylbenzene	U		0.125	1.00	1	02/09/2024 13:41	WG2223329
tert-Butylbenzene	U		0.127	1.00	1	02/09/2024 13:41	WG2223329
Carbon disulfide	U		0.0962	1.00	1	02/09/2024 13:41	WG2223329
Carbon tetrachloride	U		0.128	1.00	1	02/09/2024 13:41	WG2223329
Chlorobenzene	U		0.116	1.00	1	02/09/2024 13:41	WG2223329
Chlorodibromomethane	U		0.140	1.00	1	02/09/2024 13:41	WG2223329
Chloroethane	U		0.192	5.00	1	02/09/2024 13:41	WG2223329
Chloroform	U		0.111	5.00	1	02/09/2024 13:41	WG2223329
Chloromethane	U		0.960	2.50	1	02/09/2024 13:41	WG2223329
2-Chlorotoluene	U		0.106	1.00	1	02/09/2024 13:41	WG2223329
4-Chlorotoluene	U		0.114	1.00	1	02/09/2024 13:41	WG2223329
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/09/2024 13:41	WG2223329
1,2-Dibromoethane	U		0.126	1.00	1	02/09/2024 13:41	WG2223329
Dibromomethane	U		0.122	1.00	1	02/09/2024 13:41	WG2223329
1,2-Dichlorobenzene	U		0.107	1.00	1	02/09/2024 13:41	WG2223329
1,3-Dichlorobenzene	U		0.110	1.00	1	02/09/2024 13:41	WG2223329
1,4-Dichlorobenzene	U		0.120	1.00	1	02/09/2024 13:41	WG2223329
Dichlorodifluoromethane	U		0.374	5.00	1	02/09/2024 13:41	WG2223329
1,1-Dichloroethane	U		0.100	1.00	1	02/09/2024 13:41	WG2223329
1,2-Dichloroethane	U		0.0819	1.00	1	02/09/2024 13:41	WG2223329
1,1-Dichloroethene	U		0.188	1.00	1	02/09/2024 13:41	WG2223329
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/09/2024 13:41	WG2223329
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/09/2024 13:41	WG2223329
1,2-Dichloropropane	U		0.149	1.00	1	02/09/2024 13:41	WG2223329
1,1-Dichloropropene	U		0.142	1.00	1	02/09/2024 13:41	WG2223329
1,3-Dichloropropane	U		0.110	1.00	1	02/09/2024 13:41	WG2223329
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/09/2024 13:41	WG2223329
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/09/2024 13:41	WG2223329
2,2-Dichloropropane	U		0.161	1.00	1	02/09/2024 13:41	WG2223329
Di-isopropyl ether	U		0.105	1.00	1	02/09/2024 13:41	WG2223329
Ethylbenzene	U		0.137	1.00	1	02/09/2024 13:41	WG2223329
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/09/2024 13:41	WG2223329
Isopropylbenzene	0.143	J	0.105	1.00	1	02/09/2024 13:41	WG2223329
p-Isopropyltoluene	0.138	J	0.120	1.00	1	02/09/2024 13:41	WG2223329
2-Butanone (MEK)	U		1.19	10.0	1	02/09/2024 13:41	WG2223329
Methylene Chloride	U		0.430	5.00	1	02/09/2024 13:41	WG2223329
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/09/2024 13:41	WG2223329
Methyl tert-butyl ether	U		0.101	1.00	1	02/09/2024 13:41	WG2223329
Naphthalene	U		1.00	5.00	1	02/09/2024 13:41	WG2223329

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
n-Propylbenzene	0.439	J	0.0993	1.00	1	02/09/2024 13:41	WG2223329
Styrene	U		0.118	1.00	1	02/09/2024 13:41	WG2223329
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/09/2024 13:41	WG2223329
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/09/2024 13:41	WG2223329
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/09/2024 13:41	WG2223329
Tetrachloroethene	U		0.300	1.00	1	02/09/2024 13:41	WG2223329
Toluene	U		0.278	1.00	1	02/09/2024 13:41	WG2223329
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/09/2024 13:41	WG2223329
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/09/2024 13:41	WG2223329
1,1,1-Trichloroethane	U		0.149	1.00	1	02/09/2024 13:41	WG2223329
1,1,2-Trichloroethane	U		0.158	1.00	1	02/09/2024 13:41	WG2223329
Trichloroethene	U		0.190	1.00	1	02/09/2024 13:41	WG2223329
Trichlorofluoromethane	U		0.160	5.00	1	02/09/2024 13:41	WG2223329
1,2,3-Trichloropropane	U		0.237	2.50	1	02/09/2024 13:41	WG2223329
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/09/2024 13:41	WG2223329
1,2,3-Trimethylbenzene	0.218	J	0.104	1.00	1	02/09/2024 13:41	WG2223329
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/09/2024 13:41	WG2223329
Vinyl chloride	U		0.234	1.00	1	02/09/2024 13:41	WG2223329
Xylenes, Total	U		0.174	3.00	1	02/09/2024 13:41	WG2223329
(S) Toluene-d8	*102*			*80.0-120*		*02/09/2024 13:41*	WG2223329
(S) 4-Bromofluorobenzene	*99.0*			*77.0-126*		*02/09/2024 13:41*	WG2223329
(S) 1,2-Dichloroethane-d4	*94.0*			*70.0-130*		*02/09/2024 13:41*	WG2223329

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	U		33.3	100	1	02/13/2024 01:34	WG2224153
Residual Range Organics (RRO)	U		83.3	250	1	02/13/2024 01:34	WG2224153
(S) o-Terphenyl	*55.0*			*31.0-160*		*02/13/2024 01:34*	WG2224153

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

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	02/12/2024 18:07	WG2223477

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	149	B	31.6	100	1	02/12/2024 18:53	WG2224051
(S) a,a,a-Trifluorotoluene(FID)	*94.0*			*78.0-120*		*02/12/2024 18:53*	WG2224051

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	02/09/2024 14:00	WG2223329
Acrolein	U	C3	2.54	50.0	1	02/09/2024 14:00	WG2223329
Acrylonitrile	U		0.671	10.0	1	02/09/2024 14:00	WG2223329
Benzene	U		0.0941	1.00	1	02/09/2024 14:00	WG2223329
Bromobenzene	U		0.118	1.00	1	02/09/2024 14:00	WG2223329
Bromodichloromethane	U		0.136	1.00	1	02/09/2024 14:00	WG2223329
Bromoform	U		0.129	1.00	1	02/09/2024 14:00	WG2223329
Bromomethane	U		0.605	5.00	1	02/09/2024 14:00	WG2223329
n-Butylbenzene	U		0.157	1.00	1	02/09/2024 14:00	WG2223329
sec-Butylbenzene	0.146	J	0.125	1.00	1	02/09/2024 14:00	WG2223329
tert-Butylbenzene	U		0.127	1.00	1	02/09/2024 14:00	WG2223329
Carbon disulfide	U		0.0962	1.00	1	02/09/2024 14:00	WG2223329
Carbon tetrachloride	U		0.128	1.00	1	02/09/2024 14:00	WG2223329
Chlorobenzene	U		0.116	1.00	1	02/09/2024 14:00	WG2223329
Chlorodibromomethane	U		0.140	1.00	1	02/09/2024 14:00	WG2223329
Chloroethane	U		0.192	5.00	1	02/09/2024 14:00	WG2223329
Chloroform	U		0.111	5.00	1	02/09/2024 14:00	WG2223329
Chloromethane	U		0.960	2.50	1	02/09/2024 14:00	WG2223329
2-Chlorotoluene	U		0.106	1.00	1	02/09/2024 14:00	WG2223329
4-Chlorotoluene	U		0.114	1.00	1	02/09/2024 14:00	WG2223329
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/09/2024 14:00	WG2223329
1,2-Dibromoethane	U		0.126	1.00	1	02/09/2024 14:00	WG2223329
Dibromomethane	U		0.122	1.00	1	02/09/2024 14:00	WG2223329
1,2-Dichlorobenzene	U		0.107	1.00	1	02/09/2024 14:00	WG2223329
1,3-Dichlorobenzene	U		0.110	1.00	1	02/09/2024 14:00	WG2223329
1,4-Dichlorobenzene	U		0.120	1.00	1	02/09/2024 14:00	WG2223329
Dichlorodifluoromethane	U		0.374	5.00	1	02/09/2024 14:00	WG2223329
1,1-Dichloroethane	U		0.100	1.00	1	02/09/2024 14:00	WG2223329
1,2-Dichloroethane	U		0.0819	1.00	1	02/09/2024 14:00	WG2223329
1,1-Dichloroethene	U		0.188	1.00	1	02/09/2024 14:00	WG2223329
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/09/2024 14:00	WG2223329
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/09/2024 14:00	WG2223329
1,2-Dichloropropane	U		0.149	1.00	1	02/09/2024 14:00	WG2223329
1,1-Dichloropropene	U		0.142	1.00	1	02/09/2024 14:00	WG2223329
1,3-Dichloropropane	U		0.110	1.00	1	02/09/2024 14:00	WG2223329
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/09/2024 14:00	WG2223329
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/09/2024 14:00	WG2223329
2,2-Dichloropropane	U		0.161	1.00	1	02/09/2024 14:00	WG2223329
Di-isopropyl ether	U		0.105	1.00	1	02/09/2024 14:00	WG2223329
Ethylbenzene	U		0.137	1.00	1	02/09/2024 14:00	WG2223329
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/09/2024 14:00	WG2223329
Isopropylbenzene	0.238	J	0.105	1.00	1	02/09/2024 14:00	WG2223329
p-Isopropyltoluene	0.161	J	0.120	1.00	1	02/09/2024 14:00	WG2223329

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2-Butanone (MEK)	U		1.19	10.0	1	02/09/2024 14:00	WG2223329
Methylene Chloride	U		0.430	5.00	1	02/09/2024 14:00	WG2223329
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/09/2024 14:00	WG2223329
Methyl tert-butyl ether	U		0.101	1.00	1	02/09/2024 14:00	WG2223329
Naphthalene	U		1.00	5.00	1	02/09/2024 14:00	WG2223329
n-Propylbenzene	0.680	J	0.0993	1.00	1	02/09/2024 14:00	WG2223329
Styrene	U		0.118	1.00	1	02/09/2024 14:00	WG2223329
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/09/2024 14:00	WG2223329
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/09/2024 14:00	WG2223329
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/09/2024 14:00	WG2223329
Tetrachloroethene	U		0.300	1.00	1	02/09/2024 14:00	WG2223329
Toluene	U		0.278	1.00	1	02/09/2024 14:00	WG2223329
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/09/2024 14:00	WG2223329
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/09/2024 14:00	WG2223329
1,1,1-Trichloroethane	U		0.149	1.00	1	02/09/2024 14:00	WG2223329
1,1,2-Trichloroethane	U		0.158	1.00	1	02/09/2024 14:00	WG2223329
Trichloroethene	U		0.190	1.00	1	02/09/2024 14:00	WG2223329
Trichlorofluoromethane	U		0.160	5.00	1	02/09/2024 14:00	WG2223329
1,2,3-Trichloropropane	U		0.237	2.50	1	02/09/2024 14:00	WG2223329
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/09/2024 14:00	WG2223329
1,2,3-Trimethylbenzene	0.303	J	0.104	1.00	1	02/09/2024 14:00	WG2223329
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/09/2024 14:00	WG2223329
Vinyl chloride	U		0.234	1.00	1	02/09/2024 14:00	WG2223329
Xylenes, Total	U		0.174	3.00	1	02/09/2024 14:00	WG2223329
(S) Toluene-d8	*102*			*80.0-120*		*02/09/2024 14:00*	WG2223329
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*02/09/2024 14:00*	WG2223329
(S) 1,2-Dichloroethane-d4	*89.8*			*70.0-130*		*02/09/2024 14:00*	WG2223329

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	U		38.0	114	1.14	02/13/2024 01:54	WG2224153
Residual Range Organics (RRO)	U		95.0	285	1.14	02/13/2024 01:54	WG2224153
(S) o-Terphenyl	*78.9*			*31.0-160*		*02/13/2024 01:54*	WG2224153

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	
Anthracene	U		0.0190	0.0500	1	02/10/2024 15:43	WG2223119
Acenaphthene	U		0.0190	0.0500	1	02/10/2024 15:43	WG2223119
Acenaphthylene	U		0.0171	0.0500	1	02/10/2024 15:43	WG2223119
Benzo(a)anthracene	U		0.0203	0.0500	1	02/10/2024 15:43	WG2223119
Benzo(a)pyrene	U		0.0184	0.0500	1	02/10/2024 15:43	WG2223119
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/10/2024 15:43	WG2223119
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/10/2024 15:43	WG2223119
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/10/2024 15:43	WG2223119
Chrysene	U		0.0179	0.0500	1	02/10/2024 15:43	WG2223119
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/10/2024 15:43	WG2223119
Fluoranthene	U		0.0270	0.100	1	02/10/2024 15:43	WG2223119
Fluorene	U		0.0169	0.0500	1	02/10/2024 15:43	WG2223119
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/10/2024 15:43	WG2223119
Naphthalene	0.206	J	0.0917	0.250	1	02/10/2024 15:43	WG2223119
Phenanthrene	U		0.0180	0.0500	1	02/10/2024 15:43	WG2223119
Pyrene	U		0.0169	0.0500	1	02/10/2024 15:43	WG2223119
1-Methylnaphthalene	U		0.0687	0.250	1	02/10/2024 15:43	WG2223119

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	
2-Methylnaphthalene	0.104	J	0.0674	0.250	1	02/10/2024 15:43	WG2223119
2-Chloronaphthalene	U		0.0682	0.250	1	02/10/2024 15:43	WG2223119
(S) Nitrobenzene-d5	*134*			*31.0-160*		*02/10/2024 15:43*	WG2223119
(S) 2-Fluorobiphenyl	*113*			*48.0-148*		*02/10/2024 15:43*	WG2223119
(S) p-Terphenyl-d14	*122*			*37.0-146*		*02/10/2024 15:43*	WG2223119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	78.1		1	02/09/2024 10:17	WG2223140

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	1.51	J	1.36	4.02	25	02/11/2024 04:22	WG2224020
(S) a,a,a-Trifluorotoluene(FID)	*97.9*			*77.0-120*		*02/11/2024 04:22*	WG2224020

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	0.0587	0.0804	1	02/12/2024 02:19	WG2224373
Acrylonitrile	U	C3 J3	0.00580	0.0201	1	02/12/2024 02:19	WG2224373
Benzene	U		0.000751	0.00161	1	02/12/2024 02:19	WG2224373
Bromobenzene	U		0.00145	0.0201	1	02/12/2024 02:19	WG2224373
Bromodichloromethane	U		0.00117	0.00402	1	02/12/2024 02:19	WG2224373
Bromoform	U		0.00188	0.0402	1	02/12/2024 02:19	WG2224373
Bromomethane	U	C3	0.00317	0.0201	1	02/12/2024 02:19	WG2224373
n-Butylbenzene	U		0.00844	0.0201	1	02/12/2024 02:19	WG2224373
sec-Butylbenzene	U		0.00463	0.0201	1	02/12/2024 02:19	WG2224373
tert-Butylbenzene	U		0.00313	0.00804	1	02/12/2024 02:19	WG2224373
Carbon disulfide	U	J3	0.00113	0.0201	1	02/12/2024 02:19	WG2224373
Carbon tetrachloride	U		0.00144	0.00804	1	02/12/2024 02:19	WG2224373
Chlorobenzene	U		0.000338	0.00402	1	02/12/2024 02:19	WG2224373
Chlorodibromomethane	U		0.000984	0.00402	1	02/12/2024 02:19	WG2224373
Chloroethane	U		0.00273	0.00804	1	02/12/2024 02:19	WG2224373
Chloroform	U		0.00166	0.00402	1	02/12/2024 02:19	WG2224373
Chloromethane	U	C3	0.00699	0.0201	1	02/12/2024 02:19	WG2224373
2-Chlorotoluene	U		0.00139	0.00402	1	02/12/2024 02:19	WG2224373
4-Chlorotoluene	U		0.000723	0.00804	1	02/12/2024 02:19	WG2224373
1,2-Dibromo-3-Chloropropane	U		0.00627	0.0402	1	02/12/2024 02:19	WG2224373
1,2-Dibromoethane	U		0.00104	0.00402	1	02/12/2024 02:19	WG2224373
Dibromomethane	U		0.00121	0.00804	1	02/12/2024 02:19	WG2224373
1,2-Dichlorobenzene	U		0.000683	0.00804	1	02/12/2024 02:19	WG2224373
1,3-Dichlorobenzene	U		0.000964	0.00804	1	02/12/2024 02:19	WG2224373
1,4-Dichlorobenzene	U		0.00113	0.00804	1	02/12/2024 02:19	WG2224373
Dichlorodifluoromethane	U		0.00259	0.00804	1	02/12/2024 02:19	WG2224373
1,1-Dichloroethane	U		0.000789	0.00402	1	02/12/2024 02:19	WG2224373
1,2-Dichloroethane	U		0.00104	0.00402	1	02/12/2024 02:19	WG2224373
1,1-Dichloroethene	U		0.000974	0.00402	1	02/12/2024 02:19	WG2224373
cis-1,2-Dichloroethene	U		0.00118	0.00402	1	02/12/2024 02:19	WG2224373
trans-1,2-Dichloroethene	U		0.00167	0.00804	1	02/12/2024 02:19	WG2224373
1,2-Dichloropropane	U		0.00228	0.00804	1	02/12/2024 02:19	WG2224373
1,1-Dichloropropene	U		0.00130	0.00402	1	02/12/2024 02:19	WG2224373
1,3-Dichloropropane	U		0.000805	0.00804	1	02/12/2024 02:19	WG2224373
cis-1,3-Dichloropropene	U		0.00122	0.00402	1	02/12/2024 02:19	WG2224373
trans-1,3-Dichloropropene	U		0.00183	0.00804	1	02/12/2024 02:19	WG2224373
2,2-Dichloropropane	U		0.00222	0.00402	1	02/12/2024 02:19	WG2224373
Di-isopropyl ether	U		0.000659	0.00161	1	02/12/2024 02:19	WG2224373
Ethylbenzene	U		0.00118	0.00402	1	02/12/2024 02:19	WG2224373
Hexachloro-1,3-butadiene	U		0.00964	0.0402	1	02/12/2024 02:19	WG2224373
Isopropylbenzene	U		0.000683	0.00402	1	02/12/2024 02:19	WG2224373
p-Isopropyltoluene	U		0.00410	0.00804	1	02/12/2024 02:19	WG2224373
2-Butanone (MEK)	U		0.102	0.161	1	02/12/2024 02:19	WG2224373
Methylene Chloride	U		0.0107	0.0402	1	02/12/2024 02:19	WG2224373

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		0.00366	0.0402	1	02/12/2024 02:19	WG2224373
Methyl tert-butyl ether	U		0.000563	0.00161	1	02/12/2024 02:19	WG2224373
Naphthalene	U		0.00784	0.0201	1	02/12/2024 02:19	WG2224373
n-Propylbenzene	U		0.00153	0.00804	1	02/12/2024 02:19	WG2224373
Styrene	U		0.000368	0.0201	1	02/12/2024 02:19	WG2224373
1,1,1,2-Tetrachloroethane	U		0.00152	0.00402	1	02/12/2024 02:19	WG2224373
1,1,2,2-Tetrachloroethane	U		0.00112	0.00402	1	02/12/2024 02:19	WG2224373
1,1,2-Trichlorotrifluoroethane	U		0.00121	0.00402	1	02/12/2024 02:19	WG2224373
Tetrachloroethene	U		0.00144	0.00402	1	02/12/2024 02:19	WG2224373
Toluene	U		0.00209	0.00804	1	02/12/2024 02:19	WG2224373
1,2,3-Trichlorobenzene	U		0.0118	0.0201	1	02/12/2024 02:19	WG2224373
1,2,4-Trichlorobenzene	U		0.00707	0.0201	1	02/12/2024 02:19	WG2224373
1,1,1-Trichloroethane	U		0.00148	0.00402	1	02/12/2024 02:19	WG2224373
1,1,2-Trichloroethane	U		0.000960	0.00402	1	02/12/2024 02:19	WG2224373
Trichloroethene	U		0.000939	0.00161	1	02/12/2024 02:19	WG2224373
Trichlorofluoromethane	U		0.00133	0.00402	1	02/12/2024 02:19	WG2224373
1,2,3-Trichloropropane	U		0.00260	0.0201	1	02/12/2024 02:19	WG2224373
1,2,4-Trimethylbenzene	U		0.00254	0.00804	1	02/12/2024 02:19	WG2224373
1,2,3-Trimethylbenzene	U		0.00254	0.00804	1	02/12/2024 02:19	WG2224373
1,3,5-Trimethylbenzene	U		0.00321	0.00804	1	02/12/2024 02:19	WG2224373
Vinyl chloride	U		0.00186	0.00402	1	02/12/2024 02:19	WG2224373
Xylenes, Total	U		0.00141	0.0104	1	02/12/2024 02:19	WG2224373
(S) Toluene-d8	*104*			*75.0-131*		*02/12/2024 02:19*	WG2224373
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*02/12/2024 02:19*	WG2224373
(S) 1,2-Dichloroethane-d4	*95.5*			*70.0-130*		*02/12/2024 02:19*	WG2224373

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	31.4		8.54	25.6	5	02/10/2024 11:39	WG2221443
Residual Range Organics (RRO)	280		21.4	64.0	5	02/10/2024 11:39	WG2221443
(S) o-Terphenyl	*32.0*			*18.0-148*		*02/10/2024 11:39*	WG2221443

Sample Narrative:

L1703299-09 WG2221443: Sample resembles laboratory standard for Hydraulic Oil.

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	02/12/2024 18:11	WG2223477

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	02/12/2024 19:16	WG2224051
(S) a,a,a-Trifluorotoluene(FID)	*93.9*			*78.0-120*		*02/12/2024 19:16*	WG2224051

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	02/09/2024 14:18	WG2223329
Acrolein	U	C3	2.54	50.0	1	02/09/2024 14:18	WG2223329
Acrylonitrile	U		0.671	10.0	1	02/09/2024 14:18	WG2223329
Benzene	U		0.0941	1.00	1	02/09/2024 14:18	WG2223329
Bromobenzene	U		0.118	1.00	1	02/09/2024 14:18	WG2223329
Bromodichloromethane	U		0.136	1.00	1	02/09/2024 14:18	WG2223329
Bromoform	U		0.129	1.00	1	02/09/2024 14:18	WG2223329
Bromomethane	U		0.605	5.00	1	02/09/2024 14:18	WG2223329
n-Butylbenzene	U		0.157	1.00	1	02/09/2024 14:18	WG2223329
sec-Butylbenzene	U		0.125	1.00	1	02/09/2024 14:18	WG2223329
tert-Butylbenzene	U		0.127	1.00	1	02/09/2024 14:18	WG2223329
Carbon disulfide	U		0.0962	1.00	1	02/09/2024 14:18	WG2223329
Carbon tetrachloride	U		0.128	1.00	1	02/09/2024 14:18	WG2223329
Chlorobenzene	U		0.116	1.00	1	02/09/2024 14:18	WG2223329
Chlorodibromomethane	U		0.140	1.00	1	02/09/2024 14:18	WG2223329
Chloroethane	U		0.192	5.00	1	02/09/2024 14:18	WG2223329
Chloroform	U		0.111	5.00	1	02/09/2024 14:18	WG2223329
Chloromethane	U		0.960	2.50	1	02/09/2024 14:18	WG2223329
2-Chlorotoluene	U		0.106	1.00	1	02/09/2024 14:18	WG2223329
4-Chlorotoluene	U		0.114	1.00	1	02/09/2024 14:18	WG2223329
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/09/2024 14:18	WG2223329
1,2-Dibromoethane	U		0.126	1.00	1	02/09/2024 14:18	WG2223329
Dibromomethane	U		0.122	1.00	1	02/09/2024 14:18	WG2223329
1,2-Dichlorobenzene	U		0.107	1.00	1	02/09/2024 14:18	WG2223329
1,3-Dichlorobenzene	U		0.110	1.00	1	02/09/2024 14:18	WG2223329
1,4-Dichlorobenzene	U		0.120	1.00	1	02/09/2024 14:18	WG2223329
Dichlorodifluoromethane	U		0.374	5.00	1	02/09/2024 14:18	WG2223329
1,1-Dichloroethane	U		0.100	1.00	1	02/09/2024 14:18	WG2223329
1,2-Dichloroethane	U		0.0819	1.00	1	02/09/2024 14:18	WG2223329
1,1-Dichloroethene	U		0.188	1.00	1	02/09/2024 14:18	WG2223329
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/09/2024 14:18	WG2223329
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/09/2024 14:18	WG2223329
1,2-Dichloropropane	U		0.149	1.00	1	02/09/2024 14:18	WG2223329
1,1-Dichloropropene	U		0.142	1.00	1	02/09/2024 14:18	WG2223329
1,3-Dichloropropane	U		0.110	1.00	1	02/09/2024 14:18	WG2223329
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/09/2024 14:18	WG2223329
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/09/2024 14:18	WG2223329
2,2-Dichloropropane	U		0.161	1.00	1	02/09/2024 14:18	WG2223329
Di-isopropyl ether	U		0.105	1.00	1	02/09/2024 14:18	WG2223329
Ethylbenzene	U		0.137	1.00	1	02/09/2024 14:18	WG2223329
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/09/2024 14:18	WG2223329
Isopropylbenzene	U		0.105	1.00	1	02/09/2024 14:18	WG2223329
p-Isopropyltoluene	U		0.120	1.00	1	02/09/2024 14:18	WG2223329

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2-Butanone (MEK)	U		1.19	10.0	1	02/09/2024 14:18	WG2223329
Methylene Chloride	U		0.430	5.00	1	02/09/2024 14:18	WG2223329
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/09/2024 14:18	WG2223329
Methyl tert-butyl ether	U		0.101	1.00	1	02/09/2024 14:18	WG2223329
Naphthalene	U		1.00	5.00	1	02/09/2024 14:18	WG2223329
n-Propylbenzene	0.101	J	0.0993	1.00	1	02/09/2024 14:18	WG2223329
Styrene	U		0.118	1.00	1	02/09/2024 14:18	WG2223329
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/09/2024 14:18	WG2223329
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/09/2024 14:18	WG2223329
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/09/2024 14:18	WG2223329
Tetrachloroethene	U		0.300	1.00	1	02/09/2024 14:18	WG2223329
Toluene	U		0.278	1.00	1	02/09/2024 14:18	WG2223329
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/09/2024 14:18	WG2223329
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/09/2024 14:18	WG2223329
1,1,1-Trichloroethane	U		0.149	1.00	1	02/09/2024 14:18	WG2223329
1,1,2-Trichloroethane	U		0.158	1.00	1	02/09/2024 14:18	WG2223329
Trichloroethene	U		0.190	1.00	1	02/09/2024 14:18	WG2223329
Trichlorofluoromethane	U		0.160	5.00	1	02/09/2024 14:18	WG2223329
1,2,3-Trichloropropane	U		0.237	2.50	1	02/09/2024 14:18	WG2223329
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/09/2024 14:18	WG2223329
1,2,3-Trimethylbenzene	0.186	J	0.104	1.00	1	02/09/2024 14:18	WG2223329
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/09/2024 14:18	WG2223329
Vinyl chloride	U		0.234	1.00	1	02/09/2024 14:18	WG2223329
Xylenes, Total	U		0.174	3.00	1	02/09/2024 14:18	WG2223329
(S) Toluene-d8	*100*			*80.0-120*		*02/09/2024 14:18*	WG2223329
(S) 4-Bromofluorobenzene	*99.3*			*77.0-126*		*02/09/2024 14:18*	WG2223329
(S) 1,2-Dichloroethane-d4	*92.0*			*70.0-130*		*02/09/2024 14:18*	WG2223329

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	U		44.0	132	1.32	02/13/2024 02:15	WG2224153
Residual Range Organics (RRO)	U		110	330	1.32	02/13/2024 02:15	WG2224153
(S) o-Terphenyl	*76.8*			*31.0-160*		*02/13/2024 02:15*	WG2224153

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	
Anthracene	U		0.0190	0.0500	1	02/10/2024 16:01	WG2223119
Acenaphthene	U		0.0190	0.0500	1	02/10/2024 16:01	WG2223119
Acenaphthylene	U		0.0171	0.0500	1	02/10/2024 16:01	WG2223119
Benzo(a)anthracene	U		0.0203	0.0500	1	02/10/2024 16:01	WG2223119
Benzo(a)pyrene	U		0.0184	0.0500	1	02/10/2024 16:01	WG2223119
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/10/2024 16:01	WG2223119
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/10/2024 16:01	WG2223119
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/10/2024 16:01	WG2223119
Chrysene	U		0.0179	0.0500	1	02/10/2024 16:01	WG2223119
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/10/2024 16:01	WG2223119
Fluoranthene	U		0.0270	0.100	1	02/10/2024 16:01	WG2223119
Fluorene	U		0.0169	0.0500	1	02/10/2024 16:01	WG2223119
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/10/2024 16:01	WG2223119
Naphthalene	0.125	J	0.0917	0.250	1	02/10/2024 16:01	WG2223119
Phenanthrene	0.0314	J	0.0180	0.0500	1	02/10/2024 16:01	WG2223119
Pyrene	U		0.0169	0.0500	1	02/10/2024 16:01	WG2223119
1-Methylnaphthalene	0.0992	J	0.0687	0.250	1	02/10/2024 16:01	WG2223119

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	
2-Methylnaphthalene	0.0875	J	0.0674	0.250	1	02/10/2024 16:01	WG2223119
2-Chloronaphthalene	U		0.0682	0.250	1	02/10/2024 16:01	WG2223119
(S) Nitrobenzene-d5	*129*			*31.0-160*		*02/10/2024 16:01*	WG2223119
(S) 2-Fluorobiphenyl	*94.7*			*48.0-148*		*02/10/2024 16:01*	WG2223119
(S) p-Terphenyl-d14	*107*			*37.0-146*		*02/10/2024 16:01*	WG2223119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	81.8		1	02/09/2024 10:17	WG2223140

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	U		1.26	3.70	25	02/11/2024 04:41	WG2224020
(S) a,a,a-Trifluorotoluene(FID)	*95.9*			*77.0-120*		*02/11/2024 04:41*	WG2224020

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	0.0541	0.0741	1	02/12/2024 02:38	WG2224373
Acrylonitrile	U	C3 J3	0.00535	0.0185	1	02/12/2024 02:38	WG2224373
Benzene	U		0.000692	0.00148	1	02/12/2024 02:38	WG2224373
Bromobenzene	U		0.00133	0.0185	1	02/12/2024 02:38	WG2224373
Bromodichloromethane	U		0.00107	0.00370	1	02/12/2024 02:38	WG2224373
Bromoform	U		0.00173	0.0370	1	02/12/2024 02:38	WG2224373
Bromomethane	U	C3	0.00292	0.0185	1	02/12/2024 02:38	WG2224373
n-Butylbenzene	U		0.00778	0.0185	1	02/12/2024 02:38	WG2224373
sec-Butylbenzene	U		0.00427	0.0185	1	02/12/2024 02:38	WG2224373
tert-Butylbenzene	U		0.00289	0.00741	1	02/12/2024 02:38	WG2224373
Carbon disulfide	U	J3	0.00104	0.0185	1	02/12/2024 02:38	WG2224373
Carbon tetrachloride	U		0.00133	0.00741	1	02/12/2024 02:38	WG2224373
Chlorobenzene	U		0.000311	0.00370	1	02/12/2024 02:38	WG2224373
Chlorodibromomethane	U		0.000907	0.00370	1	02/12/2024 02:38	WG2224373
Chloroethane	U		0.00252	0.00741	1	02/12/2024 02:38	WG2224373
Chloroform	U		0.00153	0.00370	1	02/12/2024 02:38	WG2224373
Chloromethane	U	C3	0.00645	0.0185	1	02/12/2024 02:38	WG2224373
2-Chlorotoluene	U		0.00128	0.00370	1	02/12/2024 02:38	WG2224373
4-Chlorotoluene	U		0.000667	0.00741	1	02/12/2024 02:38	WG2224373
1,2-Dibromo-3-Chloropropane	U		0.00578	0.0370	1	02/12/2024 02:38	WG2224373
1,2-Dibromoethane	U		0.000960	0.00370	1	02/12/2024 02:38	WG2224373
Dibromomethane	U		0.00111	0.00741	1	02/12/2024 02:38	WG2224373
1,2-Dichlorobenzene	U		0.000630	0.00741	1	02/12/2024 02:38	WG2224373
1,3-Dichlorobenzene	U		0.000889	0.00741	1	02/12/2024 02:38	WG2224373
1,4-Dichlorobenzene	U		0.00104	0.00741	1	02/12/2024 02:38	WG2224373
Dichlorodifluoromethane	U		0.00239	0.00741	1	02/12/2024 02:38	WG2224373
1,1-Dichloroethane	U		0.000728	0.00370	1	02/12/2024 02:38	WG2224373
1,2-Dichloroethane	U		0.000962	0.00370	1	02/12/2024 02:38	WG2224373
1,1-Dichloroethene	U		0.000898	0.00370	1	02/12/2024 02:38	WG2224373
cis-1,2-Dichloroethene	U		0.00109	0.00370	1	02/12/2024 02:38	WG2224373
trans-1,2-Dichloroethene	U		0.00154	0.00741	1	02/12/2024 02:38	WG2224373
1,2-Dichloropropane	U		0.00210	0.00741	1	02/12/2024 02:38	WG2224373
1,1-Dichloropropene	U		0.00120	0.00370	1	02/12/2024 02:38	WG2224373
1,3-Dichloropropane	U		0.000742	0.00741	1	02/12/2024 02:38	WG2224373
cis-1,3-Dichloropropene	U		0.00112	0.00370	1	02/12/2024 02:38	WG2224373
trans-1,3-Dichloropropene	U		0.00169	0.00741	1	02/12/2024 02:38	WG2224373
2,2-Dichloropropane	U		0.00204	0.00370	1	02/12/2024 02:38	WG2224373
Di-isopropyl ether	U		0.000608	0.00148	1	02/12/2024 02:38	WG2224373
Ethylbenzene	U		0.00109	0.00370	1	02/12/2024 02:38	WG2224373
Hexachloro-1,3-butadiene	U		0.00889	0.0370	1	02/12/2024 02:38	WG2224373
Isopropylbenzene	U		0.000630	0.00370	1	02/12/2024 02:38	WG2224373
p-Isopropyltoluene	U		0.00378	0.00741	1	02/12/2024 02:38	WG2224373
2-Butanone (MEK)	U		0.0941	0.148	1	02/12/2024 02:38	WG2224373
Methylene Chloride	U		0.00984	0.0370	1	02/12/2024 02:38	WG2224373

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		0.00338	0.0370	1	02/12/2024 02:38	WG2224373
Methyl tert-butyl ether	U		0.000519	0.00148	1	02/12/2024 02:38	WG2224373
Naphthalene	U		0.00723	0.0185	1	02/12/2024 02:38	WG2224373
n-Propylbenzene	U		0.00141	0.00741	1	02/12/2024 02:38	WG2224373
Styrene	U		0.000339	0.0185	1	02/12/2024 02:38	WG2224373
1,1,1,2-Tetrachloroethane	U		0.00140	0.00370	1	02/12/2024 02:38	WG2224373
1,1,2,2-Tetrachloroethane	U		0.00103	0.00370	1	02/12/2024 02:38	WG2224373
1,1,2-Trichlorotrifluoroethane	U		0.00112	0.00370	1	02/12/2024 02:38	WG2224373
Tetrachloroethene	U		0.00133	0.00370	1	02/12/2024 02:38	WG2224373
Toluene	U		0.00193	0.00741	1	02/12/2024 02:38	WG2224373
1,2,3-Trichlorobenzene	U		0.0109	0.0185	1	02/12/2024 02:38	WG2224373
1,2,4-Trichlorobenzene	U		0.00652	0.0185	1	02/12/2024 02:38	WG2224373
1,1,1-Trichloroethane	U		0.00137	0.00370	1	02/12/2024 02:38	WG2224373
1,1,2-Trichloroethane	U		0.000885	0.00370	1	02/12/2024 02:38	WG2224373
Trichloroethene	U		0.000865	0.00148	1	02/12/2024 02:38	WG2224373
Trichlorofluoromethane	U		0.00123	0.00370	1	02/12/2024 02:38	WG2224373
1,2,3-Trichloropropane	U		0.00240	0.0185	1	02/12/2024 02:38	WG2224373
1,2,4-Trimethylbenzene	U		0.00234	0.00741	1	02/12/2024 02:38	WG2224373
1,2,3-Trimethylbenzene	U		0.00234	0.00741	1	02/12/2024 02:38	WG2224373
1,3,5-Trimethylbenzene	U		0.00296	0.00741	1	02/12/2024 02:38	WG2224373
Vinyl chloride	U		0.00172	0.00370	1	02/12/2024 02:38	WG2224373
Xylenes, Total	U		0.00130	0.00963	1	02/12/2024 02:38	WG2224373
(S) Toluene-d8	*104*			*75.0-131*		*02/12/2024 02:38*	WG2224373
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*02/12/2024 02:38*	WG2224373
(S) 1,2-Dichloroethane-d4	*96.4*			*70.0-130*		*02/12/2024 02:38*	WG2224373

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-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		40.7	122	25	02/10/2024 11:39	WG2221443
Residual Range Organics (RRO)	560		102	306	25	02/10/2024 11:39	WG2221443
(S) o-Terphenyl	*47.1*	J7		*18.0-148*		*02/10/2024 11:39*	WG2221443

Sample Narrative:

L1703299-13 WG2221443: Cannot run at lower dilution due to viscosity of extract. Resembles lab standard for Hydraulic Oil.

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	02/12/2024 18:14	WG2223477

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	02/12/2024 19:52	WG2224051
(S) a,a,a-Trifluorotoluene(FID)	*94.5*			*78.0-120*		*02/12/2024 19:52*	WG2224051

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	02/09/2024 14:37	WG2223329
Acrolein	U	C3	2.54	50.0	1	02/09/2024 14:37	WG2223329
Acrylonitrile	U		0.671	10.0	1	02/09/2024 14:37	WG2223329
Benzene	U		0.0941	1.00	1	02/09/2024 14:37	WG2223329
Bromobenzene	U		0.118	1.00	1	02/09/2024 14:37	WG2223329
Bromodichloromethane	U		0.136	1.00	1	02/09/2024 14:37	WG2223329
Bromoform	U		0.129	1.00	1	02/09/2024 14:37	WG2223329
Bromomethane	U		0.605	5.00	1	02/09/2024 14:37	WG2223329
n-Butylbenzene	U		0.157	1.00	1	02/09/2024 14:37	WG2223329
sec-Butylbenzene	U		0.125	1.00	1	02/09/2024 14:37	WG2223329
tert-Butylbenzene	U		0.127	1.00	1	02/09/2024 14:37	WG2223329
Carbon disulfide	U		0.0962	1.00	1	02/09/2024 14:37	WG2223329
Carbon tetrachloride	U		0.128	1.00	1	02/09/2024 14:37	WG2223329
Chlorobenzene	U		0.116	1.00	1	02/09/2024 14:37	WG2223329
Chlorodibromomethane	U		0.140	1.00	1	02/09/2024 14:37	WG2223329
Chloroethane	U		0.192	5.00	1	02/09/2024 14:37	WG2223329
Chloroform	U		0.111	5.00	1	02/09/2024 14:37	WG2223329
Chloromethane	U		0.960	2.50	1	02/09/2024 14:37	WG2223329
2-Chlorotoluene	U		0.106	1.00	1	02/09/2024 14:37	WG2223329
4-Chlorotoluene	U		0.114	1.00	1	02/09/2024 14:37	WG2223329
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/09/2024 14:37	WG2223329
1,2-Dibromoethane	U		0.126	1.00	1	02/09/2024 14:37	WG2223329
Dibromomethane	U		0.122	1.00	1	02/09/2024 14:37	WG2223329
1,2-Dichlorobenzene	U		0.107	1.00	1	02/09/2024 14:37	WG2223329
1,3-Dichlorobenzene	U		0.110	1.00	1	02/09/2024 14:37	WG2223329
1,4-Dichlorobenzene	U		0.120	1.00	1	02/09/2024 14:37	WG2223329
Dichlorodifluoromethane	U		0.374	5.00	1	02/09/2024 14:37	WG2223329
1,1-Dichloroethane	U		0.100	1.00	1	02/09/2024 14:37	WG2223329
1,2-Dichloroethane	U		0.0819	1.00	1	02/09/2024 14:37	WG2223329
1,1-Dichloroethene	U		0.188	1.00	1	02/09/2024 14:37	WG2223329
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/09/2024 14:37	WG2223329
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/09/2024 14:37	WG2223329
1,2-Dichloropropane	U		0.149	1.00	1	02/09/2024 14:37	WG2223329
1,1-Dichloropropene	U		0.142	1.00	1	02/09/2024 14:37	WG2223329
1,3-Dichloropropane	U		0.110	1.00	1	02/09/2024 14:37	WG2223329
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/09/2024 14:37	WG2223329
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/09/2024 14:37	WG2223329
2,2-Dichloropropane	U		0.161	1.00	1	02/09/2024 14:37	WG2223329
Di-isopropyl ether	U		0.105	1.00	1	02/09/2024 14:37	WG2223329
Ethylbenzene	U		0.137	1.00	1	02/09/2024 14:37	WG2223329
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/09/2024 14:37	WG2223329
Isopropylbenzene	U		0.105	1.00	1	02/09/2024 14:37	WG2223329
p-Isopropyltoluene	U		0.120	1.00	1	02/09/2024 14:37	WG2223329

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2-Butanone (MEK)	U		1.19	10.0	1	02/09/2024 14:37	WG2223329
Methylene Chloride	U		0.430	5.00	1	02/09/2024 14:37	WG2223329
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/09/2024 14:37	WG2223329
Methyl tert-butyl ether	U		0.101	1.00	1	02/09/2024 14:37	WG2223329
Naphthalene	U		1.00	5.00	1	02/09/2024 14:37	WG2223329
n-Propylbenzene	U		0.0993	1.00	1	02/09/2024 14:37	WG2223329
Styrene	U		0.118	1.00	1	02/09/2024 14:37	WG2223329
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/09/2024 14:37	WG2223329
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/09/2024 14:37	WG2223329
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/09/2024 14:37	WG2223329
Tetrachloroethene	U		0.300	1.00	1	02/09/2024 14:37	WG2223329
Toluene	U		0.278	1.00	1	02/09/2024 14:37	WG2223329
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/09/2024 14:37	WG2223329
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/09/2024 14:37	WG2223329
1,1,1-Trichloroethane	U		0.149	1.00	1	02/09/2024 14:37	WG2223329
1,1,2-Trichloroethane	U		0.158	1.00	1	02/09/2024 14:37	WG2223329
Trichloroethene	U		0.190	1.00	1	02/09/2024 14:37	WG2223329
Trichlorofluoromethane	U		0.160	5.00	1	02/09/2024 14:37	WG2223329
1,2,3-Trichloropropane	U		0.237	2.50	1	02/09/2024 14:37	WG2223329
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/09/2024 14:37	WG2223329
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/09/2024 14:37	WG2223329
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/09/2024 14:37	WG2223329
Vinyl chloride	U		0.234	1.00	1	02/09/2024 14:37	WG2223329
Xylenes, Total	U		0.174	3.00	1	02/09/2024 14:37	WG2223329
(S) Toluene-d8	*101*			*80.0-120*		*02/09/2024 14:37*	WG2223329
(S) 4-Bromofluorobenzene	*99.6*			*77.0-126*		*02/09/2024 14:37*	WG2223329
(S) 1,2-Dichloroethane-d4	*93.0*			*70.0-130*		*02/09/2024 14:37*	WG2223329

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	U		33.3	100	1	02/13/2024 02:35	WG2224153
Residual Range Organics (RRO)	249	J	83.3	250	1	02/13/2024 02:35	WG2224153
(S) o-Terphenyl	*77.0*			*31.0-160*		*02/13/2024 02:35*	WG2224153

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	
Anthracene	U		0.0190	0.0500	1	02/10/2024 16:18	WG2223119
Acenaphthene	U		0.0190	0.0500	1	02/10/2024 16:18	WG2223119
Acenaphthylene	U		0.0171	0.0500	1	02/10/2024 16:18	WG2223119
Benzo(a)anthracene	U		0.0203	0.0500	1	02/10/2024 16:18	WG2223119
Benzo(a)pyrene	U		0.0184	0.0500	1	02/10/2024 16:18	WG2223119
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/10/2024 16:18	WG2223119
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/10/2024 16:18	WG2223119
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/10/2024 16:18	WG2223119
Chrysene	U		0.0179	0.0500	1	02/10/2024 16:18	WG2223119
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/10/2024 16:18	WG2223119
Fluoranthene	U		0.0270	0.100	1	02/10/2024 16:18	WG2223119
Fluorene	U		0.0169	0.0500	1	02/10/2024 16:18	WG2223119
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/10/2024 16:18	WG2223119
Naphthalene	U		0.0917	0.250	1	02/10/2024 16:18	WG2223119
Phenanthrene	U		0.0180	0.0500	1	02/10/2024 16:18	WG2223119
Pyrene	U		0.0169	0.0500	1	02/10/2024 16:18	WG2223119
1-Methylnaphthalene	U		0.0687	0.250	1	02/10/2024 16:18	WG2223119

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	
2-Methylnaphthalene	U		0.0674	0.250	1	02/10/2024 16:18	WG2223119
2-Chloronaphthalene	U		0.0682	0.250	1	02/10/2024 16:18	WG2223119
(S) Nitrobenzene-d5	*128*			*31.0-160*		*02/10/2024 16:18*	WG2223119
(S) 2-Fluorobiphenyl	*110*			*48.0-148*		*02/10/2024 16:18*	WG2223119
(S) p-Terphenyl-d14	*113*			*37.0-146*		*02/10/2024 16:18*	WG2223119

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	61.5		1	02/09/2024 10:17	WG2223140

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	10.2		0.161	3.25	5	02/13/2024 13:00	WG2223355

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	1600		19.6	57.9	250	02/12/2024 03:30	WG2224137
(S) a,a,a-Trifluorotoluene(FID)	*110*			*77.0-120*		*02/12/2024 03:30*	WG2224137

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	1.69	2.32	20	02/12/2024 05:08	WG2224373
Acrylonitrile	U	C3 J3	0.167	0.579	20	02/12/2024 05:08	WG2224373
Benzene	1.17		0.0216	0.0463	20	02/12/2024 05:08	WG2224373
Bromobenzene	U		0.0417	0.579	20	02/12/2024 05:08	WG2224373
Bromodichloromethane	U		0.0336	0.116	20	02/12/2024 05:08	WG2224373
Bromoform	U		0.0542	1.16	20	02/12/2024 05:08	WG2224373
Bromomethane	U	C3	0.0912	0.579	20	02/12/2024 05:08	WG2224373
n-Butylbenzene	13.1		0.243	0.579	20	02/12/2024 05:08	WG2224373
sec-Butylbenzene	1.32		0.133	0.579	20	02/12/2024 05:08	WG2224373
tert-Butylbenzene	0.936		0.0903	0.232	20	02/12/2024 05:08	WG2224373
Carbon disulfide	U	J3	0.0324	0.579	20	02/12/2024 05:08	WG2224373
Carbon tetrachloride	U		0.0417	0.232	20	02/12/2024 05:08	WG2224373
Chlorobenzene	U		0.00973	0.116	20	02/12/2024 05:08	WG2224373
Chlorodibromomethane	U		0.0283	0.116	20	02/12/2024 05:08	WG2224373
Chloroethane	U		0.0787	0.232	20	02/12/2024 05:08	WG2224373
Chloroform	U		0.0477	0.116	20	02/12/2024 05:08	WG2224373
Chloromethane	U	C3	0.201	0.579	20	02/12/2024 05:08	WG2224373
2-Chlorotoluene	U		0.0401	0.116	20	02/12/2024 05:08	WG2224373
4-Chlorotoluene	U		0.0208	0.232	20	02/12/2024 05:08	WG2224373
1,2-Dibromo-3-Chloropropane	U		0.181	1.16	20	02/12/2024 05:08	WG2224373
1,2-Dibromoethane	U		0.0301	0.116	20	02/12/2024 05:08	WG2224373
Dibromomethane	U		0.0347	0.232	20	02/12/2024 05:08	WG2224373
1,2-Dichlorobenzene	U		0.0197	0.232	20	02/12/2024 05:08	WG2224373
1,3-Dichlorobenzene	U		0.0278	0.232	20	02/12/2024 05:08	WG2224373
1,4-Dichlorobenzene	U		0.0324	0.232	20	02/12/2024 05:08	WG2224373
Dichlorodifluoromethane	U		0.0746	0.232	20	02/12/2024 05:08	WG2224373
1,1-Dichloroethane	U		0.0227	0.116	20	02/12/2024 05:08	WG2224373
1,2-Dichloroethane	U		0.0301	0.116	20	02/12/2024 05:08	WG2224373
1,1-Dichloroethene	U		0.0280	0.116	20	02/12/2024 05:08	WG2224373
cis-1,2-Dichloroethene	U		0.0340	0.116	20	02/12/2024 05:08	WG2224373
trans-1,2-Dichloroethene	U		0.0482	0.232	20	02/12/2024 05:08	WG2224373
1,2-Dichloropropane	U		0.0658	0.232	20	02/12/2024 05:08	WG2224373
1,1-Dichloropropene	U		0.0375	0.116	20	02/12/2024 05:08	WG2224373
1,3-Dichloropropane	U		0.0232	0.232	20	02/12/2024 05:08	WG2224373
cis-1,3-Dichloropropene	U		0.0350	0.116	20	02/12/2024 05:08	WG2224373
trans-1,3-Dichloropropene	U		0.0528	0.232	20	02/12/2024 05:08	WG2224373
2,2-Dichloropropane	U		0.0639	0.116	20	02/12/2024 05:08	WG2224373
Di-isopropyl ether	U		0.0190	0.0463	20	02/12/2024 05:08	WG2224373

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
Ethylbenzene	7.94		0.0340	0.116	20	02/12/2024 05:08	WG2224373
Hexachloro-1,3-butadiene	U		0.278	1.16	20	02/12/2024 05:08	WG2224373
Isopropylbenzene	3.03		0.0197	0.116	20	02/12/2024 05:08	WG2224373
p-Isopropyltoluene	0.894		0.118	0.232	20	02/12/2024 05:08	WG2224373
2-Butanone (MEK)	U		2.94	4.63	20	02/12/2024 05:08	WG2224373
Methylene Chloride	U		0.308	1.16	20	02/12/2024 05:08	WG2224373
4-Methyl-2-pentanone (MIBK)	0.445	J	0.106	1.16	20	02/12/2024 05:08	WG2224373
Methyl tert-butyl ether	U		0.0162	0.0463	20	02/12/2024 05:08	WG2224373
Naphthalene	11.0		0.226	0.579	20	02/12/2024 05:08	WG2224373
n-Propylbenzene	8.80		0.0440	0.232	20	02/12/2024 05:08	WG2224373
Styrene	U		0.0106	0.579	20	02/12/2024 05:08	WG2224373
1,1,1,2-Tetrachloroethane	U		0.0440	0.116	20	02/12/2024 05:08	WG2224373
1,1,2,2-Tetrachloroethane	U		0.0322	0.116	20	02/12/2024 05:08	WG2224373
1,1,2-Trichlorotrifluoroethane	U		0.0350	0.116	20	02/12/2024 05:08	WG2224373
Tetrachloroethene	U		0.0415	0.116	20	02/12/2024 05:08	WG2224373
Toluene	0.131	J	0.0602	0.232	20	02/12/2024 05:08	WG2224373
1,2,3-Trichlorobenzene	U		0.340	0.579	20	02/12/2024 05:08	WG2224373
1,2,4-Trichlorobenzene	U		0.204	0.579	20	02/12/2024 05:08	WG2224373
1,1,1-Trichloroethane	U		0.0428	0.116	20	02/12/2024 05:08	WG2224373
1,1,2-Trichloroethane	U		0.0276	0.116	20	02/12/2024 05:08	WG2224373
Trichloroethene	U		0.0271	0.0463	20	02/12/2024 05:08	WG2224373
Trichlorofluoromethane	U		0.0382	0.116	20	02/12/2024 05:08	WG2224373
1,2,3-Trichloropropane	U		0.0750	0.579	20	02/12/2024 05:08	WG2224373
1,2,4-Trimethylbenzene	0.131	J	0.0732	0.232	20	02/12/2024 05:08	WG2224373
1,2,3-Trimethylbenzene	20.1		0.0732	0.232	20	02/12/2024 05:08	WG2224373
1,3,5-Trimethylbenzene	0.472		0.0926	0.232	20	02/12/2024 05:08	WG2224373
Vinyl chloride	U		0.0537	0.116	20	02/12/2024 05:08	WG2224373
Xylenes, Total	0.0590	J	0.0408	0.301	20	02/12/2024 05:08	WG2224373
(S) Toluene-d8	*104*			*75.0-131*		*02/12/2024 05:08*	WG2224373
(S) 4-Bromofluorobenzene	*110*			*67.0-138*		*02/12/2024 05:08*	WG2224373
(S) 1,2-Dichloroethane-d4	*90.5*			*70.0-130*		*02/12/2024 05:08*	WG2224373

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	38.4		2.16	6.51	1	02/10/2024 11:27	WG2221443
Residual Range Organics (RRO)	50.7		5.42	16.3	1	02/10/2024 11:27	WG2221443
(S) o-Terphenyl	*40.9*			*18.0-148*		*02/10/2024 11:27*	WG2221443

Sample Narrative:

L1703299-16 WG2221443: Sample resembles laboratory standards for Mineral Spirits and 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		0.00374	0.00976	1	02/12/2024 16:44	WG2224064
Acenaphthene	0.0177		0.00340	0.00976	1	02/12/2024 16:44	WG2224064
Acenaphthylene	U		0.00351	0.00976	1	02/12/2024 16:44	WG2224064
Benzo(a)anthracene	U		0.00281	0.00976	1	02/12/2024 16:44	WG2224064
Benzo(a)pyrene	U		0.00291	0.00976	1	02/12/2024 16:44	WG2224064
Benzo(b)fluoranthene	U		0.00249	0.00976	1	02/12/2024 16:44	WG2224064
Benzo(g,h,i)perylene	0.00335	J	0.00288	0.00976	1	02/12/2024 16:44	WG2224064
Benzo(k)fluoranthene	U		0.00350	0.00976	1	02/12/2024 16:44	WG2224064
Chrysene	U		0.00377	0.00976	1	02/12/2024 16:44	WG2224064
Dibenz(a,h)anthracene	U		0.00280	0.00976	1	02/12/2024 16:44	WG2224064

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
Fluoranthene	0.00631	J	0.00369	0.00976	1	02/12/2024 16:44	WG2224064
Fluorene	0.0268		0.00333	0.00976	1	02/12/2024 16:44	WG2224064
Indeno(1,2,3-cd)pyrene	U		0.00294	0.00976	1	02/12/2024 16:44	WG2224064
Naphthalene	5.16		0.00664	0.0325	1	02/12/2024 16:44	WG2224064
Phenanthrene	0.0407		0.00376	0.00976	1	02/12/2024 16:44	WG2224064
Pyrene	0.00839	J	0.00325	0.00976	1	02/12/2024 16:44	WG2224064
1-Methylnaphthalene	1.63		0.00730	0.0325	1	02/12/2024 16:44	WG2224064
2-Methylnaphthalene	3.71		0.00695	0.0325	1	02/12/2024 16:44	WG2224064
2-Chloronaphthalene	U		0.00758	0.0325	1	02/12/2024 16:44	WG2224064
(S) p-Terphenyl-d14	*64.6*			*23.0-120*		*02/12/2024 16:44*	WG2224064
(S) Nitrobenzene-d5	*0.000*	J2		*14.0-149*		*02/12/2024 16:44*	WG2224064
(S) 2-Fluorobiphenyl	*62.8*			*34.0-125*		*02/12/2024 16:44*	WG2224064

Sample Narrative:

L1703299-16 WG2224064: Surrogate failure due to matrix interference.

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	51.5		1	02/09/2024 10:17	WG2223140

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	64.6		4.64	13.7	58.5	02/12/2024 01:16	WG2224137
(S) a,a,a-Trifluorotoluene(FID)	*99.4*			*77.0-120*		*02/12/2024 01:16*	WG2224137

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	1.85	C3	0.200	0.274	2.34	02/12/2024 02:57	WG2224373
Acrylonitrile	U	C3 J3	0.0198	0.0686	2.34	02/12/2024 02:57	WG2224373
Benzene	0.0354		0.00255	0.00548	2.34	02/12/2024 02:57	WG2224373
Bromobenzene	U		0.00494	0.0686	2.34	02/12/2024 02:57	WG2224373
Bromodichloromethane	U		0.00398	0.0137	2.34	02/12/2024 02:57	WG2224373
Bromoform	U		0.00642	0.137	2.34	02/12/2024 02:57	WG2224373
Bromomethane	U	C3	0.0108	0.0686	2.34	02/12/2024 02:57	WG2224373
n-Butylbenzene	0.410		0.0288	0.0686	2.34	02/12/2024 02:57	WG2224373
sec-Butylbenzene	0.0564	J	0.0158	0.0686	2.34	02/12/2024 02:57	WG2224373
tert-Butylbenzene	0.0233	J	0.0107	0.0274	2.34	02/12/2024 02:57	WG2224373
Carbon disulfide	U	J3	0.00384	0.0686	2.34	02/12/2024 02:57	WG2224373
Carbon tetrachloride	U		0.00492	0.0274	2.34	02/12/2024 02:57	WG2224373
Chlorobenzene	U		0.00115	0.0137	2.34	02/12/2024 02:57	WG2224373
Chlorodibromomethane	U		0.00335	0.0137	2.34	02/12/2024 02:57	WG2224373
Chloroethane	U		0.00932	0.0274	2.34	02/12/2024 02:57	WG2224373
Chloroform	U		0.00564	0.0137	2.34	02/12/2024 02:57	WG2224373
Chloromethane	U	C3	0.0239	0.0686	2.34	02/12/2024 02:57	WG2224373
2-Chlorotoluene	U		0.00473	0.0137	2.34	02/12/2024 02:57	WG2224373
4-Chlorotoluene	U		0.00246	0.0274	2.34	02/12/2024 02:57	WG2224373
1,2-Dibromo-3-Chloropropane	U		0.0214	0.137	2.34	02/12/2024 02:57	WG2224373
1,2-Dibromoethane	U		0.00356	0.0137	2.34	02/12/2024 02:57	WG2224373
Dibromomethane	U		0.00412	0.0274	2.34	02/12/2024 02:57	WG2224373
1,2-Dichlorobenzene	U		0.00233	0.0274	2.34	02/12/2024 02:57	WG2224373
1,3-Dichlorobenzene	U		0.00328	0.0274	2.34	02/12/2024 02:57	WG2224373
1,4-Dichlorobenzene	U		0.00384	0.0274	2.34	02/12/2024 02:57	WG2224373
Dichlorodifluoromethane	U		0.00883	0.0274	2.34	02/12/2024 02:57	WG2224373
1,1-Dichloroethane	U		0.00269	0.0137	2.34	02/12/2024 02:57	WG2224373
1,2-Dichloroethane	U		0.00356	0.0137	2.34	02/12/2024 02:57	WG2224373
1,1-Dichloroethene	U		0.00332	0.0137	2.34	02/12/2024 02:57	WG2224373
cis-1,2-Dichloroethene	U		0.00403	0.0137	2.34	02/12/2024 02:57	WG2224373
trans-1,2-Dichloroethene	U		0.00569	0.0274	2.34	02/12/2024 02:57	WG2224373
1,2-Dichloropropane	0.0167	J	0.00777	0.0274	2.34	02/12/2024 02:57	WG2224373
1,1-Dichloropropene	U		0.00443	0.0137	2.34	02/12/2024 02:57	WG2224373
1,3-Dichloropropane	U		0.00274	0.0274	2.34	02/12/2024 02:57	WG2224373
cis-1,3-Dichloropropene	U		0.00414	0.0137	2.34	02/12/2024 02:57	WG2224373
trans-1,3-Dichloropropene	U		0.00625	0.0274	2.34	02/12/2024 02:57	WG2224373
2,2-Dichloropropane	U		0.00756	0.0137	2.34	02/12/2024 02:57	WG2224373
Di-isopropyl ether	U		0.00225	0.00548	2.34	02/12/2024 02:57	WG2224373
Ethylbenzene	0.231		0.00403	0.0137	2.34	02/12/2024 02:57	WG2224373
Hexachloro-1,3-butadiene	U		0.0328	0.137	2.34	02/12/2024 02:57	WG2224373
Isopropylbenzene	0.403		0.00233	0.0137	2.34	02/12/2024 02:57	WG2224373
p-Isopropyltoluene	0.0393		0.0140	0.0274	2.34	02/12/2024 02:57	WG2224373
2-Butanone (MEK)	U		0.349	0.548	2.34	02/12/2024 02:57	WG2224373
Methylene Chloride	U		0.0363	0.137	2.34	02/12/2024 02:57	WG2224373

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 (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.0125	0.137	2.34	02/12/2024 02:57	WG2224373
Methyl tert-butyl ether	0.0189		0.00192	0.00548	2.34	02/12/2024 02:57	WG2224373
Naphthalene	0.386		0.0267	0.0686	2.34	02/12/2024 02:57	WG2224373
n-Propylbenzene	0.805		0.00520	0.0274	2.34	02/12/2024 02:57	WG2224373
Styrene	U		0.00125	0.0686	2.34	02/12/2024 02:57	WG2224373
1,1,1,2-Tetrachloroethane	U		0.00520	0.0137	2.34	02/12/2024 02:57	WG2224373
1,1,2,2-Tetrachloroethane	U		0.00382	0.0137	2.34	02/12/2024 02:57	WG2224373
1,1,2-Trichlorotrifluoroethane	U		0.00412	0.0137	2.34	02/12/2024 02:57	WG2224373
Tetrachloroethene	U		0.00492	0.0137	2.34	02/12/2024 02:57	WG2224373
Toluene	0.0499		0.00712	0.0274	2.34	02/12/2024 02:57	WG2224373
1,2,3-Trichlorobenzene	U		0.0403	0.0686	2.34	02/12/2024 02:57	WG2224373
1,2,4-Trichlorobenzene	U		0.0241	0.0686	2.34	02/12/2024 02:57	WG2224373
1,1,1-Trichloroethane	U		0.00506	0.0137	2.34	02/12/2024 02:57	WG2224373
1,1,2-Trichloroethane	U		0.00328	0.0137	2.34	02/12/2024 02:57	WG2224373
Trichloroethene	U		0.00321	0.00548	2.34	02/12/2024 02:57	WG2224373
Trichlorofluoromethane	U		0.00454	0.0137	2.34	02/12/2024 02:57	WG2224373
1,2,3-Trichloropropane	U		0.00887	0.0686	2.34	02/12/2024 02:57	WG2224373
1,2,4-Trimethylbenzene	0.0169	J	0.00866	0.0274	2.34	02/12/2024 02:57	WG2224373
1,2,3-Trimethylbenzene	1.06		0.00866	0.0274	2.34	02/12/2024 02:57	WG2224373
1,3,5-Trimethylbenzene	0.0300		0.0110	0.0274	2.34	02/12/2024 02:57	WG2224373
Vinyl chloride	U		0.00634	0.0137	2.34	02/12/2024 02:57	WG2224373
Xylenes, Total	0.200		0.00482	0.0356	2.34	02/12/2024 02:57	WG2224373
(S) Toluene-d8	*104*			*75.0-131*		*02/12/2024 02:57*	WG2224373
(S) 4-Bromofluorobenzene	*106*			*67.0-138*		*02/12/2024 02:57*	WG2224373
(S) 1,2-Dichloroethane-d4	*94.3*			*70.0-130*		*02/12/2024 02:57*	WG2224373

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	7.43	J	2.58	7.76	1	02/10/2024 11:02	WG2221443
Residual Range Organics (RRO)	21.9		6.46	19.4	1	02/10/2024 11:02	WG2221443
(S) o-Terphenyl	*35.2*			*18.0-148*		*02/10/2024 11:02*	WG2221443

Sample Narrative:

L1703299-18 WG2221443: Sample resembles laboratory standard for Hydraulic Oil.

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	54.0		1	02/09/2024 10:17	WG2223140

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	5.66	J	2.82	8.31	33.3	02/12/2024 01:35	WG2224137
(S) a,a,a-Trifluorotoluene(FID)	*96.6*			*77.0-120*		*02/12/2024 01:35*	WG2224137

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	0.404	C3	0.121	0.166	1.33	02/12/2024 03:16	WG2224373
Acrylonitrile	U	C3 J3	0.0120	0.0414	1.33	02/12/2024 03:16	WG2224373
Benzene	0.00240	J	0.00155	0.00332	1.33	02/12/2024 03:16	WG2224373
Bromobenzene	U		0.00299	0.0414	1.33	02/12/2024 03:16	WG2224373
Bromodichloromethane	U		0.00240	0.00831	1.33	02/12/2024 03:16	WG2224373
Bromoform	U		0.00389	0.0831	1.33	02/12/2024 03:16	WG2224373
Bromomethane	U	C3	0.00654	0.0414	1.33	02/12/2024 03:16	WG2224373
n-Butylbenzene	0.0254	J	0.0174	0.0414	1.33	02/12/2024 03:16	WG2224373
sec-Butylbenzene	U		0.00955	0.0414	1.33	02/12/2024 03:16	WG2224373
tert-Butylbenzene	U		0.00646	0.0166	1.33	02/12/2024 03:16	WG2224373
Carbon disulfide	U	J3	0.00232	0.0414	1.33	02/12/2024 03:16	WG2224373
Carbon tetrachloride	U		0.00297	0.0166	1.33	02/12/2024 03:16	WG2224373
Chlorobenzene	U		0.000696	0.00831	1.33	02/12/2024 03:16	WG2224373
Chlorodibromomethane	U		0.00203	0.00831	1.33	02/12/2024 03:16	WG2224373
Chloroethane	U		0.00564	0.0166	1.33	02/12/2024 03:16	WG2224373
Chloroform	U		0.00342	0.00831	1.33	02/12/2024 03:16	WG2224373
Chloromethane	U	C3	0.0144	0.0414	1.33	02/12/2024 03:16	WG2224373
2-Chlorotoluene	U		0.00287	0.00831	1.33	02/12/2024 03:16	WG2224373
4-Chlorotoluene	U		0.00149	0.0166	1.33	02/12/2024 03:16	WG2224373
1,2-Dibromo-3-Chloropropane	U		0.0129	0.0831	1.33	02/12/2024 03:16	WG2224373
1,2-Dibromoethane	U		0.00215	0.00831	1.33	02/12/2024 03:16	WG2224373
Dibromomethane	U		0.00249	0.0166	1.33	02/12/2024 03:16	WG2224373
1,2-Dichlorobenzene	U		0.00141	0.0166	1.33	02/12/2024 03:16	WG2224373
1,3-Dichlorobenzene	U		0.00199	0.0166	1.33	02/12/2024 03:16	WG2224373
1,4-Dichlorobenzene	U		0.00232	0.0166	1.33	02/12/2024 03:16	WG2224373
Dichlorodifluoromethane	U		0.00534	0.0166	1.33	02/12/2024 03:16	WG2224373
1,1-Dichloroethane	U		0.00163	0.00831	1.33	02/12/2024 03:16	WG2224373
1,2-Dichloroethane	U		0.00215	0.00831	1.33	02/12/2024 03:16	WG2224373
1,1-Dichloroethene	U		0.00201	0.00831	1.33	02/12/2024 03:16	WG2224373
cis-1,2-Dichloroethene	U		0.00243	0.00831	1.33	02/12/2024 03:16	WG2224373
trans-1,2-Dichloroethene	U		0.00344	0.0166	1.33	02/12/2024 03:16	WG2224373
1,2-Dichloropropane	U		0.00472	0.0166	1.33	02/12/2024 03:16	WG2224373
1,1-Dichloropropene	U		0.00269	0.00831	1.33	02/12/2024 03:16	WG2224373
1,3-Dichloropropane	U		0.00166	0.0166	1.33	02/12/2024 03:16	WG2224373
cis-1,3-Dichloropropene	U		0.00252	0.00831	1.33	02/12/2024 03:16	WG2224373
trans-1,3-Dichloropropene	U		0.00379	0.0166	1.33	02/12/2024 03:16	WG2224373
2,2-Dichloropropane	U		0.00459	0.00831	1.33	02/12/2024 03:16	WG2224373
Di-isopropyl ether	U		0.00136	0.00332	1.33	02/12/2024 03:16	WG2224373
Ethylbenzene	0.0155		0.00244	0.00831	1.33	02/12/2024 03:16	WG2224373
Hexachloro-1,3-butadiene	U		0.0199	0.0831	1.33	02/12/2024 03:16	WG2224373
Isopropylbenzene	0.00606	J	0.00141	0.00831	1.33	02/12/2024 03:16	WG2224373
p-Isopropyltoluene	U		0.00846	0.0166	1.33	02/12/2024 03:16	WG2224373
2-Butanone (MEK)	U		0.211	0.332	1.33	02/12/2024 03:16	WG2224373
Methylene Chloride	U		0.0220	0.0831	1.33	02/12/2024 03:16	WG2224373

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		0.00756	0.0831	1.33	02/12/2024 03:16	WG2224373
Methyl tert-butyl ether	0.0150		0.00116	0.00332	1.33	02/12/2024 03:16	WG2224373
Naphthalene	0.0249	J	0.0162	0.0414	1.33	02/12/2024 03:16	WG2224373
n-Propylbenzene	0.0128	J	0.00314	0.0166	1.33	02/12/2024 03:16	WG2224373
Styrene	U		0.000761	0.0414	1.33	02/12/2024 03:16	WG2224373
1,1,1,2-Tetrachloroethane	U		0.00314	0.00831	1.33	02/12/2024 03:16	WG2224373
1,1,2,2-Tetrachloroethane	U		0.00231	0.00831	1.33	02/12/2024 03:16	WG2224373
1,1,2-Trichlorotrifluoroethane	U		0.00249	0.00831	1.33	02/12/2024 03:16	WG2224373
Tetrachloroethene	U		0.00297	0.00831	1.33	02/12/2024 03:16	WG2224373
Toluene	0.00938	J	0.00432	0.0166	1.33	02/12/2024 03:16	WG2224373
1,2,3-Trichlorobenzene	U		0.0243	0.0414	1.33	02/12/2024 03:16	WG2224373
1,2,4-Trichlorobenzene	U		0.0146	0.0414	1.33	02/12/2024 03:16	WG2224373
1,1,1-Trichloroethane	U		0.00307	0.00831	1.33	02/12/2024 03:16	WG2224373
1,1,2-Trichloroethane	U		0.00198	0.00831	1.33	02/12/2024 03:16	WG2224373
Trichloroethene	U		0.00194	0.00332	1.33	02/12/2024 03:16	WG2224373
Trichlorofluoromethane	U		0.00274	0.00831	1.33	02/12/2024 03:16	WG2224373
1,2,3-Trichloropropane	U		0.00536	0.0414	1.33	02/12/2024 03:16	WG2224373
1,2,4-Trimethylbenzene	U		0.00524	0.0166	1.33	02/12/2024 03:16	WG2224373
1,2,3-Trimethylbenzene	0.108		0.00524	0.0166	1.33	02/12/2024 03:16	WG2224373
1,3,5-Trimethylbenzene	U		0.00664	0.0166	1.33	02/12/2024 03:16	WG2224373
Vinyl chloride	U		0.00384	0.00831	1.33	02/12/2024 03:16	WG2224373
Xylenes, Total	0.0384		0.00292	0.0216	1.33	02/12/2024 03:16	WG2224373
(S) Toluene-d8	*105*			*75.0-131*		*02/12/2024 03:16*	WG2224373
(S) 4-Bromofluorobenzene	*108*			*67.0-138*		*02/12/2024 03:16*	WG2224373
(S) 1,2-Dichloroethane-d4	*96.6*			*70.0-130*		*02/12/2024 03:16*	WG2224373

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-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		2.46	7.41	1	02/10/2024 10:25	WG2221443
Residual Range Organics (RRO)	U		6.17	18.5	1	02/10/2024 10:25	WG2221443
(S) o-Terphenyl	*44.3*			*18.0-148*		*02/10/2024 10:25*	WG2221443

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	6.68		0.849	2.00	1	02/12/2024 18:17	WG2223477

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	58300		632	2000	20	02/12/2024 21:21	WG2224051
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*		*02/12/2024 21:21*	WG2224051

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		226	1000	20	02/09/2024 17:25	WG2223329
Acrolein	U	C3	50.8	1000	20	02/09/2024 17:25	WG2223329
Acrylonitrile	U		13.4	200	20	02/09/2024 17:25	WG2223329
Benzene	650		1.88	20.0	20	02/09/2024 17:25	WG2223329
Bromobenzene	U		2.36	20.0	20	02/09/2024 17:25	WG2223329
Bromodichloromethane	U		2.72	20.0	20	02/09/2024 17:25	WG2223329
Bromoform	U		2.58	20.0	20	02/09/2024 17:25	WG2223329
Bromomethane	U		12.1	100	20	02/09/2024 17:25	WG2223329
n-Butylbenzene	25.1		3.14	20.0	20	02/09/2024 17:25	WG2223329
sec-Butylbenzene	22.1		2.50	20.0	20	02/09/2024 17:25	WG2223329
tert-Butylbenzene	22.0		2.54	20.0	20	02/09/2024 17:25	WG2223329
Carbon disulfide	U		1.92	20.0	20	02/09/2024 17:25	WG2223329
Carbon tetrachloride	U		2.56	20.0	20	02/09/2024 17:25	WG2223329
Chlorobenzene	U		2.32	20.0	20	02/09/2024 17:25	WG2223329
Chlorodibromomethane	U		2.80	20.0	20	02/09/2024 17:25	WG2223329
Chloroethane	U		3.84	100	20	02/09/2024 17:25	WG2223329
Chloroform	U		2.22	100	20	02/09/2024 17:25	WG2223329
Chloromethane	U		19.2	50.0	20	02/09/2024 17:25	WG2223329
2-Chlorotoluene	U		2.12	20.0	20	02/09/2024 17:25	WG2223329
4-Chlorotoluene	U		2.28	20.0	20	02/09/2024 17:25	WG2223329
1,2-Dibromo-3-Chloropropane	U		5.52	100	20	02/09/2024 17:25	WG2223329
1,2-Dibromoethane	U		2.52	20.0	20	02/09/2024 17:25	WG2223329
Dibromomethane	U		2.44	20.0	20	02/09/2024 17:25	WG2223329
1,2-Dichlorobenzene	U		2.14	20.0	20	02/09/2024 17:25	WG2223329
1,3-Dichlorobenzene	U		2.20	20.0	20	02/09/2024 17:25	WG2223329
1,4-Dichlorobenzene	U		2.40	20.0	20	02/09/2024 17:25	WG2223329
Dichlorodifluoromethane	U		7.48	100	20	02/09/2024 17:25	WG2223329
1,1-Dichloroethane	U		2.00	20.0	20	02/09/2024 17:25	WG2223329
1,2-Dichloroethane	U		1.64	20.0	20	02/09/2024 17:25	WG2223329
1,1-Dichloroethene	U		3.76	20.0	20	02/09/2024 17:25	WG2223329
cis-1,2-Dichloroethene	U		2.52	20.0	20	02/09/2024 17:25	WG2223329
trans-1,2-Dichloroethene	U		2.98	20.0	20	02/09/2024 17:25	WG2223329
1,2-Dichloropropane	U		2.98	20.0	20	02/09/2024 17:25	WG2223329
1,1-Dichloropropene	U		2.84	20.0	20	02/09/2024 17:25	WG2223329
1,3-Dichloropropane	U		2.20	20.0	20	02/09/2024 17:25	WG2223329
cis-1,3-Dichloropropene	U		2.22	20.0	20	02/09/2024 17:25	WG2223329
trans-1,3-Dichloropropene	U		2.36	20.0	20	02/09/2024 17:25	WG2223329
2,2-Dichloropropane	U		3.22	20.0	20	02/09/2024 17:25	WG2223329
Di-isopropyl ether	U		2.10	20.0	20	02/09/2024 17:25	WG2223329
Ethylbenzene	606		2.74	20.0	20	02/09/2024 17:25	WG2223329
Hexachloro-1,3-butadiene	U		6.74	20.0	20	02/09/2024 17:25	WG2223329
Isopropylbenzene	134		2.10	20.0	20	02/09/2024 17:25	WG2223329
p-Isopropyltoluene	16.0	J	2.40	20.0	20	02/09/2024 17:25	WG2223329

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		23.8	200	20	02/09/2024 17:25	WG2223329
Methylene Chloride	U		8.60	100	20	02/09/2024 17:25	WG2223329
4-Methyl-2-pentanone (MIBK)	U		9.56	200	20	02/09/2024 17:25	WG2223329
Methyl tert-butyl ether	U		2.02	20.0	20	02/09/2024 17:25	WG2223329
Naphthalene	377		20.0	100	20	02/09/2024 17:25	WG2223329
n-Propylbenzene	310		1.99	20.0	20	02/09/2024 17:25	WG2223329
Styrene	U		2.36	20.0	20	02/09/2024 17:25	WG2223329
1,1,1,2-Tetrachloroethane	U		2.94	20.0	20	02/09/2024 17:25	WG2223329
1,1,2,2-Tetrachloroethane	U		2.66	20.0	20	02/09/2024 17:25	WG2223329
1,1,2-Trichlorotrifluoroethane	U		3.60	20.0	20	02/09/2024 17:25	WG2223329
Tetrachloroethene	U		6.00	20.0	20	02/09/2024 17:25	WG2223329
Toluene	27.9		5.56	20.0	20	02/09/2024 17:25	WG2223329
1,2,3-Trichlorobenzene	U		4.60	20.0	20	02/09/2024 17:25	WG2223329
1,2,4-Trichlorobenzene	U		9.62	20.0	20	02/09/2024 17:25	WG2223329
1,1,1-Trichloroethane	U		2.98	20.0	20	02/09/2024 17:25	WG2223329
1,1,2-Trichloroethane	U		3.16	20.0	20	02/09/2024 17:25	WG2223329
Trichloroethene	U		3.80	20.0	20	02/09/2024 17:25	WG2223329
Trichlorofluoromethane	U		3.20	100	20	02/09/2024 17:25	WG2223329
1,2,3-Trichloropropane	U		4.74	50.0	20	02/09/2024 17:25	WG2223329
1,2,4-Trimethylbenzene	U		6.44	20.0	20	02/09/2024 17:25	WG2223329
1,2,3-Trimethylbenzene	726		2.08	20.0	20	02/09/2024 17:25	WG2223329
1,3,5-Trimethylbenzene	16.7	J	2.08	20.0	20	02/09/2024 17:25	WG2223329
Vinyl chloride	U		4.68	20.0	20	02/09/2024 17:25	WG2223329
Xylenes, Total	34.4	J	3.48	60.0	20	02/09/2024 17:25	WG2223329
(S) Toluene-d8	*98.6*			*80.0-120*		*02/09/2024 17:25*	WG2223329
(S) 4-Bromofluorobenzene	*96.9*			*77.0-126*		*02/09/2024 17:25*	WG2223329
(S) 1,2-Dichloroethane-d4	*95.2*			*70.0-130*		*02/09/2024 17:25*	WG2223329

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	2000		40.7	122	1.22	02/13/2024 02:55	WG2224153
Residual Range Organics (RRO)	379		102	305	1.22	02/13/2024 02:55	WG2224153
(S) o-Terphenyl	*59.8*			*31.0-160*		*02/13/2024 02:55*	WG2224153

Sample Narrative:

L1703299-20 WG2224153: Sample resembles laboratory standard for Kerosene.

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	02/10/2024 16:36	WG2223119
Acenaphthene	0.265		0.0190	0.0500	1	02/10/2024 16:36	WG2223119
Acenaphthylene	0.0424	J	0.0171	0.0500	1	02/10/2024 16:36	WG2223119
Benzo(a)anthracene	U		0.0203	0.0500	1	02/10/2024 16:36	WG2223119
Benzo(a)pyrene	U		0.0184	0.0500	1	02/10/2024 16:36	WG2223119
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/10/2024 16:36	WG2223119
Benzo(g,h,i)perylene	0.0204	J	0.0184	0.0500	1	02/10/2024 16:36	WG2223119
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/10/2024 16:36	WG2223119
Chrysene	U		0.0179	0.0500	1	02/10/2024 16:36	WG2223119
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/10/2024 16:36	WG2223119
Fluoranthene	0.0457	J	0.0270	0.100	1	02/10/2024 16:36	WG2223119
Fluorene	0.341		0.0169	0.0500	1	02/10/2024 16:36	WG2223119
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/10/2024 16:36	WG2223119
Naphthalene	404		1.83	5.00	20	02/14/2024 21:04	WG2223119

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	0.284		0.0180	0.0500	1	02/10/2024 16:36	WG2223119
Pyrene	0.0502		0.0169	0.0500	1	02/10/2024 16:36	WG2223119
1-Methylnaphthalene	47.0		0.0687	0.250	1	02/10/2024 16:36	WG2223119
2-Methylnaphthalene	118		1.35	5.00	20	02/14/2024 21:04	WG2223119
2-Chloronaphthalene	U		0.0682	0.250	1	02/10/2024 16:36	WG2223119
(S) Nitrobenzene-d5	*0.000*	J7		*31.0-160*		*02/14/2024 21:04*	WG2223119
(S) Nitrobenzene-d5	*0.000*	J2		*31.0-160*		*02/10/2024 16:36*	WG2223119
(S) 2-Fluorobiphenyl	*109*			*48.0-148*		*02/10/2024 16:36*	WG2223119
(S) 2-Fluorobiphenyl	*119*	J7		*48.0-148*		*02/14/2024 21:04*	WG2223119
(S) p-Terphenyl-d14	*100*			*37.0-146*		*02/10/2024 16:36*	WG2223119
(S) p-Terphenyl-d14	*116*	J7		*37.0-146*		*02/14/2024 21:04*	WG2223119

Sample Narrative:

L1703299-20 WG2223119: Surrogate failure due to matrix interference.

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	71.2		1	02/09/2024 10:00	WG2223141

Metals (ICPMS) by Method 6020B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Lead	16.7		0.139	2.81	5	02/13/2024 13:03	WG2223355

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	1.68	J	1.67	4.92	27.8	02/12/2024 01:55	WG2224137
(S) a,a,a-Trifluorotoluene(FID)	*96.6*			*77.0-120*		*02/12/2024 01:55*	WG2224137

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	1.11	02/12/2024 03:34	WG2224373
Acrylonitrile	U	C3 J3	0.00710	0.0246	1.11	02/12/2024 03:34	WG2224373
Benzene	U		0.000917	0.00196	1.11	02/12/2024 03:34	WG2224373
Bromobenzene	U		0.00177	0.0246	1.11	02/12/2024 03:34	WG2224373
Bromodichloromethane	U		0.00142	0.00492	1.11	02/12/2024 03:34	WG2224373
Bromoform	U		0.00230	0.0492	1.11	02/12/2024 03:34	WG2224373
Bromomethane	U	C3	0.00388	0.0246	1.11	02/12/2024 03:34	WG2224373
n-Butylbenzene	U		0.0103	0.0246	1.11	02/12/2024 03:34	WG2224373
sec-Butylbenzene	U		0.00566	0.0246	1.11	02/12/2024 03:34	WG2224373
tert-Butylbenzene	U		0.00382	0.00982	1.11	02/12/2024 03:34	WG2224373
Carbon disulfide	U	J3	0.00138	0.0246	1.11	02/12/2024 03:34	WG2224373
Carbon tetrachloride	U		0.00176	0.00982	1.11	02/12/2024 03:34	WG2224373
Chlorobenzene	U		0.000412	0.00492	1.11	02/12/2024 03:34	WG2224373
Chlorodibromomethane	U		0.00120	0.00492	1.11	02/12/2024 03:34	WG2224373
Chloroethane	U		0.00334	0.00982	1.11	02/12/2024 03:34	WG2224373
Chloroform	U		0.00202	0.00492	1.11	02/12/2024 03:34	WG2224373
Chloromethane	U	C3	0.00855	0.0246	1.11	02/12/2024 03:34	WG2224373
2-Chlorotoluene	U		0.00170	0.00492	1.11	02/12/2024 03:34	WG2224373
4-Chlorotoluene	U		0.000885	0.00982	1.11	02/12/2024 03:34	WG2224373
1,2-Dibromo-3-Chloropropane	U		0.00766	0.0492	1.11	02/12/2024 03:34	WG2224373
1,2-Dibromoethane	U		0.00127	0.00492	1.11	02/12/2024 03:34	WG2224373
Dibromomethane	U		0.00147	0.00982	1.11	02/12/2024 03:34	WG2224373
1,2-Dichlorobenzene	U		0.000835	0.00982	1.11	02/12/2024 03:34	WG2224373
1,3-Dichlorobenzene	U		0.00118	0.00982	1.11	02/12/2024 03:34	WG2224373
1,4-Dichlorobenzene	U		0.00138	0.00982	1.11	02/12/2024 03:34	WG2224373
Dichlorodifluoromethane	U		0.00317	0.00982	1.11	02/12/2024 03:34	WG2224373
1,1-Dichloroethane	U		0.000965	0.00492	1.11	02/12/2024 03:34	WG2224373
1,2-Dichloroethane	U		0.00127	0.00492	1.11	02/12/2024 03:34	WG2224373
1,1-Dichloroethene	U		0.00119	0.00492	1.11	02/12/2024 03:34	WG2224373
cis-1,2-Dichloroethene	U		0.00144	0.00492	1.11	02/12/2024 03:34	WG2224373
trans-1,2-Dichloroethene	U		0.00204	0.00982	1.11	02/12/2024 03:34	WG2224373
1,2-Dichloropropane	U		0.00280	0.00982	1.11	02/12/2024 03:34	WG2224373
1,1-Dichloropropene	U		0.00159	0.00492	1.11	02/12/2024 03:34	WG2224373
1,3-Dichloropropane	U		0.000984	0.00982	1.11	02/12/2024 03:34	WG2224373
cis-1,3-Dichloropropene	U		0.00149	0.00492	1.11	02/12/2024 03:34	WG2224373
trans-1,3-Dichloropropene	U		0.00225	0.00982	1.11	02/12/2024 03:34	WG2224373
2,2-Dichloropropane	U		0.00271	0.00492	1.11	02/12/2024 03:34	WG2224373
Di-isopropyl ether	U		0.000805	0.00196	1.11	02/12/2024 03:34	WG2224373

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
Ethylbenzene	U		0.00145	0.00492	1.11	02/12/2024 03:34	WG2224373
Hexachloro-1,3-butadiene	U		0.0118	0.0492	1.11	02/12/2024 03:34	WG2224373
Isopropylbenzene	U		0.000835	0.00492	1.11	02/12/2024 03:34	WG2224373
p-Isopropyltoluene	U		0.00501	0.00982	1.11	02/12/2024 03:34	WG2224373
2-Butanone (MEK)	U		0.125	0.196	1.11	02/12/2024 03:34	WG2224373
Methylene Chloride	U		0.0130	0.0492	1.11	02/12/2024 03:34	WG2224373
4-Methyl-2-pentanone (MIBK)	U		0.00448	0.0492	1.11	02/12/2024 03:34	WG2224373
Methyl tert-butyl ether	U		0.000688	0.00196	1.11	02/12/2024 03:34	WG2224373
Naphthalene	U		0.00959	0.0246	1.11	02/12/2024 03:34	WG2224373
n-Propylbenzene	U		0.00186	0.00982	1.11	02/12/2024 03:34	WG2224373
Styrene	U		0.000450	0.0246	1.11	02/12/2024 03:34	WG2224373
1,1,1,2-Tetrachloroethane	U		0.00186	0.00492	1.11	02/12/2024 03:34	WG2224373
1,1,2,2-Tetrachloroethane	U		0.00136	0.00492	1.11	02/12/2024 03:34	WG2224373
1,1,2-Trichlorotrifluoroethane	U		0.00148	0.00492	1.11	02/12/2024 03:34	WG2224373
Tetrachloroethene	U		0.00176	0.00492	1.11	02/12/2024 03:34	WG2224373
Toluene	U		0.00255	0.00982	1.11	02/12/2024 03:34	WG2224373
1,2,3-Trichlorobenzene	U		0.0144	0.0246	1.11	02/12/2024 03:34	WG2224373
1,2,4-Trichlorobenzene	U		0.00864	0.0246	1.11	02/12/2024 03:34	WG2224373
1,1,1-Trichloroethane	U		0.00181	0.00492	1.11	02/12/2024 03:34	WG2224373
1,1,2-Trichloroethane	U		0.00117	0.00492	1.11	02/12/2024 03:34	WG2224373
Trichloroethene	U		0.00115	0.00196	1.11	02/12/2024 03:34	WG2224373
Trichlorofluoromethane	U		0.00162	0.00492	1.11	02/12/2024 03:34	WG2224373
1,2,3-Trichloropropane	U		0.00319	0.0246	1.11	02/12/2024 03:34	WG2224373
1,2,4-Trimethylbenzene	U		0.00310	0.00982	1.11	02/12/2024 03:34	WG2224373
1,2,3-Trimethylbenzene	U		0.00310	0.00982	1.11	02/12/2024 03:34	WG2224373
1,3,5-Trimethylbenzene	U		0.00393	0.00982	1.11	02/12/2024 03:34	WG2224373
Vinyl chloride	U		0.00228	0.00492	1.11	02/12/2024 03:34	WG2224373
Xylenes, Total	U		0.00173	0.0128	1.11	02/12/2024 03:34	WG2224373
(S) Toluene-d8	*104*			*75.0-131*		*02/12/2024 03:34*	WG2224373
(S) 4-Bromofluorobenzene	*107*			*67.0-138*		*02/12/2024 03:34*	WG2224373
(S) 1,2-Dichloroethane-d4	*96.9*			*70.0-130*		*02/12/2024 03:34*	WG2224373

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	3.71	J	1.87	5.62	1	02/10/2024 11:27	WG2221443
Residual Range Organics (RRO)	34.6		4.68	14.0	1	02/10/2024 11:27	WG2221443
(S) o-Terphenyl	*48.1*			*18.0-148*		*02/10/2024 11:27*	WG2221443

Sample Narrative:

L1703299-21 WG2221443: 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		0.00323	0.00843	1	02/12/2024 16:26	WG2224064
Acenaphthene	U		0.00294	0.00843	1	02/12/2024 16:26	WG2224064
Acenaphthylene	U		0.00303	0.00843	1	02/12/2024 16:26	WG2224064
Benzo(a)anthracene	U		0.00243	0.00843	1	02/12/2024 16:26	WG2224064
Benzo(a)pyrene	U		0.00251	0.00843	1	02/12/2024 16:26	WG2224064
Benzo(b)fluoranthene	U		0.00215	0.00843	1	02/12/2024 16:26	WG2224064
Benzo(g,h,i)perylene	U		0.00249	0.00843	1	02/12/2024 16:26	WG2224064
Benzo(k)fluoranthene	U		0.00302	0.00843	1	02/12/2024 16:26	WG2224064
Chrysene	U		0.00326	0.00843	1	02/12/2024 16:26	WG2224064
Dibenz(a,h)anthracene	U		0.00242	0.00843	1	02/12/2024 16:26	WG2224064

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
Fluoranthene	U		0.00319	0.00843	1	02/12/2024 16:26	WG2224064
Fluorene	U		0.00288	0.00843	1	02/12/2024 16:26	WG2224064
Indeno(1,2,3-cd)pyrene	U		0.00254	0.00843	1	02/12/2024 16:26	WG2224064
Naphthalene	U		0.00573	0.0281	1	02/12/2024 16:26	WG2224064
Phenanthrene	U		0.00325	0.00843	1	02/12/2024 16:26	WG2224064
Pyrene	U		0.00281	0.00843	1	02/12/2024 16:26	WG2224064
1-Methylnaphthalene	U		0.00631	0.0281	1	02/12/2024 16:26	WG2224064
2-Methylnaphthalene	U		0.00600	0.0281	1	02/12/2024 16:26	WG2224064
2-Chloronaphthalene	U		0.00655	0.0281	1	02/12/2024 16:26	WG2224064
(S) p-Terphenyl-d14	*68.2*			*23.0-120*		*02/12/2024 16:26*	WG2224064
(S) Nitrobenzene-d5	*64.8*			*14.0-149*		*02/12/2024 16:26*	WG2224064
(S) 2-Fluorobiphenyl	*61.4*			*34.0-125*		*02/12/2024 16:26*	WG2224064

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	67.1		1	02/09/2024 10:00	WG2223141

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	3.11	J	1.68	4.96	25	02/12/2024 02:14	WG2224137
(S) a,a,a-Trifluorotoluene(FID)	*98.4*			*77.0-120*		*02/12/2024 02:14*	WG2224137

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	0.0724	0.0991	1	02/12/2024 03:53	WG2224373
Acrylonitrile	U	C3 J3	0.00716	0.0248	1	02/12/2024 03:53	WG2224373
Benzene	U		0.000926	0.00198	1	02/12/2024 03:53	WG2224373
Bromobenzene	U		0.00178	0.0248	1	02/12/2024 03:53	WG2224373
Bromodichloromethane	U		0.00144	0.00496	1	02/12/2024 03:53	WG2224373
Bromoform	U		0.00232	0.0496	1	02/12/2024 03:53	WG2224373
Bromomethane	U	C3	0.00391	0.0248	1	02/12/2024 03:53	WG2224373
n-Butylbenzene	U		0.0104	0.0248	1	02/12/2024 03:53	WG2224373
sec-Butylbenzene	U		0.00571	0.0248	1	02/12/2024 03:53	WG2224373
tert-Butylbenzene	U		0.00387	0.00991	1	02/12/2024 03:53	WG2224373
Carbon disulfide	U	J3	0.00139	0.0248	1	02/12/2024 03:53	WG2224373
Carbon tetrachloride	U		0.00178	0.00991	1	02/12/2024 03:53	WG2224373
Chlorobenzene	U		0.000416	0.00496	1	02/12/2024 03:53	WG2224373
Chlorodibromomethane	U		0.00121	0.00496	1	02/12/2024 03:53	WG2224373
Chloroethane	U		0.00337	0.00991	1	02/12/2024 03:53	WG2224373
Chloroform	U		0.00204	0.00496	1	02/12/2024 03:53	WG2224373
Chloromethane	U	C3	0.00862	0.0248	1	02/12/2024 03:53	WG2224373
2-Chlorotoluene	U		0.00171	0.00496	1	02/12/2024 03:53	WG2224373
4-Chlorotoluene	U		0.000892	0.00991	1	02/12/2024 03:53	WG2224373
1,2-Dibromo-3-Chloropropane	U		0.00773	0.0496	1	02/12/2024 03:53	WG2224373
1,2-Dibromoethane	U		0.00128	0.00496	1	02/12/2024 03:53	WG2224373
Dibromomethane	U		0.00149	0.00991	1	02/12/2024 03:53	WG2224373
1,2-Dichlorobenzene	U		0.000843	0.00991	1	02/12/2024 03:53	WG2224373
1,3-Dichlorobenzene	U		0.00119	0.00991	1	02/12/2024 03:53	WG2224373
1,4-Dichlorobenzene	U		0.00139	0.00991	1	02/12/2024 03:53	WG2224373
Dichlorodifluoromethane	U		0.00319	0.00991	1	02/12/2024 03:53	WG2224373
1,1-Dichloroethane	U		0.000973	0.00496	1	02/12/2024 03:53	WG2224373
1,2-Dichloroethane	U		0.00129	0.00496	1	02/12/2024 03:53	WG2224373
1,1-Dichloroethene	U		0.00120	0.00496	1	02/12/2024 03:53	WG2224373
cis-1,2-Dichloroethene	U		0.00146	0.00496	1	02/12/2024 03:53	WG2224373
trans-1,2-Dichloroethene	U		0.00206	0.00991	1	02/12/2024 03:53	WG2224373
1,2-Dichloropropane	U		0.00282	0.00991	1	02/12/2024 03:53	WG2224373
1,1-Dichloropropene	U		0.00160	0.00496	1	02/12/2024 03:53	WG2224373
1,3-Dichloropropane	U		0.000993	0.00991	1	02/12/2024 03:53	WG2224373
cis-1,3-Dichloropropene	U		0.00150	0.00496	1	02/12/2024 03:53	WG2224373
trans-1,3-Dichloropropene	U		0.00226	0.00991	1	02/12/2024 03:53	WG2224373
2,2-Dichloropropane	U		0.00274	0.00496	1	02/12/2024 03:53	WG2224373
Di-isopropyl ether	U		0.000813	0.00198	1	02/12/2024 03:53	WG2224373
Ethylbenzene	U		0.00146	0.00496	1	02/12/2024 03:53	WG2224373
Hexachloro-1,3-butadiene	U		0.0119	0.0496	1	02/12/2024 03:53	WG2224373
Isopropylbenzene	U		0.000843	0.00496	1	02/12/2024 03:53	WG2224373
p-Isopropyltoluene	U		0.00506	0.00991	1	02/12/2024 03:53	WG2224373
2-Butanone (MEK)	U		0.126	0.198	1	02/12/2024 03:53	WG2224373
Methylene Chloride	U		0.0132	0.0496	1	02/12/2024 03:53	WG2224373

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 (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
4-Methyl-2-pentanone (MIBK)	U		0.00452	0.0496	1	02/12/2024 03:53	WG2224373
Methyl tert-butyl ether	U		0.000694	0.00198	1	02/12/2024 03:53	WG2224373
Naphthalene	U		0.00967	0.0248	1	02/12/2024 03:53	WG2224373
n-Propylbenzene	U		0.00188	0.00991	1	02/12/2024 03:53	WG2224373
Styrene	U		0.000454	0.0248	1	02/12/2024 03:53	WG2224373
1,1,1,2-Tetrachloroethane	U		0.00188	0.00496	1	02/12/2024 03:53	WG2224373
1,1,2,2-Tetrachloroethane	U		0.00138	0.00496	1	02/12/2024 03:53	WG2224373
1,1,2-Trichlorotrifluoroethane	U		0.00149	0.00496	1	02/12/2024 03:53	WG2224373
Tetrachloroethene	U		0.00178	0.00496	1	02/12/2024 03:53	WG2224373
Toluene	U		0.00258	0.00991	1	02/12/2024 03:53	WG2224373
1,2,3-Trichlorobenzene	U		0.0145	0.0248	1	02/12/2024 03:53	WG2224373
1,2,4-Trichlorobenzene	U		0.00872	0.0248	1	02/12/2024 03:53	WG2224373
1,1,1-Trichloroethane	U		0.00183	0.00496	1	02/12/2024 03:53	WG2224373
1,1,2-Trichloroethane	U		0.00118	0.00496	1	02/12/2024 03:53	WG2224373
Trichloroethene	U		0.00116	0.00198	1	02/12/2024 03:53	WG2224373
Trichlorofluoromethane	U		0.00164	0.00496	1	02/12/2024 03:53	WG2224373
1,2,3-Trichloropropane	U		0.00321	0.0248	1	02/12/2024 03:53	WG2224373
1,2,4-Trimethylbenzene	U		0.00313	0.00991	1	02/12/2024 03:53	WG2224373
1,2,3-Trimethylbenzene	U		0.00313	0.00991	1	02/12/2024 03:53	WG2224373
1,3,5-Trimethylbenzene	U		0.00396	0.00991	1	02/12/2024 03:53	WG2224373
Vinyl chloride	U		0.00230	0.00496	1	02/12/2024 03:53	WG2224373
Xylenes, Total	U		0.00174	0.0129	1	02/12/2024 03:53	WG2224373
(S) Toluene-d8	*103*			*75.0-131*		*02/12/2024 03:53*	WG2224373
(S) 4-Bromofluorobenzene	*104*			*67.0-138*		*02/12/2024 03:53*	WG2224373
(S) 1,2-Dichloroethane-d4	*97.6*			*70.0-130*		*02/12/2024 03:53*	WG2224373

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-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		1.98	5.96	1	02/10/2024 10:37	WG2221443
Residual Range Organics (RRO)	7.96	J	4.96	14.9	1	02/10/2024 10:37	WG2221443
(S) o-Terphenyl	*52.6*			*18.0-148*		*02/10/2024 10:37*	WG2221443

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead,Dissolved	1.01	J	0.849	2.00	1	02/12/2024 18:20	WG2223477

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	02/11/2024 19:01	WG2224145
(S) a,a,a-Trifluorotoluene(FID)	*88.7*			*78.0-120*		*02/11/2024 19:01*	WG2224145

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	12.7	J	11.3	50.0	1	02/09/2024 14:56	WG2223329
Acrolein	U	C3	2.54	50.0	1	02/09/2024 14:56	WG2223329
Acrylonitrile	U		0.671	10.0	1	02/09/2024 14:56	WG2223329
Benzene	0.105	J	0.0941	1.00	1	02/09/2024 14:56	WG2223329
Bromobenzene	U		0.118	1.00	1	02/09/2024 14:56	WG2223329
Bromodichloromethane	U		0.136	1.00	1	02/09/2024 14:56	WG2223329
Bromoform	U		0.129	1.00	1	02/09/2024 14:56	WG2223329
Bromomethane	U		0.605	5.00	1	02/09/2024 14:56	WG2223329
n-Butylbenzene	U		0.157	1.00	1	02/09/2024 14:56	WG2223329
sec-Butylbenzene	U		0.125	1.00	1	02/09/2024 14:56	WG2223329
tert-Butylbenzene	U		0.127	1.00	1	02/09/2024 14:56	WG2223329
Carbon disulfide	U		0.0962	1.00	1	02/09/2024 14:56	WG2223329
Carbon tetrachloride	U		0.128	1.00	1	02/09/2024 14:56	WG2223329
Chlorobenzene	U		0.116	1.00	1	02/09/2024 14:56	WG2223329
Chlorodibromomethane	U		0.140	1.00	1	02/09/2024 14:56	WG2223329
Chloroethane	U		0.192	5.00	1	02/09/2024 14:56	WG2223329
Chloroform	U		0.111	5.00	1	02/09/2024 14:56	WG2223329
Chloromethane	U		0.960	2.50	1	02/09/2024 14:56	WG2223329
2-Chlorotoluene	U		0.106	1.00	1	02/09/2024 14:56	WG2223329
4-Chlorotoluene	U		0.114	1.00	1	02/09/2024 14:56	WG2223329
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/09/2024 14:56	WG2223329
1,2-Dibromoethane	U		0.126	1.00	1	02/09/2024 14:56	WG2223329
Dibromomethane	U		0.122	1.00	1	02/09/2024 14:56	WG2223329
1,2-Dichlorobenzene	U		0.107	1.00	1	02/09/2024 14:56	WG2223329
1,3-Dichlorobenzene	U		0.110	1.00	1	02/09/2024 14:56	WG2223329
1,4-Dichlorobenzene	U		0.120	1.00	1	02/09/2024 14:56	WG2223329
Dichlorodifluoromethane	U		0.374	5.00	1	02/09/2024 14:56	WG2223329
1,1-Dichloroethane	U		0.100	1.00	1	02/09/2024 14:56	WG2223329
1,2-Dichloroethane	U		0.0819	1.00	1	02/09/2024 14:56	WG2223329
1,1-Dichloroethene	U		0.188	1.00	1	02/09/2024 14:56	WG2223329
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/09/2024 14:56	WG2223329
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/09/2024 14:56	WG2223329
1,2-Dichloropropane	U		0.149	1.00	1	02/09/2024 14:56	WG2223329
1,1-Dichloropropene	U		0.142	1.00	1	02/09/2024 14:56	WG2223329
1,3-Dichloropropane	U		0.110	1.00	1	02/09/2024 14:56	WG2223329
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/09/2024 14:56	WG2223329
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/09/2024 14:56	WG2223329
2,2-Dichloropropane	U		0.161	1.00	1	02/09/2024 14:56	WG2223329
Di-isopropyl ether	U		0.105	1.00	1	02/09/2024 14:56	WG2223329
Ethylbenzene	0.872	J	0.137	1.00	1	02/09/2024 14:56	WG2223329
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/09/2024 14:56	WG2223329
Isopropylbenzene	0.148	J	0.105	1.00	1	02/09/2024 14:56	WG2223329
p-Isopropyltoluene	U		0.120	1.00	1	02/09/2024 14:56	WG2223329

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)	3.26	J	1.19	10.0	1	02/09/2024 14:56	WG2223329
Methylene Chloride	U		0.430	5.00	1	02/09/2024 14:56	WG2223329
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/09/2024 14:56	WG2223329
Methyl tert-butyl ether	U		0.101	1.00	1	02/09/2024 14:56	WG2223329
Naphthalene	U		1.00	5.00	1	02/09/2024 14:56	WG2223329
n-Propylbenzene	0.320	J	0.0993	1.00	1	02/09/2024 14:56	WG2223329
Styrene	U		0.118	1.00	1	02/09/2024 14:56	WG2223329
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/09/2024 14:56	WG2223329
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/09/2024 14:56	WG2223329
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/09/2024 14:56	WG2223329
Tetrachloroethene	U		0.300	1.00	1	02/09/2024 14:56	WG2223329
Toluene	U		0.278	1.00	1	02/09/2024 14:56	WG2223329
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/09/2024 14:56	WG2223329
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/09/2024 14:56	WG2223329
1,1,1-Trichloroethane	U		0.149	1.00	1	02/09/2024 14:56	WG2223329
1,1,2-Trichloroethane	U		0.158	1.00	1	02/09/2024 14:56	WG2223329
Trichloroethene	U		0.190	1.00	1	02/09/2024 14:56	WG2223329
Trichlorofluoromethane	U		0.160	5.00	1	02/09/2024 14:56	WG2223329
1,2,3-Trichloropropane	U		0.237	2.50	1	02/09/2024 14:56	WG2223329
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/09/2024 14:56	WG2223329
1,2,3-Trimethylbenzene	0.675	J	0.104	1.00	1	02/09/2024 14:56	WG2223329
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/09/2024 14:56	WG2223329
Vinyl chloride	U		0.234	1.00	1	02/09/2024 14:56	WG2223329
Xylenes, Total	U		0.174	3.00	1	02/09/2024 14:56	WG2223329
(S) Toluene-d8	*102*			*80.0-120*		*02/09/2024 14:56*	WG2223329
(S) 4-Bromofluorobenzene	*98.1*			*77.0-126*		*02/09/2024 14:56*	WG2223329
(S) 1,2-Dichloroethane-d4	*93.8*			*70.0-130*		*02/09/2024 14:56*	WG2223329

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Diesel Range Organics (DRO)	45.8	J	40.0	120	1.2	02/13/2024 03:15	WG2224153
Residual Range Organics (RRO)	1120		100	300	1.2	02/13/2024 03:15	WG2224153
(S) o-Terphenyl	*80.9*			*31.0-160*		*02/13/2024 03:15*	WG2224153

Sample Narrative:

L1703299-24 WG2224153: Sample resembles laboratory standard for Motor Oil.

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	02/10/2024 16:54	WG2223119
Acenaphthene	U		0.0190	0.0500	1	02/10/2024 16:54	WG2223119
Acenaphthylene	U		0.0171	0.0500	1	02/10/2024 16:54	WG2223119
Benzo(a)anthracene	U		0.0203	0.0500	1	02/10/2024 16:54	WG2223119
Benzo(a)pyrene	U		0.0184	0.0500	1	02/10/2024 16:54	WG2223119
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/10/2024 16:54	WG2223119
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/10/2024 16:54	WG2223119
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/10/2024 16:54	WG2223119
Chrysene	U		0.0179	0.0500	1	02/10/2024 16:54	WG2223119
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/10/2024 16:54	WG2223119
Fluoranthene	U		0.0270	0.100	1	02/10/2024 16:54	WG2223119
Fluorene	U		0.0169	0.0500	1	02/10/2024 16:54	WG2223119
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/10/2024 16:54	WG2223119
Naphthalene	0.216	J	0.0917	0.250	1	02/10/2024 16:54	WG2223119

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	02/10/2024 16:54	WG2223119
Pyrene	U		0.0169	0.0500	1	02/10/2024 16:54	WG2223119
1-Methylnaphthalene	U		0.0687	0.250	1	02/10/2024 16:54	WG2223119
2-Methylnaphthalene	0.0736	J	0.0674	0.250	1	02/10/2024 16:54	WG2223119
2-Chloronaphthalene	U		0.0682	0.250	1	02/10/2024 16:54	WG2223119
(S) Nitrobenzene-d5	*131*			*31.0-160*		*02/10/2024 16:54*	WG2223119
(S) 2-Fluorobiphenyl	*102*			*48.0-148*		*02/10/2024 16:54*	WG2223119
(S) p-Terphenyl-d14	*105*			*37.0-146*		*02/10/2024 16:54*	WG2223119

Metals (ICPMS) by Method 6020B

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Lead	32.4		0.849	2.00	1	02/09/2024 19:44	WG2222725

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	1800		31.6	100	1	02/11/2024 19:23	WG2224145
(S) a,a,a-Trifluorotoluene(FID)	*98.3*			*78.0-120*		*02/11/2024 19:23*	WG2224145

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	02/09/2024 15:14	WG2223329
Acrolein	U	C3	2.54	50.0	1	02/09/2024 15:14	WG2223329
Acrylonitrile	U		0.671	10.0	1	02/09/2024 15:14	WG2223329
Benzene	48.7		0.0941	1.00	1	02/09/2024 15:14	WG2223329
Bromobenzene	U		0.118	1.00	1	02/09/2024 15:14	WG2223329
Bromodichloromethane	U		0.136	1.00	1	02/09/2024 15:14	WG2223329
Bromoform	U		0.129	1.00	1	02/09/2024 15:14	WG2223329
Bromomethane	U		0.605	5.00	1	02/09/2024 15:14	WG2223329
n-Butylbenzene	U		0.157	1.00	1	02/09/2024 15:14	WG2223329
sec-Butylbenzene	3.10		0.125	1.00	1	02/09/2024 15:14	WG2223329
tert-Butylbenzene	2.69		0.127	1.00	1	02/09/2024 15:14	WG2223329
Carbon disulfide	U		0.0962	1.00	1	02/09/2024 15:14	WG2223329
Carbon tetrachloride	U		0.128	1.00	1	02/09/2024 15:14	WG2223329
Chlorobenzene	U		0.116	1.00	1	02/09/2024 15:14	WG2223329
Chlorodibromomethane	U		0.140	1.00	1	02/09/2024 15:14	WG2223329
Chloroethane	U		0.192	5.00	1	02/09/2024 15:14	WG2223329
Chloroform	U		0.111	5.00	1	02/09/2024 15:14	WG2223329
Chloromethane	U		0.960	2.50	1	02/09/2024 15:14	WG2223329
2-Chlorotoluene	U		0.106	1.00	1	02/09/2024 15:14	WG2223329
4-Chlorotoluene	U		0.114	1.00	1	02/09/2024 15:14	WG2223329
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/09/2024 15:14	WG2223329
1,2-Dibromoethane	U		0.126	1.00	1	02/09/2024 15:14	WG2223329
Dibromomethane	U		0.122	1.00	1	02/09/2024 15:14	WG2223329
1,2-Dichlorobenzene	U		0.107	1.00	1	02/09/2024 15:14	WG2223329
1,3-Dichlorobenzene	U		0.110	1.00	1	02/09/2024 15:14	WG2223329
1,4-Dichlorobenzene	U		0.120	1.00	1	02/09/2024 15:14	WG2223329
Dichlorodifluoromethane	U		0.374	5.00	1	02/09/2024 15:14	WG2223329
1,1-Dichloroethane	U		0.100	1.00	1	02/09/2024 15:14	WG2223329
1,2-Dichloroethane	U		0.0819	1.00	1	02/09/2024 15:14	WG2223329
1,1-Dichloroethene	U		0.188	1.00	1	02/09/2024 15:14	WG2223329
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/09/2024 15:14	WG2223329
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/09/2024 15:14	WG2223329
1,2-Dichloropropane	U		0.149	1.00	1	02/09/2024 15:14	WG2223329
1,1-Dichloropropene	U		0.142	1.00	1	02/09/2024 15:14	WG2223329
1,3-Dichloropropane	U		0.110	1.00	1	02/09/2024 15:14	WG2223329
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/09/2024 15:14	WG2223329
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/09/2024 15:14	WG2223329
2,2-Dichloropropane	U		0.161	1.00	1	02/09/2024 15:14	WG2223329
Di-isopropyl ether	U		0.105	1.00	1	02/09/2024 15:14	WG2223329
Ethylbenzene	58.9		0.137	1.00	1	02/09/2024 15:14	WG2223329
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/09/2024 15:14	WG2223329
Isopropylbenzene	13.7		0.105	1.00	1	02/09/2024 15:14	WG2223329
p-Isopropyltoluene	2.20		0.120	1.00	1	02/09/2024 15:14	WG2223329

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2-Butanone (MEK)	U		1.19	10.0	1	02/09/2024 15:14	WG2223329
Methylene Chloride	U		0.430	5.00	1	02/09/2024 15:14	WG2223329
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/09/2024 15:14	WG2223329
Methyl tert-butyl ether	U		0.101	1.00	1	02/09/2024 15:14	WG2223329
Naphthalene	36.4		1.00	5.00	1	02/09/2024 15:14	WG2223329
n-Propylbenzene	32.4		0.0993	1.00	1	02/09/2024 15:14	WG2223329
Styrene	U		0.118	1.00	1	02/09/2024 15:14	WG2223329
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/09/2024 15:14	WG2223329
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/09/2024 15:14	WG2223329
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/09/2024 15:14	WG2223329
Tetrachloroethene	U		0.300	1.00	1	02/09/2024 15:14	WG2223329
Toluene	2.56		0.278	1.00	1	02/09/2024 15:14	WG2223329
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/09/2024 15:14	WG2223329
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/09/2024 15:14	WG2223329
1,1,1-Trichloroethane	U		0.149	1.00	1	02/09/2024 15:14	WG2223329
1,1,2-Trichloroethane	U		0.158	1.00	1	02/09/2024 15:14	WG2223329
Trichloroethene	U		0.190	1.00	1	02/09/2024 15:14	WG2223329
Trichlorofluoromethane	U		0.160	5.00	1	02/09/2024 15:14	WG2223329
1,2,3-Trichloropropane	U		0.237	2.50	1	02/09/2024 15:14	WG2223329
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/09/2024 15:14	WG2223329
1,2,3-Trimethylbenzene	67.5		0.104	1.00	1	02/09/2024 15:14	WG2223329
1,3,5-Trimethylbenzene	2.09		0.104	1.00	1	02/09/2024 15:14	WG2223329
Vinyl chloride	U		0.234	1.00	1	02/09/2024 15:14	WG2223329
Xylenes, Total	3.36		0.174	3.00	1	02/09/2024 15:14	WG2223329
(S) Toluene-d8	*96.5*			*80.0-120*		*02/09/2024 15:14*	WG2223329
(S) 4-Bromofluorobenzene	*99.6*			*77.0-126*		*02/09/2024 15:14*	WG2223329
(S) 1,2-Dichloroethane-d4	*98.4*			*70.0-130*		*02/09/2024 15:14*	WG2223329

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	207		33.3	100	1	02/13/2024 03:36	WG2224153
Residual Range Organics (RRO)	279		83.3	250	1	02/13/2024 03:36	WG2224153
(S) o-Terphenyl	*61.6*			*31.0-160*		*02/13/2024 03:36*	WG2224153

Sample Narrative:

L1703299-26 WG2224153: Sample resembles laboratory standard for Mineral Spirits

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

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	02/12/2024 18:23	WG2223477

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	78.3	B J	31.6	100	1	02/11/2024 19:46	WG2224145
(S) a,a,a-Trifluorotoluene(FID)	*90.6*			*78.0-120*		*02/11/2024 19:46*	WG2224145

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	02/09/2024 15:33	WG2223329
Acrolein	U	C3	2.54	50.0	1	02/09/2024 15:33	WG2223329
Acrylonitrile	U		0.671	10.0	1	02/09/2024 15:33	WG2223329
Benzene	0.105	J	0.0941	1.00	1	02/09/2024 15:33	WG2223329
Bromobenzene	U		0.118	1.00	1	02/09/2024 15:33	WG2223329
Bromodichloromethane	U		0.136	1.00	1	02/09/2024 15:33	WG2223329
Bromoform	U		0.129	1.00	1	02/09/2024 15:33	WG2223329
Bromomethane	U		0.605	5.00	1	02/09/2024 15:33	WG2223329
n-Butylbenzene	U		0.157	1.00	1	02/09/2024 15:33	WG2223329
sec-Butylbenzene	U		0.125	1.00	1	02/09/2024 15:33	WG2223329
tert-Butylbenzene	U		0.127	1.00	1	02/09/2024 15:33	WG2223329
Carbon disulfide	U		0.0962	1.00	1	02/09/2024 15:33	WG2223329
Carbon tetrachloride	U		0.128	1.00	1	02/09/2024 15:33	WG2223329
Chlorobenzene	U		0.116	1.00	1	02/09/2024 15:33	WG2223329
Chlorodibromomethane	U		0.140	1.00	1	02/09/2024 15:33	WG2223329
Chloroethane	U		0.192	5.00	1	02/09/2024 15:33	WG2223329
Chloroform	U		0.111	5.00	1	02/09/2024 15:33	WG2223329
Chloromethane	U		0.960	2.50	1	02/09/2024 15:33	WG2223329
2-Chlorotoluene	U		0.106	1.00	1	02/09/2024 15:33	WG2223329
4-Chlorotoluene	U		0.114	1.00	1	02/09/2024 15:33	WG2223329
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/09/2024 15:33	WG2223329
1,2-Dibromoethane	U		0.126	1.00	1	02/09/2024 15:33	WG2223329
Dibromomethane	U		0.122	1.00	1	02/09/2024 15:33	WG2223329
1,2-Dichlorobenzene	U		0.107	1.00	1	02/09/2024 15:33	WG2223329
1,3-Dichlorobenzene	U		0.110	1.00	1	02/09/2024 15:33	WG2223329
1,4-Dichlorobenzene	U		0.120	1.00	1	02/09/2024 15:33	WG2223329
Dichlorodifluoromethane	U		0.374	5.00	1	02/09/2024 15:33	WG2223329
1,1-Dichloroethane	U		0.100	1.00	1	02/09/2024 15:33	WG2223329
1,2-Dichloroethane	U		0.0819	1.00	1	02/09/2024 15:33	WG2223329
1,1-Dichloroethene	U		0.188	1.00	1	02/09/2024 15:33	WG2223329
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/09/2024 15:33	WG2223329
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/09/2024 15:33	WG2223329
1,2-Dichloropropane	U		0.149	1.00	1	02/09/2024 15:33	WG2223329
1,1-Dichloropropene	U		0.142	1.00	1	02/09/2024 15:33	WG2223329
1,3-Dichloropropane	U		0.110	1.00	1	02/09/2024 15:33	WG2223329
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/09/2024 15:33	WG2223329
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/09/2024 15:33	WG2223329
2,2-Dichloropropane	U		0.161	1.00	1	02/09/2024 15:33	WG2223329
Di-isopropyl ether	U		0.105	1.00	1	02/09/2024 15:33	WG2223329
Ethylbenzene	U		0.137	1.00	1	02/09/2024 15:33	WG2223329
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/09/2024 15:33	WG2223329
Isopropylbenzene	U		0.105	1.00	1	02/09/2024 15:33	WG2223329
p-Isopropyltoluene	U		0.120	1.00	1	02/09/2024 15:33	WG2223329

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
2-Butanone (MEK)	U		1.19	10.0	1	02/09/2024 15:33	WG2223329
Methylene Chloride	U		0.430	5.00	1	02/09/2024 15:33	WG2223329
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/09/2024 15:33	WG2223329
Methyl tert-butyl ether	U		0.101	1.00	1	02/09/2024 15:33	WG2223329
Naphthalene	U		1.00	5.00	1	02/09/2024 15:33	WG2223329
n-Propylbenzene	U		0.0993	1.00	1	02/09/2024 15:33	WG2223329
Styrene	U		0.118	1.00	1	02/09/2024 15:33	WG2223329
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/09/2024 15:33	WG2223329
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	02/09/2024 15:33	WG2223329
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/09/2024 15:33	WG2223329
Tetrachloroethene	U		0.300	1.00	1	02/09/2024 15:33	WG2223329
Toluene	U		0.278	1.00	1	02/09/2024 15:33	WG2223329
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/09/2024 15:33	WG2223329
1,2,4-Trichlorobenzene	U		0.481	1.00	1	02/09/2024 15:33	WG2223329
1,1,1-Trichloroethane	U		0.149	1.00	1	02/09/2024 15:33	WG2223329
1,1,2-Trichloroethane	U		0.158	1.00	1	02/09/2024 15:33	WG2223329
Trichloroethene	U		0.190	1.00	1	02/09/2024 15:33	WG2223329
Trichlorofluoromethane	U		0.160	5.00	1	02/09/2024 15:33	WG2223329
1,2,3-Trichloropropane	U		0.237	2.50	1	02/09/2024 15:33	WG2223329
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/09/2024 15:33	WG2223329
1,2,3-Trimethylbenzene	0.257	J	0.104	1.00	1	02/09/2024 15:33	WG2223329
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/09/2024 15:33	WG2223329
Vinyl chloride	U		0.234	1.00	1	02/09/2024 15:33	WG2223329
Xylenes, Total	U		0.174	3.00	1	02/09/2024 15:33	WG2223329
(S) Toluene-d8	*102*			*80.0-120*		*02/09/2024 15:33*	WG2223329
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*02/09/2024 15:33*	WG2223329
(S) 1,2-Dichloroethane-d4	*93.4*			*70.0-130*		*02/09/2024 15:33*	WG2223329

Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-SGT

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	U		33.3	100	1	02/13/2024 03:56	WG2224153
Residual Range Organics (RRO)	U		83.3	250	1	02/13/2024 03:56	WG2224153
(S) o-Terphenyl	*77.0*			*31.0-160*		*02/13/2024 03:56*	WG2224153

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	
Anthracene	U		0.0190	0.0500	1	02/10/2024 17:12	WG2223119
Acenaphthene	0.0515		0.0190	0.0500	1	02/10/2024 17:12	WG2223119
Acenaphthylene	U		0.0171	0.0500	1	02/10/2024 17:12	WG2223119
Benzo(a)anthracene	U		0.0203	0.0500	1	02/10/2024 17:12	WG2223119
Benzo(a)pyrene	U		0.0184	0.0500	1	02/10/2024 17:12	WG2223119
Benzo(b)fluoranthene	U		0.0168	0.0500	1	02/10/2024 17:12	WG2223119
Benzo(g,h,i)perylene	U		0.0184	0.0500	1	02/10/2024 17:12	WG2223119
Benzo(k)fluoranthene	U		0.0202	0.0500	1	02/10/2024 17:12	WG2223119
Chrysene	U		0.0179	0.0500	1	02/10/2024 17:12	WG2223119
Dibenz(a,h)anthracene	U		0.0160	0.0500	1	02/10/2024 17:12	WG2223119
Fluoranthene	U		0.0270	0.100	1	02/10/2024 17:12	WG2223119
Fluorene	U		0.0169	0.0500	1	02/10/2024 17:12	WG2223119
Indeno(1,2,3-cd)pyrene	U		0.0158	0.0500	1	02/10/2024 17:12	WG2223119
Naphthalene	U		0.0917	0.250	1	02/10/2024 17:12	WG2223119
Phenanthrene	U		0.0180	0.0500	1	02/10/2024 17:12	WG2223119
Pyrene	U		0.0169	0.0500	1	02/10/2024 17:12	WG2223119
1-Methylnaphthalene	U		0.0687	0.250	1	02/10/2024 17:12	WG2223119

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	
2-Methylnaphthalene	U		0.0674	0.250	1	02/10/2024 17:12	WG2223119
2-Chloronaphthalene	U		0.0682	0.250	1	02/10/2024 17:12	WG2223119
(S) Nitrobenzene-d5	*121*			*31.0-160*		*02/10/2024 17:12*	WG2223119
(S) 2-Fluorobiphenyl	*111*			*48.0-148*		*02/10/2024 17:12*	WG2223119
(S) p-Terphenyl-d14	*120*			*37.0-146*		*02/10/2024 17:12*	WG2223119

Method Blank (MB)

(MB) R4032167-1 02/09/24 10:17

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1703299-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1703299-04 02/09/24 10:17 • (DUP) R4032167-3 02/09/24 10:17

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	53.6	53.8	1	0.385		10

Laboratory Control Sample (LCS)

(LCS) R4032167-2 02/09/24 10:17

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) R4032166-1 02/09/24 10:00

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

L1703300-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1703300-01 02/09/24 10:00 • (DUP) R4032166-3 02/09/24 10:00

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Total Solids	80.7	82.2	1	1.92		10

Laboratory Control Sample (LCS)

(LCS) R4032166-2 02/09/24 10:00

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) R4032136-1 02/09/24 18:30

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Lead	U		0.849	2.00

Laboratory Control Sample (LCS)

(LCS) R4032136-2 02/09/24 18:33

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	50.0	46.5	93.0	80.0-120	

L1703293-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1703293-01 02/09/24 18:37 • (MS) R4032136-4 02/09/24 18:43 • (MSD) R4032136-5 02/09/24 18:46

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 %
Lead	50.0	U	46.8	46.5	93.6	92.9	1	75.0-125			0.719	20

Method Blank (MB)

(MB) R4032802-1 02/12/24 16:32

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Lead,Dissolved	U		0.849	2.00

Laboratory Control Sample (LCS)

(LCS) R4032802-2 02/12/24 16:35

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Lead,Dissolved	50.0	50.1	100	80.0-120	

L1703018-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1703018-02 02/12/24 17:13 • (MS) R4032802-7 02/12/24 17:19 • (MSD) R4032802-8 02/12/24 17:22

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Lead,Dissolved	50.0	U	47.5	50.4	95.0	101	5	75.0-125			5.88	20

Method Blank (MB)

(MB) R4033058-1 02/13/24 11:37

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Lead	U		0.0990	2.00

Laboratory Control Sample (LCS)

(LCS) R4033058-2 02/13/24 11:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Lead	100	111	111	80.0-120	

L1701308-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1701308-02 02/13/24 11:43 • (MS) R4033058-5 02/13/24 11:53 • (MSD) R4033058-6 02/13/24 11:56

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 %
Lead	100	12.5	112	105	99.9	92.8	5	75.0-125			6.49	20

Method Blank (MB)

(MB) R4032763-3 02/10/24 22:21

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)	*96.5*			*77.0-120*

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

(LCS) R4032763-1 02/10/24 21:04 • (LCSD) R4032763-2 02/10/24 21:24

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	5.00	5.45	5.57	109	111	71.0-124			2.18	20
(S) a,a,a-Trifluorotoluene(FID)				*104*	*103*	*77.0-120*				

L1702554-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1702554-14 02/10/24 22:54 • (MS) R4032763-4 02/11/24 06:38 • (MSD) R4032763-5 02/11/24 06:57

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	194	2.02	205	215	104	110	37.3	50.0-150			4.98	27
(S) a,a,a-Trifluorotoluene(FID)					*108*	*109*		*77.0-120*				

Method Blank (MB)

(MB) R4033348-3 02/11/24 22:04

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)	*89.0*			*77.0-120*

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

(LCS) R4033348-1 02/11/24 20:46 • (LCSD) R4033348-2 02/11/24 21:06

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	5.00	5.43	4.94	109	98.8	71.0-124			9.45	20
(S) a,a,a-Trifluorotoluene(FID)				*107*	*104*	*77.0-120*				

L1703514-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1703514-01 02/12/24 02:33 • (MS) R4033348-4 02/12/24 06:42 • (MSD) R4033348-5 02/12/24 07:01

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 %
Gasoline Range Organics-NWTPH	125	U	137	142	110	114	25	50.0-150			3.58	27
(S) a,a,a-Trifluorotoluene(FID)					*102*	*103*		*77.0-120*				

Method Blank (MB)

(MB) R4032697-2 02/12/24 12:37

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	31.8	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*95.9*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R4032697-1 02/12/24 11:03

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5000	5160	103	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*78.0-120*	

Method Blank (MB)

(MB) R4033797-2 02/11/24 13:32

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Gasoline Range Organics-NWTPH	44.5	J	31.6	100
(S) a,a,a-Trifluorotoluene(FID)	*91.8*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R4033797-1 02/11/24 12:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Gasoline Range Organics-NWTPH	5000	4330	86.6	70.0-124	
(S) a,a,a-Trifluorotoluene(FID)			*94.3*	*78.0-120*	

Method Blank (MB)

(MB) R4033716-3 02/09/24 10:38

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) R4033716-3 02/09/24 10:38

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	*101*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*94.5*			*70.0-130*

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

(LCS) R4033716-1 02/09/24 09:42 • (LCSD) R4033716-2 02/09/24 10:00

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	30.3	27.4	121	110	19.0-160			10.1	27
Acrolein	25.0	17.4	17.7	69.6	70.8	10.0-160			1.71	26
Acrylonitrile	25.0	27.0	25.8	108	103	55.0-149			4.55	20

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

(LCS) R4033716-1 02/09/24 09:42 • (LCSD) R4033716-2 02/09/24 10:00

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	5.33	5.20	107	104	70.0-123			2.47	20
Bromobenzene	5.00	5.06	4.91	101	98.2	73.0-121			3.01	20
Bromodichloromethane	5.00	5.15	4.90	103	98.0	75.0-120			4.98	20
Bromoform	5.00	4.72	4.43	94.4	88.6	68.0-132			6.34	20
Bromomethane	5.00	4.94	4.60	98.8	92.0	10.0-160			7.13	25
n-Butylbenzene	5.00	4.93	4.67	98.6	93.4	73.0-125			5.42	20
sec-Butylbenzene	5.00	5.22	5.16	104	103	75.0-125			1.16	20
tert-Butylbenzene	5.00	5.16	5.15	103	103	76.0-124			0.194	20
Carbon disulfide	5.00	4.55	4.40	91.0	88.0	61.0-128			3.35	20
Carbon tetrachloride	5.00	5.64	5.41	113	108	68.0-126			4.16	20
Chlorobenzene	5.00	5.18	4.85	104	97.0	80.0-121			6.58	20
Chlorodibromomethane	5.00	5.17	4.85	103	97.0	77.0-125			6.39	20
Chloroethane	5.00	4.58	4.54	91.6	90.8	47.0-150			0.877	20
Chloroform	5.00	4.96	4.80	99.2	96.0	73.0-120			3.28	20
Chloromethane	5.00	5.58	6.52	112	130	41.0-142			15.5	20
2-Chlorotoluene	5.00	4.85	4.97	97.0	99.4	76.0-123			2.44	20
4-Chlorotoluene	5.00	4.97	4.92	99.4	98.4	75.0-122			1.01	20
1,2-Dibromo-3-Chloropropane	5.00	4.61	4.37	92.2	87.4	58.0-134			5.35	20
1,2-Dibromoethane	5.00	5.33	4.98	107	99.6	80.0-122			6.79	20
Dibromomethane	5.00	5.03	4.81	101	96.2	80.0-120			4.47	20
1,2-Dichlorobenzene	5.00	5.17	4.92	103	98.4	79.0-121			4.96	20
1,3-Dichlorobenzene	5.00	4.89	4.86	97.8	97.2	79.0-120			0.615	20
1,4-Dichlorobenzene	5.00	5.16	4.91	103	98.2	79.0-120			4.97	20
Dichlorodifluoromethane	5.00	6.33	5.94	127	119	51.0-149			6.36	20
1,1-Dichloroethane	5.00	5.32	4.94	106	98.8	70.0-126			7.41	20
1,2-Dichloroethane	5.00	5.04	4.70	101	94.0	70.0-128			6.98	20
1,1-Dichloroethene	5.00	5.63	5.40	113	108	71.0-124			4.17	20
cis-1,2-Dichloroethene	5.00	4.84	4.84	96.8	96.8	73.0-120			0.000	20
trans-1,2-Dichloroethene	5.00	5.25	5.10	105	102	73.0-120			2.90	20
1,2-Dichloropropane	5.00	5.06	4.77	101	95.4	77.0-125			5.90	20
1,1-Dichloropropene	5.00	5.33	5.15	107	103	74.0-126			3.44	20
1,3-Dichloropropane	5.00	5.26	4.99	105	99.8	80.0-120			5.27	20
cis-1,3-Dichloropropene	5.00	4.74	4.71	94.8	94.2	80.0-123			0.635	20
trans-1,3-Dichloropropene	5.00	4.73	4.57	94.6	91.4	78.0-124			3.44	20
2,2-Dichloropropane	5.00	5.18	4.65	104	93.0	58.0-130			10.8	20
Di-isopropyl ether	5.00	5.08	4.94	102	98.8	58.0-138			2.79	20
Ethylbenzene	5.00	5.52	5.08	110	102	79.0-123			8.30	20
Hexachloro-1,3-butadiene	5.00	4.55	4.84	91.0	96.8	54.0-138			6.18	20
Isopropylbenzene	5.00	5.63	5.17	113	103	76.0-127			8.52	20
p-Isopropyltoluene	5.00	5.03	4.94	101	98.8	76.0-125			1.81	20

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

(LCS) R4033716-1 02/09/24 09:42 • (LCSD) R4033716-2 02/09/24 10:00

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	30.0	27.7	120	111	44.0-160			7.97	20
Methylene Chloride	5.00	5.07	4.75	101	95.0	67.0-120			6.52	20
4-Methyl-2-pentanone (MIBK)	25.0	28.1	25.9	112	104	68.0-142			8.15	20
Methyl tert-butyl ether	5.00	4.53	4.53	90.6	90.6	68.0-125			0.000	20
Naphthalene	5.00	4.54	4.60	90.8	92.0	54.0-135			1.31	20
n-Propylbenzene	5.00	5.23	5.15	105	103	77.0-124			1.54	20
Styrene	5.00	5.25	4.70	105	94.0	73.0-130			11.1	20
1,1,1,2-Tetrachloroethane	5.00	5.23	4.58	105	91.6	75.0-125			13.3	20
1,1,2,2-Tetrachloroethane	5.00	4.59	4.41	91.8	88.2	65.0-130			4.00	20
1,1,2-Trichlorotrifluoroethane	5.00	5.45	5.47	109	109	69.0-132			0.366	20
Tetrachloroethene	5.00	6.16	5.60	123	112	72.0-132			9.52	20
Toluene	5.00	5.59	5.13	112	103	79.0-120			8.58	20
1,2,3-Trichlorobenzene	5.00	4.74	5.04	94.8	101	50.0-138			6.13	20
1,2,4-Trichlorobenzene	5.00	5.08	4.73	102	94.6	57.0-137			7.14	20
1,1,1-Trichloroethane	5.00	5.71	5.44	114	109	73.0-124			4.84	20
1,1,2-Trichloroethane	5.00	5.13	5.00	103	100	80.0-120			2.57	20
Trichloroethene	5.00	5.80	5.46	116	109	78.0-124			6.04	20
Trichlorofluoromethane	5.00	5.07	5.05	101	101	59.0-147			0.395	20
1,2,3-Trichloropropane	5.00	5.13	4.85	103	97.0	73.0-130			5.61	20
1,2,4-Trimethylbenzene	5.00	4.92	4.60	98.4	92.0	76.0-121			6.72	20
1,2,3-Trimethylbenzene	5.00	4.71	4.63	94.2	92.6	77.0-120			1.71	20
1,3,5-Trimethylbenzene	5.00	5.09	4.88	102	97.6	76.0-122			4.21	20
Vinyl chloride	5.00	4.75	4.70	95.0	94.0	67.0-131			1.06	20
Xylenes, Total	15.0	16.3	15.0	109	100	79.0-123			8.31	20
(S) Toluene-d8				*103*	*99.4*	*80.0-120*				
(S) 4-Bromofluorobenzene				*102*	*102*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*95.9*	*96.2*	*70.0-130*				

Method Blank (MB)

(MB) R4032936-3 02/11/24 22:52

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) R4032936-3 02/11/24 22:52

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	*102*			*75.0-131*
(S) 4-Bromofluorobenzene	*103*			*67.0-138*
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*

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

(LCS) R4032936-1 02/11/24 21:37 • (LCSD) R4032936-2 02/11/24 21:56

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	0.481	0.651	77.0	104	10.0-160			30.0	31
Acrylonitrile	0.625	0.458	0.577	73.3	92.3	45.0-153		J3	23.0	22
Benzene	0.125	0.110	0.113	88.0	90.4	70.0-123			2.69	20
Bromobenzene	0.125	0.112	0.121	89.6	96.8	73.0-121			7.73	20

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

(LCS) R4032936-1 02/11/24 21:37 • (LCSD) R4032936-2 02/11/24 21:56

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	0.107	0.120	85.6	96.0	73.0-121			11.5	20
Bromoform	0.125	0.118	0.109	94.4	87.2	64.0-132			7.93	20
Bromomethane	0.125	0.0976	0.107	78.1	85.6	56.0-147			9.19	20
n-Butylbenzene	0.125	0.119	0.117	95.2	93.6	68.0-135			1.69	20
sec-Butylbenzene	0.125	0.117	0.112	93.6	89.6	74.0-130			4.37	20
tert-Butylbenzene	0.125	0.117	0.116	93.6	92.8	75.0-127			0.858	20
Carbon disulfide	0.125	0.108	0.0788	86.4	63.0	56.0-133		J3	31.3	20
Carbon tetrachloride	0.125	0.126	0.120	101	96.0	66.0-128			4.88	20
Chlorobenzene	0.125	0.119	0.120	95.2	96.0	76.0-128			0.837	20
Chlorodibromomethane	0.125	0.119	0.124	95.2	99.2	74.0-127			4.12	20
Chloroethane	0.125	0.101	0.105	80.8	84.0	61.0-134			3.88	20
Chloroform	0.125	0.108	0.115	86.4	92.0	72.0-123			6.28	20
Chloromethane	0.125	0.0919	0.0965	73.5	77.2	51.0-138			4.88	20
2-Chlorotoluene	0.125	0.115	0.123	92.0	98.4	75.0-124			6.72	20
4-Chlorotoluene	0.125	0.117	0.119	93.6	95.2	75.0-124			1.69	20
1,2-Dibromo-3-Chloropropane	0.125	0.112	0.105	89.6	84.0	59.0-130			6.45	20
1,2-Dibromoethane	0.125	0.127	0.129	102	103	74.0-128			1.56	20
Dibromomethane	0.125	0.115	0.122	92.0	97.6	75.0-122			5.91	20
1,2-Dichlorobenzene	0.125	0.114	0.117	91.2	93.6	76.0-124			2.60	20
1,3-Dichlorobenzene	0.125	0.113	0.116	90.4	92.8	76.0-125			2.62	20
1,4-Dichlorobenzene	0.125	0.109	0.111	87.2	88.8	77.0-121			1.82	20
Dichlorodifluoromethane	0.125	0.103	0.102	82.4	81.6	43.0-156			0.976	20
1,1-Dichloroethane	0.125	0.103	0.117	82.4	93.6	70.0-127			12.7	20
1,2-Dichloroethane	0.125	0.123	0.121	98.4	96.8	65.0-131			1.64	20
1,1-Dichloroethene	0.125	0.120	0.124	96.0	99.2	65.0-131			3.28	20
cis-1,2-Dichloroethene	0.125	0.115	0.114	92.0	91.2	73.0-125			0.873	20
trans-1,2-Dichloroethene	0.125	0.108	0.117	86.4	93.6	71.0-125			8.00	20
1,2-Dichloropropane	0.125	0.109	0.113	87.2	90.4	74.0-125			3.60	20
1,1-Dichloropropene	0.125	0.116	0.123	92.8	98.4	73.0-125			5.86	20
1,3-Dichloropropane	0.125	0.124	0.125	99.2	100	80.0-125			0.803	20
cis-1,3-Dichloropropene	0.125	0.122	0.121	97.6	96.8	76.0-127			0.823	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	0.123	0.123	98.4	98.4	59.0-135			0.000	20
Di-isopropyl ether	0.125	0.110	0.124	88.0	99.2	60.0-136			12.0	20
Ethylbenzene	0.125	0.123	0.122	98.4	97.6	74.0-126			0.816	20
Hexachloro-1,3-butadiene	0.125	0.113	0.124	90.4	99.2	57.0-150			9.28	20
Isopropylbenzene	0.125	0.124	0.123	99.2	98.4	72.0-127			0.810	20
p-Isopropyltoluene	0.125	0.118	0.113	94.4	90.4	72.0-133			4.33	20
2-Butanone (MEK)	0.625	0.505	0.631	80.8	101	30.0-160			22.2	24
Methylene Chloride	0.125	0.110	0.122	88.0	97.6	68.0-123			10.3	20

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

(LCS) R4032936-1 02/11/24 21:37 • (LCSD) R4032936-2 02/11/24 21:56

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	0.649	0.651	104	104	56.0-143			0.308	20
Methyl tert-butyl ether	0.125	0.113	0.123	90.4	98.4	66.0-132			8.47	20
Naphthalene	0.125	0.116	0.109	92.8	87.2	59.0-130			6.22	20
n-Propylbenzene	0.125	0.117	0.117	93.6	93.6	74.0-126			0.000	20
Styrene	0.125	0.124	0.130	99.2	104	72.0-127			4.72	20
1,1,1,2-Tetrachloroethane	0.125	0.121	0.120	96.8	96.0	74.0-129			0.830	20
1,1,2,2-Tetrachloroethane	0.125	0.113	0.112	90.4	89.6	68.0-128			0.889	20
1,1,2-Trichlorotrifluoroethane	0.125	0.110	0.112	88.0	89.6	61.0-139			1.80	20
Tetrachloroethene	0.125	0.132	0.130	106	104	70.0-136			1.53	20
Toluene	0.125	0.120	0.119	96.0	95.2	75.0-121			0.837	20
1,2,3-Trichlorobenzene	0.125	0.121	0.116	96.8	92.8	59.0-139			4.22	20
1,2,4-Trichlorobenzene	0.125	0.117	0.116	93.6	92.8	62.0-137			0.858	20
1,1,1-Trichloroethane	0.125	0.113	0.116	90.4	92.8	69.0-126			2.62	20
1,1,2-Trichloroethane	0.125	0.128	0.127	102	102	78.0-123			0.784	20
Trichloroethene	0.125	0.118	0.127	94.4	102	76.0-126			7.35	20
Trichlorofluoromethane	0.125	0.105	0.106	84.0	84.8	61.0-142			0.948	20
1,2,3-Trichloropropane	0.125	0.122	0.124	97.6	99.2	67.0-129			1.63	20
1,2,4-Trimethylbenzene	0.125	0.120	0.117	96.0	93.6	70.0-126			2.53	20
1,2,3-Trimethylbenzene	0.125	0.116	0.116	92.8	92.8	74.0-124			0.000	20
1,3,5-Trimethylbenzene	0.125	0.121	0.114	96.8	91.2	73.0-127			5.96	20
Vinyl chloride	0.125	0.106	0.107	84.8	85.6	63.0-134			0.939	20
Xylenes, Total	0.375	0.374	0.372	99.7	99.2	72.0-127			0.536	20
(S) Toluene-d8				*105*	*102*	*75.0-131*				
(S) 4-Bromofluorobenzene				*109*	*106*	*67.0-138*				
(S) 1,2-Dichloroethane-d4				*96.9*	*101*	*70.0-130*				

Method Blank (MB)

(MB) R4032233-2 02/10/24 10:11

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	*64.4*			*18.0-148*

Laboratory Control Sample (LCS)

(LCS) R4032233-1 02/10/24 09:43

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Diesel Range Organics (DRO)	50.0	25.7	51.4	50.0-150	
(S) o-Terphenyl			*45.0*	*18.0-148*	

L1701885-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1701885-02 02/10/24 10:50 • (MS) R4032233-3 02/10/24 11:02 • (MSD) R4032233-4 02/10/24 11:14

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 %
Diesel Range Organics (DRO)	58.4	16.7	68.4	56.8	88.5	68.3	1	50.0-150			18.6	20
(S) o-Terphenyl					*56.5*	*70.6*		*18.0-148*				

Sample Narrative:

OS: Sample resembles laboratory standard for Diesel.

Method Blank (MB)

(MB) R4033094-1 02/13/24 00:13

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Diesel Range Organics (DRO)	U		33.3	100
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	*70.5*			*31.0-160*

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

(LCS) R4033094-2 02/13/24 00:33 • (LCSD) R4033094-3 02/13/24 00:53

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	979	978	65.3	65.2	50.0-150			0.102	20
(S) o-Terphenyl				*0.000*	*0.000*	*31.0-160*	J2	J2		

Method Blank (MB)

(MB) R4031885-2 02/09/24 11:51

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	*98.8*			*23.0-120*
(S) Nitrobenzene-d5	*92.0*			*14.0-149*
(S) 2-Fluorobiphenyl	*92.3*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4031885-1 02/09/24 11:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0792	99.0	50.0-126	
Acenaphthene	0.0800	0.0717	89.6	50.0-120	
Acenaphthylene	0.0800	0.0804	101	50.0-120	
Benzo(a)anthracene	0.0800	0.0798	99.8	45.0-120	
Benzo(a)pyrene	0.0800	0.0618	77.3	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0734	91.8	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0716	89.5	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0711	88.9	49.0-125	
Chrysene	0.0800	0.0778	97.3	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0737	92.1	47.0-125	
Fluoranthene	0.0800	0.0813	102	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4031885-1 02/09/24 11:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0800	100	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0739	92.4	46.0-125	
Naphthalene	0.0800	0.0732	91.5	50.0-120	
Phenanthrene	0.0800	0.0778	97.3	47.0-120	
Pyrene	0.0800	0.0756	94.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0789	98.6	51.0-121	
2-Methylnaphthalene	0.0800	0.0783	97.9	50.0-120	
2-Chloronaphthalene	0.0800	0.0757	94.6	50.0-120	
(S) p-Terphenyl-d14			*101*	*23.0-120*	
(S) Nitrobenzene-d5			*111*	*14.0-149*	
(S) 2-Fluorobiphenyl			*104*	*34.0-125*	

Method Blank (MB)

(MB) R4032797-2 02/12/24 11:02

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	*78.8*			*23.0-120*
(S) Nitrobenzene-d5	*71.9*			*14.0-149*
(S) 2-Fluorobiphenyl	*71.7*			*34.0-125*

Laboratory Control Sample (LCS)

(LCS) R4032797-1 02/12/24 10:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0644	80.5	50.0-126	
Acenaphthene	0.0800	0.0602	75.3	50.0-120	
Acenaphthylene	0.0800	0.0655	81.9	50.0-120	
Benzo(a)anthracene	0.0800	0.0686	85.8	45.0-120	
Benzo(a)pyrene	0.0800	0.0548	68.5	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0672	84.0	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0618	77.3	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0591	73.9	49.0-125	
Chrysene	0.0800	0.0666	83.3	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0641	80.1	47.0-125	
Fluoranthene	0.0800	0.0656	82.0	49.0-129	

Laboratory Control Sample (LCS)

(LCS) R4032797-1 02/12/24 10:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0656	82.0	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0653	81.6	46.0-125	
Naphthalene	0.0800	0.0618	77.3	50.0-120	
Phenanthrene	0.0800	0.0648	81.0	47.0-120	
Pyrene	0.0800	0.0639	79.9	43.0-123	
1-Methylnaphthalene	0.0800	0.0645	80.6	51.0-121	
2-Methylnaphthalene	0.0800	0.0633	79.1	50.0-120	
2-Chloronaphthalene	0.0800	0.0617	77.1	50.0-120	
(S) p-Terphenyl-d14			*80.0*	*23.0-120*	
(S) Nitrobenzene-d5			*75.2*	*14.0-149*	
(S) 2-Fluorobiphenyl			*72.2*	*34.0-125*	

L1703231-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1703231-10 02/12/24 11:20 • (MS) R4032797-3 02/12/24 11:38 • (MSD) R4032797-4 02/12/24 11:56

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	0.0493	0.0523	64.9	68.8	1	10.0-145			5.91	30
Acenaphthene	0.0760	U	0.0450	0.0484	59.2	63.7	1	14.0-127			7.28	27
Acenaphthylene	0.0760	U	0.0493	0.0530	64.9	69.7	1	21.0-124			7.23	25
Benzo(a)anthracene	0.0760	U	0.0502	0.0536	66.1	70.5	1	10.0-139			6.55	30
Benzo(a)pyrene	0.0760	U	0.0468	0.0495	61.6	65.1	1	10.0-141			5.61	31
Benzo(b)fluoranthene	0.0760	U	0.0484	0.0519	63.7	68.3	1	10.0-140			6.98	36
Benzo(g,h,i)perylene	0.0760	U	0.0467	0.0506	61.4	66.6	1	10.0-140			8.02	33
Benzo(k)fluoranthene	0.0760	U	0.0450	0.0473	59.2	62.2	1	10.0-137			4.98	31
Chrysene	0.0760	U	0.0499	0.0526	65.7	69.2	1	10.0-145			5.27	30
Dibenz(a,h)anthracene	0.0760	U	0.0498	0.0535	65.5	70.4	1	10.0-132			7.16	31
Fluoranthene	0.0760	U	0.0478	0.0504	62.9	66.3	1	10.0-153			5.30	33
Fluorene	0.0760	U	0.0506	0.0530	66.6	69.7	1	11.0-130			4.63	29
Indeno(1,2,3-cd)pyrene	0.0760	U	0.0486	0.0519	63.9	68.3	1	10.0-137			6.57	32
Naphthalene	0.0760	U	0.0475	0.0515	62.5	67.8	1	10.0-135			8.08	27
Phenanthrene	0.0760	U	0.0494	0.0521	65.0	68.6	1	10.0-144			5.32	31
Pyrene	0.0760	U	0.0478	0.0506	62.9	66.6	1	10.0-148			5.69	35
1-Methylnaphthalene	0.0760	U	0.0484	0.0531	63.7	69.9	1	10.0-142			9.26	28
2-Methylnaphthalene	0.0760	U	0.0477	0.0516	62.8	67.9	1	10.0-137			7.85	28
2-Chloronaphthalene	0.0760	U	0.0474	0.0507	62.4	66.7	1	29.0-120			6.73	24
(S) p-Terphenyl-d14					*63.3*	*76.4*		*23.0-120*				
(S) Nitrobenzene-d5					*69.9*	*76.0*		*14.0-149*				
(S) 2-Fluorobiphenyl					*58.0*	*62.5*		*34.0-125*				

Method Blank (MB)

(MB) R4033801-3 02/10/24 15:25

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	*135*			*31.0-160*
(S) 2-Fluorobiphenyl	*107*			*48.0-148*
(S) p-Terphenyl-d14	*122*			*37.0-146*

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

(LCS) R4033801-1 02/10/24 14:50 • (LCSD) R4033801-2 02/10/24 15:08

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	2.19	2.13	109	106	67.0-150			2.78	20
Acenaphthene	2.00	2.10	2.14	105	107	65.0-138			1.89	20
Acenaphthylene	2.00	2.39	2.45	119	122	66.0-140			2.48	20
Benzo(a)anthracene	2.00	2.17	2.17	108	108	61.0-140			0.000	20
Benzo(a)pyrene	2.00	2.42	2.48	121	124	60.0-143			2.45	20
Benzo(b)fluoranthene	2.00	2.24	2.34	112	117	58.0-141			4.37	20
Benzo(g,h,i)perylene	2.00	2.16	2.25	108	112	52.0-153			4.08	20
Benzo(k)fluoranthene	2.00	2.14	2.19	107	109	58.0-148			2.31	20
Chrysene	2.00	2.26	2.29	113	115	64.0-144			1.32	20
Dibenz(a,h)anthracene	2.00	2.29	2.35	115	117	52.0-155			2.59	20
Fluoranthene	2.00	2.32	2.37	116	118	69.0-153			2.13	20

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

(LCS) R4033801-1 02/10/24 14:50 • (LCSD) R4033801-2 02/10/24 15:08

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	2.28	2.32	114	116	64.0-136			1.74	20
Indeno(1,2,3-cd)pyrene	2.00	2.28	2.33	114	117	54.0-153			2.17	20
Naphthalene	2.00	2.25	2.30	112	115	61.0-137			2.20	20
Phenanthrene	2.00	2.16	2.21	108	111	62.0-137			2.29	20
Pyrene	2.00	2.17	2.21	108	111	60.0-142			1.83	20
1-Methylnaphthalene	2.00	2.37	2.42	118	121	66.0-142			2.09	20
2-Methylnaphthalene	2.00	2.35	2.40	117	120	62.0-136			2.11	20
2-Chloronaphthalene	2.00	2.08	2.12	104	106	64.0-140			1.90	20
(S) Nitrobenzene-d5				*124*	*109*	*31.0-160*				
(S) 2-Fluorobiphenyl				*108*	*111*	*48.0-148*				
(S) p-Terphenyl-d14				*112*	*114*	*37.0-146*				

Method Blank (MB)

(MB) R4034283-3 02/12/24 17:22

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	*111*			*31.0-160*
(S) 2-Fluorobiphenyl	*93.5*			*48.0-148*
(S) p-Terphenyl-d14	*103*			*37.0-146*

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

(LCS) R4034283-1 02/12/24 16:47 • (LCSD) R4034283-2 02/12/24 17:04

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	1.77	1.83	88.5	91.5	67.0-150			3.33	20
Acenaphthene	2.00	1.74	1.85	87.0	92.5	65.0-138			6.13	20
Acenaphthylene	2.00	2.00	2.09	100	104	66.0-140			4.40	20
Benzo(a)anthracene	2.00	1.72	1.75	86.0	87.5	61.0-140			1.73	20
Benzo(a)pyrene	2.00	1.90	1.94	95.0	97.0	60.0-143			2.08	20
Benzo(b)fluoranthene	2.00	1.85	1.89	92.5	94.5	58.0-141			2.14	20
Benzo(g,h,i)perylene	2.00	1.69	1.71	84.5	85.5	52.0-153			1.18	20
Benzo(k)fluoranthene	2.00	1.63	1.67	81.5	83.5	58.0-148			2.42	20
Chrysene	2.00	1.82	1.88	91.0	94.0	64.0-144			3.24	20
Dibenz(a,h)anthracene	2.00	1.69	1.72	84.5	86.0	52.0-155			1.76	20
Fluoranthene	2.00	1.97	2.00	98.5	100	69.0-153			1.51	20

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

(LCS) R4034283-1 02/12/24 16:47 • (LCSD) R4034283-2 02/12/24 17:04

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	1.91	1.99	95.5	99.5	64.0-136			4.10	20
Indeno(1,2,3-cd)pyrene	2.00	1.75	1.74	87.5	87.0	54.0-153			0.573	20
Naphthalene	2.00	1.97	2.05	98.5	103	61.0-137			3.98	20
Phenanthrene	2.00	1.83	1.93	91.5	96.5	62.0-137			5.32	20
Pyrene	2.00	1.85	1.89	92.5	94.5	60.0-142			2.14	20
1-Methylnaphthalene	2.00	1.99	2.07	99.5	104	66.0-142			3.94	20
2-Methylnaphthalene	2.00	1.99	2.03	99.5	102	62.0-136			1.99	20
2-Chloronaphthalene	2.00	1.72	1.80	86.0	90.0	64.0-140			4.55	20
(S) Nitrobenzene-d5				*108*	*110*	*31.0-160*				
(S) 2-Fluorobiphenyl				*90.5*	*93.0*	*48.0-148*				
(S) p-Terphenyl-d14				*90.5*	*90.0*	*37.0-146*				

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.
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.
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.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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

Project Name: Former Sumner Store

Project #: 2060.012.004

Sampler Name: B. Warner, R. Kemp

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 _____

C025

Sample Preservative

Sample ID#	Collection Date	Collection Time	Matrix	Number of Containers	Solids: Liquids:	Solids:	Solids: Liquids:	Solids: Liquids:					
Requested Analyses					TPH Gasoline by NWTPH-Gx	TPH as Diesel by NWTPH-Dx with SGC	VOCs (Full List) by EPA8260D	PAHs by EPA8270E-SIM	Dissolved Pb by EPA 6020B (Field Filtered)	Total Pb by EPA 6020B	GRO and VOCs by EPA TO-15		
P1-S1	2/5/24	9:00	S	2	X	X	X	X		X			
P1		10:20	W	12	X	X	X	X	X				
P2-S1		9:50	S	2	X	X	X	X		X			
P2-S2		9:35	S	2	X	X	X						
~~P2-S3~~ P2-S1-D		9:31	S	2 TM	X	X	X	X		X			
P2-D		10:16	S	2 12	X	X	X						
P2		10:15	W	12	X	X	X	X	X				
P3-S1		10:45	S	2									
P3-S2		10:50	S	2	X	X	X						
P3-S3		10:55	S	2									
P3		12:50	W	12	X	X	X	X	X				
~~P3-S1~~ P4-S1		12:15	S	2									
~~P3-S2~~ P4-S2		12:20	S	2	X	X	X						
~~P3-S3~~ P4-S3		12:25	S	2									
P4		13:25	W	12	X	X	X	X	X				

Comments
L1703299
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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.
Return non-analyzed samples on hold.

Relinquished By: BRAEDON WARNER	Agency/Agent: GSI WATER SOL.	Received By: Taylor McCurdy	Agency/Agent: Pace
Signature:	Time & Date: 1015 2/6/24	Signature: Taylor McCurdy	Time & Date: 2-7-24 0400
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature:	Time & Date:

THIS PURCHASE IS SUBMITTE
HEREBY INCORPORATED BY R

INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S &C'S) CONTAINED IN THE PRICE AGREEMENT ARE
ND C'S, EXPRESS OR IMPLIED.

Sample Receipt Checklist

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

PH-10BDH5021 TRC-2352362
CR6-20221V

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 #:
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 Sumner Store

Project #: 2060.012.004

Sampler Name: B. Warner, R. Kemp

Sample Preservative

Sample ID#	Collection Date	Collection Time	Matrix	Number of Containers	Solids: Liquids:	Solids:	Solids: Liquids:	Solids: Liquids:					Comments
					Requested Analyses								
					TPH Gasoline by NWTPH-Gx	TPH as Diesel by NWTPH-Dx with SGC	VOCs (Full List) by EPA8260D	PAHs by EPA8270E-SIM	Dissolved Pb by EPA 6020B (Field Filtered)	Total Pb by EPA 6020B	GRO and VOCs by EPA TO-15		LI703299
P5-S1	2/5/24	13:20	S	2	X	X	X	X		X			-16
P5-S1-D		13:21	S	2									-17
P5-S2		13:25	S	2	X	X	X						-18
P5-S3		15:30	S	2	X	X	X						-19
P5		14:15	W	12	X	X	X	X	X				-20
P6-S1		14:35	S	2	X	X	X	X		X			-21
P6-S2		14:40	S	2	X	X	X						-22
P6-S3		14:45	S	2									-23
P6		15:50	W	12	X	X	X	X	X				-24
IDW-S		15:35	S	2									-25
IDW-W		16:20	W	2	X	X	X			X			-26
Rinse		15:20	W	12	X	X	X	X	X				-27

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.

Return non-analyzed samples on hold.

Relinquished By: BRAEDON WARNER	Agency/Agent: GSI WATER SOL.	Received By: Taylor McCurdy	Agency/Agent: Pace
Signature:	Time & Date: 1015 2/6/24	Signature: Taylor McCurdy	Time & Date: 2.7.24 0900
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature:	Time & Date:

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

LN03299

Tracking Numbers	Temperature
7210 2108 8817	DBA84.1 ℃ = 4.1
6727 1915 6650	DBA81 2 ℃ = 12
7210 2109 0265	DBA81.8 ℃ = 1.8

Name

Date

ANALYTICAL REPORT

February 26, 2024

Oregon Dept. of Env. Quality - ODEQ

Sample Delivery Group:	L1707571
Samples Received:	02/07/2024
Project Number:	2060.012.004
Description:	Former Sumner Store

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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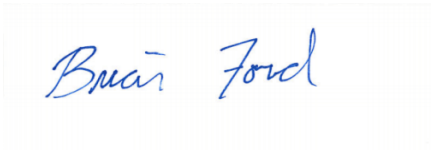
TRIP L1707571-01 GW

Collected by	Collected date/time	Received date/time
BW/RK	02/05/24 00:00	02/07/24 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 12:11	02/24/24 12:11	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

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 12:11	WG2233119
Acrolein	U		2.54	50.0	1	02/24/2024 12:11	WG2233119
Acrylonitrile	U		0.671	10.0	1	02/24/2024 12:11	WG2233119
Benzene	U		0.0941	1.00	1	02/24/2024 12:11	WG2233119
Bromobenzene	U	C3	0.118	1.00	1	02/24/2024 12:11	WG2233119
Bromodichloromethane	U		0.136	1.00	1	02/24/2024 12:11	WG2233119
Bromoform	U		0.129	1.00	1	02/24/2024 12:11	WG2233119
Bromomethane	U		0.605	5.00	1	02/24/2024 12:11	WG2233119
n-Butylbenzene	U		0.157	1.00	1	02/24/2024 12:11	WG2233119
sec-Butylbenzene	U		0.125	1.00	1	02/24/2024 12:11	WG2233119
tert-Butylbenzene	U		0.127	1.00	1	02/24/2024 12:11	WG2233119
Carbon disulfide	U		0.0962	1.00	1	02/24/2024 12:11	WG2233119
Carbon tetrachloride	U	J4	0.128	1.00	1	02/24/2024 12:11	WG2233119
Chlorobenzene	U		0.116	1.00	1	02/24/2024 12:11	WG2233119
Chlorodibromomethane	U		0.140	1.00	1	02/24/2024 12:11	WG2233119
Chloroethane	U		0.192	5.00	1	02/24/2024 12:11	WG2233119
Chloroform	U		0.111	5.00	1	02/24/2024 12:11	WG2233119
Chloromethane	U		0.960	2.50	1	02/24/2024 12:11	WG2233119
2-Chlorotoluene	U		0.106	1.00	1	02/24/2024 12:11	WG2233119
4-Chlorotoluene	U		0.114	1.00	1	02/24/2024 12:11	WG2233119
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	02/24/2024 12:11	WG2233119
1,2-Dibromoethane	U		0.126	1.00	1	02/24/2024 12:11	WG2233119
Dibromomethane	U		0.122	1.00	1	02/24/2024 12:11	WG2233119
1,2-Dichlorobenzene	U		0.107	1.00	1	02/24/2024 12:11	WG2233119
1,3-Dichlorobenzene	U		0.110	1.00	1	02/24/2024 12:11	WG2233119
1,4-Dichlorobenzene	U		0.120	1.00	1	02/24/2024 12:11	WG2233119
Dichlorodifluoromethane	U		0.374	5.00	1	02/24/2024 12:11	WG2233119
1,1-Dichloroethane	U		0.100	1.00	1	02/24/2024 12:11	WG2233119
1,2-Dichloroethane	U		0.0819	1.00	1	02/24/2024 12:11	WG2233119
1,1-Dichloroethene	U		0.188	1.00	1	02/24/2024 12:11	WG2233119
cis-1,2-Dichloroethene	U		0.126	1.00	1	02/24/2024 12:11	WG2233119
trans-1,2-Dichloroethene	U		0.149	1.00	1	02/24/2024 12:11	WG2233119
1,2-Dichloropropane	U		0.149	1.00	1	02/24/2024 12:11	WG2233119
1,1-Dichloropropene	U		0.142	1.00	1	02/24/2024 12:11	WG2233119
1,3-Dichloropropane	U		0.110	1.00	1	02/24/2024 12:11	WG2233119
cis-1,3-Dichloropropene	U		0.111	1.00	1	02/24/2024 12:11	WG2233119
trans-1,3-Dichloropropene	U		0.118	1.00	1	02/24/2024 12:11	WG2233119
2,2-Dichloropropane	U		0.161	1.00	1	02/24/2024 12:11	WG2233119
Di-isopropyl ether	U	C3	0.105	1.00	1	02/24/2024 12:11	WG2233119
Ethylbenzene	U		0.137	1.00	1	02/24/2024 12:11	WG2233119
Hexachloro-1,3-butadiene	U		0.337	1.00	1	02/24/2024 12:11	WG2233119
Isopropylbenzene	U		0.105	1.00	1	02/24/2024 12:11	WG2233119
p-Isopropyltoluene	U		0.120	1.00	1	02/24/2024 12:11	WG2233119
2-Butanone (MEK)	U		1.19	10.0	1	02/24/2024 12:11	WG2233119
Methylene Chloride	U		0.430	5.00	1	02/24/2024 12:11	WG2233119
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	02/24/2024 12:11	WG2233119
Methyl tert-butyl ether	U		0.101	1.00	1	02/24/2024 12:11	WG2233119
Naphthalene	U	C3	1.00	5.00	1	02/24/2024 12:11	WG2233119
n-Propylbenzene	U		0.0993	1.00	1	02/24/2024 12:11	WG2233119
Styrene	U		0.118	1.00	1	02/24/2024 12:11	WG2233119
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	02/24/2024 12:11	WG2233119
1,1,2,2-Tetrachloroethane	U	C3	0.133	1.00	1	02/24/2024 12:11	WG2233119
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	02/24/2024 12:11	WG2233119
Tetrachloroethene	U	J4	0.300	1.00	1	02/24/2024 12:11	WG2233119
Toluene	U		0.278	1.00	1	02/24/2024 12:11	WG2233119
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/24/2024 12:11	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 12:11	WG2233119
1,1,1-Trichloroethane	U		0.149	1.00	1	02/24/2024 12:11	WG2233119
1,1,2-Trichloroethane	U		0.158	1.00	1	02/24/2024 12:11	WG2233119
Trichloroethene	U	J4	0.190	1.00	1	02/24/2024 12:11	WG2233119
Trichlorofluoromethane	U		0.160	5.00	1	02/24/2024 12:11	WG2233119
1,2,3-Trichloropropane	U		0.237	2.50	1	02/24/2024 12:11	WG2233119
1,2,4-Trimethylbenzene	U		0.322	1.00	1	02/24/2024 12:11	WG2233119
1,2,3-Trimethylbenzene	U		0.104	1.00	1	02/24/2024 12:11	WG2233119
1,3,5-Trimethylbenzene	U		0.104	1.00	1	02/24/2024 12:11	WG2233119
Vinyl chloride	U		0.234	1.00	1	02/24/2024 12:11	WG2233119
Xylenes, Total	U		0.174	3.00	1	02/24/2024 12:11	WG2233119
(S) Toluene-d8	*107*			*80.0-120*		*02/24/2024 12:11*	WG2233119
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*02/24/2024 12:11*	WG2233119
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*02/24/2024 12:11*	WG2233119

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*				

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
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
C3	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Method sensitivity check is acceptable.
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.

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	**Contract Laboratory Name:** Pace Analytical National
Send Lab Report To: Ellen Woods Address: 700 NE Multnomah Street, Suite 600 Portland, OR 97232-4100 Tel #: 541-608-0490 Email: ellen.woods@deq.or.gov, remst@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

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 Sumner Store

Project #: 2060.012.004

Sampler Name: B. Warner, R. Kemp

C025

L1707571

Sample ID#	Collection Date	Collection Time	Matrix	Number of Containers	Sample Preservative: Solids/Liquids	TPH Gasoline by NWTPH-Gx	TPH as Diesel by NWTPH-Dx with SGC	VOCs (Full List) by EPA8260D	PAHs by EPA8270E-SIM	Dissolved Pb by EPA 6020B (Field Filtered)	Total Pb by EPA 6020B	GRO and VOCs by EPA TO-15	Comments
P1-S1	2/5/24	9:00	S	2	Solids	X	X	X	X		X		~~L1703799~~ -01
P1		10:20	W	12	Liquids	X	X	X	X	X			~~-02~~
P2-S1		9:50	S	2	Solids	X	X	X	X		X		~~-03~~
P2-S2		9:35	S	2	Liquids	X	X	X					~~-04~~
~~P2-S3~~ P2-S1-D		9:31	S	2 TM	Solids	X	X	X	X		X		~~-05~~
P2-D		10:16	S	2 12	Liquids	X	X	X					~~-06~~
P2		10:15	W	12		X	X	X	X	X			~~-07~~
P3-S1		10:45	S	2									~~-08~~
P3-S2		10:50	S	2		X	X	X					~~-09~~
P3-S3		10:55	S	2									~~-10~~
P3		12:50	W	12		X	X	X	X	X			~~-11~~
~~P3-S4~~ P4-S1		12:15	S	2									~~-12~~
~~P3-S2~~ P4-S2		12:20	S	2		X	X	X					~~-13~~
~~P3-S3~~ P4-S3		12:25	S	2									~~-14~~
P4		13:25	W	12		X	X	X	X	X			~~-15~~

Requested Analyses

NOTES: Contact Rick Ernst (503 708 5945, remst@gsiws.com) or Brandon Warner (208.991.6713) with questions. Include DEQ EDD with final lab report.

Return non-analyzed samples on hold.

1V 2/21/24

Relinquished By: BRANDON WARNER	Agency/Agent: GSI WATER SOL.	Received By: Taylor McCoy	Agency/Agent: Pace
Signature:	Time & Date: 1015 2/6/24	Signature: Taylor McCoy	Time & Date: 2.7.24 0400
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature:	Time & Date:

THIS PURCHASE IS SUBMITTE... HEREBY INCORPORATED BY R...

INCLUDING CONTRACT TERMS AND CONDITIONS AND SPECIAL CONTRACT TERMS AND CONDITIONS (T'S &C'S) CONTAINED IN THE PRICE AGREEMENT ARE ...ND C'S, EXPRESS OR IMPLIED.

Sample Receipt Checklist

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

PH-10BDH5021 TRC-2362362
CR6-20221V

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 #:
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 Sumner Store

Project #: 2060.012.004

Sampler Name: B. Warner, R. Kemp

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 with SGC	VOCs (Full List) by EPA8260D	PAHs by EPA8270E-SIM	Dissolved Pb by EPA 6020B (Field Filtered)	Total Pb by EPA 6020B	GRO and VOCs by EPA TO-15			Comments
				Solids: Liquids	Solids:	Solids: Liquids	Solids: Liquids							L1707571
P5-S1	2/5/24	13:20	S	2	X	X	X	X		X				L1703799
P5-S1-D		13:21	S	2										-10
P5-S2		13:25	S	2	X	X	X							-11
P5-S3		15:30	S	2	X	X	X							-12
P5		14:15	W	12	X	X	X	X	X					-13
P6-S1		14:55	S	2	X	X	X	X		X				-14
P6-S2		14:45	S	2	X	X	X							-15
P6-S3		14:45	S	2										-16
P6		15:15	W	12	X	X	X	X	X					-17
IDW-S		15:35	S	2										-18
IDW-W		16:20	W	2	X	X	X			X				-19
Rinse		15:20	W	12	X	X	X	X	X					-20

NOTES: Contact Rick Ernst (503.706.5945, rernst@gsiws.com) or Braedon Warner (208.991.6713) with questions. Include DEQ EDD with final lab report.

Return non-analyzed samples on hold.

Relinquished By: BRAEDON WARNER	Agency/Agent: GSI WATER SOL.	Received By: Taylor McCurdy	Agency/Agent: Pace
Signature:	Time & Date: 1105 2/6/24	Signature: Taylor McCurdy	Time & Date: 2.7.24 0900
Relinquished By:	Agency/Agent:	Received By:	Agency/Agent:
Signature:	Time & Date:	Signature:	Time & Date:

LI707571

LI703299

Tracking Numbers	Temperature
7210 2108 8817	DRA84.1 ℃ = 4.1
6727 1915 6650	DRA81.2 ℃ = 12
7210 2109 0265	DRA81.8 ℃ = 1.8

Name

Date

L1703299 OREGONDEQ re-log

R5

Please re-log for TRIP which is a Trip Blank for V8260 as R5 due 02/27.

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

Members

BF Brian Ford