

# Data Gap Investigation Report Former Weyerhaeuser Mill Site Oregon Department of Environmental Quality ECSI #1083 Coos County, Oregon

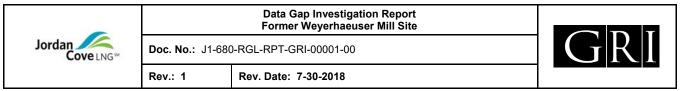
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		Data Gap Investigation Report Former Weyerhaeuser Mill Site	
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**Data Gap Investigation Report** 

# Former Weyerhaeuser Mill Site

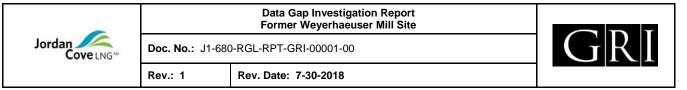
Oregon Department of Environmental Quality ECSI #1083 Coos County, Oregon

Prepared by



Oregon & Washington

July 30, 2018



#### DATA GAP INVESTIGATION EXECUTIVE SUMMARY

The former mill site was originally developed for a neutral-sulfite, semi-chemical process mill by the Menasha Wooden Ware Corporation in 1961. The mill consisted of main mill/paper machine building, shipping warehouse, maintenance/operations buildings, office space, repair shops, and storage. Weyerhaeuser purchased the mill in 1981 and operated at the site until approximately 2003. Multiple environmental investigations have been completed at the site to identify and characterize soil and groundwater conditions following the industrial use of the property (PES, 2006), which identified residual contamination that remains at the former Weyerhaeuser site. The Oregon Department of Environmental Quality (DEQ) approved leaving this contamination in place because it is not present at concentrations that pose an unacceptable risk to human health, safety, welfare, and the environment, and No Further Action (NFA) was appropriate. DEQ's approval to leave contamination on the site recommended the extent of residual concentrations from a hydraulic oil release in the vicinity of the south "lowerator" be determined by supplementary investigation.

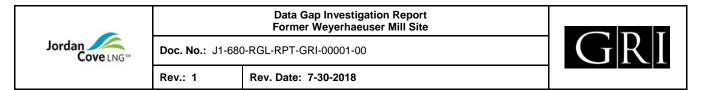
A data gap evaluation, conducted by GRI in 2015, identified additional data needs after review of existing information and recommended additional investigation to evaluate data needs and obtain the data necessary to assess potential human health and ecological risk to potential site receptors (GRI, 2015).

GRI prepared a Data Gap Investigation Work Plan and Site-Specific Safety Plan (SSSP), which describes the objectives, methods, and overall approach to obtaining the soil and groundwater data. DEQ approved the work plan in a letter dated January 22, 2018. In addition to delineating the extent of the residual concentrations near the south "lowerator," the work plan identified other locations for soil and groundwater chemical data collection to evaluate additional data gaps identified at the site previously (GRI, 2015) and provide current chemical data for the low-level residual industrial chemicals in soil and groundwater compared to current DEQ Risk-Based Concentrations (RBCs) as a preliminary screening approach to identify potential human health risks (DEQ, 2018). Based on anticipated continued industrial use of the site, the applicable RBC exposure pathways includes soil ingestion, inhalation, and dermal contact under the occupational, construction, and excavation worker exposure scenarios and groundwater in excavation for construction and excavation workers.

The range of polynuclear aromatic hydrocarbons (PAHs), metals, and/or petroleum hydrocarbons concentrations detected during this investigation are generally within the range of concentrations detected by the previous environmental investigation completed at the site by others (PES, 2006) that were used as the basis for the NFA determination issued by DEQ in 2006. However, where comparative analysis exists, the concentrations of PAHs, metals, and/or petroleum hydrocarbons detected during this investigation are typically detected at concentrations less than those detected in 2006. The 2006 investigation compared analytical results to a combination of regulatory levels that included DEQ RBCs published in 2003 and EPA Region 9 Preliminary Remediation Goals, dated October 2004. This report compares analytical results to the current RBCs published by DEQ in 2018.

Current chemical concentrations from soil and groundwater testing compared to generic RBCs indicate subsurface soils in the Fuel-Oil Release Area (FO), Chip Truck Hydraulic Lift Area (CT), Stream Channel Area (SC), North and South "Lowerators" Area (NL/SL), Former Mobile/Paint/Fuel Shops Area (SH), Mobile Shop Area (MO), South Jordan Point Debris Area (JP), Boiler and Powerhouse Area (BP), Debarker Area (DB), and fire suppression building areas of the site contain PAHs, metals, and/or





petroleum hydrocarbons at concentrations greater than the applicable RBCs considered. The SC, SH, MO, and JP areas of the site contain arsenic and/or chromium concentrations that exceed applicable RBCs but are below the natural background concentrations for the Coast Range (DEQ, 2018). In our opinion, the elevated metal concentrations likely represent natural background concentrations and are not indicative of anthropogenic sources. Concentrations detected in groundwater samples are below the applicable RBCs considered.

Based on comparison of the analytical results from the Data Gap Investigation to current generic RBCs developed by DEQ (2018) the following areas evaluated in this investigation have concentrations of PAHs, metals, and/or petroleum hydrocarbons that exceed RBCs for soil and we recommend mitigation in these areas if land use activities at the site change:

- Fuel Oil Release Area (FO) Naphthalene (46.8 mg/kg) exceeds the occupational RBC (23 mg/kg)
- Chip Truck Hydraulic Lift Area (CT) Oil (6,190 mg/kg) exceeds the construction worker RBC (4,600 mg/kg)
- "Lowerators" Area (NL/SL) Oil (61,500 mg/kg) exceeds occupational and construction worker RBCs of 4,600 and 14,000 mg/kg, respectively
- Boiler and Powerhouse Area (BP):

Benzo(a)pyrene (2.27 mg/kg) exceeds occupational RBCs (2.1 mg/kg)

Naphthalene (92 mg/kg) exceeds the occupational RBCs (23 mg/kg)

Diesel (27,660 mg/kg) exceeds the construction worker RBC (4,600 mg/kg)

Oil (14,000 mg/kg) exceeds the construction worker RBC (4,600 mg/kg)

- Debarker Area (DB) Oil (6,130 mg/kg) exceeds the construction worker RBC (4,600 mg/kg)
- Fire-Suppression Diesel AST Area Chromium (743 mg/kg) exceeds the construction worker RBC (49 mg/kg) and the default natural background concentration (240 mg/kg) for the Coast Range (DEQ, 2018)

Consistent with the recommendation of the NFA determination, the recent data collected for this investigation should be used to evaluate if subsequent remedial mitigation efforts are necessary to reduce the concentration of contaminants in soil. If land use activities at the site change, we recommend that remedial mitigation efforts be considered to:

- Mitigate future potential risk to human health, safety, welfare, and the environment by lowering the residual concentrations or eliminating exposure; and
- Satisfy the requirements and recommendations of the NFA determination.





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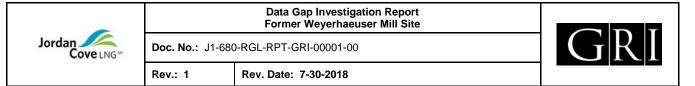
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#### INTRODUCTION

This Data Gap Investigation Report was prepared on behalf of Fort Chicago Holdings II, LLC, (Fort Chicago Holdings) for the former Weyerhaeuser (Weyerhaeuser) containerboard mill (site) located on the North Spit of Coos Bay, Oregon. The general location of the site is shown on Figure 1, the Vicinity Map. Multiple environmental investigations have been completed at the site to identify and characterize soil and groundwater conditions following the industrial use of the property (PES, 2006). These investigations identified residual contamination that remains at the former Weyerhaeuser site. The Oregon Department of Environmental Quality (DEQ) approved leaving this contamination in place because it is not present at concentrations that pose an unacceptable risk to human health, safety, welfare and the environment and No Further Action (NFA) was appropriate. DEQ's approval to leave contamination on the site recommended that the extent of residual concentrations from a hydraulic oil release in the vicinity of the south "lowerator" be determined by supplementary investigation. We understand Weyerhaeuser abandoned the monitoring wells associated with the hazardous-substance investigation and removal actions also recommended in the NFA determination issued by the DEQ in 2006.

Fort Chicago Holdings elected to conduct the supplementary investigation recommended by DEQ in the 2006 NFA and requested GRI prepare a Data Gap Investigation Work Plan and Site Specific Safety Plan (SSSP). The Data Gap Investigation Work Plan describes the objectives, methods, and overall approach to obtaining the soil and groundwater data and was provided to the site owner and DEQ for review and comment. DEQ approved the work plan in a letter dated January 22, 2018. In addition to delineating the extent of the residual concentrations near the south "lowerator", the work plan identified other locations for soil and groundwater chemical data collection to evaluate additional data gaps identified at the site previously (GRI, 2015) and provide current chemical data for the low level residual industrial chemicals in soil and groundwater. Our work included 1) review of DEQ files associated with Environmental Cleanup Site Information (ECSI) #1083, 2) collection of three shallow soil samples and completion of 104 exploratory borings to collect soil and groundwater samples, 3) chemical evaluation of the samples aimed to address data gaps, and 4) generation of this report.

The sample locations and chemical evaluation described in this report were designed to help identify the lateral and vertical extents of the low levels of residual contamination allowed to remain at the Main Mill Complex of the site as described in the NFA determination by DEQ and generate up-to-date chemical data. The concentrations of detected contaminants are compared to current DEQ Risk-Based Concentrations (RBCs) as a preliminary screening approach to identify potential human health risks (DEQ 2018). Considering the current industrial zoning for the site, reasonably anticipated future land use includes commercial or industrial operations. Based on anticipated continued use for industrial activities at the site, the applicable RBC exposure pathway includes soil ingestion, inhalation, and dermal contact under the occupational, construction, and excavation worker exposure scenarios. For groundwater, the applicable RBC exposure pathway includes and groundwater is not likely to be used for potable water supply. No RBC values have been established specifically for hydraulic oil; however, detected oil concentrations in soil and groundwater have been compared to DEQ natural background concentrations for metals (DEQ, 2018).

#### BACKGROUND

The former mill site was originally developed for a neutral-sulfite, semi-chemical process mill by the Menasha Wooden Ware Corporation in 1961. The mill consisted of main mill / paper machine building,



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shipping warehouse, maintenance / operations buildings, office space, repair shops, and storage. Weyerhaeuser purchased the mill in 1981 and operated at the site until approximately 2003.

The site is listed in the DEQ ECSI regulatory database (ECSI #1083). In April 1996, DEQ identified several areas of concern at the site. In 2006, PES Environmental, Inc. (PES), identified 13 areas of concern at the site where soil and groundwater contamination was suspected based on review of data from past environmental assessment work, observations of site conditions at the time, Weyerhaeuser knowledge of past practices, a 1996 DEQ Strategy Recommendation Memorandum, and findings of a Phase I Environmental Site Assessment completed by Delta Environmental Consultants (Delta) in 2004 (PES, 2006).

A data gap evaluation, conducted by GRI in 2015, identified additional data needs after review of existing information. Additional details on the evaluation and identification of data gaps can be found in the September 28, 2015, report by GRI titled "Data Gap Evaluation and Work Plan, South Dunes Site Oregon Department of Environmental Quality ECSI #1083, Coos County, Oregon." Additional investigation was recommended to evaluate data needs and obtain the data necessary to assess potential human health and ecological risk to potential site receptors.

#### METHODS

This section describes the methods used for the completion of field activities. The methods were developed to supplement previously available investigation data and identify current soil and groundwater environmental conditions. Data gap investigation activities included the collection of soil and groundwater samples and chemical analysis described in greater detail below.

#### Field Exploration Activities

Subsurface explorations were completed at the site between January 29 and February 14, 2018. Field activities complied with applicable Occupational Safety and Health Administration (OSHA) regulations for geo-environmental drilling. The GRI field supervisor served as the Site Health and Safety Officer and led the daily tailgate safety meetings. A general summary of field activities is provided below.

- Site Access GRI personnel and subcontractors accessed the locations of the subsurface explorations within the project site from the locked gate at the north end of the site. Access to the locations was coordinated with the property owner. No significant site clearing was conducted during field activities at the exploration locations. Minor areas of soil were disturbed for borings located at Jordan Point from the turning action of the drill rig.
- Exploration Layout and Utility Locates The subsurface exploration locations were located and marked with white marking paint or survey stakes with white flagging by GRI personnel on January 16 and 17, 2018. Each exploration location was evaluated for potential conflicting utilities by both One-Call Utility Notification Service and a private utility locating service.
- Subsurface Explorations The subsurface exploration program included 104 direct-push borings drilled from a track-mounted drill rig. Boring locations are





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presented on Figures 2 through 10. Each boring was advanced to depths ranging from 4 to 45 ft, with the majority of borings advanced to a depth of 15 ft. Borings were advanced in areas of known or suspected contamination to further evaluate and constrain identified data gaps. Due to the exploratory nature of the investigation, the location of borings presented on Figures 2 through 10 are different than those proposed in the Data Gap Investigation Work Plan (GRI, 2018).

Subsurface explorations were backfilled with bentonite and abandoned in accordance with Oregon Water Resources Department regulations. The drilling and sampling was accomplished under the direction of an experienced certified engineering geologist from GRI, who located the general areas of the subsurface explorations and maintained a log of the materials and conditions encountered during the course of the work. Boring logs are included in Appendix A. The explorations were completed by Stratus Corporation, Inc., of Gaston, Oregon. Borings were located using a recreational-grade GPS unit with a horizontal accuracy of about 15 ft.

■ Soil Sampling - Soil samples were obtained from the borings by advancing a continuous sampler in 5-ft intervals and then removing the sample core from the borehole before advancing the next 5-ft interval. The core was contained in a clear acetate sleeve inside the sample barrel. The soil core sleeves were extracted from the core barrel and opened in the field to allow visual classification of soils and qualitative observation of indications of contamination (sheen, odor, discoloration). Field screening results are used as a general guideline to assess areas of possible contamination. The field screening methods used included visual screening and organic vapor screening using a calibrated Photo Ionization Detector (PID).

The effectiveness of field screening varies with temperature, moisture content, organic content, soil type and type and age of contaminant. The presence or absence of a sheen, odor, discoloration, or volatile organic compound (VOC) vapors does not necessarily indicate the presence or absence of significant contamination. Visual screening consists of observing soil and groundwater for indications of contamination. Sheen observations involved placing a small amount of soil in water and observing the water surface for signs of sheen.

No Sheen: No visible sheen on the water surface.

*Slight Sheen:* Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly. Natural organic matter in the soil may produce a slight sheen.

*Moderate Sheen:* Light to heavy sheen; may have some color/iridescence; spread is irregular to flowing, may be rapid; few remaining areas of no sheen on the water surface.



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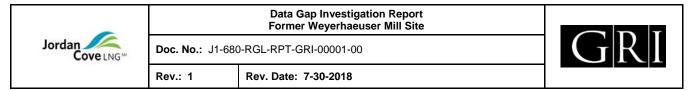
*Heavy Sheen:* Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

Headspace vapor screening evaluates the presence of VOC in the field. Headspace vapor screening involves placing a soil sample in a sealed container and measuring the vapors with PID to record the presence of organic vapors.

Soil samples for chemical analysis were selected based on results of the field screening and data needs to address potential data gaps. Sample designations in this report are codified by investigation area, followed by boring number, and the sample depth. For example, the sample designated FO-111-8 was collected from the fuel-oil release area (FO), from boring number 111, at a depth of 8 ft. Clean nitrile gloves and stainless-steel sampling tools were used for sample collection. The sampling tools were cleaned with a solution of Alconox detergent and water and then rinsed with distilled water between samples. Clean, laboratory-supplied glass sample containers were filled as full as possible and sealed with air-tight, Teflon-lined caps. Samples were stored in a cooler with ice for transport to the analytical laboratory.

- **Groundwater Sampling** Groundwater samples were collected from a temporary well point and brought to the ground surface by a peristaltic pump. Groundwater samples were designated with the area prefix (e.g. Fuel-oil release area samples are designated "FO"), the boring number (e.g. 111), and the letter "W." For example, groundwater sample FO-111-W was collected from boring FO-111 in the fuel-oil release area.
- Chemical Analysis Sample containers were labelled, recorded on a chain-of-custody form, placed in a cooler with ice, and later transported to ESC Lab Sciences in Mount Juliet, Tennessee, for chemical analysis. Chemical analysis included Northwest Method Total Petroleum Hydrocarbons (NWTPH) diesel (Dx) and gasoline (Gx) range organics, polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270SIM, volatile organic compounds (VOCs) by EPA Method 8260, polychlorinated biphenyls PCBs) by EPA Method 8082, and Priority Pollutant Metals (metals) by EPA Method 3010B, 6020, 7470A, and 7471A. The analyses were completed within a standard turnaround time.
- Cuttings and Drilling Fluids Cuttings, decontamination fluids, and other investigation derived wastes (IDW) were produced while completing the borings. Cuttings and fluids obtained from the explorations and from equipment decontamination were contained in 55-gal. steel drums and temporarily stored on site. At the completion of the subsurface explorations, the drums were removed from the site and the IDW disposed (in accordance with appropriate regulations) at Hillsboro Landfill in May of 2018.





#### RESULTS

A total of 13 areas are addressed in this report: 1) fuel-oil release area (FO), 2) mineral spirits release area (MS), 3) truck scales (TS) and carpenter shop (CS), 4) chip truck hydraulic lift area (CT), 5) hog fuel hydraulic lift area (HF), 6) stream channel area (SC), 7) north (NL) and south (SL) "lowerators," 8) former paint/mobile/fuel shops (SH), 9) mobile shop (MO), 10) South Jordan Point debris area (JP), 11) Boiler and Powerhouse (BP), 12) debarker area (DB), and 13) during the field activities, an above-ground storage tank (AST) cradle was identified adjacent to the fire suppression support building. The field team agreed with the property owner to collect a shallow soil sample just east of the fire support building below the footprint of the former AST.

During the course of the work, daily site-visit reports were provided to the property owner describing the work accomplished that day and presented an estimate of the field activities work planned for the following day. The site-visit reports served to inform the project team the daily findings and results of the investigation field work for discussion and planning.

#### 1: FUEL-OIL RELEASE AREA (FO)

**Background.** A fuel line ruptured near the main mill entrance in 1989 and released an estimated 3,000 gal. of fuel oil. An initial cleanup action by Weyerhaeuser removed 110 cu yd of soil and 27,760 gal. of oily groundwater. In 1991 Weyerhaeuser removed an additional 950 cu yd of soil. Soil and groundwater was evaluated by four soil borings and two groundwater monitoring wells around the perimeter of the soil excavation in March 1992. Soil and groundwater from the borings did not contain detectable concentrations of TPH or benzene, toluene, ethylbenzene, and xylenes (BTEX). Analysis for TPH (diesel and oil) and PAHs was conducted on soil samples from six test pits, and soil and groundwater from one direct-push boring indicated that detectable concentrations of TPH were not encountered in soil or groundwater. Two PAH compounds were detected in groundwater at concentrations below applicable RBCs.

**Data Gap Evaluation.** However, the six test pits and one direct-push boring were completed outside of the former above-ground fuel oil storage tank area. Additionally, fuel oil is also referred to as cutter stock oil and reprocessed fuel oil, which is a combination of Bunker C residual and recycled used oil. Recycled used oil can contain VOCs and metals, which were not analyzed for during the investigation by PES (PES, 2006).

#### Data Gap Investigation Results

Ten borings were completed in the Fuel-Oil Release Area. Exploration data and field observations are summarized in the table below. Boring locations are shown on Figure 3.

Area Prefix	Exploration ID #	Sample collected	PID, ppm	DTW, ft	TD, ft	Sheen	Odor	Date Completed	Longitude	Latitude
FO-	110	GW		2.8	15.0	No	No	1/30/2018	-124.23941	43.43640
FO-	111	GS	32.5	3.5	20.0	Slight	Slight	1/30/2018	-124.23937	43.43628

#### FUEL-OIL RELEASE AREA EXPLORATION SUMMARY



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Area Prefix	Exploration ID #	Sample collected	PID, ppm	DTW, ft	TD, ft	Sheen	Odor	Date Completed	Longitude	Latitude
FO-	112	SS		2.4	15.0	No	No	1/30/2018	-124.23953	43.43613
FO-	113	SS		3.5	15.0	No	No	1/30/2018	-124.23925	43.43634
FO-	114	SS		3.4	15.0	Slight	No	1/30/2018	-124.23926	43.43627
FO-	115	NS	8.1	3.1	20.0	Slight	Slight	1/30/2018	-124.23937	43.43625
FO-	116	SS	1.9	3.6	15.0	No	Moderate	1/31/2018	-124.23943	43.43630
FO-	117	SS	0.7	3.1	15.0	No	No	1/31/2018	-124.23920	43.43617
FO-	118	GS	0.0	2.4	15.0	No	No	1/31/2018	-124.23883	43.43611
FO-	203	SS	1.3	-	10.0	No	No	2/14/2018	-124.23934	43.43616

GW = Groundwater sample collected only

GS = Both groundwater and soil samples collected

SS = Soil sample collected only

NS = No samples were collected from this boring.

PID = Highest concentration of VOCs detected, in parts per million

DTW = Depth to groundwater, in ft

TD = Total depth of boring, in ft

- = Depth to groundwater could not be obtained, due to either refusal above the water level or caving

A slight sheen was observed in three borings at a depth of:

- 8 to 10 ft in boring FO-111
- 9.25 to 12.5 ft in boring FO-114
- 8.5 to 17.5 ft in FO-115

A light to moderate odor was observed in three borings at a depth of:

- 8 to 10 ft in boring FO-111
- isolated at 8.5 ft in boring FO-115
- isolated at 10 ft in boring FO-116

#### Soil Analytical Results

Based on field screening, six soil samples (FO-111-8, FO-113-8, FO-114-13, FO-116-14, FO-118-4, and FO-203-9) were analyzed from the fuel-oil release area. Laboratory results are summarized in Table 1 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that soil in the fuel-oil release area contains metals, VOCs, PAHs, diesel, oil, and gasoline.

**Metals.** Chemical analytical results indicate antimony, cadmium, selenium, silver, and thallium were not detected in soil sample FO-118-4. With the exception of arsenic and chromium, chemical analytical results indicate metals were detected below applicable RBCs. Arsenic was detected in FO-118-4 at a concentration of







3.12 milligrams per kilogram (mg/kg), which exceeds the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in FO-118-4 at concentrations of 7.5 mg/kg, which exceeds the occupational RBC for chromium (VI) of 6.3 mg/kg. However, these concentrations are total chromium concentrations. Additionally, the detected chromium concentration in sample FO-118-4 is below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).

**VOCs.** A total of 12 VOC compounds were detected in soil samples. With the exception of naphthalene, chemical analytical results indicate VOCs were detected below applicable RBCs. Naphthalene was detected in soil sample FO-111-8 at a concentration of 46.8 mg/kg, which exceeds the occupational RBC of 23 mg/kg.

**PAHs.** PAHs were not detected in soil samples FO-116-14, FO-118-4, and FO-203-9. Chemical analytical results indicate a total of 17 PAH compounds were detected in soil samples from FO-111-8, FO-113-8, and FO-114-13 at concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate diesel (up to 375 mg/kg), oil (477 mg/kg), and gasoline (1.66 mg/kg) were detected in soil samples at concentrations below applicable RBCs.

# **Groundwater Analytical Results**

Three groundwater samples (FO-110-W, FO-111-W, and FO-118-W) were analyzed from the fuel-oil release area. Laboratory results are summarized in Table 2 at the end of this report and in the analytical laboratory report included as Appendix B. VOCs were not detected in groundwater samples collected from the fuel-oil release area. Chemical testing indicates that groundwater in the fuel-oil release area contains metals, PAHs, and diesel.

**Metals.** Chemical analytical results indicate antimony, selenium, and silver were not detected in groundwater samples. Chemical analytical results indicate that other metals detected in groundwater are below applicable RBCs.

**PAHs.** Chemical analytical results indicate a total of five PAH compounds were detected in groundwater samples at concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate oil and gasoline were not detected in the groundwater sample collected from the fuel-oil release area. Diesel was detected in the groundwater sample at a concentration of 0.0416 milligrams per liter (mg/L).



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# Fuel-Oil Release Area Investigation Findings

The analytical results indicate detected concentrations of arsenic in soil sample FO-118-4 and naphthalene in soil sample FO-111-8 exceed the applicable RBC. Arsenic was detected in sample FO-118-4 at a concentration of 3.12 mg/kg, which exceeds the applicable RBC but is below the natural background concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in soil sample FO-118-4 at a concentration of 7.5 mg/kg, which exceeds the applicable RBC, but is below the natural background background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).

Observations of petroleum sheen and odor were clustered in borings FO-111, FO-114, FO-115, and FO-116. Naphthalene was detected in soil sample FO-111-8 at a concentration of 46.8 mg/kg from the VOC analysis and 0.372 mg/kg from the PAH analysis. The concentration of naphthalene exceeds the occupational RBCs of 23 mg/kg. The absence of elevated concentrations of naphthalene in other soil samples, including from boring FO-114 and FO-116, suggests soil exceeding the occupational RBC for naphthalene is limited to a small area surrounding boring FO-111. A slight petroleum sheen and light odor were observed in boring FO-111 from 8-10 ft. Based on the observations and chemical data collected for this assessment, the volume of soil exceeding the applicable RBC for naphthalene is estimated to be approximately 200 cubic yards.

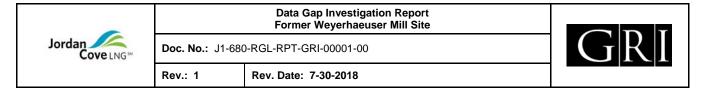
The analytical results indicate detected concentrations of analytes in groundwater do not exceed applicable RBCs in the Fuel-Oil Release area.

# 2: MINERAL SPIRITS RELEASE AREA (MS)

**Background.** Mineral spirits used to clean pitch from paper machine components were released from former above-ground storage tank (AST) and underground storage tanks (USTs) on the north side of the paper machine building. An air sparge / soil vapor extraction (AS/SVE) system was installed and operated from 1992 to 1994 to remediate contaminated groundwater. The AS/SVE system was decommissioned in 1994 following groundwater monitoring results indicating concentrations declined to below regulatory levels. PES collected groundwater samples in 2005 from three groundwater wells and three direct-push borings and analyzed for TPH (diesel and oil), PAHs, and VOCs. Soil samples were collected from three direct-push borings and analyzed for TPH (diesel, oil, and gasoline), PAHs, and VOCs. Diesel, mineral spirits, gasoline, and oil-range TPH and six VOC compounds were detected in one soil sample. Diesel, gasoline, PAHs, and VOCs were detected in groundwater in the mineral spirits release area. However, the concentrations of detected contaminants in soil and groundwater samples were less than applicable RBCs.

**Data Gap Evaluation.** Additional data needs were not identified in the Mineral Spirits Release area. However, the DEQ indicated in the No Further Action letter, that residual contamination remaining in the Mineral Spirits Release area includes low levels of petroleum hydrocarbon contamination below the concrete slab. Soil and groundwater below the concrete slab were evaluated to obtain recent chemical data and extent of residual mineral spirits.





#### Data Gap Investigation Results

Eight borings were completed in the Mineral Spirits Release Area. Exploration data and observations are summarized in the table below. Boring locations are shown on Figure 4.

Area Prefix	Exploration ID #	Sample collected	PID (ppm)	DTW (ft)	TD (ft)	Sheen	Odor	Date Completed	Longitude	Latitude
MS-	131	GS	300.0	4.8	25	No	Heavy	2/2/2018	-124.23936	43.43481
MS-	132	SS	2.6	4.6	15	No	No	2/2/2018	-124.23946	43.43480
MS-	133	SS	0.3	8.3	15	No	No	2/2/2018	-124.23917	43.43477
MS-	134	GW	0.3	4.7	15	No	No	2/3/2018	-124.23936	43.43461
MS-	135	NS	0.0	4.5	15	No	No	2/5/2018	-124.23958	43.43494
MS-	136	GS	0.0	4.5	15	No	No	2/5/2018	-124.23925	43.43491
MS-	184	NS	1.4	-	4	No	No	2/12/2018	-124.23917	43.43428
MS-	185	SS	3.8	0.5	15	No	No	2/12/2018	-124.23917	43.43421

#### MINERAL SPIRITS RELEASE AREA EXPLORATION SUMMARY

GW = Groundwater sample collected only

GS = Both groundwater and soil samples collected

SS = Soil sample collected only

NS = No samples were collected from this boring

PID = Highest concentration of VOCs detected, in parts per million

DTW = Depth to groundwater, in ft

TD = Total depth of boring, in ft

- = Depth to groundwater could not be obtained, due to either refusal above the water level or caving

#### Soil Analytical Results

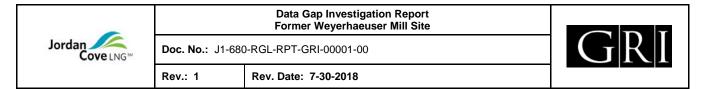
Five soil samples (MS-131-9, MS-131-21, MS-132-9, MS-133-9, and MS-185-4) were analyzed from the Mineral Spirits Release area. Laboratory results are summarized in Table 3 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that soil in the Mineral Spirits Release area contains VOCs, PAHs, diesel, and oil.

**VOCs.** A total of ten VOC compounds were detected in soil samples. Chemical analytical results indicate VOCs were detected below applicable RBCs.

**PAHs.** PAHs were not detected in soil samples MS-132-9 and MS-133-9. Chemical analytical results indicate a total of 16 PAH compounds were detected in the remaining soil samples at concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate diesel was not detected in soil samples MS-131-21 and MS-185-4, and oil was not detected in soil sample MS-131-21. Analytical results indicate diesel was detected in sample MS-131-9 at a concentration below applicable RBCs. Oil was detected in soil samples MS-131-9 and MS-185-4 at





concentrations of 69.6 and 4.59 mg/kg respectively; which are below the applicable RBCs.

#### **Groundwater Analytical Results**

Three groundwater samples (MS-131-W, MS-134-W, and MS-136-W) were collected from the Mineral Spirits Release area. Laboratory results are summarized in Table 4 at the end of this report and in the analytical laboratory report included in Appendix B. Chemical testing indicates that groundwater in the Mineral Spirits Release area contains metals, VOCs, PAHs, diesel, oil, and gasoline.

**Metals.** Chemical analytical results indicate beryllium, cadmium, selenium, and silver were not detected in groundwater samples. Chemical analytical results indicate other metals detected in groundwater at concentrations are below applicable RBCs.

**VOCs.** Chemical analytical results indicate a total of 12 VOC compounds were detected in groundwater samples at concentrations below applicable RBCs.

**PAHs.** Chemical analytical results indicate a total of ten PAH compounds were detected in groundwater samples at concentrations below applicable RBCs.

**Petroleum.** Diesel was detected in groundwater at a concentration of 15 mg/L. Oil was detected in groundwater at a concentration of 2.21 mg/L. Gasoline was detected in groundwater at a concentration of 0.38 mg/L. Chemical analytical results indicate petroleum compounds detected in groundwater samples at concentrations below applicable RBCs.

#### **Mineral Spirits Release Area Investigation Findings**

The analytical results indicate detected concentrations of analytes in soil and groundwater samples do not exceed applicable RBCs within the Mineral Spirits Release area.

#### 3: TRUCK SCALES AND CARPENTER SHOP (TS/CS)

**Background.** One gasoline UST and one diesel UST were removed from north of the truck scales and one mineral spirits UST was removed from north of the carpenter shop. Soil sample analysis in 1992 detected gasoline, diesel, ethylbenzene, and xylenes in groundwater from a monitoring well, and total petroleum hydrocarbons in soil from two borings (SEACOR, 1992). In 2005, PES collected groundwater samples from two monitoring wells, soil samples from nine test pits, and soil and groundwater samples from one direct-push boring. Diesel was detected in soil in three test pits and oil was detected in soil in two test pits. Diesel, gasoline, PAHs, and VOCs were detected in groundwater.

**Data Gap Evaluation.** The previous investigation appears to have concentrated on an area to the east of the truck scales. Review of environmental investigations conducted prior to the 2005 investigation indicates residual impacts from the gasoline and diesel USTs are present north of the truck scales. In addition, soil



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and groundwater sampling were not completed north of the carpenter shop in the area of former USTs. The lack of sample data in the vicinity of the decommissioned mineral spirits UST represents a data gap.

# Data Gap Investigation Results

Eight borings were completed in the Truck Scales and Carpenter Shop area. Exploration data and observations are summarized in the table below. Boring locations are shown on Figure 5.

Area Prefix	Exploration ID #	Sample collected	PID (ppm)	DTW (ft)	TD (ft)	Sheen	Odor	Date Completed	Longitude	Latitude
TS-	192	SS	4.2	1.5	15	No	Slight	2/13/2018	-124.24138	43.43581
TS-	193	SS	1.5	1.5	15	No	Slight	2/13/2018	-124.24134	43.43582
TS-	194	SS	1.6	2.0	15	No	No	2/13/2018	-124.24126	43.43578
TS-	195	GS	1.8	0.5	15	No	Slight	2/13/2018	-124.24134	43.43576
CS-	196	SS	3.4	3.2	15	No	No	2/13/2018	-124.24170	43.43584
CS-	197	SS	0.5	-	15	No	No	2/13/2018	-124.24172	43.43593
CS-	198	GS	1.5	2.1	15	No	No	2/13/2018	-124.24187	43.43585
TS-	204	GW	1.4	3.0	10	No	No	2/14/2018	-124.24091	43.43631

TRUCK SCALES AND CARPENTER SHOP EXPLORATION SUMMARY

GW = Groundwater sample collected only

GS = Both groundwater and soil samples collected

SS = Soil sample collected only

PID = Highest concentration of VOCs detected, in parts per million

DTW = Depth to groundwater, in ft

TD = Total depth of boring, in ft

- = Depth to groundwater could not be obtained, due to either refusal above the water level or caving

# Soil Analytical Results

Three soil samples (TS-192-8, TS-193-15, and TS-195-11) were analyzed from the truck scales area and one soil sample (CS-198-9) was analyzed from the carpenter shop area. Laboratory results are summarized in Table 5 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that soil in the Truck Scales area contains PAHs and diesel.

**PAHs.** PAHs were not detected in soil samples TS-193-15 and CS-198-9. Chemical analytical results indicate a total of eight PAH compounds were detected in soil samples TS-192-8 and TS-195-11 at concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate diesel was detected in sample TS-192-8 at a concentration of 13.2 mg/kg, which is below the applicable RBCs.

# **Groundwater Analytical Results**

Three groundwater samples (TS-195-W, TS-204-W, and CS-198-W) were analyzed from the Truck Scale and Carpenter Shop areas. Laboratory results are summarized in Table 6 at the end of this report and in the



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analytical laboratory report included as Appendix B. VOCs were not detected in the groundwater sample collected from TS-195-W, with the exception of a low concentration of toluene. Chemical testing indicates that groundwater in the Truck Scales area contains metals, PAHs, and diesel.

**Metals.** Chemical analytical results indicate metals detected in groundwater are below applicable RBCs.

**PAHs.** Chemical analytical results indicate a total of four PAH compounds were detected in groundwater samples at concentrations below applicable RBCs. In addition, two PAH compounds were also detected in the laboratory blank and likely represent a laboratory contaminant not actually present in the sample.

**Petroleum.** Analytical results indicate gasoline was not detected in the groundwater samples collected from the Truck Scales area. Diesel and oil were detected in the groundwater samples at concentrations below applicable RBCs.

# Truck Scales Carpenter Shop Investigation Findings

The analytical results indicate detected concentrations of analytes in soil and groundwater samples do not exceed applicable RBCs within the Truck Scales and Carpenter Shop area.

# 4: CHIP TRUCK HYDRAULIC LIFT AREA (CT)

**Background.** Approximately 150 gal. of hydraulic oil was released in this area in the early 1990s. Soil sample analysis in 1992 detected TPH on the south side of the chip truck hydraulic lift. Additional soil sampling in 1995 detected oil on the north side of the lift. PES collected soil samples from five test pits and soil and groundwater from five direct-push borings in 2005. Analysis of four soil samples detected diesel and oil. Based on the results of TPH analysis, soil samples were also analyzed for PAHs and two compounds were detected. Analysis of two groundwater samples indicated detection of diesel and oil and one groundwater sample detected PAHs. A remedial excavation was completed in the area in 2005 that removed approximately 699.5 tons of soil and 3,315 gal. of contaminated groundwater.

**Data Gap Evaluation.** Diesel, oil, and PAHs were detected in soil and groundwater in the chip truck hydraulic lift area. Following excavation and removal of contaminated soil and groundwater, confirmation samples indicate the concentrations are less than applicable RBCs. Based on the sampling and analysis completed in 2005, it did not appear that there are remaining data gaps in this area. However, some contamination was left in place following remedial activities and the spatial distribution of sample locations suggest that horizontal limits were less than refined.

#### Data Gap Investigation Results

Thirteen borings were completed in the Chip Truck Hydraulic Lift Area. Exploration data and observations are summarized in the table below. Boring locations are shown on Figure 6.



		Data Gap Investigation Report Former Weyerhaeuser Mill Site	
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Area	Exploration	Sample	PID	DTW	TD			Date		
Prefix	ID #	collected	(ppm)	(ft)	(ft)	Sheen	Odor	Completed	Longitude	Latitude
CT-	142	GS	1.0	4.3	20	Moderate	Moderate	2/5/2018	-124.24111	43.43525
CT-	143	SS	0.6	3.6	15	No	No	2/5/2018	-124.24073	43.43520
CT-	144	GS	0.0	3.5	20	No	No	2/5/2018	-124.24108	43.43514
CT-	145	SS	0.0	3.8	20	Moderate	Heavy	2/6/2018	-124.24121	43.43528
CT-	146	SS	0.0	4.2	20	Slight	No	2/6/2018	-124.24121	43.43519
CT-	147	NS	0.0	6.2	20	Moderate	Moderate	2/6/2018	-124.24103	43.43532
CT-	148	SS	0.0	4.6	15	No	No	2/6/2018	-124.24099	43.43542
CT-	149	SS	0.0	4.5	30	Slight	No	2/6/2018	-124.24123	43.43537
CT-	150	SS		3.4	20	Slight	No	2/6/2018	-124.24132	43.43533
CT-	151	GS		2.5	15	Slight	No	2/6/2018	-124.24155	43.43518
CT-	152	SS		3.9	15	Slight	No	2/6/2018	-124.24083	43.43525
CT-	153	GW		2.4	15	No	No	2/7/2018	-124.24134	43.43507
CT-	154	GW		4.5	15	No	No	2/7/2018	-124.24155	43.43485

#### CHIP TRUCK HYDRAULIC LIFT AREA EXPLORATION SUMMARY

GW = Groundwater sample collected only

GS = Both groundwater and soil samples collected

SS = Soil sample collected only

NS = No samples were collected from this boring

PID = Highest concentration of VOCs detected, in parts per million

DTW = Depth to groundwater, in ft

TD = Total depth of boring, in ft

#### Soil Analytical Results

Seven soil samples (CT-142-11, CT-145-7, CT-145-16, CT-146-13, CT-149-13, CT-149-29, and CT-150-13) were analyzed from the Chip Truck Hydraulic Lift area. Laboratory results are summarized in Table 7 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that soil in the Chip Truck Hydraulic Lift area contains PAHs, diesel, and oil.

**PAHs.** PAHs were not detected in soil samples CT-145-16, CT-146-13, CT-149-29, and CT-150-13. Chemical analytical results indicate a total of 12 PAH compounds were detected in soil samples at concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate diesel and oil detected were in soil in the Chip Truck area. Oil was detected in sample CT-145-7 at concentration of 6,190 mg/kg, which exceeds the applicable RBC of 4,600 mg/kg.

#### **Groundwater Analytical Results**

Four groundwater samples (CT-142-W, CT-144-W, CT-151-W, and CT-153-W) were analyzed from the Chip Truck Hydraulic Lift area. Laboratory results are summarized in Table 8 at the end of this report and



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in the analytical laboratory report included as Appendix B. Chemical testing indicates that groundwater in Chip Truck Hydraulic Lift area contains PAHs, oil, and diesel.

**PAHs.** Chemical analytical results indicate a total of 10 PAH compounds were detected in groundwater samples at concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate diesel and oil were detected in the groundwater sample at concentrations below applicable RBCs.

# Chip Truck Investigation Findings

The analytical results indicate the detected concentration of oil in soil exceeds applicable RBCs within the Chip Truck Hydraulic Lift area.

The analytical results indicate detected concentrations of analytes in groundwater samples do not exceed applicable RBCs within the Chip Truck Hydraulic Lift area.

# 5: HOG FUEL HYDRAULIC LIFT AREA (HF)

**Background.** Soil and groundwater samples were collected from seven direct-push borings in 1995. Analysis of the samples indicated that oil was detected between the truck scales and the chip truck lift area. Analysis of soil samples from three test pits detected diesel and oil in one test pit sample at concentrations below applicable RBCs. Analysis for PAHs in the sample with diesel and oil did not detect PAHs.

**Data Gap Evaluation.** The test pits completed to evaluate the hog fuel area were not located within the footprint of the hydraulic lift. Drips and leaks from hydraulic equipment and oil reservoir storage, if they occurred, would be located directly below the lift equipment. Additionally, the groundwater sample used to represent groundwater conditions in the hog fuel hydraulic lift area was located approximately 60 ft south of the equipment location. This distance may not be adequate to represent groundwater characterization of the hog fuel lift.

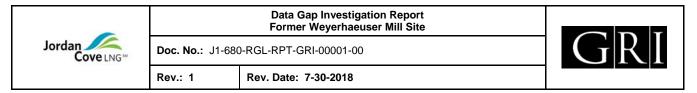
#### Data Gap Investigation Results

Five borings were completed in the Hog Fuel Hydraulic Lift Area. Exploration data and observations are summarized in the table below. Boring locations are shown on Figure 6.

Area Prefix	Exploration ID #	Sample collected	PID (ppm)	DTW (ft)	TD (ft)	Sheen	Odor	Date Completed	Longitude	Latitude
HF-	137	GS	0.9	3.6	20	Very Slight	No	2/5/2018	-124.24101	43.43557
HF-	138	NS	1.6	3.3	15	No	No	2/5/2018	-124.24114	43.43561
HF-	139	NS	0.2	3.2	7	No	No	2/5/2018	-124.24094	43.43557
HF-	140	SS	0.0	3.5	15	No	No	2/5/2018	-124.24090	43.43560
HF-	141	SS	0.8	3.8	15	No	No	2/5/2018	-124.24101	43.43561

#### HOG FUEL AREA EXPLORATION SUMMARY





GS = Both groundwater and soil samples collected

SS = Soil sample collected only

NS = No samples were collected from this boring

PID = Highest concentration of VOCs detected, in parts per million

DTW = Depth to groundwater, in ft

TD = Total depth of boring, in ft

#### Soil Analytical Results

One soil sample (HF-137-16) was analyzed from the Hog Fuel Hydraulic Lift Area. Laboratory results are summarized in Table 9 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that soil in the fuel-oil release area contains a PAH compound, phenanthrene.

**PAHs.** Chemical analytical results indicate phenanthrene was detected at a concentration of 0.000756 mg/kg. There is no established RBC for this compound.

Petroleum. Analytical results indicate diesel and oil were not detected.

#### **Groundwater Analytical Results**

One groundwater sample (HF-137-W) was analyzed from the Hog Fuel Hydraulic Lift area. Laboratory results are summarized in Table 10 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical analytical testing indicates that PAHs were not detected in the groundwater sample collected from the Hog Fuel Hydraulic Lift area. Chemical testing indicates that groundwater in the Hog Fuel Hydraulic Lift area contains diesel and oil.

**Petroleum.** Analytical results indicate diesel and oil were detected in the groundwater sample at concentrations of 0.0964 and 0.163 mg/l respectively, which are below applicable RBCs.

#### Hog Fuel Area Investigation Findings

The analytical results indicate phenanthrene was detected in soil sample HF-137-16 at a concentration of 0.000756 mg/kg. However, no RBCs have been established for this compound. The analytical results indicate soil concentrations do not exceed applicable RBCs within the Hog Fuel Hydraulic Lift area.

The analytical results indicate detected concentrations of diesel and oil do not exceed applicable RBCs within the Hog Fuel Hydraulic Lift area.

#### 6: STREAM CHANNEL AREA (SC)

**Background.** A stream formerly drained south-southeast from the maintenance shop to Coos Bay. The northern segment has been culverted and the southern segment remains open. Sediment samples collected in 2005 from four hand-augered borings completed in the southern portion and one direct-push boring in the northern portion of the channel encountered diesel and oil, three PAHs, and two PCBs.



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**Data Gap Evaluation.** The likely source of contaminants in the stream channel is stormwater runoff from the mill site. Sediment samples were collected in the stream channel area to evaluate the concentration of these contaminants.

# Data Gap Investigation Results

Two shallow explorations were completed in the Stream Channel Area. Stream Channel area samples were not field-screened using the PID. Groundwater samples were not collected from the Stream Channel explorations. Exploration data and observations are summarized in the table below. Exploration locations are shown on Figure 7.

Area Prefix	Exploration ID #	Sample collected	DTW (ft)	TD (ft)	Sheen	Odor	Date Completed	Longitude	Latitude
SC-	205	SS	-	1	No	No	2/14/2018	-124.23855	43.43208
SC-	206	SS	-	1	No	No	2/14/2018	-124.23999	43.43206

#### STREAMCHANNEL AREA EXPLORATION SUMMARY

SS = Soil sample collected only

DTW = Depth to groundwater, in ft

TD = Total depth of boring, in ft

- = Depth to groundwater could not be obtained, due to either refusal above the water level or caving

#### Soil Analytical Results

Two soil samples (SC-205-1 and SC-206-1) were analyzed from the Stream Channel area. Laboratory results are summarized in Table 11 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that soil in the Stream Channel area contains metals, PAHs, oil, and gasoline. Chemical analytical results indicate PCBs were not detected in Stream Channel area soil samples.

**Metals.** Chemical analytical results indicate selenium, silver, and thallium were not detected in soil samples. With the exception of arsenic and chromium, chemical analytical results indicate metals were detected below applicable RBCs. Arsenic was detected in SC-205-1 and SC-206-1 at concentrations of 3.12 and 4.84 mg/kg respectively, which exceed the occupational RBC of 1.9 mg/kg, but are below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in SC-205-1 and SC-205-1 at concentrations of 80.3 and 7.11 mg/kg respectively, which exceed the occupational RBC for chromium (VI) of 6.3 mg/kg. The chromium concentration detected in soil sample SC-205-1 also exceeds the construction worker RBC for chromium (VI) of 49 mg/kg. However, these concentrations are total chromium concentrations. Additionally, the detected chromium concentrations are below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).



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**PAHs.** Chemical analytical results indicate a total of 18 PAH compounds were detected in soil samples at concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate oil and gasoline were detected in soil samples at concentrations below applicable RBCs.

# Stream Channel Area Investigation Findings

The analytical results indicate detected concentrations of arsenic and chromium in soil samples SC-205-1 and SC-206-1 exceed the occupational RBC, and chromium in soil sample SC-205-1 also exceeds the construction worker RBC. Elevated arsenic concentrations and chromium concentration in SC-206-1 likely represent natural background concentrations and are not indicative of anthropogenic sources. Based on receiving site stormwater runoff and the shallow depth of sample collection, the elevated chromium concentration in SC-205-1 of 80.3 mg/kg when compared to other chromium results potentially represents an anthropogenic source. However, the concentration of chromium in SC-205-1 is less than the natural background concentration of 240 mg/kg.

# 7: NORTH AND SOUTH "LOWERATORS" AREA (NL/SL)

**Background.** Two hydraulic elevators, or "lowerators," were located at the east end of the main mill building to lower paper from the upper floor of the main mill building to the lower floor. The hydraulic equipment was set within concrete walls in a below-grade sump about 10 to 16 ft below the floor of the building. Soil and groundwater samples were collected from two direct-push borings completed near the north and south lowerators and analyzed for diesel, oil, and PAHs. Oil was detected in soil near the south lowerator. Diesel and oil were detected in groundwater less than the applicable RBC.

**Data Gap Evaluation.** PAHs were not detected in soil or groundwater; however, analytical testing results indicate elevated detection limits for PAHs are greater than the applicable RBCs.

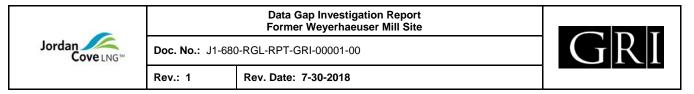
#### Data Gap Investigation Results

Seven borings were completed in the North and South "Lowerators" Area. Exploration data and observations are summarized in the table below. Boring locations are shown on Figure 4.

Area	Exploration	Sample	PID,	DTW,	TD,			Date		
Prefix	ID #	collected	ppm	ft	ft	Sheen	Odor	Completed	Longitude	Latitude
SL-	178	NS	0.0	-	7	No	No	2/12/2018	-124.23872	43.43465
SL-	179	NS	0.0	-	7	No	No	2/12/2018	-124.23869	43.43463
SL-	180	GS	20.0	5.8	15	No	Moderate	2/12/2018	-124.23874	43.43464
SL-	181	SS	0.4	-	15	No	No	2/12/2018	-124.23873	43.43458
NL-	182	SS	0.3	0.7	5	Heavy	Moderate	2/12/2018	-124.23870	43.43477
NL-	183	SS	0.3	-	15	No	No	2/12/2018	-124.23865	43.43476
SL-	186	GW	1.3	3.8	10	No	No	2/12/2018	-124.23838	43.43435

#### NORTH AND SOUTH "LOWERATORS" AREA EXPLORATION SUMMARY





- GW = Groundwater sample collected only
- GS = Both groundwater and soil samples collected
- SS = Soil sample collected only
- NS = No samples were collected from this boring
- PID = Highest concentration of VOCs detected, in parts per million
- DTW = Depth to groundwater, in ft
- TD = Total depth of boring, in ft
- = Depth to groundwater could not be obtained, due to either refusal above the water level or caving

#### Soil Analytical Results

Four soil samples (SL-180-10, SL-180-15, NL-182-5, and NL-183-15) were analyzed from North and South "Lowerators" area. Laboratory results are summarized in Table 12 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that soil in North and South "Lowerators" area contains metals, VOCs, PAHs, diesel, and oil.

**Metals.** Chemical analytical results indicate antimony, beryllium, cadmium, selenium, silver, and thallium were not detected in soil sample NL-182-5. With the exception of arsenic and chromium, chemical analytical results indicate metals were detected below applicable RBCs. Arsenic was detected in NL-182-5 at a concentration of 3.97 mg/kg, which exceeds the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in NL-182-5 at a concentration of 8.76 mg/kg, which exceeds the occupational RBC for chromium (VI) of 6.3 mg/kg. However, chromium is reported as total chromium concentrations. Additionally, the detected chromium concentration is below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).

**VOCs.** A total of eight VOC compounds were detected in soil. Chemical analytical results indicate VOCs were detected below applicable RBCs.

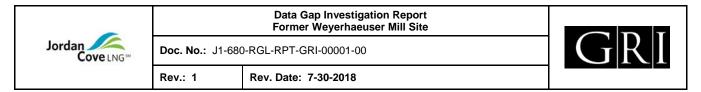
**PAHs.** PAHs were not detected in soil sample NL-183-15. Chemical analytical results indicate a total of thirteen PAH compounds were detected in soil samplesat concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate diesel was detected in soil samples at concentrations below applicable RBCs. Oil was detected in soil sample SL-180-10 at a concentration of 61,500 mg/kg, which exceeds the applicable RBC of 4,600 mg/kg.

#### Groundwater Analytical Results

Two groundwater samples (SL-180-W and SL-186-W) were analyzed from the North and South "Lowerators" area. Laboratory results are summarized in Table 13 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that groundwater in the North and South "Lowerators" area contains metals, PAHs, diesel, and oil.





**Metals.** Chemical analytical results indicate beryllium, cadmium, selenium, silver, and thallium were not detected in groundwater samples. Chemical analytical results indicate other metals were detected in groundwater below applicable RBCs.

**PAHs.** Chemical analytical results indicate naphthalene and 1-methylnaphthalene were detected in groundwater samples at concentrations below applicable RBCs.

**Petroleum.** Gasoline was not detected in groundwater. Analytical results indicate diesel and oil was detected in both groundwater samples at concentrations below applicable RBCs.

#### North and South Lowerators Area Investigation Findings

The analytical results indicate detected concentrations of arsenic and chromium in soil sample NL-182-5 exceed the occupational RBCs. Arsenic was detected in sample NL-182-5 at a concentration of 3.97 mg/kg, which exceeds the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in NL-182-5 at a concentration of 8.76 mg/kg, which exceeds the occupational RBC for chromium (VI) of 6.3 mg/kg, but is below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).

Chemical analytical results indicate a total of 13 PAH compounds were detected in soil samples at concentrations below applicable RBCs. Oil was detected in soil sample SL-180-10 at a concentration that exceeds applicable RBCs. A moderate petroleum odor was observed from 6 to 10 ft in boring SL-180. Using field observations, samples were selected for analysis to determine the lateral and vertical extent of compounds within soil that potentially exceed applicable RBCs. In the South "Lowerator" area, field observations did not suggest potential RBC exceedances below a depth of 10 ft. Additionally, field observations did not indicate affected soil in boring SL-181; therefore, soil samples were not selected for analysis from boring SL-181. Due to refusal at 7 ft in borings SL-178 and SL-179, potential contamination at depth could not be evaluated northeast of boring SL-180. Based on field observations, it appeared that the vaults containing the in-ground hydraulic lift for the lowerators were filled with concrete during the mill decommissioning activities. In addition, it appeared that the detected analytes that exceed RBCs are contained in the concrete vault and affected soils are likely limited to the interior of the north lowerator vault and the area to the northwest of the south lowerator.

The analytical results indicate detected concentrations of analytes in groundwater do not exceed applicable RBCs for the North and South "Lowerators" area.

#### 8: FORMER MOBILE/PAINT/FUEL SHOPS AREA (SH)

**Background.** The oil, mobile, and paint shops were located adjacent to each other near the west end of the main mill building. These shops were demolished in 1990 and the oil shop service pit was filled with gravel and capped with concrete. Soil samples from four direct-push borings were collected in 2005 and analyzed for diesel and oil. No diesel or oil was detected in soil samples.



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**Data Gap Evaluation.** Previous samples were not analyzed for VOCs or metals, which may have been used or stored at this location as used oils and spent solvents. In addition, three of the samples analyzed were shallow (less than 3 ft).

# Data Gap Investigation Results

Two borings were completed in the Former Mobile/Paint/Fuel Shops area. Exploration data and observations are summarized in the table below. Boring locations are shown on Figure 8.

Area Prefix	Exploration ID #	Sample collected	PID (ppm)	DTW (ft)	TD (ft)	Sheen	Odor	Date Completed	Longitude	Latitude
SH-	176	GS	0.6	4.3	15	No	No	2/9/2018	-124.24063	43.43433
SH-	177	SS	0.0	1.7	15	Slight	Slight	2/12/2018	-124.24055	43.43459

#### FORMER MOBILE/PAINT/FUEL SHOPS AREA EXPLORATION SUMMARY

GS = Both groundwater and soil samples collected

SS = Soil sample collected only

PID = Highest concentration of VOCs detected, in parts per million

DTW = Depth to groundwater, in ft

TD = Total depth of boring, in ft

#### Soil Analytical Results

One soil sample (SH-177-5) was analyzed from the Former Mobile/Paint/Fuel Shops area. Laboratory results are summarized in Table 14 at the end of this report and in the analytical laboratory report included as Appendix B. Analytical results indicate VOCs were not detected in soil sample SH-177-5. Chemical testing indicates that soil in Former Mobile/Paint/Fuel Shops area contains metals, PAHs, diesel, oil, and gasoline.

**Metals.** Chemical analytical results indicate antimony, beryllium, cadmium, selenium, silver, and thallium were not detected in soil sample SH-177-5. With the exception of arsenic, chemical analytical results indicate other metals were detected below applicable RBCs. Arsenic was detected in SH-177-5 at a concentration of 4.33 mg/kg, which exceeds the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018).

**PAHs.** Naphthalene was detected at a concentration of 0.00307 mg/kg, which is below applicable RBCs. 2-methylnapthalene was detected at a concentration of 0.00382 mg/kg; however, no RBCs have been established for this compound.

**Petroleum.** Analytical results indicate diesel, oil, and gasoline were detected in soil samples at concentrations below applicable RBCs.



		Data Gap Investigation Report Former Weyerhaeuser Mill Site	
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#### **Groundwater Analytical Results**

One groundwater samples (SH-176-W) was analyzed from the Former Mobile/Paint/Fuel Shops area. Laboratory results are summarized in Table 15 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that groundwater in the Former Mobile/Paint/Fuel Shops area contains metals, VOCs, PAHs, diesel, and oil.

**Metals.** Chemical analytical results indicate antimony, beryllium, cadmium, selenium, silver, thallium, and mercury were not detected in groundwater samples. Chemical analytical results indicate other metals detected in groundwater are below applicable RBCs.

**VOCs.** Chemical analytical results indicate toluene was detected at a concentration of 0.00103 mg/L, which is below the RBC of 220 mg/L.

**PAHs.** Chemical analytical results indicate a total of three PAH compounds were detected in groundwater samples at concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate gasoline was not detected in the groundwater sample collected from the Former Mobile/Paint/Fuel Shops area. Diesel was detected in the groundwater sample at a concentration of 0.159 mg/L, which is below the applicable RBC. Oil was detected at a concentration of 0.083 mg/L, which is below the applicable RBC.

#### Former Shops Area Investigation Findings

The analytical results indicate arsenic was detected in SH-177-5 at a concentration of 4.33 mg/kg, which exceeds the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018).

The analytical results indicate detected concentrations of VOC, PAHs, diesel, and oil detected in soil and groundwater do not exceed applicable RBCs.

#### 9: MOBILE SHOP AREA (MO)

**Background.** Following the demolition of the former paint, mobile, and oil shops, new paint, mobile, and oil shop buildings were constructed south of the purchasing building. A shallow soil sample (less than 2 ft) was collected from one direct-push boring in the drum storage area of the mobile shop and analyzed for diesel and oil. No diesel or oil was detected in the soil sample.

**Data Gap Evaluation.** Analysis of soil and groundwater in the vicinity of the oil shop and paint shop has not been completed.



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#### Data Gap Investigation Results

Five borings were completed in the Mobile Shop area. Exploration data and observations are summarized in the table below. Boring locations are shown on Figure 9.

Area	Exploration	Sample	PID	DTW	TD	cl		Date		1
Prefix	ID #	collected	(ppm)	(ft)	(ft)	Sheen	Odor	Completed	Longitude	Latitude
MO-	171	GS	0.8	3.5	15	No	No	2/8/2018	-124.24112	43.43379
MO-	172	SS	0.7	3.8	15	No	No	2/8/2018	-124.24115	43.43364
MO-	173	GS	0.7	3.3	15	Slight	No	2/8/2018	-124.24093	43.43361
MO-	174	SS	0.3	-	15	No	No	2/9/2018	-124.24041	43.43330
MO-	175	GS	0.8	3.1	15	No	No	2/9/2018	-124.24023	43.43370

#### MOBILE SHOP AREA EXPLORATION SUMMARY

GS = Both groundwater and soil samples collected

SS = Soil sample collected only

PID = Highest concentration of VOCs detected, in parts per million

DTW = Depth to groundwater, in ft

TD = Total depth of boring, in ft

- = Depth to groundwater could not be obtained, due to either refusal above the water level or caving

#### Soil Analytical Results

One soil sample (MO-173-14) was analyzed from the Mobile Shop area. Laboratory results are summarized in Table 16 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that soil in the Mobile Shop area contains metals. Chemical analytical results indicate PAHs, diesel, and oil were not detected in soil sample MO-173-14.

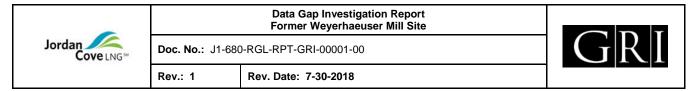
**Metals.** Chemical analytical results indicate antimony, beryllium, cadmium, selenium, silver, and thallium were not detected in soil sample MO-173-14. With the exception of arsenic, chemical analytical results indicate other metals were detected below applicable RBCs. Arsenic was detected in MO-173-14 at a concentration of 3.78 mg/kg, which exceeds the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018).

#### **Groundwater Analytical Results**

Three groundwater samples (MO-171-W, MO-173-W, and MO-175-W) were analyzed from the Mobile Shop area. Laboratory results are summarized in Table 17 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that groundwater in the Mobile Shop area contains metals, VOCs, PAHs, diesel, and oil.

**Metals.** Chemical analytical results indicate silver and thallium were not detected in groundwater samples. Chemical analytical results indicate other metals were detected in groundwater are below applicable RBCs.





**PAHs.** Chemical analytical results indicate naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene were detected in groundwater samples at concentrations below applicable RBCs.

**Petroleum.** Diesel and oil were detected in groundwater sample MO-175-W, at concentrations of 1.44 and 2.88 mg/kg, respectively, at concentrations below applicable RBCs.

#### Mobile Shop Area Investigation Findings

The analytical results indicate detected concentrations of arsenic in soil sample MO-173-14 exceed the RBCs for the occupational exposure scenario. Arsenic was detected in MO-173-14 at a concentration of 3.78 mg/kg, which exceeds the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018).

The analytical results indicate detected concentrations of compounds in groundwater do not exceed applicable RBCs for the Mobile Shop area.

# 10: SOUTH JORDAN POINT DEBRIS AREA (JP)

**Background.** According to previous report findings, the southern portion of Jordan Point was used as a disposal area for mill-related fill and construction debris. The debris material includes metal plates and scrap, wires, and building material (including asbestos-containing transite siding). Thirteen test pits were completed in the disposal area and four samples of suspected asbestos-containing material analyzed for asbestos. Three of the samples analyzed contained asbestos.

**Data Gap Evaluation.** The use of Jordan Point as a former disposal area for various mill debris (metals, building materials, and fill soil), suggest that TPH and metals may be present in the fill.

#### Data Gap Investigation Results

Four borings were completed in the South Jordan Point Debris area. Exploration data and observations are summarized in the table below. Boring locations are shown on Figures 7 and 9.

Area	Exploration	Sample	PID	DTW	TD			Date		
Prefix	ID #	collected	(ppm)	(ft)	(ft)	Sheen	Odor	Completed	Longitude	Latitude
JP-	188	GS	0.0	7.5	10	No	No	2/13/2018	-124.23925	43.43105
JP-	189	SS	0.0	7.5	10	No	No	2/13/2018	-124.23908	43.43142
JP-	190	SS	0.0	7.0	10	No	No	2/13/2018	-124.23854	43.43139
JP-	191	GS	2.1	6.0	15	No	No	2/13/2018	-124.24007	43.43274

#### SOUTH JORDAN POINT DEBRIS AREA EXPLORATION SUMMARY

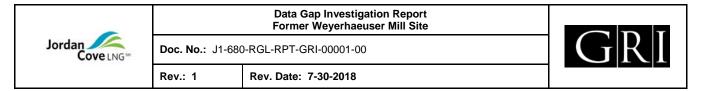
GS = Both groundwater and soil samples collected

SS = Soil sample collected only

PID = Highest concentration of VOCs detected, in parts per million

DTW = Depth to groundwater, in ft





TD = Total depth of boring, in ft

#### Soil Analytical Results

Four soil samples (JP-188-6, JP189-7, JP-190-7, and JP-191-8) were analyzed from the South Jordan Point Debris area. Laboratory results are summarized in Table 18 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that soil in the Jordan Point area contains metals, PAHs, diesel, and oil. PCBs were not detected in soil samples

**Metals.** Chemical analytical results indicate antimony, selenium, silver, and thallium were not detected in South Jordan Point Debris area soil samples. With the exception of arsenic and chromium, chemical analytical results indicate metals were detected soil below applicable RBCs. Arsenic was detected in soil samples JP-188-6, JP189-7, and JP-190-7 at concentrations of 2.39, 4.66, and 7.07 mg/kg, respectively, which exceed the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in soil samples JP-188-6, JP189-7, and JP-190-7 at concentrations of 19.7, 15.6, and 38.3 mg/kg, respectively, which exceed the occupational RBC for chromium (VI) of 6.3 mg/kg. However, chromium is reported as total chromium concentrations. Additionally, the detected chromium concentration is below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).

**PAHs.** PAHs were not detected in soil sample JP-191-8. Chemical analytical results indicate a total of 17 PAH compounds were detected in the remaining soil samples at concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate diesel, oil, and gasoline were not detected in sample JP-191-8. Diesel and oil were detected in sample JP-188-6 at concentrations of 48 and 1,980 mg/kg respectively, which are below applicable RBCs.

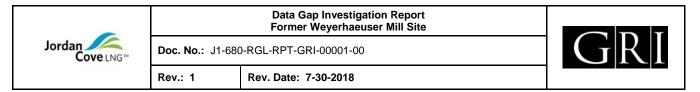
#### **Groundwater Analytical Results**

Two groundwater samples (JP-188-W and JP-191-W) were analyzed from the South Jordan Point Debris area. Laboratory results are summarized in Table 19 at the end of this report and in the analytical laboratory report included as Appendix B. VOCs were not detected in groundwater samples collected from the South Jordan Point Debris area. Chemical testing indicates that groundwater in the South Jordan Point Debris area contains metals, PAHs, diesel, and oil.

**Metals.** Chemical analytical results indicate antimony, beryllium, cadmium, selenium, silver, and thallium were not detected in groundwater samples. Chemical analytical results indicate other metals were detected below applicable RBCs.

**PAHs.** Chemical analytical results indicate benzo(g,h,i)perylene, naphthalene, and 2-methylnapthalene were detected in groundwater samples at concentrations below





applicable RBCs. In addition, benzo(g,h,i)perylene and naphthalene were also detected in the laboratory blank and likely represent a laboratory contaminant not actually present in the sample.

**Petroleum.** Gasoline was not detected in groundwater samples. Diesel was detected in groundwater samples JP-188-W and JP-191-W at concentrations of 0.674 and 0.179 mg/L, respectively. Oil was detected in samples JP-188-W and JP-191-W at concentrations of 1.31 and 0.21 mg/L respectively, which is below the applicable RBCs.

# Jordan Point Area Investigation Findings

The analytical results indicate detected concentrations of arsenic and chromium in soil samples JP-188-6, JP189-7, and JP-190-7 exceed the occupational RBCs. Arsenic was detected in soil samples JP-188-6, JP189-7, and JP-190-7 at concentrations ranging from 2.39 to 7.07 mg/kg, which exceed the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in soil samples JP-188-6, JP189-7, and JP-190-7 at concentrations ranging from 15.6 to 38.3 mg/kg, which exceed the occupational RBC for chromium (VI) of 6.3 mg/kg. However, chromium is reported as total chromium concentrations. Additionally, the detected chromium concentration is below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).

The analytical results indicate detected concentrations of compounds in groundwater do not exceed applicable RBCs for the South Jordan Point Debris area.



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#### 11: BOILER AND POWERHOUSE AREA (BP)

**Background.** Based on information from a former Weyerhaeuser employee, the mill operated two boilers to provide heat to the mill and for drying kilns.

**Data Gap Evaluation.** The fuel used for the boilers consisted of fuel oil and hog fuel. There is potential for fuel oil to be present beneath the former boiler and powerhouse location. There is no TPH, PAHs, metals, and VOCs data from the area of the boilers and powerhouse prior to this investigation.

#### Data Gap Investigation Results

Twenty-five borings were completed in the Boiler and Powerhouse area. Exploration data and observations are summarized in the table below. Boring locations are shown on Figure 10.

Area	Exploration	Sample	PID	DTW	TD			Date		
Prefix	ID #	collected	(ppm)	(ft)	(ft)	Sheen	Odor	Completed	Longitude	Latitude
BP-	101	GS	0.0	1.8	35	Slight	No	1/29/2018	-124.23968	43.43561
BP-	102	GS	2.1	2.2	20	Heavy	Slight	1/29/2018	-124.23975	43.43563
BP-	103	SS	0.0	1.9	20	No	No	1/30/2018	-124.23978	43.43572
BP-	104	SS	0.0	2.4	20	Slight	No	1/30/2018	-124.23981	43.43560
BP-	105	NS	0.6	2.3	20	Moderate	No	1/30/2018	-124.23966	43.43576
BP-	106	SS	0.0	2.5	20	No	No	1/30/2018	-124.23950	43.43590
BP-	107	SS	0.0	1.8	20	No	No	1/30/2018	-124.23949	43.43580
BP-	108	SS	0.0	2.5	20	Slight	No	1/30/2018	-124.23967	43.43588
BP-	109	GW		2.8	10	No	No	1/30/2018	-124.23982	43.43589
BP-	119	GS	75.0	3.5	45	Heavy	Heavy	1/31/2018	-124.23940	43.43540
BP-	120	SS	2.9	3.2	20	Moderate	Moderate	2/1/2018	-124.23951	43.43556
BP-	121	GS	3.3	3.8	30	No	Slight	2/1/2018	-124.23928	43.43522
BP-	122	SS	2.0	3.7	15	No	Slight	2/1/2018	-124.23928	43.43531
BP-	123	SS	3.2	3.8	15	No	No	2/1/2018	-124.23968	43.43508
BP-	124	NS	0.6	3.7	15	No	No	2/1/2018	-124.23944	43.43519
BP-	125	SS	0.0	3.6	20	No	Slight	2/1/2018	-124.23932	43.43534
BP-	126	SS	0.3	3.3	15	Slight	No	2/1/2018	-124.23950	43.43537
BP-	127	SS	0.0	-	15	Slight	No	2/1/2018	-124.23929	43.43551
BP-	128	SS	107.0	3.8	15	Moderate	Heavy	2/2/2018	-124.23927	43.43542
BP-	129	SS	140.0	4.0	15	Heavy	Heavy	2/2/2018	-124.23923	43.43543
BP-	130	NS		2.0	5.5	No	No	2/2/2018	-124.23918	43.43544
BP-	187	GS	2.4	-	15	No	No	2/12/2018	-124.23909	43.43547

#### BOILER AND POWERHOUSE AREA EXPLORATION SUMMARY



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Area Prefix	Exploration ID #	Sample collected	PID (ppm)	DTW (ft)	TD (ft)	Sheen	Odor	Date Completed	Longitude	Latitude
BP-	200	SS	13.0	-	15	Moderate	Heavy	2/14/2018	-124.23949	43.43549
BP-	201	NS		-	5	No	No	2/14/2018	-124.23967	43.43533
BP-	202	GS	0.5	2.0	10	No	No	2/14/2018	-124.23965	43.43531

GW = Groundwater sample collected only

GS = Both groundwater and soil samples collected

SS = Soil sample collected only

NS = No samples were collected from this boring

PID = Highest concentration of VOCs detected, in parts per million

DTW = Depth to groundwater, in ft

TD = Total depth of boring, in ft

- = Depth to groundwater could not be obtained, due to either refusal above the water level or caving

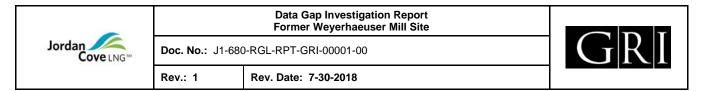
A slight sheen was observed in boring BP-101 between a depth of 7 and 12 ft. A heavy sheen and slight odor were observed in boring BP-102 between a depth of 8 and 17 ft. A slight sheen was observed in boring BP-104 between a depth of 10 and 14 ft. A moderate sheen was observed in boring BP-105 between a depth of 8.5 and 13.5 ft. A slight sheen was observed in boring BP-108 between a depth of 8.7 and 14.5 ft. A heavy odor was observed in boring BP-119 between a depth of 8 and 20 ft; a heavy sheen was observed between 11 and 24 ft; a moderate odor was observed between a depth of 20 and 28 ft; a moderate sheen was observed between 24 and 26 ft; a slight sheen was observed between 26 and 29 ft; a slight sheen and/or staining of the acetate sample sleeves was observed between 29 and 43.5 ft. A moderate sheen and odor was observed in boring BP-120 between a depth of 8 and 9 ft. A slight odor was observed in boring BP-122 at a depth of between 6 and 7 ft. A slight odor was observed in boring BP-125 isolated at a depth of 14 ft. A slight sheen was observed in boring BP-126 at a depth of between 5 and 6 ft. A slight sheen was observed in boring BP-127 isolated at a depth of 9 ft. A moderate sheen and heavy odor were observed in boring BP-128 at a depth of between 7.5 and 14 ft. A heavy odor was observed in boring BP-129 isolated at a depth of 6.5 ft, a slight to moderate sheen was observed between 8 and 10 ft, and a moderate odor and moderate to heavy sheen were observed from 10 to 13.5 ft. A heavy odor and moderate sheen were observed in boring BP-200 between a depth of 6 and 9.5 ft.

#### Soil Analytical Results

Twenty-five soil samples (BP-101-7, BP-101-30, BP-102-12, BP-102-20, BP-103-13, BP-104-13, BP-104-20, BP-106-13, BP-107-12, BP-108-13, BP-108-17, BP-119-8, BP-119-17, BP-119-33, BP-121-9, BP-125-13, BP-126-6, BP-127-8, BP-129-8, BP-129-14, BP-187-11, BP-200-8, BP-200-13, BP-202-4, and BP-202-10) were analyzed from the Boiler and Powerhouse area. Laboratory results are summarized in Table 20 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that soil in the Boiler and Powerhouse area contains metals, VOCs, PAHs, gasoline, diesel, and oil. Chemical analytical results indicate PCBs were not detected in soil samples

**Metals.** Chemical analytical results indicate antimony, selenium, silver, and thallium were not detected in Boiler and Powerhouse area soil samples.





With the exception of arsenic and chromium, chemical analytical results indicate metals were detected below applicable RBCs.

Arsenic was detected in soil samples BP-102-12 and BP-202-4 at concentrations of 3.68 and 4.17 mg/kg, respectively, which exceed the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018).

Chromium was detected in soil samples BP-102-12 and BP-202-4 at concentrations of 11.6 and 13.8 mg/kg which exceed the occupational RBC for chromium (VI) of 6.3 mg/kg. However, chromium is reported as total chromium concentrations. Additionally, the detected chromium concentrations are below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).

**VOCs.** A total of 13 VOC compounds were detected in soil. With the Chemical analytical results indicate VOCs were detected below applicable RBCs.

**PAHs**. With the exception of 2-chloronapthalene, chemical analytical results indicate 18 PAH compounds were detected in soil samples from the Boiler and Powerhouse area. PAHs were not detected in soil samples BP-101-30, BP-102-20, BP-103-13, BP-104-20, BP-106-13, BP-107-12, BP-108-17, BP-127-8, BP-200-13, and BP-202-10.

With the exception of benzo(a)pyrene and naphthalene, PAHs were detected at concentrations below applicable RBCs. Benzo(a)pyrene was detected in soil sample BP-119-8 at a concentration of 2.27 mg/kg, which exceeds the occupational RBC of 2.1 mg/kg.

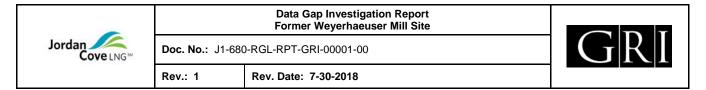
Naphthalene was detected in soil samples BP-119-8 and BP-129-8 at concentrations of 92.0 and 50.4 mg/kg, which exceed the occupational RBCs of 23 mg/kg.

**Petroleum.** Analytical results indicate gasoline was detected in soil samples BP-102-12 and BP-119-8 at concentrations of 0.803 and 161 mg/kg, respectively, which are below applicable RBCs.

Diesel was detected in soil samples BP-102-12, BP-108-13, BP-119-8, BP-129-8, BP-129-14, and BP-200-8. Diesel was detected in soil samples BP-119-8 and BP-129-8 at concentrations of 27,660 and 10,800 mg/kg, which exceed the construction worker RBC of 4,600 mg/kg. Diesel in soil sample BP-119-8 (27,660 mg/kg) exceeds the occupational RBC of 14,000 mg/kg.

Oil was detected in soil samples BP-102-12, BP-108-13, BP-119-8, BP-119-17, BP-129-8, BP-200-8, and BP-202-4 at concentrations ranging from 5.79 to 14,000 mg/kg. Oil was detected in soil samples BP-119-8 and BP-129-8 at





concentrations of 14,000 and 5,100 mg/kg, which exceed the construction worker RBC of 4,600 mg/kg.

## Groundwater Analytical Results

Six groundwater samples (BP-102-W, BP-109-W, BP-119-W, BP-121-W, BP-187-W, and BP-202-W) were analyzed from the Boiler and Powerhouse area. Laboratory results are summarized in Table 21 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that groundwater in the Boiler and Powerhouse area contains metals, VOCs, PAHs, gasoline, diesel, and oil.

**Metals.** Chemical analytical results indicate beryllium, cadmium, selenium, and silver were not detected in groundwater samples. Chemical analytical results indicate other metals were detected in groundwater below applicable RBCs.

**VOCs.** Chemical analytical results indicate naphthalene and n-propylbenzene were detected in groundwater from BP-119-W at concentrations of 0.0249 and 0.000686 mg/L, respectively. Naphthalene was detected in BP-119-W at a concentration less than the RBC of 0.5 mg/L.

**PAHs.** Chemical analytical results indicate a total of 10 PAH compounds were detected in groundwater samples at concentrations below applicable RBCs.

**Petroleum.** Gasoline was detected in BP-119-W at a concentration of 0.0929 mg/L, which is below the RBC of 14 mg/L. Diesel was detected in groundwater samples BP-102-W, BP-119-W, BP-187-W, and BP-202-W at concentrations ranging from 0.0428 and 1.34 mg/L. Oil was detected in samples BP-119-W, BP-187-W, and BP-202-W at concentrations ranging from 0.148 and 1.25 mg/L, which are below the applicable RBCs.

## **Boiler and Powerhouse Area Investigation Findings**

The analytical results indicate detected concentrations of arsenic and chromium in soil samples BP-102-12 and BP-202-4 exceed the applicable RBCs. The concentration of two PAH compounds (benzo(a)pyrene and naphthalene), diesel, and oil in soil from BP-119-8 and BP-129-8 exceed the applicable RBCs.

Arsenic was detected in soil samples BP-102-12 and BP-202-4 at concentrations of 3.68 and 4.17 mg/kg respectively, which exceed the occupational RBC of 1.9 mg/kg, but are below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in soil samples BP-102-12 and BP-202-4 at concentrations of 11.6 and 13.8 mg/kg, which exceed the occupational RBC for chromium (VI) of 6.3 mg/kg. However, chromium is reported as total chromium concentrations. Additionally, the detected chromium concentrations are below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).



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Analytical results indicate gasoline was detected in soil samples BP-102-12 and BP-119-8 at concentrations of 0.803 and 161 mg/kg, respectively, which are below applicable RBCs. Diesel was detected in soil samples BP-119-8 and BP-129-8 at concentrations of 27,660 and 10,800 mg/kg, which exceed the construction worker RBC of 4,600 mg/kg. Diesel in soil sample BP-119-8 (27,660 mg/kg) exceeds the occupational RBC of 14,000 mg/kg.

With the exception of benzo(a)pyrene and naphthalene, PAHs were detected at concentrations below applicable RBCs. Benzo(a)pyrene was detected in soil sample BP-119-8 at a concentration of 2.27 mg/kg, which exceed the occupational RBCs of 2.1 mg/kg. Naphthalene was detected in soil samples BP-119-8 and BP-129-8 at concentration of 92.0 and 50.4 mg/kg, which exceed the occupational RBCs of 23 mg/kg.

The absence of elevated concentrations of diesel and oil in other soil samples, including borings adjacent to borings BP-119 and BP-129, suggests soil exceeding the construction worker RBCs for diesel and oil is limited to a small area surrounding borings BP-119 and BP-129. The absence of elevated concentrations of diesel and oil in soil samples BP-119-17 and BP-119-33 suggests soil exceeding the applicable RBCs is limited to depths shallower than 17 ft. The volume of soil exceeding the occupational RBC for benzo(a)pyrene naphthalene, diesel, and oil and the construction worker RBC for diesel and oil is estimated to be approximately 6,100 cubic yards.

The analytical results indicate detected concentrations of compounds in groundwater do not exceed applicable RBCs for the Boiler and Powerhouse area.

## 12: DEBARKER AREA (DB)

**Background.** Based on historical aerial photographs, a debarker and saw mill appear to have been in operation west of the purchasing building.

**Data Gap Evaluation.** Drips and/or leaks of hydraulic fluids may have occurred at the debarker. However, there have been no previous investigations in this area.

## Data Gap Investigation Results

Seventeen borings were completed in the Debarker area. Exploration data and observations are summarized in the table below. Boring locations are shown on Figure 7.

Area Prefix	Exploration ID #	Sample collected	PID (ppm)	DTW (ft)	TD (ft)	Sheen	Odor	Date Completed	Longitude	Latitude
DB-	155	NS		-	7.0	No	No	2/7/2018	-124.24136	43.43452
DB-	156	GS	0.4	1.6	7.5	Slight	Slight	2/7/2018	-124.24107	43.43467
DB-	157	SS		-	5.3	No	No	2/7/2018	-124.24127	43.43435
DB-	158	NS	0.2	-	5.1	No	No	2/7/2018	-124.24117	43.43441
DB-	159	SS	0.6	6.8	7.7	No	Slight	2/7/2018	-124.24132	43.43438
DB-	160	SS	0.4	5.2	15.0	No	No	2/7/2018	-124.24107	43.43439
DB-	161	SS	0.5	-	30	Slight	No	2/7/2018	-124.24120	43.43417

#### DEBARKER AREA EXPLORATION SUMMARY



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Area Prefix	Exploration ID #	Sample collected	PID (ppm)	DTW (ft)	TD (ft)	Sheen	Odor	Date Completed	Longitude	Latitude
DB-	162	GS	1.8	7.3	25	Heavy	Heavy	2/7/2018	-124.24137	43.43433
DB-	163	GS	1.3	11.3	15	No	No	2/8/2018	-124.24139	43.43431
DB-	164	NS	1.2	-	7.5	No	No	2/8/2018	-124.24140	43.43437
DB-	165	SS	1.4	-	15	No	No	2/8/2018	-124.24146	43.43440
DB-	166	SS	1.2	-	15	No	No	2/8/2018	-124.24133	43.43430
DB-	167	SS		-	7.0	No	No	2/8/2018	-124.24132	43.43443
DB-	168	SS	0.9	5.6	15	No	No	2/8/2018	-124.24117	43.43419
DB-	169	SS	0.5	5.5	20	Slight	No	2/8/2018	-124.24111	43.43414
DB-	170	SS	1.0	4.8	20	Slight	No	2/8/2018	-124.24122	43.43402
DB-	199	GS	1.2	-	15	No	No	2/14/2018	-124.24255	43.43507

GS = Both groundwater and soil samples collected

SS = Soil sample collected only

NS = No samples were collected from this boring

PID = Highest concentration of VOCs detected, in parts per million

DTW = Depth to groundwater, in ft

TD = Total depth of boring, in ft

- = Depth to groundwater could not be obtained, due to either refusal above the water level or caving

A slight sheen was observed in borings DB-156, DB-161, DB-169, and DB-170. In boring DB-162, a moderate to heavy sheen was observed from 8 to 11 ft, a moderate to heavy odor was observed from 8 to 10 ft, a slight to moderate odor was observed from 5 to 8 ft, and a slight sheen was observed from 12 to 20 ft. A slight odor was observed in borings DB-156 between 6 and 7 ft and DB-159 between 7 and 8 ft. Several of the explorations in the DB area encountered refusal at similar depths. The obstruction may be a former concrete pad that appears to have been buried and paved over.

#### Soil Analytical Results

Twelve soil samples (DB-159-7, DB-161-13, DB-161-30, DB-162-10, DB-162-21, DB-163-11, DB-165-10, DB-166-11, DB-169-12, DB-169-16, DB-170-13, and DB-199-11) were analyzed from the Debarker area. Laboratory results are summarized in Table 22 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical analytical results indicate VOCs and gasoline were not detected in soil samples. Chemical testing indicates that soil in the Debarker area contains metals, PAHs, diesel, and oil.

**Metals.** Chemical analytical results indicate antimony, cadmium, selenium, silver, and thallium were not detected in Debarker area soil samples. With the exception of arsenic and chromium, chemical analytical results indicate metals were detected below applicable RBCs. Arsenic was detected in soil samples DB-162-10 and DB-199-11 at concentrations of 3.75 and 3.87 mg/kg respectively, which exceed the occupational RBC of 1.9 mg/kg, but are below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected



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in soil sample DB-199-11 at a concentration of 7.46 mg/kg, which exceeds the occupational RBC for chromium (VI) of 6.3 mg/kg. However, chromium is reported as total chromium concentrations. Additionally, the detected chromium concentration is below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).

**PAHs.** PAHs were not detected in soil samples DB-170-13 and DB-199-11. Chemical analytical results indicate a total of 17 PAH compounds were detected in soil samples at concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate gasoline was not detected in sample DB-199-11. Diesel was detected in samples DB-162-10 and DB-166-11 at concentrations of 1,480 and 1.6 mg/kg respectively, which are below applicable RBCs. Oil was detected in samples DB-163-11, DB-166-11, and DB-169-12 at concentrations ranging from 4.15 to 26 mg/kg, which are below applicable RBCs. Oil detected in DB-162-10 at a concentration of 6,130 mg/kg, which exceeds applicable RBCs.

## **Groundwater Analytical Results**

Three groundwater samples (DB-162-W, DB-163-W, and DB-199-W) were analyzed from the Debarker area. Laboratory results are summarized in Table 23 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that groundwater in the Debarker area contains metals, 1,2,3-trimethylbenzene, PAHs, diesel, and gasoline.

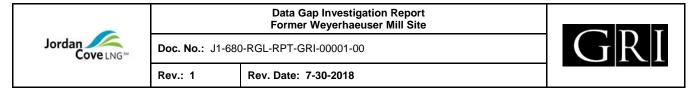
**Metals.** Chemical analytical results indicate antimony, beryllium, cadmium, selenium, and silver were not detected in groundwater samples. Chemical analytical results indicate metals were detected below applicable RBCs.

**VOCs.** VOCs were not detected in groundwater samples DB-163-W and DB-199-W. Chemical analytical results indicate 1,2,3-trimethylbenzene was detected in groundwater sample DB-162-W at concentration of 0.000369 mg/L. No applicable RBC is established for 1,2,3-trimethylbenzene.

**PAHs.** Chemical analytical results indicate a total of 11 PAH compounds were detected in groundwater samples at concentrations below applicable RBCs.

**Petroleum.** Oil was not detected in groundwater samples. Gasoline was not detected in groundwater sample DB-199-W. Diesel was detected in groundwater sample DB-163-W at a concentration of 0.0494 mg/L, which is below the applicable RBC. Gasoline was detected in sample DB-163-W at a concentration of 0.0324 mg/L, which is below the applicable RBC of 14 mg/L. Gasoline was also detected in the laboratory blank.





## Debarker Area Investigation Findings

The analytical results indicate detected concentrations of arsenic and chromium in soil samples DB-162-10 and DB-199-11 exceed the occupational RBCs. Arsenic was detected in soil samples DB-162-10 and DB-199-11 at concentrations of 3.75 and 3.87 mg/kg respectively, which exceed the occupational RBC of 1.9 mg/kg, but are below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in soil sample DB-199-11 at a concentration of 7.46 mg/kg, which exceeds the occupational RBC for chromium (VI) of 6.3 mg/kg. However, chromium is reported as total chromium concentrations. Additionally, the detected chromium concentration is below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).

Diesel was detected in samples DB-162-10 and DB-166-11 at concentrations of 1,480 and 1.6 mg/kg respectively, which are below applicable RBCs. Oil detected in DB-162-10 at a concentration of 6,130 mg/kg, which exceeds the construction worker RBC.

The analytical results indicate detected concentrations of compounds in groundwater do not exceed applicable RBCs.

## 13: FIRE-SUPPRESSION DIESEL AST AREA (FS)

**Background.** A former diesel aboveground storage tank (AST) cradle was identified by GRI adjacent to the fire suppression building. The field team collected a shallow soil sample below the footprint of the former AST to evaluate for the potential the drips and/or leaks of diesel fuel that may have occurred.

## Data Gap Investigation Results

One shallow soil sample (FSDAST) was collected from the former AST area. Exploration data and observations are summarized below. The exploration location is shown on Figure 10.



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#### DEBARKER AREA EXPLORATION SUMMARY

Exploration	Sample	PID	DTW	TD			Date		
ID #	collected	(ppm)	(ft)	(ft)	Sheen	Odor	Completed	Longitude	Latitude
FSDAST	SS	0.0	-	1.0	No	No	2/14/2018	-124.23930	43.43588

SS = Soil sample collected only

PID = Highest concentration of VOCs detected, in parts per million

DTW = Depth to groundwater, in ft

TD = Total depth of boring, in ft

- = Depth to groundwater could not be obtained, due to either refusal above the water level or caving

## Soil Analytical Results

One soil sample (FSDAST) was analyzed for metals, PAHs, and Dx. Laboratory results are summarized in Table 24 at the end of this report and in the analytical laboratory report included as Appendix B. Chemical testing indicates that soil metals, PAHs, diesel, and oil.

**Metals.** Chemical analytical results indicate selenium, silver, and thallium were not detected. With the exception of arsenic and chromium, chemical analytical results indicate metals were detected below applicable RBCs. Arsenic was detected at 3.07 mg/kg, which exceeds the occupational RBC of 1.9 mg/kg, but are below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected at 743 mg/kg, which exceeds the applicable RBCs for chromium (VI). However, chromium is reported as total chromium concentrations. Additionally, the detected chromium concentration is greater than the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018).

**PAHs.** Chemical analytical results indicate a total of 16 PAH compounds were detected in soil at concentrations below applicable RBCs.

**Petroleum.** Analytical results indicate diesel and oil were detected at concentrations of 701 and 361 mg/kg, respectively, which are below applicable RBCs.

#### **Fire-Suppression Building Investigation Findings**

The analytical results indicate detected concentrations of arsenic (3.07 mg/kg) and chromium (743 mg/kg) in soil exceed the applicable RBCs.

## FINDINGS AND CONCLUSIONS

Activities conducted during investigation included soil and groundwater sample collection from 104 direct-push explorations and three surface soil samples at the site. The following summarizes the findings of the investigation.

**General.** Subsurface soils and groundwater at the site generally contain low concentrations of metals, PAHs, and petroleum hydrocarbons. The analytical results of soil and groundwater samples collected



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during this work address recommendations in the NFA determination issued by the DEQ in 2006 to delineate the vertical and areal extent of low levels of residual TPH by supplementary investigation.

1: Fuel-Oil Release Area (FO). The analytical results indicate the concentration of arsenic and chromium in soil sample FO-118-4 and naphthalene in soil sample FO-111-8 exceed the applicable RBC. Arsenic was detected in sample FO-118-4 at a concentration of 3.12 mg/kg, which exceeds the applicable RBC but is below the natural background concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in soil sample FO-118-4 at a concentration of 7.5 mg/kg, which exceeds the applicable RBC but is below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018). In our opinion, the elevated arsenic and chromium concentrations represent natural background concentrative of anthropogenic sources.

Naphthalene was detected in soil sample FO-111-8 at a concentration of 46.8 mg/kg from the VOC analysis and 0.372 mg/kg from the PAH analysis. The concentration of naphthalene exceeds the occupational RBCs of 23 mg/kg. Elevated concentrations of naphthalene were not disclosed in borings FO-114 and FO-116, which suggests soil exceeding the occupational RBC for naphthalene is limited to a small area surrounding boring FO-111. A slight petroleum sheen and light odor were observed in boring FO-111 from 8 to 10 ft. Based on field observations and chemical data collected for this assessment, the volume of soil exceeding the applicable RBC for naphthalene is estimated to be approximately 200 cubic yards.

The analytical results indicate concentration of analytes in groundwater do not exceed applicable RBCs in the Fuel-Oil Release area.

**2:** Mineral Spirits Release Area (MS). The analytical results indicate the concentration of analytes detected do not exceed applicable RBCs for soil or groundwater. Based on the results of this investigation, additional characterization and remedial mitigation do not appear to be necessary at this time.

**3:** Truck Scales and Carpenter Shop (TS/CS). The analytical results indicate the concentration of analytes detected do not exceed applicable RBCs for soil or groundwater. Based on the results of this investigation, additional characterization and remedial mitigation do not appear to be necessary at this time.

**4:** Chip Truck Hydraulic Lift Area (CT). The analytical results indicate the detected concentration of oil (6,190 mg/kg) in soil exceeds the construction worker RBC (4,600 mg/kg). The analytical results indicate the concentration of analytes detected do not exceed applicable RBCs for groundwater. Based on the results of this investigation, additional characterization does not appear to be necessary at this time.

**5:** Hog Fuel Hydraulic Lift Area (HF). The analytical results indicate the concentration of analytes detected do not exceed applicable RBCs for soil or groundwater. Based on the results of this investigation, additional characterization and remedial mitigation do not appear to be necessary at this time.

6: Stream Channel Area (SC). The analytical results indicate detected concentrations of arsenic and chromium in soil samples SC-205-1 (3.12 mg/kg and 80.3 mg/kg, respectively) and SC-206-1 (4.84 mg/kg



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and 7.11 mg/kg, respectively) exceed the occupational RBC (1.9 mg/kg and 6.3 mg/kg, respectively), and chromium in soil sample SC-205-1 also exceeds the construction worker RBC (49 mg/kg). In our opinion, the elevated arsenic concentration likely represents natural background concentration and is not indicative of anthropogenic sources. Based on receiving site stormwater runoff and the shallow depth of sample collection, the elevated chromium concentration in SC-205-1 of 80.3 mg/kg potentially represents an anthropogenic source. However, the concentration of chromium in SC-205-1 is less than the natural background concentration of 240 mg/kg and, in our opinion, additional characterization and remedial mitigation do not appear to be necessary at this time.

**7:** North and South "Lowerators" Area (NL/SL). The analytical results indicate detected concentrations of arsenic and chromium in soil sample NL-182-5 exceed the occupational RBCs. Arsenic was detected in sample NL-182-5 at a concentration of 3.97 mg/kg, which exceeds the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in NL-182-5 at a concentration of 8.76 mg/kg, which exceeds the occupational RBC for chromium (VI) of 6.3 mg/kg, but is below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018). In our opinion, the elevated arsenic and chromium concentrations represent natural background concentrations and are not indicative of anthropogenic sources.

Chemical analytical results indicate 13 PAH compounds were detected in soil samples at concentrations below applicable RBCs. Oil was detected in soil sample SL-180-10 at a concentration of 61,500 mg/kg that exceeds the applicable occupational and construction worker RBCs of 4,600 and 14,000 mg/kg, respectively. A moderate petroleum odor was observed from 6 to 10 ft in boring SL-180. Using field observations, samples were selected for analysis to determine the lateral and vertical extent of compounds within soil that potentially exceed applicable RBCs. In the South "Lowerator" area, field observations did not suggest potential contamination in boring SL-181; therefore, soil samples were not selected for analysis from boring SL-181. Borings NL-182, SL-178, SL-179 met refusal at about 5 to 7 ft due to encountering concrete. Based on field observations, it appeared that the vaults containing the in-ground hydraulic lift for the lowerators were filled with concrete during the mill decommissioning activities. In addition, it appeared that the detected analytes that exceed RBCs are contained in the concrete vault and affected soils are likely limited to the interior of the north lowerator vault and the area to the northwest of the south lowerator.

The analytical results indicate concentration of analytes in groundwater do not exceed applicable RBCs for the North and South "Lowerators" area.

Based on the results of this investigation, additional characterization does not appear to be necessary at this time.

8: Former Mobile/Paint/Fuel Shops Area (SH). The analytical results indicate arsenic was detected in SH-177-5 at a concentration of 4.33 mg/kg, which exceeds the occupational RBC of 1.9 mg/kg, but is



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below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). In our opinion, the elevated arsenic concentration likely represents a natural background concentration and is not indicative of anthropogenic sources.

The analytical results indicate the concentration of analytes in groundwater do not exceed applicable RBCs. Based on the results of this investigation, additional characterization and remedial mitigation do not appear to be necessary at this time.

**9:** Mobile Shop Area (MO). The analytical results indicate arsenic was detected in MO-173-14 at a concentration of 3.78 mg/kg, which exceeds the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). In our opinion, the elevated arsenic concentration likely represents a natural background concentration and is not indicative of anthropogenic sources.

The analytical results indicate concentration of analytes in groundwater do not exceed applicable RBCs for the Mobile Shop area. Based on the results of this investigation, additional characterization and remedial mitigation do not appear to be necessary at this time.

**10: South Jordan Point Debris Area (JP).** The analytical results indicate detected concentrations of arsenic and chromium in soil samples JP-188-6, JP-189-7, and JP-190-7 exceeding the occupational RBCs. Arsenic was detected in soil samples JP-188-6, JP-189-7, and JP-190-7 at concentrations ranging from 2.39 to 7.07 mg/kg, which exceed the occupational RBC of 1.9 mg/kg, but is below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in soil samples JP-189-7, and JP-190-7 at concentrations ranging from 15.6 to 38.3 mg/kg which exceed the occupational RBC for chromium (VI) of 6.3 mg/kg, but are below the natural background chromium concentrations likely represent natural background concentrations and are not indicative of anthropogenic sources.

The analytical results indicate concentration of analytes in groundwater do not exceed applicable RBCs for the South Jordan Point Debris area. Based on the results of this investigation, additional characterization and remedial mitigation (for compounds other than asbestos) do not appear to be necessary at this time.

Previous assessments in the Jordan Point area encountered asbestos containing materials in the Jordan Point area (PES, 2006). Asbestos concentration and distribution were not evaluated during the Data Gap Investigation.

**11: Boiler and Powerhouse Area (BP).** The analytical results indicate detected concentrations of arsenic and chromium in soil samples BP-102-12 and BP-202-4 exceed the applicable RBCs. The concentration of benzo(a)pyrene, naphthalene, and diesel in soil from BP-119-8 and BP-129-8 exceed the applicable RBCs.

Arsenic was detected in soil samples BP-102-12 and BP-202-4 at concentrations of 3.68 and 4.12 mg/kg respectively, which exceed the occupational RBC of 1.9 mg/kg, but are below the natural background



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arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in soil samples BP-102-12 and BP-202-4 at concentrations of 11.6 and 13.8 mg/kg which exceed the occupational RBC for chromium (VI) of 6.3 mg/kg. However, chromium is reported as total chromium concentrations. Additionally, the detected chromium concentrations are below the natural background chromium concentration for the Coast Range of 240 mg/kg (DEQ, 2018). In our opinion, the elevated arsenic and chromium concentration likely represents a natural background concentration and are not indicative of anthropogenic sources.

Analytical results indicate gasoline was detected in soil samples BP-102-12 and BP-119-8 at concentrations of 0.803 and 161 mg/kg, respectively, which are below applicable RBCs. Diesel was detected in soil samples BP-119-8 and BP-129-8 at concentrations of 27,660 and 10,800 mg/kg, which exceed the construction worker RBC of 4,600 mg/kg. Diesel in soil sample BP-119-8 (27,660 mg/kg) exceeds the occupational RBC of 14,000 mg/kg. Oil was detected in soil samples BP-119-8 and BP-129-8 at concentrations of 14,000 mg/kg.

With the exception of benzo(a)pyrene and naphthalene, PAHs were detected at concentrations below applicable RBCs. Benzo(a)pyrene was detected in soil sample BP-119-8 at a concentration of 2.27 mg/kg, which exceeds the occupational RBCs of 2.1 mg/kg. Naphthalene was detected in soil samples BP-119-8 and BP-129-8 at concentrations of 92.0 and 50.4 mg/kg, which exceed the occupational RBCs of 23 mg/kg.

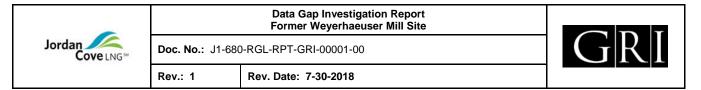
Field observations and chemical analytical data, suggests soil exceeding the occupational RBCs for the two PAH compounds, diesel, and oil, and the construction worker RBCs for diesel and oil is limited to a small area surrounding borings BP-119 and BP-129. Based on field observations and analytical testing, the volume of soil exceeding the occupational RBCs for benzo(a)pyrene naphthalene, diesel, and oil and the construction worker RBCs for diesel and oil is estimated to be approximately 6,100 cubic yards.

The analytical results indicate detected concentrations of compounds in groundwater do not exceed applicable RBCs for the Boiler and Powerhouse area.

Based on the results of this investigation, previously unidentified soil and groundwater contamination were encountered in the Boiler and Powerhouse area. Analytical testing indicates that the concentration of PAHs, diesel, and oil exceed applicable RBCs.

**12: Debarker Area (DB).** The analytical results indicate detected concentrations of arsenic and chromium in soil samples DB-162-10 and DB-199-11 exceed the occupational RBCs. Arsenic was detected in soil samples DB-162-10 and DB-199-11 at concentrations of 3.75 and 3.87 mg/kg, respectively, which exceed the occupational RBC of 1.9 mg/kg but are below the natural background arsenic concentration for the Coast Range of 12 mg/kg (DEQ, 2018). Chromium was detected in soil sample DB-199-11 at a concentration of 7.46 mg/kg, which exceeds the occupational RBC for chromium (VI) of 6.3 mg/kg. However, chromium is reported as total chromium concentrations. Additionally, the detected chromium concentration is below the natural background chromium concentration for the Coast Range of 240 mg/kg





(DEQ, 2018). Elevated arsenic and chromium concentration likely represents a natural background concentration and are not indicative of anthropogenic sources.

Diesel was detected in samples DB-162-10 and DB-166-11 at concentrations of 1,480 and 1.6 mg/kg respectively, which are below applicable RBCs. Oil detected in DB-162-10 at a concentration of 6,130 mg/kg, which exceeds the applicable construction worker RBC.

The analytical results indicate detected concentrations of compounds in groundwater do not exceed applicable RBCs. Based on the results of this investigation, additional characterization and remedial mitigation do not appear to be necessary at this time.

**13: Fire-Suppression Diesel AST Area.** The analytical results indicate detected concentrations of arsenic (3.07 mg/kg) and chromium (743 mg/kg) in soil exceed the occupational RBCs of 1.9 mg/kg and 6.3 mg/kg, respectively. In addition, detected concentrations of chromium (743 mg/kg) exceeds the construction worker RBC of 49 mg/kg. In our opinion, the elevated arsenic concentration likely represents a natural background concentration and are not indicative of anthropogenic sources. The elevated chromium concentration may represent an anthropogenic source related to paint used on the fire suppression building.

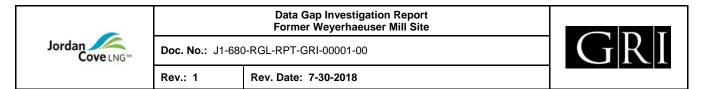
## **Remedial Mitigation**

Current chemical concentrations from soil and groundwater testing compared to generic RBCs indicate subsurface soils in the FO, CT, SC, NL/SL, SH, MO, JP, BP, DB, and fire suppression building areas of the site contain PAHs, metals, and/or petroleum hydrocarbons at concentrations that are greater than the applicable RBCs considered. Figure 11, RBC Exceedance in Soil North Area, and Figure 12, RBC Exceedance in Soil South Area, present the approximate areas where the concentration of residual contamination from historical industrial activities are greater than applicable RBCs. Concentrations detected in groundwater samples are below the applicable RBCs considered.

Detected metal concentrations in soil at the SC, MO, SH, and JP areas that exceed the applicable RBCs are generally less than the regional default natural background concentrations for metals in the Coast Range (DEQ, 2018). Only the Fire-Suppression Diesel AST area sample result for chromium (743 mg/kg) is greater than the regional default natural background concentration (240 mg/kg) for the Coast Range (DEQ, 2018).

The range of PAHs, metals, and/or petroleum hydrocarbons concentrations detected during this investigation are generally within the range of concentrations detected by the previous environmental investigation completed at the site by others (PES, 2006) that were used as the basis for the NFA determination issued by DEQ in 2006. However, where comparative analysis exists, the concentration of PAHs, metals, and/or petroleum hydrocarbons detected during this investigation are typically not detected or at concentrations less than those detected in 2006. The 2006 investigation compared analytical results to a combination of regulatory levels that included DEQ RBCs published in 2003 and EPA Region 9





Preliminary Remediation Goals, dated October 2004. This report compares analytical results to the current RBCs published by DEQ in 2018.

Consistent with the recommendation of the NFA determination, the recent data collected for this investigation should be used to evaluate if subsequent remedial mitigation efforts are necessary to reduce the concentration of contaminants in soil. If land use activities at the site change, we recommend that remedial mitigation efforts be considered to:

- mitigate future potential risk to human health, safety, welfare and the environment by lowering the residual concentrations or eliminating exposure; and,
- satisfy the requirements and recommendations of the NFA determination.

Based on comparison of the analytical results from the Data Gap Investigation to current generic RBCs developed by DEQ (2018) the following areas evaluated in this investigation have concentrations of PAHs, metals, and/or petroleum hydrocarbons that exceed RBCs for soil and we recommend mitigation in these areas if land use activities at the site change:

- Fuel Oil Release Area (FO): Naphthalene (46.8 mg/kg) exceeds the occupational RBC (23 mg/kg)
- Chip Truck Hydraulic Lift Area (CT). Oil (6,190 mg/kg) exceeds the construction worker RBC (4,600 mg/kg)
- "Lowerators" Area (NL/SL) Oil (61,500 mg/kg) exceeds occupational and construction worker RBC of 4,600 and 14,000 mg/kg, respectively
- **Boiler and Powerhouse Area** (BP):

-Benzo(a)pyrene (2.27 mg/kg) exceeds occupational RBC (2.1 mg/kg) -Naphthalene (92 mg/kg) exceeds the occupational RBC (23 mg/kg) -Diesel (27,660 mg/kg) exceeds the construction worker RBC (4,600 mg/kg) -Oil (14,000 mg/kg) exceeds the construction worker RBC (4,600 mg/kg)

- Debarker Area (DB): Oil (6,130 mg/kg) exceeds the construction worker RBC (4,600 mg/kg)
- Fire-Suppression Diesel AST Area: Chromium (743 mg/kg) exceeds the construction worker RBC (49 mg/kg) and the default natural background concentration (240 mg/kg) for the Coast Range (DEQ, 2018).

## LIMITATIONS

This report has been prepared to assist in evaluating soil and groundwater conditions at the abovereferenced site. The scope of work was limited to the specific project, location, and activities described herein. In the performance of an assessment of this type, specific information is obtained at specific locations at specific times. This report may be used only by the client and project team within a reasonable time from its issuance. Land-use, on- and off-site conditions, regulatory requirements or other factors may change over time, and additional work may be required with the passage of time.



Jordan Cove LNG**	Doc. No.: J1-680-RGL-RPT-GRI-00001-00		GRI
	Rev.: 1	Rev. Date: 7-30-2018	

The conclusions and recommendations presented in this report are based on our interpretation of the information obtained through the assessment procedures described in this report. No other warranty or representation, either expressed or implied, is included or intended in this report.

We appreciate the opportunity to be of service to you on this project. Please contact the undersigned if you have any questions regarding this report or require further assistance.

#### **SIGNATURES**

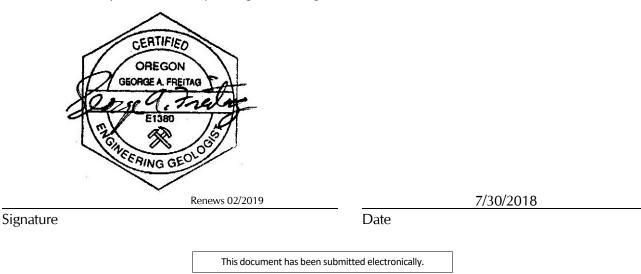
Report prepared by Mike Marshall, RG, CEG

7/30/2018

Signature

Date

Technical and corporate review by George A. Freitag, RG, CEG



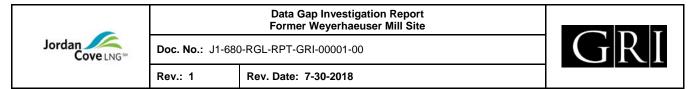
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SEACOR, 1992, Soil and Groundwater Investigation Report: Weyerhaeuser Paper Company, North Bend Mill.



## Table 1: SUMMARY OF FUEL OIL RELEASE AREA SOIL CHEMICAL DATA

	Compound		Fue	l Oil Release	Area Soil Sam	oncentration ples			or Soil Ingestion	
		FO-111-8	FO-113-8	FO-114-13	FO-116-14	FO-118-4	FO-203-9	Occupational	Construction Worker	
	Antimony	NA	NA	NA	NA	ND	NA	NE	NE	NE
	Arsenic	NA	NA	NA	NA	3.12	NA	1.9	15	420
	Beryllium	NA	NA	NA	NA	0.106 J	NA	2,300	700	19,000
	Cadmium	NA	NA	NA	NA	ND	NA	1,100	350	9,700
	Chromium	NA	NA	NA	NA	7.5	NA	6.3	49	1,400
2	Copper	NA	NA	NA	NA	2.84	NA	47,000	14,000	390,000
Metals	Lead	NA	NA	NA	NA	6.54	NA	800	800	800
_	Nickel	NA	NA	NA	NA	5.3	NA	22,000	7,000	190,000
	Selenium	NA	NA	NA	NA	ND	NA	NE	NE	NE
	Silver	NA	NA	NA	NA	ND	NA	5,800	1,800	49,000
	Thallium	NA	NA	NA	NA	ND	NA	NE	NE	NE
	Zinc	NA	NA	NA	NA	28.1	NA	NE	NE	NE
	Mercury	NA	NA	NA	NA	0.00807 B J	NA	350	110	2,900
	Acetone	ND	NA	0.0186	0.0133 J V3	NA	NA	NE	NE	NE
	Acrylonitrile	ND	NA	ND	ND	NA	NA	4	40	1,100
	Benzene	ND	NA	ND	ND	NA	NA	37	380	11,000
	Bromobenzene	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Bromodichloromethane	ND	NA	ND	ND	NA	NA	15	230	6,300
	Bromoform	ND	NA	ND	ND	NA	NA	260	2,700	74,000
	Bromomethane	ND	NA	ND	ND	NA	NA	750	370	10,000
	N-butylbenzene	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Sec-butylbenzene	0.0797	NA	ND	ND	NA	NA	NE	NE	NE
	Tert-Butylbenzene	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Carbon tetrachloride	ND	NA	ND	ND	NA	NA	34	320	8,900
	Chlorobenzene	ND	NA	ND	ND	NA	NA	8,700	4,700	130,000
	Chlorodibromomethane	ND	NA	ND	ND	NA	NA	17	210	5,800
	Chloroethane	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Chloroform	ND	NA	ND	ND	NA	NA	26	410	11,000
	Chloromethane	ND	NA	ND	ND	NA	NA	25,000	25,000	700,00
	2-Chlorotoluene	ND	NA	ND	ND	NA	NA	NE	NE	NE
	4-Chlorotoluene	ND	NA	ND	ND	NA	NA	NE	NE	NE
	1,2-dibromo-3-chloropropane	ND	NA	ND	ND	NA	NA	NE	NE	NE
	1,2-dibromoethane	ND	NA	ND	ND	NA	NA	0.73	9	250
	Dibromomethane	ND	NA	ND	ND	NA	NA	NE	NE	NE
	1,2-dichlorobenzene	ND	NA	ND	ND	NA	NA	36,000	20,000	560,000
	1,3-dichlorobenzene	ND	NA	ND	ND	NA	NA	NE	NE	NE
	1,4-dichlorobenzene	ND	NA	ND	ND	NA	NA	64	1,300	36,000
	Dichlorodifluoromethane	ND	NA	ND	ND	NA	NA	NE	NE	NE
	1,1-dichloroethane	ND	NA	ND	ND	NA	NA	260	3,200	89,000
	1,2-dichloroethane	ND	NA	ND	ND	NA	NA	NE	NE	NE
	1,1-dichloroethene	ND	NA	ND	ND	NA	NA	29,000	13,000	370,00
	Cis-1,2-dichloroethene	ND	NA	ND	ND	NA	NA	2,300	710	20,000
	Trans-1,2-dichloroethene	ND	NA	ND	ND	NA	NA	23,000	7,100	200,00
	1,2-dichloropropane	ND	NA	ND	ND	NA	NA	NE	NE	NE
3	1,1-dichloropropene	ND	NA	ND	ND	NA	NA	NE	NE	NE
502	1,3-dichloropropane	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Cis-1,3-dichloropropene	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Trans-1,3-dichloropropene	ND	NA	ND	ND	NA	NA	NE	NE	NE
	2,2-dichloropropane	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Di-isopropyl ether	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Ethylbenzene	0.0158 J	NA	ND	ND	NA	NA	150	1,700	49,000
	Hexachloro-1,3-butadiene	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Isopropylbenzene	0.0297 J	NA	ND	ND	NA	NA	57,000	27,000	750,00
	P-isopropyltoluene	0.0133 J	NA	ND	ND	NA	NA	NE	NE	NE
	2-butanone (Mek)	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Methylene chloride	ND	NA	ND	ND	NA	NA	NE	NE	NE
	4-methyl-2-pentanone (Mibk)	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Methyl tert-butyl ether	ND	NA	ND	ND	NA	NA	1,100	12,000	320,00
	Naphthalene	46.8	NA	ND	ND	NA	NA	23	580	16,000
	N-propylbenzene	0.00794 J	NA	ND	ND	NA	NA	NE	NE	NE
	Styrene	ND	NA	ND	ND	NA	NA	130,000	56,000	>Max
	1,1,1,2-tetrachloroethane	ND	NA	ND	ND	NA	NA	NE	NE	NE
	1,1,2,2-tetrachloroethane	ND	NA	ND	ND	NA	NA	NE	NE	NE
	1,1,2-trichlorotrifluoroethane	ND	NA	ND	ND	NA	NA	NE	NE	NE
	Tetrachloroethene	ND	NA	ND	ND	NA	NA	1,000	1,800	50,000
	Toluene	ND	NA	ND	0.00057 J V3	NA	NA	88,000	28,000	770,00
	1,2,3-trichlorobenzene	ND	NA	ND	ND	NA	NA	NE	NE	NE
	1,2,4-trichlorobenzene	ND	NA	ND	ND	NA	NA	NE	NE	NE



## Table 1: SUMMARY OF FUEL OIL RELEASE AREA SOIL CHEMICAL DATA

				Co	oncentration	(mg/kg)			
Compound		Fuel	Oil Release	Area Soil Samp	les		•	or Soil Ingestion ct, and Inhalatio	
	FO-111-8	FO-113-8	FO-114-13	FO-116-14	FO-118-4	FO-203-9	Occupational	Construction Worker	Excavation Worker
1,1,1-trichloroethane	ND	NA	ND	ND	NA	NA	870,000	470,000	>Max
1,1,2-trichloroethane	ND	NA	ND	ND	NA	NA	26	54	1,500
Trichloroethene	ND	NA	ND	ND	NA	NA	51	130	3,700
Trichlorofluoromethane	ND	NA	ND	ND	NA	NA	130,000	69,000	>Max
1,2,3-trichloropropane	ND	NA	ND	ND	NA	NA	NE	NE	NE
1,2,4-trimethylbenzene	0.0546 J	NA	ND	0.00036 J V3	NA	NA	6,900	2,900	81,000
1,2,3-trimethylbenzene	0.0263 J	NA	ND	ND	NA	NA	NE	NE	NE
1,3,5-trimethylbenzene	0.0261 J	NA	ND	ND	NA	NA	6,900	2,900	81,000
Vinyl chloride	ND	NA	ND	ND	NA	NA	4.4	34	950
Xylenes, total	0.0325 J	NA	ND	ND	NA	NA	25,000	20,000	560,000
Anthracene	0.173	ND	ND	ND	ND	ND	350,000	110,000	>Max
Acenaphthene	0.267	0.00185 J	0.0180	ND	ND	ND	70,000	21,000	590,000
Acenaphthylene	ND	ND	ND	ND	ND	ND	NE	NE	NE
Benzo(a)anthracene	0.0626	ND	ND	ND	ND	ND	21	170	4,800
Benzo(a)pyrene	0.0234	ND	ND	ND	ND	ND	2.1	17	490
Benzo(b)fluoranthene	0.0275	ND	ND	ND	ND	ND	21	170	4,900
Benzo(g,h,i)perylene	0.00965 J	ND	ND	ND	ND	ND	NE	NE	NE
Benzo(k)fluoranthene	0.0071 J	ND	ND	ND	ND	ND	210	1,700	49,000
Chrysene	0.0914	ND	ND	ND	ND	ND	2,100	17,000	490,000
Dibenz(a,h)anthracene	0.00453 J	ND	ND	ND	ND	ND	2.1	17	490
Fluoranthene	0.222	ND	ND	ND	ND	ND	30,000	10,000	280,000
Fluorene	0.188	0.00104 J	0.00122 J	ND	ND	ND	47,000	14,000	390,000
Indeno(1,2,3-cd)pyrene	0.00405 J	ND	ND	ND	ND	ND	21	170	4,900
Naphthalene	0.372	ND	0.0107 J	ND	ND	ND	23	580	16,000
Phenanthrene	0.455	ND	0.000870 J	ND	ND	ND	NE	NE	NE
Pyrene	0.287	0.000835 J	ND	ND	ND	ND	23,000	7,500	210,000
1-methylnaphthalene	0.0774	ND	ND	ND	ND	ND	NE	NE	NE
2-methylnaphthalene	0.121	ND	ND	ND	ND	ND	NE	NE	NE
2-chloronaphthalene	ND	ND	ND	ND	ND	ND	NE	NE	NE
Total PCBs	NA	NA	NA	NA	NA	NA	0.59	4.9	140
Diesel-Range Organics	375 J3	NA	NA	NA	3.45 J	NA	14,000	4,600	>Max
Residual-Range Organics	477 J3	NA	NA	NA	ND	NA	14,000	4,600	>Max
Gasoline-Range Organics	1.66	NA	NA	NA	NA	NA	20,000	9,700	>Max

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

V3: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. Below detection limit (BDL) results will be unaffected.

NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to pose risks in this scenario.

**Bold:** Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this compound.



#### Table 2: SUMMARY OF FUEL OIL RELEASE AREA GROUNDWATER CHEMICAL DATA

	Compound	Fuel Oil Releas	e Area Groundwat	entration (mg/l er Samples	DEQ RBCs for Groundwate in Excavation		
		FO-110-W	FO-111-W	FO-118-W	Construction & Excavation Worker		
	Antimony	ND	ND	NA	NE		
	Arsenic	0.0124	0.00188 J	NA	6.3		
	Beryllium	0.00135 J	ND	NA	270		
	Cadmium	0.00108 J	ND	NA	130		
	Chromium	0.119	ND	NA	9.4		
<b>x</b>	Copper	0.0925	ND	NA	5,400		
Melais	Lead	0.0193	0.000827 J	NA	> S		
Σ	Nickel	0.0823	ND	NA	> S		
	Selenium	ND	ND	NA	NE		
	Silver	ND	ND	NA	1,100		
	Thallium	0.000342 B J	ND	NA	NE		
	Zinc	1.05	ND	NA	NE		
	Mercury	0.0000553 J J3	0.0000492 J J3	NA	>\$		
	Acetone	ND	ND	ND	NE		
	Acrolein	ND J4	ND J4	ND J4	NE		
	Acrylonitrile	ND	ND	ND	0.25		
	Benzene	ND	ND	ND	1.8		
	Bromobenzene	ND	ND	ND	NE		
	Bromodichloromethane	ND	ND	ND	0.45		
	Bromoform	ND	ND	ND	14		
	Bromomethane	ND	ND J3	ND	1.2		
	N-butylbenzene	ND	ND	ND	NE		
	Sec-butylbenzene	ND	ND	ND	NE		
	Tert-Butylbenzene	ND	ND	ND	NE		
	Carbon tetrachloride	ND	ND	ND	1.8		
	Chlorobenzene	ND	ND	ND	10		
	Chlorodibromomethane	ND	ND	ND	0.61		
	Chloroethane	ND	ND J3	ND	2,400		
	Chloroform	ND	ND	ND	0.72		
	Chloromethane	ND	ND J3 J4	ND	22		
	2-Chlorotoluene	ND	ND	ND	NE		
	4-Chlorotoluene	ND	ND	ND	NE		
	1,2-dibromo-3-chloropropane	ND	ND	ND	NE		
	1,2-dibromoethane	ND	ND	ND	NE		
	Dibromomethane	ND	ND	ND	NE		
	1,2-dichlorobenzene	ND	ND	ND	37		
	1,3-dichlorobenzene	ND	ND	ND	NE		
	1,4-dichlorobenzene	ND	ND	ND	1.5		
	Dichlorodifluoromethane	ND	ND	ND	NE		
	1,1-dichloroethane	ND	ND	ND	10		
	1,2-dichloroethane	ND	ND	ND	NE		
	1,1-dichloroethene	ND	ND J3	ND	44		
	Cis-1,2-dichloroethene	ND	ND	ND	18		
	Trans-1,2-dichloroethene	ND	ND	ND	180		
	1,2-dichloropropane	ND	ND	ND	NE		
NOCS	1,1-dichloropropene	ND	ND	ND	NE		
>	1,3-dichloropropane	ND	ND	ND	NE		
	Cis-1,3-dichloropropene	ND	ND	ND	NE		
	Trans-1,3-dichloropropene	ND	ND	ND	NE		
	2,2-dichloropropane	ND	ND J3	ND	NE		
	Di-isopropyl ether	ND	ND	ND	NE		
	Ethylbenzene	ND	ND	ND	4.5		
	Hexachloro-1,3-butadiene	ND	ND	ND	NE		
	Isopropylbenzene	ND	ND	ND	51		
	P-isopropyltoluene	ND	ND	ND	NE		
	2-butanone (Mek)	ND	ND	ND	NE		
	Methylene chloride	ND	ND	ND	NE		
	4-methyl-2-pentanone (Mibk)	ND	ND	ND	NE		
	Methyl tert-butyl ether	ND	ND	ND	63		
	Naphthalene	ND	ND	ND	0.5		
	N-propylbenzene	ND	ND	ND	NE		
	Styrene	ND	ND	ND	170		
	1,1,1,2-tetrachloroethane	ND	ND	ND	NE		
	1,1,2,2-tetrachloroethane	ND	ND	ND	NE		
	1,1,2-trichlorotrifluoroethane	ND	ND J3	ND	>\$		
	Tetrachloroethene	ND	ND	ND	6		
	Toluene	ND	ND	ND	220		



#### Table 2: SUMMARY OF FUEL OIL RELEASE AREA GROUNDWATER CHEMICAL DATA

			Conce	entration (mg/l)	)
	Compound	Fuel Oil Releas	e Area Groundwat	ter Samples	DEQ RBCs for Groundwater in Excavation
		FO-110-W	FO-111-W	FO-118-W	Construction & Excavation Worker
	1,2,4-trichlorobenzene	ND	ND	ND	NE
	1,1,1-trichloroethane	ND	ND	ND	1,100
	1,1,2-trichloroethane	ND	ND	ND	0.049
	Trichloroethene	ND	ND	ND	0.43
	Trichlorofluoromethane	ND	ND	ND	160
	1,2,3-trichloropropane	ND	ND	ND	NE
	1,2,4-trimethylbenzene	ND	ND	ND	6
	1,2,3-trimethylbenzene	ND	ND	ND	NE
	1,3,5-trimethylbenzene	ND	ND	ND	8
	Vinyl chloride	ND	ND J3 J4	ND	0.96
	Xylenes, total	ND	ND	ND	23
	Anthracene	ND T8	ND	ND	>\$
	Acenaphthene	ND T8	ND	ND	>\$
	Acenaphthylene	ND T8	ND	ND	NE
	Benzo(a)anthracene	ND T8	ND	ND	>\$
	Benzo(a)pyrene	ND T8	ND	ND	>\$
	Benzo(b)fluoranthene	0.0000255 J T8	0.00000721 B J	ND	>\$
	Benzo(g,h,i)perylene	0.0000986 J T8	0.00000248 B J	ND	NE
	Benzo(k)fluoranthene	ND T8	ND	ND	>\$
	Chrysene	0.0000355 J T8	ND	ND	>\$
PAHS	Dibenz(a,h)anthracene	ND T8	ND	ND	>S
2	Fluoranthene	ND T8	ND	ND	>\$
	Fluorene	ND T8	ND	ND	>\$
	Indeno(1,2,3-cd)pyrene	ND T8	ND	ND	>\$
	Naphthalene	ND T8	0.0000242 B J	0.0000599 J	0.5
	Phenanthrene	ND T8	ND	ND	NE
	Pyrene	0.0000512 J T8	ND	ND	>\$
	1-methylnaphthalene	ND T8	ND	ND	NE
	2-methylnaphthalene	ND T8	ND	ND	NE
	2-chloronaphthalene	ND T8	ND	ND	NE
	Diesel-Range Organics	NA	0.0416 J	NA	>\$
	Residual-Range Organics	NA	ND	NA	>\$
	Gasoline-Range Organics	NA	ND	NA	14

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: Compound not analyzed for this sample.

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

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

NE: Value not established.

T8: Sample(s) received past/too close to holding time expiration.

>S: The groundwater Risk-Based Concentration exceeds the solubility limit.

Bold: Value exceeds the RBC for groundwater in excavation for the construction and excavation worker



### Table 3: SUMMARY OF MINERAL SPIRITS AREA SOIL CHEMICAL DATA

	Compound		Mineral Sp	oirits Area S	oil Samples		DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation				
	Compound	MS-131-9	MS-131-21	MS-132-9	MS-133-9	MS-185-4	Conta Occupational	Construction Worker	on Excavatio Worker		
	Antimony	NA	NA	NA	NA	NA	NE	NE	NE		
	Arsenic	NA	NA	NA	NA	NA	1.9	15	420		
	Beryllium	NA	NA	NA	NA	NA	2,300	700	19,000		
	Cadmium	NA	NA	NA	NA	NA	1,100	350	9,700		
	Chromium	NA	NA	NA	NA	NA	6.3	49	1400		
s	Copper	NA	NA	NA	NA	NA	47,000	14,000	390,000		
Metals	Lead	NA	NA	NA	NA	NA	800	800	800		
2	Nickel	NA	NA	NA	NA	NA	22,000	7,000	190,000		
	Selenium	NA	NA	NA	NA	NA	NE	NE	NE		
	Silver	NA	NA	NA	NA	NA	5,800	1,800	49,000		
	Thallium	NA	NA	NA	NA	NA	NE	NE	NE		
	Zinc	NA	NA	NA	NA	NA	NE	NE	NE		
	Mercury	NA	NA	NA	NA	NA	350	110	2,900		
	Acetone	ND	ND	0.0168 J	ND	NA	NE	NE	NE		
	Acrylonitrile	ND	ND	ND	ND	NA	4	40	1,100		
	Benzene	ND	ND	ND	ND	NA	37	380	11,000		
	Bromobenzene	ND	ND	ND	ND	NA	NE	NE	NE		
	Bromodichloromethane	ND	ND	ND	ND	NA	15	230	6,300		
	Bromoform	ND	ND	ND	ND	NA	260	2,700	74,000		
	Bromomethane N-butylbenzene	ND	ND	ND	ND	NA	750	370 NE	10,000 NE		
	,	0.0704	ND	ND	ND	NA	NE				
	Sec-butylbenzene	0.0442	ND	ND	ND	NA	NE	NE	NE		
	Tert-Butylbenzene Carbon tetrachloride	ND	ND	ND	ND	NA	NE 34	NE	NE 8.000		
	Chlorobenzene	ND ND	ND ND	ND ND	ND ND	NA NA	34 8,700	320	8,900		
	Chlorodibromomethane	ND	ND	ND	ND	NA	17	4,700 210	130,000 5,800		
	Chloroethane	ND	ND	ND	ND	NA	NE	210 NE	5,800 NE		
	Chloroform	ND	ND	ND	ND	NA	26	410	11,000		
	Chloromethane	ND	ND	ND	ND	NA	25,000	25,000	700,000		
	2-Chlorotoluene	ND	ND	ND	ND	NA	23,000 NE	23,000 NE	700,000 NE		
	4-Chlorotoluene	ND	ND	ND	ND	NA	NE	NE	NE		
	1,2-dibromo-3-chloropropane	ND	ND	ND	ND	NA	NE	NE	NE		
	1,2-dibromoethane	ND	ND	ND	ND	NA	0.73	9	250		
	Dibromomethane	ND	ND	ND	ND	NA	NE	NE	NE		
	1,2-dichlorobenzene	ND	ND	ND	ND	NA	36,000	20,000	560,000		
	1,3-dichlorobenzene	ND	ND	ND	ND	NA	NE	NE	NE		
	1,4-dichlorobenzene	ND	ND	ND	ND	NA	64	1,300	36,000		
	Dichlorodifluoromethane	ND	ND	ND	ND	NA	NE	NE	NE		
	1,1-dichloroethane	ND	NA	ND	ND	NA	260	3,200	89,000		
	1,2-dichloroethane	ND	ND	ND	ND	NA	NE	NE	NE		
	1,1-dichloroethene	ND	ND	ND	ND	NA	29,000	13,000	370,000		
	Cis-1,2-dichloroethene	ND	ND	0.0052 J	ND	NA	2,300	710	20,000		
	Trans-1,2-dichloroethene	ND	ND	ND	ND	NA	23,000	7,100	200,000		
	1,2-dichloropropane	ND	ND	ND	ND	NA	NE	NE	NE		
0	1,1-dichloropropene	ND	ND	ND	ND	NA	NE	NE	NE		
5	1,3-dichloropropane	ND	ND	ND	ND	NA	NE	NE	NE		
>	Cis-1,3-dichloropropene	ND	ND	ND	ND	NA	NE	NE	NE		
	Trans-1,3-dichloropropene	ND	ND	ND	ND	NA	NE	NE	NE		
	2,2-dichloropropane	ND	ND	ND	ND	NA	NE	NE	NE		
	Di-isopropyl ether	ND	ND	ND	ND	NA	NE	NE	NE		
	Ethylbenzene	ND	ND	ND	ND	NA	150	1,700	49,000		
	Hexachloro-1,3-butadiene	ND	ND	ND	ND	NA	NE	NE	NE		
	Isopropylbenzene	0.00767 J	ND	ND	ND	NA	57,000	27,000	750,000		
	P-isopropyltoluene	0.0308	ND	ND	ND	NA	NE	NE	NE		
	2-butanone (Mek)	ND	ND	ND	ND	NA	NE	NE	NE		
	Methylene chloride	ND	ND	ND	ND	NA	NE	NE	NE		
	4-methyl-2-pentanone (Mibk)	ND	ND	ND	ND	NA	NE	NE	NE		
	Methyl tert-butyl ether	ND	ND	ND	ND	NA	1,100	12,000	320,000		
	Naphthalene	0.0935 J	ND	ND	ND	NA	23	580	16,000		
	N-propylbenzene	0.0264 J	ND	ND	ND	NA	NE	NE	NE		
	Styrene	ND	ND	ND	ND	NA	130,000	56,000	>Max		
	1,1,1,2-tetrachloroethane	ND	ND	ND	ND	NA	NE	NE	NE		
	1,1,2,2-tetrachloroethane	ND	ND	ND	ND	NA	NE	NE	NE		
	1,1,2-trichlorotrifluoroethane	ND	ND	ND	ND	NA	NE	NE	NE		
	Tetrachloroethene	ND	ND	ND	ND	NA	1,000	1,800	50,000		
	Toluene	ND	ND	ND	ND	NA	88,000	28,000	770,000		
	1,2,3-trichlorobenzene	ND	ND	ND	ND	NA	NE	NE	NE		



### Table 3: SUMMARY OF MINERAL SPIRITS AREA SOIL CHEMICAL DATA

					Conce	entration (mg	g/kg)		
	Compound		Mineral Sp	oirits Area S	oil Samples			or Soil Ingestion ct, and Inhalatic	
	·	MS-131-9	MS-131-21	MS-132-9	MS-133-9	MS-185-4	Occupational	Construction Worker	Excavation Worker
	1,1,1-trichloroethane	ND	ND	ND	ND	NA	870,000	470,000	>Max
	1,1,2-trichloroethane	ND	ND	ND	ND	NA	26	54	1,500
	Trichloroethene	ND	ND	ND	ND	NA	51	130	3,700
	Trichlorofluoromethane	ND	ND	ND	ND	NA	130,000	69,000	>Max
	1,2,3-trichloropropane	ND	ND	ND	ND	NA	NE	NE	NE
	1,2,4-trimethylbenzene	ND	ND	ND	0.00101 J	NA	6,900	6,900	81,000
	1,2,3-trimethylbenzene	ND	ND	ND	0.00045 J	NA	NE	NE	NE
	1,3,5-trimethylbenzene	ND	ND	ND	ND	NA	6,900	6,900	81,000
	Vinyl chloride	ND	ND	ND	ND	NA	4.4	34	950
	Xylenes, total	ND	ND	ND	ND	NA	25,000	20,000	560,000
	Anthracene	0.00333 J	ND	ND	ND	0.0148	350,000	110,000	>Max
	Acenaphthene	ND	0.0012 J	ND	ND	ND	70,000	21,000	590,000
	Acenaphthylene	ND	ND	ND	ND	ND	NE	NE	NE
	Benzo(a)anthracene	0.0022 J	ND	ND	ND	ND	21	170	4,800
	Benzo(a)pyrene	0.00265 J	ND	ND	ND	ND	2.1	17	490
	Benzo(b)fluoranthene	0.00275 J	ND	ND	ND	ND	21	170	4,900
	Benzo(g,h,i)perylene	0.00566 J	ND	ND	ND	ND	NE	NE	NE
	Benzo(k)fluoranthene	0.00086 J	ND	ND	ND	ND	210	1,700	49,000
	Chrysene	0.00204 J	ND	ND	ND	ND	2,100	17,000	490,000
PAHs	Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	2.1	17	490
С.	Fluoranthene	0.00857	ND	ND	ND	0.00701	30,000	10,000	280,000
	Fluorene	0.0415	ND	ND	ND	0.0562	47,000	14,000	390,000
	Indeno(1,2,3-cd)pyrene	0.00416 J	ND	ND	ND	ND	21	170	4,900
	Naphthalene	0.319	ND	ND	ND	ND	23	580	16,000
	Phenanthrene	0.0235	ND	ND	ND	0.0702	NE	NE	NE
	Pyrene	0.0103	ND	ND	ND	0.00719	23,000	7,500	210,000
	1-methylnaphthalene	0.492	ND	ND	ND	ND	NE	NE	NE
	2-methylnaphthalene	0.459	ND	ND	ND	ND	NE	NE	NE
	2-chloronaphthalene	ND	ND	ND	ND	ND	NE	NE	NE
	Total PCBs	NA	NA	NA	NA	NA	0.59	4.9	140
	Diesel-Range Organics	1,150	ND	NA	NA	ND	14,000	4,600	>Max
	Residual-Range Organics	69.6	ND	NA	NA	4.59	14,000	4,600	>Max
	Gasoline-Range Organics	NA	NA	NA	NA	NA	20,000	9,700	>Max

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

- J: The identification of the analyte is acceptable; the reported value is an estimate.
- J3: The associated batch QC was outside the established quality control range for precision.
- V3: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. Below detection limit (BDL) results will be unaffected.

NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to pose risks in this scenario.

**Bold:** Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this compound.



#### Table 4: SUMMARY OF MINERAL SPIRITS GROUNDWATER CHEMICAL DATA

			)				
	Compound	Mineral Spir	its Groundwater	Samples	DEQ RBCs for Groundwater in Excavation		
		MS-131-W	MS-134-W	MS-136-W	Construction & Excavation Worker		
	Antimony	0.000804 J	NA	NA	NE		
	Arsenic	0.0164	NA	NA	6.3		
	Beryllium	ND	NA	NA	270		
	Cadmium	ND	NA	NA	130		
	Chromium	0.00933 J	NA	NA	9.4		
als	Copper Lead	0.0104 0.00218 B	NA NA	NA NA	5,400 >S		
Metals	Nickel	0.00218 B	NA	NA	>\$		
	Selenium	0.00303 J	NA	NA	NE		
	Silver	ND	NA	NA	1,100		
	Thallium	0.00218	NA	NA	NE		
	Zinc	0.0422 J	NA	NA	NE		
	Mercury	0.0000823 B J	NA	NA	>\$		
	Acetone	ND J3	ND J3	NA	NE		
	Acrolein	ND	ND	NA	NE		
	Acrylonitrile	ND	ND	NA	0.25		
	Benzene	ND	ND	NA	1.8		
	Bromobenzene	ND	ND	NA	NE		
	Bromodichloromethane	ND	ND	NA	0.45		
	Bromoform	ND	ND	NA	14		
	Bromomethane	ND	ND	NA	1.2		
	N-butylbenzene	0.00359	ND	NA	NE		
	Sec-butylbenzene	0.00294	ND	NA	NE		
	Tert-Butylbenzene	0.000693 J	ND	NA	NE		
	Carbon tetrachloride	ND	ND	NA	1.8		
	Chlorobenzene	ND	ND	NA	10		
	Chlorodibromomethane	ND	ND	NA	0.61		
	Chloroethane	ND	ND	NA	2,400		
	Chloroform	ND	ND	NA	0.72		
	Chloromethane	ND	ND	NA	22		
	2-Chlorotoluene	ND	ND	NA	NE		
	4-Chlorotoluene 1,2-dibromo-3-chloropropane	ND ND	ND ND	NA NA	NE NE		
	1,2-dibromoethane	ND	ND	NA	NE		
	Dibromomethane	ND	ND	NA	NE		
	1,2-dichlorobenzene	ND	ND	NA	37		
	1,3-dichlorobenzene	ND	ND	NA	NE		
	1,4-dichlorobenzene	ND	ND	NA	1.5		
	Dichlorodifluoromethane	ND	ND	NA	NE		
	1,1-dichloroethane	ND	ND	NA	10		
	1,2-dichloroethane	ND	ND	NA	NE		
	1,1-dichloroethene	ND	ND	NA	44		
	Cis-1,2-dichloroethene	ND	ND	NA	18		
	Trans-1,2-dichloroethene	ND	ND	NA	180		
	1,2-dichloropropane	ND	ND	NA	NE		
50	1,1-dichloropropene	ND	ND	NA	NE		
>	1,3-dichloropropane	ND	ND	NA	NE		
	Cis-1,3-dichloropropene	ND	ND	NA	NE		
	Trans-1,3-dichloropropene	ND	ND	NA	NE		
	2,2-dichloropropane	ND	ND	NA	NE		
	Di-isopropyl ether	ND	ND	NA	NE		
	Ethylbenzene	0.000498 J	ND	NA	4.5		
	Hexachloro-1,3-butadiene Isopropylbenzene	ND	ND ND	NA NA	NE 51		
	P-isopropyltoluene	0.00112 0.00331	ND ND	NA NA	51 NE		
	2-butanone (Mek)	0.00331 ND	ND	NA	NE		
	Methylene chloride	ND	ND	NA	NE		
	4-methyl-2-pentanone (Mibk)	ND	ND	NA	NE		
	Methyl tert-butyl ether	ND	ND	NA	63		
	Naphthalene	0.00707	ND	NA	0.5		
	N-propylbenzene	0.00291	ND	NA	NE		
	Styrene	ND	ND	NA	170		
	1,1,1,2-tetrachloroethane	ND	ND	NA	NE		
	1,1,2,2-tetrachloroethane	ND	ND	NA	NE		
	1,1,2-trichlorotrifluoroethane	ND	ND	NA	> \$		
	Tetrachloroethene	ND	ND	NA	6		
	Toluene	0.00149	ND	NA	220		
	1,2,3-trichlorobenzene	ND	ND	NA	NE		



#### Table 4: SUMMARY OF MINERAL SPIRITS GROUNDWATER CHEMICAL DATA

			Cond	entration (mg/L)	)
	Compound	Mineral Spi	rits Groundwater	Samples	DEQ RBCs for Groundwater in Excavation
	·	MS-131-W	MS-134-W	MS-136-W	Construction & Excavation Worker
	1,2,4-trichlorobenzene	ND	ND	NA	NE
	1,1,1-trichloroethane	ND	ND	NA	1,100
	1,1,2-trichloroethane	ND	ND	NA	0.049
-	Trichloroethene	ND	ND	NA	0.43
	Trichlorofluoromethane	ND	ND	NA	160
	1,2,3-trichloropropane	ND	ND	NA	NE
	1,2,4-trimethylbenzene	0.000662 J	0.000408 J	NA	6
	1,2,3-trimethylbenzene	0.000515 J	ND	NA	NE
·	1,3,5-trimethylbenzene	ND	ND	NA	8
,	Vinyl chloride	ND	ND	NA	0.96
2	Xylenes, total	0.0021 J	ND	NA	23
1	Anthracene	ND	ND	ND	>\$
	Acenaphthene	ND	ND	ND	>\$
1	Acenaphthylene	ND	ND	ND	NE
	Benzo(a)anthracene	0.0000416 J	ND	ND	>\$
I	Benzo(a)pyrene	0.0000987	ND	ND	>\$
1	Benzo(b)fluoranthene	0.0000842	ND	ND	>\$
I	Benzo(g,h,i)perylene	0.000197 J3	ND J3	00000251 B J	NE
	Benzo(k)fluoranthene	0.000022 J	ND	ND	>\$
	Chrysene	0.0000313 J	ND	ND	>\$
	Dibenz(a,h)anthracene	ND J3	ND J3	ND J3	>\$
Ľ	Fluoranthene	0.000118	ND	ND	>\$
	Fluorene	ND	ND	ND	>\$
	Indeno(1,2,3-cd)pyrene	0.00016 J3	ND J3	ND J3	>\$
	Naphthalene	0.00054	0.0000211 J	0.0000268 J	0.5
	Phenanthrene	ND	ND	ND	NE
	Pyrene	0.000189	ND	ND	>\$
	1-methylnaphthalene	ND	ND	ND	NE
	2-methylnaphthalene	ND	ND	ND	NE
	2-chloronaphthalene	ND	ND	ND	NE
	Diesel-Range Organics	15	NA	NA	>\$
	Residual-Range Organics	2.21	NA	NA	>\$
	Gasoline-Range Organics	0.38 B	NA	NA	14

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: Compound not analyzed for this sample.

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

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

NE: Value not established.

T8: Sample(s) received past/too close to holding time expiration.

>S: The groundwater Risk-Based Concentration exceeds the solubility limit.

**Bold:** Value exceeds the Risk-Based Concentration for groundwater in excavation for the construction and excavation worker receptor scenario for this compound.



#### Table 5: SUMMARY OF TRUCK SCALES AND CARPENTER SHOP AREA SOIL CHEMICAL DATA

		Concentration (mg/kg)           Truck Scales and Carpenter Shop Area Soil         DEQ RBCs for Soil Ingestion, Dermal									
	Compound	Truck Sc			Area Soil						
	Compound	TS-192-8	Sam TS-193-15*	-	CS-198-9	Conta Occupational	ct, and Inhalatio Construction Worker	Excavation			
	Antimony	NA	NA	NA	NA	NE	NE	Worker NE			
	Arsenic	NA	NA	NA	NA	1.9	15	420			
	Beryllium	NA	NA	NA	NA	2,300	700	19,000			
	Cadmium	NA	NA	NA	NA	1,100	350	9,700			
	Chromium	NA	NA	NA	NA	6.3	49	1400			
s	Copper	NA	NA	NA	NA	47,000	14,000	390,000			
Metals	Lead	NA	NA	NA	NA	800	800	800			
2	Nickel	NA	NA	NA	NA	22,000	7,000	190,000			
	Selenium	NA	NA	NA	NA	NE	NE	NE			
	Silver Thallium	NA NA	NA NA	NA NA	NA NA	5,800 NE	1,800 NE	49,000 NE			
	Zinc	NA	NA	NA	NA	NE	NE	NE			
	Mercury	NA	NA	NA	NA	350	110	2,900			
	Acetone	NA	NA	NA	NA	NE	NE	NE			
	Acrylonitrile	NA	NA	NA	NA	4	40	1,100			
	Benzene	NA	NA	NA	NA	37	380	11,000			
	Bromobenzene	NA	NA	NA	NA	NE	NE	NE			
	Bromodichloromethane	NA	NA	NA	NA	15	230	6,300			
	Bromoform	NA	NA	NA	NA	260	2,700	74,000			
	Bromomethane	NA	NA	NA	NA	750	370	10,000			
	N-butylbenzene	NA	NA	NA	NA	NE	NE	NE			
	Sec-butylbenzene	NA	NA	NA	NA	NE	NE	NE			
	Tert-Butylbenzene	NA	NA	NA	NA	NE	NE	NE			
	Carbon tetrachloride	NA	NA	NA	NA	34	320	8,900			
	Chlorobenzene	NA	NA	NA	NA	8,700	4,700	130,000			
	Chlorodibromomethane	NA	NA	NA	NA	17	210	5,800			
	Chloroethane	NA	NA	NA	NA	NE	NE	NE			
	Chloroform	NA	NA	NA	NA	26	410	11,000			
	Chloromethane	NA	NA	NA	NA	25,000	25,000	700,000			
	2-Chlorotoluene	NA	NA	NA	NA	NE	NE	NE			
	4-Chlorotoluene	NA	NA	NA	NA	NE	NE	NE			
	1,2-dibromo-3-chloropropane	NA	NA	NA	NA	NE	NE	NE			
	1,2-dibromoethane Dibromomethane	NA NA	NA NA	NA NA	NA	0.73 NE	9 NE	250 NE			
	1,2-dichlorobenzene	NA	NA	NA	NA NA	36,000	20,000	560,000			
	1,3-dichlorobenzene	NA	NA	NA	NA	NE	20,000 NE	NE			
	1,4-dichlorobenzene	NA	NA	NA	NA	64	1,300	36,000			
	Dichlorodifluoromethane	NA	NA	NA	NA	NE	NE	NE			
	1,1-dichloroethane	NA	NA	NA	NA	260	3,200	89,000			
	1,2-dichloroethane	NA	NA	NA	NA	NE	NE	NE			
	1,1-dichloroethene	NA	NA	NA	NA	29,000	13,000	370,000			
	Cis-1,2-dichloroethene	NA	NA	NA	NA	2,300	710	20,000			
	Trans-1,2-dichloroethene	NA	NA	NA	NA	23,000	7,100	200,000			
	1,2-dichloropropane	NA	NA	NA	NA	NE	NE	NE			
Ś	1,1-dichloropropene	NA	NA	NA	NA	NE	NE	NE			
VOCs	1,3-dichloropropane	NA	NA	NA	NA	NE	NE	NE			
-	Cis-1,3-dichloropropene	NA	NA	NA	NA	NE	NE	NE			
	Trans-1,3-dichloropropene	NA	NA	NA	NA	NE	NE	NE			
	2,2-dichloropropane	NA	NA	NA	NA	NE	NE	NE			
	Di-isopropyl ether	NA	NA	NA	NA	NE	NE	NE			
	Ethylbenzene	NA	NA	NA	NA	150	1,700	49,000			
	Hexachloro-1,3-butadiene	NA	NA	NA	NA	NE	NE	NE			
	Isopropylbenzene P-isopropyltoluene	NA NA	NA NA	NA NA	NA NA	57,000 NE	27,000 NE	750,000 NE			
	2-butanone (Mek)	NA	NA	NA	NA	NE	NE	NE			
	Methylene chloride	NA	NA	NA	NA	NE	NE	NE			
	4-methyl-2-pentanone (Mibk)	NA	NA	NA	NA	NE	NE	NE			
	Methyl tert-butyl ether	NA	NA	NA	NA	1,100	12,000	320,000			
	Naphthalene	NA	NA	NA	NA	23	580	16,000			
	N-propylbenzene	NA	NA	NA	NA	NE	NE	NE			
	Styrene	NA	NA	NA	NA	130,000	56,000	>Max			
	1,1,1,2-tetrachloroethane	NA	NA	NA	NA	NE	NE	NE			
	1,1,2,2-tetrachloroethane	NA	NA	NA	NA	NE	NE	NE			
	1,1,2-trichlorotrifluoroethane	NA	NA	NA	NA	NE	NE	NE			
	Tetrachloroethene	NA	NA	NA	NA	1,000	1,800	50,000			
	Toluene	NA	NA	NA	NA	88,000	28,000	770,000			
	1,2,3-trichlorobenzene	NA	NA	NA	NA	NE	NE	NE			
	1,2,4-trichlorobenzene	NA	NA	NA	NA	NE	NE	NE			



#### Table 5: SUMMARY OF TRUCK SCALES AND CARPENTER SHOP AREA SOIL CHEMICAL DATA

		Concentration (mg/kg)								
		Truck Sca	ales and Carp		Area Soil		or Soil Ingestion			
	Compound		Sam	ples		Conta	ct, and Inhalatio			
		TS-192-8	TS-193-15*	TS-195-11	CS-198-9	Occupational	Construction Worker	Excavation Worker		
	1,1,1-trichloroethane	NA	NA	NA	NA	870,000	470,000	>Max		
	1,1,2-trichloroethane	NA	NA	NA	NA	26	54	1,500		
	Trichloroethene	NA	NA	NA	NA	51	130	3,700		
	Trichlorofluoromethane	NA	NA	NA	NA	130,000	69,000	>Max		
	1,2,3-trichloropropane	NA	NA	NA	NA	NE	NE	NE		
	1,2,4-trimethylbenzene	NA	NA	NA	NA	6,900	6,900	81,000		
	1,2,3-trimethylbenzene	NA	NA	NA	NA	NE	NE	NE		
	1,3,5-trimethylbenzene	NA	NA	NA	NA	6,900	6,900	81,000		
	Vinyl chloride	NA	NA	NA	NA	4.4	34	950		
	Xylenes, total	NA	NA	NA	NA	25,000	20,000	560,000		
	Anthracene	0.00227 J	ND	ND	ND	350,000	110,000	>Max		
	Acenaphthene	0.00338 J	ND	ND	ND	70,000	21,000	590,000		
	Acenaphthylene	ND	ND	ND	ND	NE	NE	NE		
	Benzo(a)anthracene	ND	ND	ND	ND	21	170	4,800		
	Benzo(a)pyrene	ND	ND	ND	ND	2.1	17	490		
	Benzo(b)fluoranthene	ND	ND	ND	ND	21	170	4,900		
	Benzo(g,h,i)perylene	ND	ND	ND	ND	NE	NE	NE		
	Benzo(k)fluoranthene	ND	ND	ND	ND	210	1,700	49,000		
(0	Chrysene	ND	ND	ND	ND	2,100	17,000	490,000		
PAHs	Dibenz(a,h)anthracene	ND	ND	ND	ND	2.1	17	490		
с.	Fluoranthene	ND	ND	ND	ND	30,000	10,000	280,000		
	Fluorene	0.00522 J	ND	ND	ND	47,000	14,000	390,000		
	Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	21	170	4,900		
	Naphthalene	0.00295 J	ND	0.00317 J	ND	23	580	16,000		
	Phenanthrene	0.0154	ND	0.00148 J	ND	NE	NE	NE		
	Pyrene	0.0012 J	ND	ND	ND	23,000	7,500	210,000		
	1-methylnaphthalene	0.0205 J	ND	ND	ND	NE	NE	NE		
	2-methylnaphthalene	0.0216 J	ND	ND	ND	NE	NE	NE		
	2-chloronaphthalene	ND	ND	ND	ND	NE	NE	NE		
	Total PCBs	NA	NA	NA	NA	0.59	4.9	140		
	Diesel-Range Organics	13.2	ND	ND	ND	14,000	4,600	>Max		
	Residual-Range Organics	ND	ND	ND	ND	14,000	4,600	>Max		
	Gasoline-Range Organics	NA	NA	NA	NA	20,000	9,700	>Max		

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

 $V_3$ : The internal standard exhibited poor recovery due to sample matrix interference. The

analytical results will be biased high. Below detection limit (BDL) results will be unaffected. NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to pose risks in this scenario.

**Bold:** Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this compound.

\* Sample incorrectly submitted to lab as "TS-192-15"



#### Table 6: SUMMARY OF TRUCK SCALES GROUNDWATER CHEMICAL DATA

CompoundAntimonyArsenicBerylliumCadmiumCadmiumCadmiumCopperLeadCopperLeadNickelSeleniumSilverFhalliumZincAcetoneAcroleinAcroleinAcroleinAcroleinBinomobenzeneBromobenzeneBromodichloromethaneBromomethaneSilverFalliulumComponethaneComponethaneComponethaneCarbon tetrachloride	Truck Scales Grou           TS-195-W           ND           0.013           ND           0.00106 J           0.00479           0.0565           0.0106           0.0241           ND           ND           0.00106           0.0106           0.0106           0.0106           0.0106           0.0106           ND	Indwater Samples           TS-204-W           ND           0.0745           ND           0.0745           ND           0.0745           ND           0.0745           ND           0.0745           ND           0.012           0.0414           0.00386           0.0213           ND	Carpenter Shop Groundwater Sample CS-198-W ND 0.0218 ND ND 0.00325 J ND 0.000403 J ND ND ND ND ND ND ND ND ND ND ND ND ND	DEQ RBCs for Groundwater in Excavation           Construction & Excavation           Worker           NE           6.3           270           130           9.4           5,400           > S           NE           1,100           ND           NE           0.25           1.8
ArsenicIBerylliumICadmiumICadmiumICopperILeadISeleniumISeleniumISeleniumISilverIFhalliumIZincIAcetoneIAcroleinIAcrylonitrileIBenzeneIBromobenzeneIBromodichloromethaneIBromomethaneIBromomethaneIFert-ButylbenzeneIFert-ButylbenzeneIFert-ButylbenzeneI	ND 0.013 ND 0.00106 J 0.0479 0.0565 0.0106 0.0241 ND ND ND ND 0.101 0.000128 J ND ND ND ND ND ND ND ND ND ND ND ND ND	ND 0.0745 ND ND 0.12 0.0414 0.00386 0.0213 ND 0.0213 ND ND ND ND 0.034 J ND ND ND ND ND ND ND ND ND ND ND ND ND	ND           0.0218           ND           ND           0.00325 J           ND           0.000403 J           ND           ND           ND           0.000403 J           ND           NA           NA           NA           NA           NA           NA           NA           NA	Worker           NE           6.3           270           130           9.4           5,400           >S           NE           1,100           ND           NE           SS           NE           ND           NE
ArsenicIBerylliumICadmiumICadmiumICopperILeadISeleniumISeleniumISeleniumISilverIFhalliumIZincIAcetoneIAcroleinIAcrylonitrileIBenzeneIBromobenzeneIBromodichloromethaneIBromomethaneIBromomethaneIFert-ButylbenzeneIFert-ButylbenzeneIFert-ButylbenzeneI	0.013 ND 0.00106 J 0.0479 0.0565 0.0106 0.0241 ND ND ND 0.101 0.000128 J ND ND ND ND ND ND ND ND ND ND ND ND ND	0.0745 ND ND 0.12 0.0414 0.00386 0.0213 ND ND ND ND 0.034 J ND ND ND ND ND ND ND ND ND ND ND ND ND	0.0218 ND ND 0.00325 J ND 0.000403 J ND ND ND ND ND ND ND ND ND ND ND ND ND	NE           6.3           270           130           9.4           5,400           > S           > S           > S           NE           1,100           ND           NE           > S           NE           0.25
BerylliumImage: SerylliumCadmiumImage: Seriem of the seriem of	ND 0.00106 J 0.0479 0.0565 0.0106 0.0241 ND ND ND 0.101 0.101 0.000128 J ND ND ND ND ND ND ND ND ND ND ND ND ND	ND ND 0.12 0.0414 0.00386 0.0213 ND ND ND 0.034 J ND ND ND ND ND ND ND ND ND ND ND ND ND	ND ND 0.00325 J ND 0.000403 J ND ND ND ND ND ND 0.0000542 J NA NA NA NA	270 130 9.4 5,400 > S S NE 1,100 ND NE S S NE S S NE NE NE NE NE 0.25
CadmiumIChromiumICopperILeadINickelISeleniumISilverIFhalliumIZincIMercuryIAcetoneIAcroleinIAcroleinIBenzeneIBromobenzeneIBromoformIBromomethaneIBromomethaneIBromomethaneIFert-ButylbenzeneIFert-ButylbenzeneI	0.00106 J 0.0479 0.0565 0.0106 0.0241 ND ND ND 0.101 0.000128 J ND ND ND ND J4 ND ND ND ND ND ND ND ND ND ND ND ND ND	ND 0.12 0.0414 0.00386 0.0213 ND ND ND 0.034 J ND ND ND ND ND ND ND ND ND ND ND ND ND	ND 0.00325 J ND 0.000403 J ND ND ND ND 0.0000542 J NA NA NA NA	130 9.4 5,400 > S > S NE 1,100 ND NE > S NE NE NE NE NE 0.25
ChromiumChromiumCopperICopperILeadINickelISeleniumISeleniumISilverIFhalliumIZincIMercuryIAcroleinIAcroloinIBenzeneIBromobenzeneIBromoformIBromomethaneIBromomethaneIBromothane </td <td>0.0479 0.0565 0.0106 0.0241 ND ND ND 0.101 0.101 0.000128 J ND ND ND ND ND ND ND ND ND ND ND ND ND</td> <td>0.12 0.0414 0.00386 0.0213 ND ND ND 0.034 J ND ND ND ND ND ND ND ND J4 ND ND ND</td> <td>0.00325 J ND 0.000403 J ND ND ND ND 0.0000542 J NA NA NA NA</td> <td>9.4 5,400 &gt; S &gt; S NE 1,100 ND ND NE &gt; S NE NE NE 0.25</td>	0.0479 0.0565 0.0106 0.0241 ND ND ND 0.101 0.101 0.000128 J ND ND ND ND ND ND ND ND ND ND ND ND ND	0.12 0.0414 0.00386 0.0213 ND ND ND 0.034 J ND ND ND ND ND ND ND ND J4 ND ND ND	0.00325 J ND 0.000403 J ND ND ND ND 0.0000542 J NA NA NA NA	9.4 5,400 > S > S NE 1,100 ND ND NE > S NE NE NE 0.25
CopperILeadILeadINickelISeleniumISeleniumISilverIFhalliumIZincIMercuryIAcetoneIAcroleinIAcrylonitrileIBenzeneIBromobenzeneIBromoformIBromoformIBromomethaneISec-butylbenzeneIFert-ButylbenzeneIFert-ButylbenzeneI	0.0565 0.0106 0.0241 ND ND ND 0.101 0.000128 J ND ND ND ND ND ND ND ND ND ND ND ND ND	0.0414 0.00386 0.0213 ND ND ND 0.034 J ND ND ND ND ND ND ND J4 ND ND ND	ND 0.000403 J ND ND ND ND 0.0000542 J NA NA NA NA	5,400 5 S 5 S NE 1,100 ND NE 5 S NE NE 0.25
LeadNickelNickelSeleniumSilverFhalliumIncVercuryMercuryAcetoneAcroleinAcroleinAcrylonitrileBenzeneBromobenzeneBromodichloromethaneBromoformBromomethane <tr< td=""><td>0.0106 0.0241 ND ND 0.101 0.000128 J ND ND ND J4 ND ND ND ND ND ND ND ND ND ND ND</td><td>0.00386 0.0213 ND ND ND 0.034 J ND ND ND ND ND ND J4 ND ND ND</td><td>0.000403 J ND ND ND ND 0.0000542 J NA NA NA NA</td><td>&gt; S &gt; S NE 1,100 ND NE &gt; S NE NE 0.25</td></tr<>	0.0106 0.0241 ND ND 0.101 0.000128 J ND ND ND J4 ND ND ND ND ND ND ND ND ND ND ND	0.00386 0.0213 ND ND ND 0.034 J ND ND ND ND ND ND J4 ND ND ND	0.000403 J ND ND ND ND 0.0000542 J NA NA NA NA	> S > S NE 1,100 ND NE > S NE NE 0.25
NickelISeleniumSeleniumSeleniumSeleniumSilverFFhalliumSeleniumZincMarcuryAcetoneSeconeAcroleinSenzeneAcrylonitrileSenzeneBromobenzeneSenomobenzeneBromodichloromethaneSenomoformBromomethaneSecomothaneSec-butylbenzeneSec-butylbenzeneFert-ButylbenzeneSecone	0.0241 ND ND 0.101 0.000128 J ND ND ND J4 ND ND ND ND ND ND ND ND ND ND	0.0213 ND ND 0.034 J ND ND ND ND ND J4 ND ND	ND ND ND ND 0.0000542 J NA NA NA NA	> S NE 1,100 ND NE S NE NE 0.25
SeleniumSeleniumSilverSilverSilverSilverFhalliumSilverZincMercuryMercuryMercuryAcetoneAcetoneAcetoneSilverAcroleinSilverAcrylonitrileSilverBenzeneSilverBromobenzeneSilverBromodichloromethaneSilverBromoformSilverBromomethaneSilverSilverSilverSec-butylbenzeneSilverFert-ButylbenzeneSilver	ND ND 0.101 0.000128 J ND ND ND J4 ND ND ND ND ND ND ND ND ND ND	ND ND 0.034 J ND ND ND ND ND J4 ND ND ND	ND ND ND 0.0000542 J NA NA NA NA	NE         1,100         ND         NE         >S         NE         NE         0.25
SilverSilverFhalliumFhalliumZincFhalliumAcroleinFhalliumAcroleinFhalliumAcroloinFhalliumAcrylonitrileFhalliumBenzeneFormobenzeneBromobenzeneFormoformBromoformFormoformBromomethaneFormomethaneBromomethaneFormoformFert-ButylbenzeneFormoform	ND ND 0.101 0.000128 J ND ND ND ND ND ND ND ND ND ND ND ND	ND ND 0.034 J ND ND ND ND J4 ND ND	ND ND ND 0.0000542 J NA NA NA NA	1,100 ND NE > S NE NE 0.25
FhalliumCincZincMercuryAcetoneAcetoneAcroleinAcrylonitrileBanzeneBromobenzeneBromodichloromethaneBromoformBromomethaneBromomethaneBromomethaneBromomethaneBromotylbenzeneGec-butylbenzeneFert-Butylbenzene	ND 0.101 0.000128 J ND ND ND J4 ND ND ND ND ND ND ND ND	ND 0.034 J ND ND ND ND J4 ND ND	ND ND 0.0000542 J NA NA NA NA	ND NE > S NE NE 0.25
ZincIMercuryIAcetoneIAcroleinIAcrylonitrileIBenzeneIBromobenzeneIBromodichloromethaneIBromoformIBromomethaneIBromomethaneIBromotylbenzeneIFert-ButylbenzeneIFert-ButylbenzeneI	0.101 0.000128 J ND ND ND J4 ND ND ND ND ND ND	0.034 J ND ND ND ND J4 ND ND	ND 0.0000542 J NA NA NA NA	NE > S NE 0.25
MercuryMercuryAcetoneAcetoneAcroleinAcroleinAcrylonitrileBenzeneBenzeneBenzeneBromobenzeneBenzeneBromodichloromethaneBenzeneBromoformBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzeneBromomethaneBenzene	0.000128 J ND ND ND J4 ND ND ND ND ND ND ND	ND ND ND J4 ND ND	0.0000542 J NA NA NA NA	> S NE NE 0.25
AcetoneAcroleinAcroleinAcrylonitrileBenzeneBromobenzeneBromodichloromethaneBromoformBromomethaneN-butylbenzeneSec-butylbenzeneFert-Butylbenzene	ND ND ND J4 ND ND ND ND ND ND	ND ND ND J4 ND ND	NA NA NA NA	NE NE 0.25
AcroleinAcroleinAcrylonitrileBenzeneBromobenzeneBromodichloromethaneBromoformBromomethaneN-butylbenzeneSec-butylbenzeneFert-Butylbenzene	ND ND J4 ND ND ND ND ND	ND ND J4 ND ND	NA NA NA	NE 0.25
Benzene Bromobenzene Bromodichloromethane Bromoform Bromomethane N-butylbenzene Sec-butylbenzene Fert-Butylbenzene	ND ND ND ND ND	ND ND	NA	
Bromobenzene Bromodichloromethane Bromoform Bromomethane N-butylbenzene Gec-butylbenzene Fert-Butylbenzene	ND ND ND ND	ND		1.8
Bromodichloromethane Bromoform Bromomethane N-butylbenzene Sec-butylbenzene Fert-Butylbenzene	ND ND ND		NIA	
Bromoform Bromomethane N-butylbenzene Gec-butylbenzene Fert-Butylbenzene	ND ND	ND	INA	NE
Bromomethane N-butylbenzene Gec-butylbenzene Fert-Butylbenzene	ND		NA	0.45
N-butylbenzene Sec-butylbenzene Fert-Butylbenzene		ND	NA	14
Sec-butylbenzene Fert-Butylbenzene		ND	NA	1.2
Fert-Butylbenzene	ND	ND	NA	NE
	ND	ND	NA	NE
Larbon tetrachioride	ND	ND	NA	NE 1.0
Chlorobenzene	ND ND	ND ND	NA NA	1.8
Chlorodibromomethane	ND	ND	NA	0.61
Chloroethane	ND	ND	NA	2,400
				0.72
Chloromethane	ND	ND	NA	22
2-Chlorotoluene	ND	ND	NA	NE
4-Chlorotoluene	ND	ND	NA	NE
1,2-dibromo-3-chloropropane	ND	ND	NA	NE
1,2-dibromoethane	ND	ND	NA	NE
	ND	ND	NA	NE
				37
				NE
				1.5 NE
				10
				NE
				44
Cis-1,2-dichloroethene	ND	ND	NA	18
Trans-1,2-dichloroethene	ND	ND	NA	180
1,2-dichloropropane	ND	ND	NA	NE
1,1-dichloropropene	ND	ND	NA	NE
1,3-dichloropropane	ND	ND	NA	NE
				NE
·				NE
				NE
				NE 4.5
				A.5 NE
				51
				NE
2-butanone (Mek)	ND	ND	NA	NE
Methylene chloride	ND	ND	NA	NE
4-methyl-2-pentanone (Mibk)	ND	ND	NA	NE
Methyl tert-butyl ether	ND	ND	NA	63
Naphthalene	ND	ND	NA	0.5
N-propylbenzene	ND	ND	NA	NE
Styrene	ND	ND	NA	170
	ND	ND	NA	NE
				NE
				>\$
				6
				220 NE
	2-Chlorotoluene4-Chlorotoluene4-Chlorotoluene1,2-dibromo-3-chloropropane1,2-dibromoethane1,2-dichlorobenzene1,3-dichlorobenzene1,4-dichlorobenzene1,1-dichlorothane1,2-dichlorothane1,1-dichloroethane1,1-dichloroethane1,1-dichloroethane1,2-dichloropropane1,1-dichloropropane1,2-dichloropropane1,2-dichloropropane1,1-dichloropropane1,2-dichloropropane1,2-dichloropropane1,2-dichloropropane1,2-dichloropropane1,2-dichloropropane1,2-dichloropropane1,2-dichloropropane1,2-dichloropropane1,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane2,2-dichloropropane	ChloromethaneND2-ChlorotolueneND4-ChlorotolueneND4-ChlorotolueneND1,2-dibromo-3-chloropropaneND1,2-dibromoethaneND1,2-dibromoethaneND1,2-dichlorobenzeneND1,3-dichlorobenzeneND1,4-dichlorobenzeneND1,4-dichlorobenzeneND1,1-dichloroethaneND1,1-dichloroethaneND1,1-dichloroethaneND1,1-dichloroethaneND1,2-dichloropopaneND1,2-dichloropropaneND1,3-dichloropropaneND1,3-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND2,2-dichloropropaneND4-exachloro-1,3-butadieneND4-exachloro-1,3-butadieneND2-butanone (Mek)ND4-ethyl-2-pentanone (Mibk)ND4-ethyl-1-2-pentanone (Mibk)ND4-thylaeneND3-sopropylbenzeneND4-propylbenzeneND4-propylbenzeneND4-propylbenzeneND3-tyreneND <t< td=""><td>ChloromethaneNDND2-ChlorotolueneNDND2-ChlorotolueneNDND4-ChlorotolueneNDND1,2-dibromo-3-chloropropaneNDND1,2-dibromoethaneNDND1,2-dichlorobenzeneNDND1,2-dichlorobenzeneNDND1,2-dichlorobenzeneNDND1,2-dichlorobenzeneNDND1,4-dichlorobenzeneNDND1,1-dichlorodifluoromethaneNDND1,1-dichlorodifluoromethaneNDND1,1-dichloroethaneNDND1,1-dichloroethaneNDND1,1-dichloroethaneNDND1,2-dichloroptopaneNDND1,2-dichloroptopaneNDND1,1-dichloroptopaneNDND1,1-dichloroptopaneNDND1,1-dichloroptopaneNDND1,1-dichloroptopaneNDND1,2-dichloroptopaneNDND1,2-dichloroptopaneNDND1,1-dichloroptopaneNDND1,1-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopane<td>ChioronethaneNDNDNA2ChiorotolueneNDNDNA4ChiorotolueneNDNDNA4ChiorotolueneNDNDNA1,2-dibromo-3-chioropropaneNDNDNA1,2-dichoronethaneNDNDNA2,2-dibromoethaneNDNDNA1,2-dichorobenzeneNDNDNA1,2-dichorobenzeneNDNDNA1,2-dichlorobenzeneNDNDNA1,2-dichlorobenzeneNDNDNA1,2-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,2-dichloropropaneNDNDNA1,2-dichloropropaneNDNDNA1,2-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA2,2-dichloropropan</td></td></t<>	ChloromethaneNDND2-ChlorotolueneNDND2-ChlorotolueneNDND4-ChlorotolueneNDND1,2-dibromo-3-chloropropaneNDND1,2-dibromoethaneNDND1,2-dichlorobenzeneNDND1,2-dichlorobenzeneNDND1,2-dichlorobenzeneNDND1,2-dichlorobenzeneNDND1,4-dichlorobenzeneNDND1,1-dichlorodifluoromethaneNDND1,1-dichlorodifluoromethaneNDND1,1-dichloroethaneNDND1,1-dichloroethaneNDND1,1-dichloroethaneNDND1,2-dichloroptopaneNDND1,2-dichloroptopaneNDND1,1-dichloroptopaneNDND1,1-dichloroptopaneNDND1,1-dichloroptopaneNDND1,1-dichloroptopaneNDND1,2-dichloroptopaneNDND1,2-dichloroptopaneNDND1,1-dichloroptopaneNDND1,1-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopaneNDND2,2-dichloroptopane <td>ChioronethaneNDNDNA2ChiorotolueneNDNDNA4ChiorotolueneNDNDNA4ChiorotolueneNDNDNA1,2-dibromo-3-chioropropaneNDNDNA1,2-dichoronethaneNDNDNA2,2-dibromoethaneNDNDNA1,2-dichorobenzeneNDNDNA1,2-dichorobenzeneNDNDNA1,2-dichlorobenzeneNDNDNA1,2-dichlorobenzeneNDNDNA1,2-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,2-dichloropropaneNDNDNA1,2-dichloropropaneNDNDNA1,2-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA2,2-dichloropropan</td>	ChioronethaneNDNDNA2ChiorotolueneNDNDNA4ChiorotolueneNDNDNA4ChiorotolueneNDNDNA1,2-dibromo-3-chioropropaneNDNDNA1,2-dichoronethaneNDNDNA2,2-dibromoethaneNDNDNA1,2-dichorobenzeneNDNDNA1,2-dichorobenzeneNDNDNA1,2-dichlorobenzeneNDNDNA1,2-dichlorobenzeneNDNDNA1,2-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,1-dichlorobenzeneNDNDNA1,2-dichloropropaneNDNDNA1,2-dichloropropaneNDNDNA1,2-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA1,3-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA2,2-dichloropropaneNDNDNA2,2-dichloropropan



#### Table 6: SUMMARY OF TRUCK SCALES GROUNDWATER CHEMICAL DATA

				Concentration (mg/l)	
	Compound	Truck Scales Grou	ndwater Samples	Carpenter Shop Groundwater Sample	DEQ RBCs for Groundwater in Excavation
		TS-195-W	TS-204-W	CS-198-W	Construction & Excavation Worker
1,2,4	4-trichlorobenzene	ND	ND	NA	NE
1,1,1	1-trichloroethane	ND	ND	NA	1,100
1,1,2	2-trichloroethane	ND	ND	NA	0.049
Trich	nloroethene	ND	ND	NA	0.43
Trich	nlorofluoromethane	ND	ND	NA	160
1,2,3	3-trichloropropane	ND	ND	NA	NE
1,2,4	4-trimethylbenzene	ND	ND	NA	6
1,2,3	3-trimethylbenzene	ND	ND	NA	NE
1,3,5	5-trimethylbenzene	ND	ND	NA	8
Viny	l chloride	ND	ND	NA	0.96
Xylei	nes, total	ND	ND	NA	23
Anth	nracene	ND	ND	ND	>\$
Acen	naphthene	0.000079 J	ND	ND	> \$
Acen	naphthylene	ND	ND	ND	NE
Benz	zo(a)anthracene	ND	ND	ND	>\$
Benz	zo(a)pyrene	ND	ND	ND	>\$
Benz	zo(b)fluoranthene	ND	ND	ND	>\$
Benz	zo(g,h,i)perylene	0.0000329 B J	ND	0.00000339 B J	NE
Benz	zo(k)fluoranthene	ND	ND	ND	>\$
Chry	/sene	ND	ND	ND	>\$
SHY Dibe	enz(a,h)anthracene	ND	ND	ND	>\$
← Fluor	ranthene	ND	ND	ND	>\$
Fluor	rene	0.000156 J	ND	ND	>\$
Inde	no(1,2,3-cd)pyrene	ND	ND	ND	>\$
Napł	hthalene	0.000303 B J	0.0000744 B J	0.0000473 B J	0.5
Phen	nanthrene	ND	ND	ND	NE
Pyrei	ne	ND	ND	ND	>\$
1-me	ethylnaphthalene	0.000353 J	ND	ND	NE
2-me	ethylnaphthalene	0.000218 J	ND	ND	NE
2-chl	loronaphthalene	ND	ND	ND	NE
Die	esel-Range Organics	0.601	0.183	0.327	>\$
Resi	idual-Range Organics	0.855	0.288	0.459	>\$
Gase	oline-Range Organics	ND	ND	NA	14

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: Compound not analyzed for this sample.

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

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

NE: Value not established.

T8: Sample(s) received past/too close to holding time expiration.

>S: The groundwater Risk-Based Concentration exceeds the solubility limit.

**Bold:** Value exceeds the Risk-Based Concentration for groundwater in excavation for the construction and excavation worker receptor scenario for this compound.



# Table 7: SUMMARY OF CHIP TRUCK HYDRAULIC LIFT AREA SOIL CHEMICAL DATA

	Compound	( hin Truck Hydraulic Lift Area Noil Namples								s for Soil Ingestion, Dermal ntact, and Inhalation		
		CT-142-11	CT-145-16	CT-145-7	CT-146-13	CT-149-13	CT-149-29	CT-150-13	Occupational	Construction Worker	Excavation Worker	
	Antimony	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Arsenic	NA	NA	NA	NA	NA	NA	NA	1.9	15	420	
	Beryllium	NA	NA	NA	NA	NA	NA	NA	2,300	700	19,000	
	Cadmium	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	1,100 6.3	350 49	9,700 1400	
	Copper	NA	NA	NA	NA	NA	NA	NA	47,000	14,000	390,000	
Metals	Lead	NA	NA	NA	NA	NA	NA	NA	800	800	800	
Ž	Nickel	NA	NA	NA	NA	NA	NA	NA	22,000	7,000	190,000	
	Selenium	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Silver	NA	NA	NA	NA	NA	NA	NA	5,800	1,800	49,000	
	Thallium	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Zinc	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Mercury	NA	NA	NA	NA	NA	NA	NA	350	110	2,900	
	Acetone	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NE 4	NE 40	NE 1,100	
	Acrylonitrile Benzene	NA	NA	NA	NA	NA	NA	NA	4 37	380	1,100	
	Bromobenzene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	15	230	6,300	
	Bromoform	NA	NA	NA	NA	NA	NA	NA	260	2,700	74,000	
	Bromomethane	NA	NA	NA	NA	NA	NA	NA	750	370	10,000	
	N-butylbenzene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Sec-butylbenzene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Tert-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	34	320	8,900	
	Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	8,700	4,700	130,000	
	Chlorodibromomethane Chloroethane	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	17 NE	210 NE	5,800 NE	
	Chloroform	NA	NA	NA	NA	NA	NA	NA	26	410	11,000	
	Chloromethane	NA	NA	NA	NA	NA	NA	NA	25,000	25,000	700,000	
	2-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	4-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,2-dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,2-dibromoethane	NA	NA	NA	NA	NA	NA	NA	0.73	9	250	
	Dibromomethane	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,2-dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	36,000	20,000	560,000	
	1,3-dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,4-dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	64	1,300	36,000	
	Dichlorodifluoromethane	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NE 260	NE 3,200	NE 89,000	
	1,2-dichloroethane	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,1-dichloroethene	NA	NA	NA	NA	NA	NA	NA	29,000	13,000	370,000	
	Cis-1,2-dichloroethene	NA	NA	NA	NA	NA	NA	NA	2,300	710	20,000	
	Trans-1,2-dichloroethene	NA	NA	NA	NA	NA	NA	NA	23,000	7,100	200,000	
	1,2-dichloropropane	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
S	1,1-dichloropropene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
VOCs	1,3-dichloropropane	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Cis-1,3-dichloropropene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Trans-1,3-dichloropropene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	2,2-dichloropropane	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Di-isopropyl ether Ethylbenzene	NA NA	NA NA	NA NA	NA NA	NA NA	NA	NA NA	NE	NE	NE	
	Hexachloro-1,3-butadiene	NA	NA	NA	NA	NA	NA NA	NA	150 NE	1,700 NE	49,000 NE	
	Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	57,000	27,000	750,000	
	P-isopropyltoluene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	2-butanone (Mek)	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Methylene chloride	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	4-methyl-2-pentanone (Mibk)	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	1,100	12,000	320,000	
	Naphthalene	NA	NA	NA	NA	NA	NA	NA	23	580	16,000	
	N-propylbenzene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Styrene	NA	NA	NA	NA	NA	NA	NA	130,000	56,000	>Max	
	1,1,1,2-tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,1,2,2-tetrachloroethane 1,1,2-trichlorotrifluoroethane	NA NA	NA	NA	NA	NA	NA	NA	NE NE	NE NE	NE NE	
	Tetrachloroethene	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NE 1,000	NE 1,800	NE 50,000	
	Toluene	NA	NA	NA	NA	NA	NA	NA	88,000	28,000	770,000	
	1,2,3-trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NE	20,000 NE	NE	
	1,2,4-trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	



## Table 7: SUMMARY OF CHIP TRUCK HYDRAULIC LIFT AREA SOIL CHEMICAL DATA

					Conce	entration (mg	g/kg)				
Compound		Chip Truck Hydraulic Lift Area Soil Samples							DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation		
	CT-142-11	CT-145-16	CT-145-7	CT-146-13	CT-149-13	CT-149-29	CT-150-13	Occupational	Construction Worker	Excavation Worker	
1,1,1-trichloroethane	NA	NA	NA	NA	NA	NA	NA	870,000	470,000	>Max	
1,1,2-trichloroethane	NA	NA	NA	NA	NA	NA	NA	26	54	1,500	
Trichloroethene	NA	NA	NA	NA	NA	NA	NA	51	130	3,700	
Trichlorofluoromethane	NA	NA	NA	NA	NA	NA	NA	130,000	69,000	>Max	
1,2,3-trichloropropane	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
1,2,4-trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	6,900	6,900	81,000	
1,2,3-trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
1,3,5-trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	6,900	6,900	81,000	
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	4.4	34	950	
Xylenes, total	NA	NA	NA	NA	NA	NA	NA	25,000	20,000	560,000	
Anthracene	ND	ND	0.151	ND	ND	ND	ND	350,000	110,000	>Max	
Acenaphthene	0.00819	ND	0.0688 J	ND	0.00107 J	ND	ND	70,000	21,000	590,000	
Acenaphthylene	ND	ND	0.0153 J	ND	ND	ND	ND	NE	NE	NE	
Benzo(a)anthracene	0.00112 J	ND	0.0249 J	ND	ND	ND	ND	21	170	4,800	
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	2.1	17	490	
Benzo(b)fluoranthene	ND	ND	0.0734	ND	ND	ND	ND	21	170	4,900	
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE	
Benzo(k)fluoranthene	ND	ND	0.00958 J	ND	ND	ND	ND	210	1,700	49,000	
Chrysene	0.00167 J	ND	0.0114 J	ND	ND	ND	ND	2,100	17,000	490,000	
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	2.1	17	490	
Fluoranthene	0.0047 J	ND	0.0166 J	ND	ND	ND	ND	30,000	10,000	280,000	
Fluorene	0.0625	ND	0.0882	ND	ND	ND	ND	47,000	14,000	390,000	
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	21	170	4,900	
Naphthalene	ND	ND	ND	ND	0.0026 J	ND	ND	23	580	16,000	
Phenanthrene	ND	ND	0.053 J	ND	ND	ND	ND	NE	NE	NE	
Pyrene	0.0133	ND	0.097	ND	ND	ND	ND	23,000	7,500	210,000	
1-methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE	
2-methylnaphthalene	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE	
2-chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE	
Total PCBs	NA	NA	NA	NA	NA	NA	NA	0.59	4.9	140	
Diesel-Range Organics	75	2.16 J	1,030	NA	NA	NA	NA	14,000	4,600	>Max	
Residual-Range Organics	440	8.14 J	6,190	NA	NA	NA	NA	14,000	4,600	>Max	
Gasoline-Range Organics	NA	NA	NA	NA	NA	NA	NA	20,000	9,700	>Max	

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

- J: The identification of the analyte is acceptable; the reported value is an estimate.
- J3: The associated batch QC was outside the established quality control range for precision.
- V3: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. Below detection limit (BDL) results will be unaffected.

NE: Value not established.

- >Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to pose risks in this scenario.
- **Bold:** Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this compound.



#### Table 8: SUMMARY OF CHIP TRUCK GROUNDWATER CHEMICAL DATA

Compound in Excavation							
Lef H2/W         CL H2/W         CL H2/W         CL H2/W         CL H2/W         CL H2/W         No         NA		Compound		DEQ RBCs for Groundwater in Excavation			
Asenic         NA         NA <th< th=""><th></th><th></th><th>CT-142-W</th><th>CT-144-W</th><th>CT-151-W</th><th>CT-153-W</th><th>Construction &amp; Excavation Worker</th></th<>			CT-142-W	CT-144-W	CT-151-W	CT-153-W	Construction & Excavation Worker
Image         NA		Antimony	NA	NA	NA	NA	
Continue         NA         <		Arsenic	NA	NA	NA	NA	6.3
Open         NA         N							
Open         NA         NA         NA         NA         NA         NA         NA           Isofa         NA         NA         NA         NA         NA         NA         NA           Silver         NA         NA         NA         NA         NA         NA         NA           Silver         NA         NA         NA         NA         NA         NA         NA           Tallar         NA         NA         NA         NA         NA         NA         NA           Action         NA         NA         NA         NA         NA         NA         NA           Action         NA         NA         NA         NA         NA         NA         NA           Record         NA         N							
Main         NA         N							
MA         NA         NA         NA         NA         NA         NA           Siler         NA         NA         NA         NA         NA         NA         NA           Siler         NA         NA         NA         NA         NA         NA         NA           Znic         NA         NA         NA         NA         NA         NA         NA           Mercay         NA         NA         NA         NA         NA         NA         NA           Accolein         NA         NA         NA         NA         NA         NA         NA         NA           Brancemen         NA         NA </td <td>als</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	als						
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ZaneNANANANANAMetronyNANANANANAAcetonNANANANANAAccolanNANANANANAAccolanNANANANANAAccolantinicNANANANANABounochicometureNANANANANABounochicometureNANANANANABounochicometureNANANANANABounochicometureNANANANANABounochicometureNANANANANABounochicometureNANANANANABounochicometureNANANANANAChlorometureNANANANANAChlorometureNANANANANAChlorometureNANANANANAChlorometureNANANANANAChlorometureNANANANANAChlorometureNANANANANAChlorometureNANANANANALidelometureNANANANANALidelometureNANANANANALidelometureNANANANANALidelometureNANANANANA <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Mercury         NA         NA         NA         NA         NA         NA         NA           Actrolin         NA         NA         NA         NA         NA         NA         NA           Actrolini         NA         NA         NA         NA         NA         NA         NA           Bronzen         NA         NA         NA         NA         NA         NA         NA           Bronzolicomethane         NA         NA         NA         NA         NA         NA         NA           Bronzolicomethane         NA         NA         NA         NA         NA         NA         NA           National Scatter         NA         NA         NA         NA         NA         NA         NA           Bronzoliconethane         NA         NA         NA         NA         NA         NA         NA         NA           Sc fully Bourgene         NA		Thallium	NA	NA	NA	NA	NE
Mercury         NA         NA         NA         NA         NA         NA         NA           Actrolin         NA         NA         NA         NA         NA         NA         NA           Actrolini         NA         NA         NA         NA         NA         NA         NA           Bronzen         NA         NA         NA         NA         NA         NA         NA           Bronzolicomethane         NA         NA         NA         NA         NA         NA         NA           Bronzolicomethane         NA         NA         NA         NA         NA         NA         NA           National Scatter         NA         NA         NA         NA         NA         NA         NA           Bronzoliconethane         NA         NA         NA         NA         NA         NA         NA         NA           Sc fully Bourgene         NA		Zinc	NA	NA	NA	NA	NE
Actobie         NA         NA         NA         NA         NA         NA         NA           Acrolian         NA							
Approx BetzeneNANANANANANABetzeneNANANANANANABromoderanceNANANANANABromoderanceNANANANANABromoderanceNANANANANABromoderanceNANANANANABromoderanceNANANANANABromoderanceNANANANANABromoderanceNANANANANASchultbroeneNANANANANACalon tetachlorideNANANANANAChirorethroneeneNANANANANAChirorethroneeneNANANANANAChirorethroneeneNANANANANAChirorethraneNANANANANAChirorethraneNANANANANAChirorethraneNANANANANAChirorethraneNANANANANAL2-dhirorethraneNANANANANAL2-dhirorethraneNANANANANAL2-dhirorethraneNANANANANAL2-dhirorethraneNANANANANAL2-dhirorethraneNANANANANAL2-dhirore			NA	NA	NA	NA	NE
Percence         NA         NA         NA         NA         NA         NA           Bronndelforemethane         NA         NA         NA         NA         NA         NA           Bronndelforemethane         NA         NA         NA         NA         NA         NA           Bronnethane         NA         NA         NA         NA         NA         NA           Natythenzene         NA         NA         NA         NA         NA         NA           Cafton tetracthoride         NA         NA         NA         NA         NA         NA           Chlorodhersene         NA         NA         NA         NA         NA         NA         NA           Chlorodhersene         NA         NA         NA         NA         NA         NA         NA           Chlorodhersene         NA         NA         NA         NA         NA         NA         NA         NA           Chlorodhersene         NA		Acrolein					
Bromokenzene         NA		Acrylonitrile	NA	NA	NA	NA	0.25
RomodichloromethaneNANANANANABrannonethaneNANANANA1.2N-dutylbarazineNANANANANAN-butylbarazineNANANANASic- butylbarazineNANANANACation teractionideNANANANAChiorobarazineNANANANAChiorobarazineNANANANAChiorobarazineNANANANAChiorobarazineNANANANAChiorobarazineNANANANAChiorobarazineNANANANAChiorobarazineNANANANAChiorobarazineNANANANAChiorobarazineNANANANAChiorobarazineNANANANAL'AdforonobarazineNANANANAL'AdforonobarazineNANANANAL'AdforonobarazineNANANANAL'AdforonobarazineNANANANAL'AdforobarazineNANANANAL'AdforlonobarazineNANANANAL'AdforlonobarazineNANANANAL'AdforlonopopaneNANANANAL'AdforlonopopaneNANANANAL'AdforlonopopaneNANA <td< td=""><td></td><td>Benzene</td><td>NA</td><td>NA</td><td>NA</td><td>NA</td><td>1.8</td></td<>		Benzene	NA	NA	NA	NA	1.8
Bromoform         NA		Bromobenzene	NA	NA	NA	NA	NE
BromomethaneNANANANANANANAdul/benzeneNANANANANATert BuylbenzeneNANANANANACarbon tetachlorideNANANANANACarbon tetachlorideNANANANANAChiorobenzeneNANANANANAChiorodiforomonethaneNANANANANAChiorodifuronomethaneNANANANA0.61ChiorodifuraNANANANANA0.22ChiorodifuraNANANANANA0.72ChiorodifuraNANANANANA0.72ChiorodifuraNANANANANA0.72ChiorodifuraNANANANANA0.72ChiorodifuraNANANANANA0.721,2 dicinoxologneNANANANANANE1,2 dicinoxologneNANANANANANE1,2 dicinoxologneNANANANANANA1,2 dicinoxologneNANANANANA1,2 dicinoxologneNANANANANA1,2 dicinoxologneNANANANANA1,2 dicinoxologneNANANANANA1,2 dicinoxologneNANA							
N-busylbanzene         NA							
Sec barylbenzeneNANANANANATerf BuylbenzeneNANANANANACarbon tratealbairdeNANANANANAChlorodibornomethaneNANANANANAChlorodibornomethaneNANANANANAChlorodibornomethaneNANANANANAChlorodibornomethaneNANANANANAChlorodibaneNANANANANAANANANANANAAChlorodibaneNANANANAAChlorodibaneNANANANAAChlorodibaneNANANANAI.3dichlorobanzeneNANANANANADibronomethaneNANANANANAI.3dichlorobanzeneNANANANANAI.3dichlorobanzeneNANANANANAI.3dichlorodibaneNANANANANAI.3dichlorodibaneNANANANANAI.3dichlorodibaneNANANANANAI.3dichlorodibaneNANANANANAI.3dichlorodibaneNANANANANAI.3dichlorodibaneNANANANANAI.3dichlorodibaneNANANANANA <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
IertBuylbenzene         NA							
Cathon tetrachlorideNA <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>							
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ChlorodibromomethaneNA <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>							
ChloroschaneNAD.722.ChlorosthueneNA <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
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ChloromethaneNA <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
2-Chlorotoluene         NA         NA         NA         NA         NA           4-Chlorotoluene         NA         NA         NA         NA         NA           1,2-dibromo-5-chloropopane         NA         NA         NA         NA         NA           1,2-dibromo-5-chloropopane         NA         NA         NA         NA         NA           1,2-dichlorobenzene         NA         NA         NA         NA         NA           1,3-dichlorobenzene         NA         NA         NA         NA         NA           1,4-dichlorobenzene         NA         NA         NA         NA         NA           1,1-dichloroethane         NA         NA         NA         NA         NA           1,1-dichloroethane         NA         NA         NA         NA         NA           1,1-dichloroethane         NA         NA         NA         NA         NA           1,1-dichloroethene         NA         NA         NA         NA         NA           1,1-dichloropropane         NA         NA         NA         NA         NA           1,1-dichloropropane         NA         NA         NA         NA         NA							
4-Chlorotoluene         NA							
1,2-dibromorethane         NA							
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		1,2,3-trichlorobenzene		NA			NE



#### Table 8: SUMMARY OF CHIP TRUCK GROUNDWATER CHEMICAL DATA

		Concentration (mg/l)							
	Compound		DEQ RBCs for Groundwater in Excavation						
		CT-142-W	CT-144-W	CT-151-W	CT-153-W	Construction & Excavation Worker			
	1,2,4-trichlorobenzene	NA	NA	NA	NA	NE			
	1,1,1-trichloroethane	NA	NA	NA	NA	1,100			
	1,1,2-trichloroethane	NA	NA	NA	NA	0.049			
	Trichloroethene	NA	NA	NA	NA	0.43			
	Trichlorofluoromethane	NA	NA	NA	NA	160			
	1,2,3-trichloropropane	NA	NA	NA	NA	NE			
	1,2,4-trimethylbenzene	NA	NA	NA	NA	6			
	1,2,3-trimethylbenzene	NA	NA	NA	NA	NE			
	1,3,5-trimethylbenzene	NA	NA	NA	NA	8			
	Vinyl chloride	NA	NA	NA	NA	0.96			
	Xylenes, total	NA	NA	NA	NA	23			
	Anthracene	0.000186	ND	ND	ND	>\$			
	Acenaphthene	0.000232	0.0000384 J	ND	0.0000119 J	>S			
	Acenaphthylene	ND	ND	ND	ND	NE			
	Benzo(a)anthracene	ND	ND	ND	ND	>S			
	Benzo(a)pyrene	ND	ND	ND	ND	>\$			
	Benzo(b)fluoranthene	ND	ND	ND	ND	> S			
	Benzo(g,h,i)perylene	ND J3	0.00000854 B J J3	0.00000231 B J J3	0.00000401 B J J3	NE			
	Benzo(k)fluoranthene	ND	ND	ND	ND	>S			
	Chrysene	ND	ND	ND	ND	>S			
PAHs	Dibenz(a,h)anthracene	ND J3	ND J3	ND J3	ND J3	> S			
С.	Fluoranthene	0.0000225 J	ND	ND	ND	>\$			
	Fluorene	0.00158	0.000128	ND	0.000012 J	>S			
	Indeno(1,2,3-cd)pyrene	ND J3	ND J3	ND J3	ND J3	>\$			
	Naphthalene	0.0000434	ND	0.0000241 J	0.0000229 J	0.5			
	Phenanthrene	ND	ND	0.0000854 J	0.00000963 J	NE			
	Pyrene	0.0000495 J	0.0000136 J	ND	ND	> S			
	1-methylnaphthalene	0.0000196 J	ND	ND	ND	NE			
	2-methylnaphthalene	0.0000185 J	ND	ND	ND	NE			
	2-chloronaphthalene	ND	ND	ND	ND	NE			
	Diesel-Range Organics	1.32	NA	NA	NA	>S			
	Residual-Range Organics	1.98	NA	NA	NA	>\$			
	Gasoline-Range Organics	NA	NA	NA	NA	14			

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: Compound not analyzed for this sample.

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

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

NE: Value not established.

T8: Sample(s) received past/too close to holding time expiration.

>S: The groundwater Risk-Based Concentration exceeds the solubility limit.

Bold: Value exceeds the RBC for groundwater in excavation for the construction and excavation worker receptor scenari



# Table 9: SUMMARY OF HOG FUEL HYDRAULIC LIFT AREA SOIL CHEMICAL DATA

		Concentration (mg/kg)					
	Compound	Hog Fuel Hydraulic Lift	DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation				
		HF-137-16	Contact, and Inhalation Construction Excava Occupational				
	Antino and			Worker	Worker		
	Antimony Arsenic	NA	NE 1.9	NE 15	NE 420		
	Beryllium	NA	2,300	700	19,000		
	Cadmium	NA	1,100	350	9,700		
	Chromium	NA	6.3	49	1400		
	Copper	NA	47,000	14,000	390,000		
	Lead	NA	800	800	800		
	Nickel	NA	22,000	7,000	190,000		
	Selenium	NA	NE	NE	NE		
	Silver	NA	5,800	1,800	49,000		
	Thallium	NA	NE	NE	NE		
	Zinc	NA	NE	NE	NE		
	Mercury	NA	350	110	2,900		
	Acetone	NA	NE	NE 10	NE		
	Acrylonitrile Benzene	NA NA	4 37	40 380	1,100 11,000		
	Bromobenzene	NA	NE	NE	NE		
	Bromodichloromethane	NA	15	230	6,300		
	Bromoform	NA	260	2,700	74,000		
	Bromomethane	NA	750	370	10,000		
	N-butylbenzene	NA	NE	NE	NE		
	Sec-butylbenzene	NA	NE	NE	NE		
	Tert-Butylbenzene	NA	NE	NE	NE		
	Carbon tetrachloride	NA	34	320	8,900		
	Chlorobenzene	NA	8,700	4,700	130,000		
	Chlorodibromomethane	NA	17	210	5,800		
	Chloroethane	NA	NE	NE	NE		
	Chloroform Chloromethane	NA	26	410	11,000		
	2-Chlorotoluene	NA NA	25,000 NE	25,000 NE	700,000 NE		
	4-Chlorotoluene	NA	NE	NE	NE		
	1,2-dibromo-3-chloropropane	NA	NE	NE	NE		
	1,2-dibromoethane	NA	0.73	9	250		
	Dibromomethane	NA	NE	NE	NE		
	1,2-dichlorobenzene	NA	36,000	20,000	560,000		
	1,3-dichlorobenzene	NA	NE	NE	NE		
	1,4-dichlorobenzene	NA	64	1,300	36,000		
	Dichlorodifluoromethane	NA	NE	NE	NE		
	1,1-dichloroethane	NA	260	3,200	89,000		
	1,2-dichloroethane	NA	NE	NE	NE		
	1,1-dichloroethene	NA	29,000	13,000	370,000		
	Cis-1,2-dichloroethene	NA	2,300	710	20,000		
	Trans-1,2-dichloroethene 1,2-dichloropropane	NA NA	23,000 NE	7,100 NE	200,000 NE		
	1,1-dichloropropene	NA	NE	NE	NE		
	1,3-dichloropropane	NA	NE	NE	NE		
	Cis-1,3-dichloropropene	NA	NE	NE	NE		
	Trans-1,3-dichloropropene	NA	NE	NE	NE		
	2,2-dichloropropane	NA	NE	NE	NE		
	Di-isopropyl ether	NA	NE	NE	NE		
	Ethylbenzene	NA	150	1,700	49,000		
	Hexachloro-1,3-butadiene	NA	NE	NE	NE		
	Isopropylbenzene	NA	57,000	27,000	750,000		
	P-isopropyltoluene	NA	NE	NE	NE		
	2-butanone (Mek)	NA	NE	NE	NE		
	Methylene chloride 4-methyl-2-pentanone (Mibk)	NA NA	NE NE	NE NE	NE NE		
	4-metnyi-2-pentanone (MIDK) Methyl tert-butyl ether	NA	1,100	12,000	320,000		
	Naphthalene	NA	23	580	16,000		
	N-propylbenzene	NA	NE	NE	NE		
	Styrene	NA	130,000	56,000	>Max		
	1,1,1,2-tetrachloroethane	NA	NE	NE	NE		
	1,1,2,2-tetrachloroethane	NA	NE	NE	NE		
	1,1,2-trichlorotrifluoroethane	NA	NE	NE	NE		
	Tetrachloroethene	NA	1,000	1,800	50,000		
	Toluene	NA	88,000	28,000	770,000		
	1,2,3-trichlorobenzene	NA	NE	NE	NE		
	1,2,4-trichlorobenzene	NA	NE	NE	NE		



#### Table 9: SUMMARY OF HOG FUEL HYDRAULIC LIFT AREA SOIL CHEMICAL DATA

		Concentration (mg/kg)							
		Hog Fuel DEQ RBCs for Soil Ingestion, Dermal							
	Compound	Hydraulic Lift	Conta	Contact, and Inhalation					
		HF-137-16	Occupational	Construction Worker	Excavation Worker				
	1,1,1-trichloroethane	NA	870,000	470,000	>Max				
	1,1,2-trichloroethane	NA	26	54	1,500				
	Trichloroethene	NA	51	130	3,700				
	Trichlorofluoromethane	NA	130,000	69,000	>Max				
	1,2,3-trichloropropane	NA	NE	NE	NE				
	1,2,4-trimethylbenzene	NA	6,900	6,900	81,000				
	1,2,3-trimethylbenzene	NA	NE	NE	NE				
	1,3,5-trimethylbenzene	NA	6,900	6,900	81,000				
	Vinyl chloride	NA	4.4	34	950				
	Xylenes, total	NA	25,000	20,000	560,000				
	Anthracene	ND	350,000	110,000	>Max				
	Acenaphthene	ND	70,000	21,000	590,000				
	Acenaphthylene	ND	NE	NE	NE				
	Benzo(a)anthracene	ND	21	170	4,800				
	Benzo(a)pyrene	ND	2.1	17	490				
	Benzo(b)fluoranthene	ND	21	170	4,900				
	Benzo(g,h,i)perylene	ND	NE	NE	NE				
	Benzo(k)fluoranthene	ND	210	1,700	49,000				
Ś	Chrysene	ND	2,100	17,000	490,000				
PAHs	Dibenz(a,h)anthracene	ND	2.1	17	490				
д_	Fluoranthene	ND	30,000	10,000	280,000				
	Fluorene	ND	47,000	14,000	390,000				
	Indeno(1,2,3-cd)pyrene	ND	21	170	4,900				
	Naphthalene	ND	23	580	16,000				
	Phenanthrene	0.000756 J	NE	NE	NE				
	Pyrene	ND	23,000	7,500	210,000				
	1-methylnaphthalene	ND	NE	NE	NE				
	2-methylnaphthalene	ND	NE	NE	NE				
	2-chloronaphthalene	ND	NE	NE	NE				
	Total PCBs	NA	0.59	4.9	140				
	Diesel-Range Organics	ND	14,000	4,600	>Max				
	Residual-Range Organics	ND	14,000	4,600	>Max				
	Gasoline-Range Organics	NA	20,000	9,700	>Max				
		•	•						

Notes:

ND: Not detected at concentration greater than method detection limit. NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is

J3: The associated batch QC was outside the established quality contrc

V3: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high.

NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this

**Bold:** Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor



## Table 10: SUMMARY OF HOG FUEL GROUNDWATER CHEMICAL DATA

Formula         Head Groundwater Sample         BQ BRCs for Consumbater Sample           Winner         HF-137-200         Construction & Executation Worker           Amenic         NA         NE           Amenic         NA         0.1           Beryllum         NA         0.3           Chronin         NA         0.3           Chronin         NA         0.3           Chronin         NA         3.0           Chronin         NA         5.400           Chronin         NA         5.400           Chronin         NA         5.400           Chronin         NA         5.400           Selenin         NA         5.400           Tallium         NA         1.000           Tallium         NA         5.400           Tallium         NA         <			Concentration (mg/L)					
Image: Product		Compound	_					
Antimony         NA         NRC           Assenic         NA         6.3           Beryllum         NA         6.3           Beryllum         NA         2.0           Coper         NA         9.4           Selenium         NA         9.4           Selenium         NA         9.4           Siker         NA         NE           Zinc         NA         NE           Zinc         NA         NE           Actrolein         NA         NE           Actrolein         NA         NE           Bromodenzene         NA         NE           Secbulyborzene         NA         NE           Chorodbromethane         NA         NE           Chorodbromomethane         NA		Compound		Construction & Excavation				
Asenic         NA         6.3           Berlum         NA         270           Cadmium         NA         270           Cadmium         NA         9.4           Copper         NA         5.400           Lad         NA         9.4           Nickal         NA         9.4           Silver         NA         NC           Thullum         NA         NE           Silver         NA         NE           Thullum         NA         NE           Macone         NA         NE           Accrolein         NA         NE           Accrolein         NA         NE           Accrolein         NA         NE           Bromoderichoromethane         NA         NE           Bromoderichoromethane         NA         NE           Bromoderichoromethane         NA         NE           Tert Burylbenzene         NA         NE           Cathoroterachoride         NA         NE           Chorosothane         NA         NE           Chorosothane         NA         NE           Chorosothane         NA         NE           Chorosoth	_	Antimony						
Cadmium         NA         130           Copper         NA         9.4           Selenium         NA         9.4           Silver         NA         NF           Juice         NA         NF           Mercury         NA         9.5           Accoloin         NA         NE           Accoloin         NA         0.25           Bromodenzene         NA         1.8           Bromodichloromethane         NA         0.45           Bromodichloromethane         NA         1.4           Bromodifiance         NA         NE           Schuylbenzene         NA         NE           Schuylbenzene         NA         NE           Choroboursene         NA         1.8           Choroboursene         NA         1.8           Choroboursene         NA         1.8           Choroboursene         NA         1.8           Choroboursene         NA         1.8 <t< td=""><td></td><td></td><td></td><td></td></t<>								
ChromiumNA9.4SoperNA5.400LadNA>5NickelNA>5SilverNANESilverNANEThalliumNANETaineNANEMercuryNA>5AcatoneNANEAcatoneNANEAcatoneNANEAcatoneNANEAcatoneNANEAcatoneNANEAcatoneNANEBenzeneNA0.25BerzeneNA1.4BromodichoromethaneNA1.4BromodinaneNA1.4NatylbenzeneNA1.4NatylbenzeneNANESer-butylbenzeneNANEChlorobetaneNANEChlorobetaneNA0.61ChlorobetaneNANEChlorobetaneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNANEJ.dichorobenzeneNA <td rowspan="2"></td> <td>Beryllium</td> <td>NA</td> <td>270</td>		Beryllium	NA	270				
CopperNA5,400LoadNA>5NickelNA>5SeleniumNANESilverNANEZincNANEZincNANEZincNANEAcroleinNANEAcroleinNANEAcroleinNANEAcroleinNANEAcroleinNANEAcroleinNA0.25BromobenzeneNA1.8BromodichloromethaneNA1.4BromodienzeneNA1.4BromodienzeneNA1.4BromodienzeneNANEEcobaylibenzeneNANECabon tetrachlorideNA1.8ChloroobenzeneNA1.8ChloroobenzeneNANEChloroobenzeneNA1.8ChloroobenzeneNA2.400ChloroobenzeneNA2.20ChloroobenzeneNANE1,2 dibromoethaneNANE1,2 dibromoethaneNANE1,2 dibromoethaneNANE1,2 dichloroobenzeneNANE1,2 dichloroobenzeneNANE1,2 dichloroobenzeneNANE1,2 dichloroobenzeneNANE1,2 dichloroobenzeneNANE1,2 dichloroobenzeneNANE1,2 dichloroobenzeneNANE1,2 dichloroobenzeneNANE1,2		Cadmium	NA	130				
YorTeadNA> 55ScheniumNA> 55ScheniumNANESilverNA1,100TalliumNANEZincNANEZincNANEMercuryNA> 55AcetoneNANEAcryfonitrileNA0.25BenzeneNA1.8BromochonzeneNA1.8BromochonzeneNA1.4BromochonzeneNA1.4BromochonzeneNANEScottpibenzeneNANEScottpibenzeneNANECarbon tetachlorideNA1.6ChlorobenzeneNA1.8ChlorobenzeneNANETet-ButylbenzeneNA1.6ChlorobenzeneNA1.6ChlorobenzeneNA1.8ChlorobenzeneNA1.6ChlorobenzeneNA1.6ChlorobenzeneNA1.6ChlorobenzeneNANE1,2 dichlorobenzeneNANE1,2 dichlorobenzeneNA<			· ·	-				
Name         Name         Discr           Selenium         NA         NF           Silver         NA         1,100           Thallium         NA         NE           Zinc         NA         NE           Mercury         NA         >S5           Acrolein         NA         NE           Acrolein         NA         NE           Acrolein         NA         NE           Benzene         NA         1.8           Bromodichoromethane         NA         NE           Bromoform         NA         1.4           Bromoform         NA         1.6           Chloroblezene         NA         1.6           Chloroblezene         NA         1.6           Chloroblezene         NA         1.6           Chloroblezene         NA         NE           1.2-dibromo-3-chloropropane         NA         NE           1.2	als							
Selenium         NA         NE           Silver         NA         1,100           Tallium         NA         NE           Zinc         NA         NE           Zinc         NA         NE           Mercury         NA         SS           Acrolein         NA         NE           Acrolein         NA         O.25           Bromobenzene         NA         1.8           Bromobenzene         NA         1.8           Bromobenzene         NA         1.2           Neutylbenzene         NA         NE           Sechutylbenzene         NA         NE           Carbon tetrachloride         NA         NE           Chlorobenzene         NA         1.0           Chlorobenzene         NA         NE           J.2dibromo-schlane         NA         NE           J.2dibromo-schlane         NA         NE           J.2dichlorobenzene         NA         NE	Met			-				
ThalliumNANEZincNANEMercuryNA>5AcetoneNANEAcetoneNANEAcroleinNANEAcroleinNA0.25BenzeneNA1.8BromodenzeneNANEBromodenzeneNANEBromodenzeneNA1.4BromodenzeneNA1.4BromodenzeneNANEBromodenzeneNANEBromodentaneNANEBromodentaneNANECarbon tetrachlorideNANECarbon tetrachlorideNA1.8ChlorodibranomethaneNA0.61ChlorodibraneNA2.400ChlorodibraneNA2.400ChlorodibraneNANE2.ChlorotolueneNANE1.2.dibrono-3-chloropropaneNANE1.2.dichlorobenzeneNANE1.2.dichlorobenzeneNANE1.2.dichlorobenzeneNANE1.2.dichlorobenzeneNANE1.4.dichlorobenzeneNANE1.4.dichloropropaneNANE1.2.dichloropenzeneNANE1.3.dichloropenzeneNANE1.4.dichloropenzeneNANE1.4.dichloropenzeneNANE1.4.dichloropenzeneNANE1.4.dichloropenzeneNANE1.4.dichloropenzeneNANE <trr< td=""><td></td><td></td><td></td><td></td></trr<>								
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MercuryNA> SActoneNANEAcroleinNANEAcroleinNA0.25BenzeneNA1.8BromobenzeneNANABromochioromethaneNA0.45BromochioromethaneNA1.4BromochioromethaneNA1.4BromochioromethaneNA1.4BromochioromethaneNANESec-butylbenzeneNANECarbon tetrachlorideNA1.8ChlorobenzeneNA1.0ChlorobenzeneNA1.0ChlorobenzeneNA0.61ChlorobenzeneNA2.22-ChlorotlueneNA0.72ChlorobenzeneNANE1,2-dibromo-3-chloropropaneNANE1,2-dichlorobenzeneNANE1,2-dichlorobenzeneNANE1,2-dichlorobenzeneNANE1,2-dichlorobenzeneNANE1,2-dichlorobenzeneNANE1,2-dichlorobenzeneNANE1,2-dichlorobenzeneNANE1,1-dichloropenzeneNANE1,1-dichloropenzeneNANE1,1-dichloropenzeneNANE1,1-dichloropenzeneNANE1,1-dichloropenzeneNANE1,1-dichloropenzeneNANE1,1-dichloropenzeneNANE1,1-dichloropenzeneNANE1,1-dichloropenzeneNANE </td <td></td> <td>Thallium</td> <td>NA</td> <td>NE</td>		Thallium	NA	NE				
AcetoneNANEAcroleinNANFAcrylonitrileNA0.25BenzeneNA1.8BromodichloromethaneNA0.45BromodichloromethaneNA14BromonethaneNA1.2NbutylbenzeneNANEEc-ButylbenzeneNANECarbon tetrachlorideNANECarbon tetrachlorideNA1.8ChlorodibromomethaneNA1.8ChlorodibromomethaneNA0.61ChlorodibromomethaneNA0.61ChlorodibromomethaneNA2.2ChlorodibromomethaneNANE1.2 dibromo-3-chloropaneNANE1.2 dibromo-3-thoropaneNANE1.2 dibromo-3-thoropaneNANE1.2 dichlorobenzeneNANE1.2 dichlorobenzeneNANE1.2 dichlorobenzeneNANE1.2 dichlorobenzeneNANE1.4 dichlorobenzeneNANE1.4 dichlorobenzeneNANE1.4 dichlorobenzeneNANE1.4 dichlorobenzeneNANE1.4 dichloropethaneNANE1.4 dichloropethaneNANE1.4 dichloropetheneNANE1.4 dichloropetheneNANE1.4 dichloropetheneNANE1.4 dichloropetheneNANE1.4 dichloropropaneNANE1.4 dichloropropaneNANE<		Zinc	NA	NE				
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Acrylonitrile         NA         0.25           Benzene         NA         1.8           Bromodchloromethane         NA         0.45           Bromodchloromethane         NA         1.4           Bromondchloromethane         NA         1.4           Bromondchloromethane         NA         1.1           Nbutylbenzene         NA         NE           Tert-Butylbenzene         NA         1.8           Chlorobenzene         NA         1.0           Chlorobenzene         NA         0.61           Chlorobenzene         NA         0.61           Chloromethane         NA         2.2           Chloromethane         NA         0.72           Chloromethane         NA         0.72           Chlorobenzene         NA         NE           1,2-dibromo-3-chloropropane         NA         NE           1,2-dibromo-3-chloropropane         NA         NE           1,2-dichlorobenzene         NA         NE           1,2-dichlorobenzene         NA         NE           1,1-dichloropethane         NA         NE           1,1-dichloropethane         NA         NE           1,1-dichloropethane         N			NA	NE				
Benzene         NA         1.8           Bromobenzene         NA         NE           Bromodichloromethane         NA         0.45           Bromoform         NA         14           Bromomethane         NA         1.2           Nbutylbenzene         NA         NE           Sec-butylbenzene         NA         NE           Carbon tetrachloride         NA         1.8           Chlorodibromomethane         NA         0.61           Chlorodibromomethane         NA         0.61           Chlorodibromomethane         NA         0.72           Chlorodibromomethane         NA         0.72           Chlorotoluene         NA         NE           1.2-dibromo-3-chloropropane         NA         NE           1.2-dibromoethane         NA         NE           1.2-dichlorobenzene         NA         NE           1.4-dichlorobenzene         NA         NE           1.4-dichloropropane			· ·					
Bromodichloromethane         NA         NE           Bromodichloromethane         NA         0.45           Bromoform         NA         14           Bromomethane         NA         1.2           N-butylbenzene         NA         NE           Carbon tetrachloride         NA         NE           Carbon tetrachloride         NA         1.8           Chlorobenzene         NA         1.0           Chlorobenzene         NA         0.61           Chlorodbromomethane         NA         0.72           Chlorodbromomethane         NA         0.72           Chlorodbromomethane         NA         0.72           Chlorodbromomethane         NA         NE           1,2-dibromo-s-chloropropane         NA         NE           1,2-dibromoethane         NA         NE           1,2-dichlorobenzene         NA         NE           1,2-dichlorobenzene         NA         NE           1,2-dichlorobenzene         NA         NE           1,1-dichlorobenzene         NA         NE           1,1-dichloropenzene         NA         NE           1,1-dichloropenzene         NA         NE           1,1-dichloropenzen								
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P-isopropyltolueneNANE2-butanone (Mek)NANEMethylene chlorideNANE4-methyl-2-pentanone (Mibk)NANEMethyl tert-butyl etherNA63NaphthaleneNA0.5N-propylbenzeneNANEStyreneNA1701,1,2-tetrachloroethaneNANE1,1,2-trichlorotrifluoroethaneNASTetrachloroetheneNA6TolueneNA220		,						
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4-methyl-2-pentanone (Mibk)NANEMethyl tert-butyl etherNA63NaphthaleneNA0.5N-propylbenzeneNANEStyreneNA1701,1,2-tetrachloroethaneNANE1,1,2-tetrachloroethaneNANE1,1,2-trichlorotrifluoroethaneNASTetrachloroetheneNA6TolueneNA220								
Methyl tert-butyl etherNA63NaphthaleneNA0.5N-propylbenzeneNANEStyreneNA1701,1,2-tetrachloroethaneNANE1,1,2-tetrachloroethaneNANE1,1,2-trichlorotrifluoroethaneNASTetrachloroetheneNA6TolueneNA220			NA	NE				
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N-propylbenzeneNANEStyreneNA1701,1,2-tetrachloroethaneNANE1,1,2,2-tetrachloroethaneNANE1,1,2-trichlorotrifluoroethaneNA>STetrachloroetheneNA6TolueneNA220								
StyreneNA1701,1,2-tetrachloroethaneNANE1,1,2,2-tetrachloroethaneNANE1,1,2-trichlorotrifluoroethaneNA>STetrachloroetheneNA6TolueneNA220								
1,1,1,2-tetrachloroethaneNANE1,1,2,2-tetrachloroethaneNANE1,1,2-trichlorotrifluoroethaneNA>STetrachloroetheneNA6TolueneNA220								
1,1,2,2-tetrachloroethaneNANE1,1,2-trichlorotrifluoroethaneNA>STetrachloroetheneNA6TolueneNA220								
1,1,2-trichlorotrifluoroethaneNA>STetrachloroetheneNA6TolueneNA220								
TetrachloroetheneNA6TolueneNA220								
				6				
1,2,3-trichlorobenzene NA NE								
		1,2,3-trichlorobenzene	NA	NE				



#### Table 10: SUMMARY OF HOG FUEL GROUNDWATER CHEMICAL DATA

		Concentration (mg/L)					
		Hog Fuel Groundwater	_				
	Compound	Samples	in Excavation				
		HF-137-W	Construction & Excavation Worker				
	1,2,4-trichlorobenzene	NA	NE				
	1,1,1-trichloroethane	NA	1,100				
	1,1,2-trichloroethane	NA	0.049				
	Trichloroethene	NA	0.43				
	Trichlorofluoromethane	NA	160				
	1,2,3-trichloropropane	NA	NE				
	1,2,4-trimethylbenzene	NA	6				
	1,2,3-trimethylbenzene	NA	NE				
	1,3,5-trimethylbenzene	NA	8				
	Vinyl chloride	NA	0.96				
	Xylenes, total	NA	23				
	Anthracene	ND	>\$				
	Acenaphthene	ND	>\$				
	Acenaphthylene	ND	NE				
	Benzo(a)anthracene	ND	>\$				
	Benzo(a)pyrene	ND	>\$				
	Benzo(b)fluoranthene	ND	>\$				
	Benzo(g,h,i)perylene	ND	NE				
	Benzo(k)fluoranthene	ND	>\$				
	Chrysene	ND	>\$				
PAHs	Dibenz(a,h)anthracene	ND	>\$				
д_	Fluoranthene	ND	>\$				
	Fluorene	ND	>\$				
	Indeno(1,2,3-cd)pyrene	ND	>\$				
	Naphthalene	ND	0.5				
	Phenanthrene	ND	NE				
	Pyrene	ND	>\$				
	1-methylnaphthalene	ND	NE				
	2-methylnaphthalene	ND	NE				
	2-chloronaphthalene	ND	NE				
	Diesel-Range Organics	0.0964	>\$				
	Residual-Range Organics	0.163	>\$				
	Gasoline-Range Organics	NA	14				

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: Compound not analyzed for this sample.

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

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

NE: Value not established.

T8: Sample(s) received past/too close to holding time expiration.

>S: The groundwater Risk-Based Concentration exceeds the solubility limit.

Bold: Value exceeds the Risk-Based Concentration for groundwater in

excavation for the construction and excavation worker receptor



#### Table 11: SUMMARY OF STREAM CHANNEL AREA SOIL CHEMICAL DATA

		Concentration (mg/kg) Stream Channel Area DEQ RBCs for Soil Ingestion, Dermal						
Compound			annel Area amples		or Soil Ingestion ct, and Inhalatic			
		SC-205-1	SC-206-1	Occupational	Construction Worker	Excavation Worker		
	Antimony	1.36 J	ND	NE	NE	NE		
	Arsenic	3.12	4.84	1.9	15	420		
	Beryllium	0.673	ND	2,300	700	19,000		
	Cadmium	0.183 J	ND	1,100	350	9,700		
	Chromium Copper	<b>80.3</b> 70.4	<b>7.11</b> 1.09 J	6.3 47,000	49 14,000	1,400 390,000		
Metals	Lead	7.07	1.66	800	800	800		
Me	Nickel	306	5.04	22,000	7,000	190,000		
	Selenium	ND	ND	NE	NE	NE		
	Silver	ND	ND	5,800	1,800	49,000		
	Thallium	ND	ND	NE	NE	NE		
	Zinc	230	14.9	NE	NE	NE		
	Mercury	0.0182 J	0.0072 J	350	110	2,900		
	Acetone	NA	NA	NE	NE	NE		
	Acrylonitrile	NA	NA	4	40	1,100		
	Benzene	NA	NA	37	380	11,000		
	Bromobenzene	NA	NA	NE	NE	NE		
	Bromodichloromethane Bromoform	NA NA	NA NA	15 260	230	6,300 74,000		
	Bromotorm	NA NA	NA	260 750	2,700 370	74,000 10,000		
	N-butylbenzene	NA	NA	NE	NE	NE		
	Sec-butylbenzene	NA	NA	NE	NE	NE		
	Tert-Butylbenzene	NA	NA	NE	NE	NE		
	Carbon tetrachloride	NA	NA	34	320	8,900		
	Chlorobenzene	NA	NA	8,700	4,700	130,000		
	Chlorodibromomethane	NA	NA	17	210	5,800		
	Chloroethane	NA	NA	NE	NE	NE		
	Chloroform	NA	NA	26	410	11,000		
	Chloromethane	NA	NA	25,000	25,000	700,000		
	2-Chlorotoluene	NA	NA	NE	NE	NE		
	4-Chlorotoluene	NA NA	NA	NE NE	NE	NE		
	1,2-dibromo-3-chloropropane 1,2-dibromoethane	NA	NA NA	0.73	NE 9	NE 250		
	Dibromomethane	NA	NA	NE	NE	NE		
	1,2-dichlorobenzene	NA	NA	36,000	20,000	560,000		
	1,3-dichlorobenzene	NA	NA	NE	NE	NE		
	1,4-dichlorobenzene	NA	NA	64	1,300	36,000		
	Dichlorodifluoromethane	NA	NA	NE	NE	NE		
	1,1-dichloroethane	NA	NA	260	3,200	89,000		
	1,2-dichloroethane	NA	NA	NE	NE	NE		
	1,1-dichloroethene	NA	NA	29,000	13,000	370,000		
	Cis-1,2-dichloroethene	NA	NA	2,300	710	20,000		
	Trans-1,2-dichloroethene	NA	NA	23,000	7,100	200,000		
	1,2-dichloropropane	NA	NA	NE	NE	NE		
VOCs	1,1-dichloropropene 1,3-dichloropropane	NA NA	NA NA	NE NE	NE	NE		
NC V	Cis-1,3-dichloropropane	NA NA	NA	NE	NE NE	NE NE		
	Trans-1,3-dichloropropene	NA	NA	NE	NE	NE		
	2,2-dichloropropane	NA	NA	NE	NE	NE		
	Di-isopropyl ether	NA	NA	NE	NE	NE		
	Ethylbenzene	NA	NA	150	1,700	49,000		
	Hexachloro-1,3-butadiene	NA	NA	NE	NE	NE		
	Isopropylbenzene	NA	NA	57,000	27,000	750,000		
	P-isopropyltoluene	NA	NA	NE	NE	NE		
	2-butanone (Mek)	NA	NA	NE	NE	NE		
	Methylene chloride	NA	NA	NE	NE	NE		
	4-methyl-2-pentanone (Mibk)	NA	NA	NE	NE	NE		
	Methyl tert-butyl ether	NA NA	NA NA	1,100 23	12,000 580	320,000		
	Naphthalene N-propylbenzene	NA NA	NA NA	23 NE	580 NE	16,000 NE		
	Styrene	NA	NA	130,000	56,000	>Max		
	1,1,1,2-tetrachloroethane	NA	NA	NE	56,000 NE	NE		
	1,1,2,2-tetrachloroethane	NA	NA	NE	NE	NE		
	1,1,2-trichlorotrifluoroethane	NA	NA	NE	NE	NE		
	Tetrachloroethene	NA	NA	1,000	1,800	50,000		
	retractitoroethene							
	Toluene	NA	NA	88,000	28,000	770,000		
		NA NA	NA NA	88,000 NE	28,000 NE	770,000 NE		



#### Table 11: SUMMARY OF STREAM CHANNEL AREA SOIL CHEMICAL DATA

				Concentration (m	ig/kg)		
			Stream Channel Area DEQ RBCs for Soil Ingestion, Derma				
	Compound	Soil Samples		Contact, and Inhalation		on Excavation	
		SC-205-1	SC-206-1	Occupational	Construction Worker	Worker	
	1,1,1-trichloroethane	NA	NA	870,000	470,000	>Max	
	1,1,2-trichloroethane	NA	NA	26	54	1,500	
	Trichloroethene	NA	NA	51	130	3,700	
	Trichlorofluoromethane	NA	NA	130,000	69,000	>Max	
	1,2,3-trichloropropane	NA	NA	NE	NE	NE	
	1,2,4-trimethylbenzene	NA	NA	6,900	6,900	81,000	
	1,2,3-trimethylbenzene	NA	NA	NE	NE	NE	
	1,3,5-trimethylbenzene	NA	NA	6,900	6,900	81,000	
	Vinyl chloride	NA	NA	4.4	34	950	
	Xylenes, total	NA	NA	25,000	20,000	560,000	
	Anthracene	0.0273	ND	350,000	110,000	>Max	
	Acenaphthene	0.0142	ND	70,000	21,000	590,000	
	Acenaphthylene	0.0105	ND	NE	NE	NE	
	Benzo(a)anthracene	0.138	0.00102 J	21	170	4,800	
	Benzo(a)pyrene	0.168	ND	2.1	17	490	
	Benzo(b)fluoranthene	0.279	ND	21	170	4,900	
	Benzo(g,h,i)perylene	0.13	ND	NE	NE	NE	
	Benzo(k)fluoranthene	0.0709	ND	210	1,700	49,000	
(0	Chrysene	0.201	ND	2,100	17,000	490,000	
PAHs	Dibenz(a,h)anthracene	0.0272	ND	2.1	17	490	
Ъ	Fluoranthene	0.481	0.0019 J	30,000	10,000	280,000	
	Fluorene	0.0104	ND	47,000	14,000	390,000	
	Indeno(1,2,3-cd)pyrene	0.109	ND	21	170	4,900	
	Naphthalene	0.0348	ND	23	580	16,000	
	Phenanthrene	0.208	ND	NE	NE	NE	
	Pyrene	0.261	0.00127 J	23,000	7,500	210,000	
	1-methylnaphthalene	0.00345 J	ND	NE	NE	NE	
	2-methylnaphthalene	0.00596 J	ND	NE	NE	NE	
	2-chloronaphthalene	ND	ND	NE	NE	NE	
	Total PCBs	ND	ND J3	0.59	4.9	140	
	Diesel-Range Organics	ND	ND	14,000	4,600	>Max	
	Residual-Range Organics	23.6 J	ND	14,000	4,600	>Max	
	Gasoline-Range Organics	0.122 J	0.133 J	20,000	9,700	>Max	

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precisi

V3: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. Below

NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance

**Bold:** Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this



#### Table 12: SUMMARY OF NORTH AND SOUTH "LOWERATORS" AREA SOIL CHEMICAL DATA

		Concentration (mg/kg)           North and South "Lowerators" Area Soil         DEQ RBCs for Soil Ingestion, Dermal						
	Compound		Sam	ples		Conta	ct, and Inhalatio Construction	
			SL-180-15			Occupational	Worker	Worker
	Antimony	NA	NA	ND	NA	NE	NE	NE
	Arsenic	NA	NA	3.97	NA	1.9	15	420
	Beryllium	NA	NA	ND	NA	2,300	700	19,000
	Cadmium	NA	NA	ND	NA	1,100	350	9,700
	Chromium	NA	NA	8.76	NA	6.3	49	1,400
als	Copper	NA	NA	3.97	NA	47,000	14,000	390,000
Metals	Lead	NA	NA	3.63	NA	800	800	800
	Nickel	NA	NA	4.67	NA	22,000	7,000	190,000
	Selenium	NA	NA	ND	NA	NE	NE	NE
	Silver Thallium	NA	NA	ND	NA	5,800 NE	1,800	49,000
	Zinc	NA NA	NA NA	ND 17.6	NA NA	NE	NE NE	NE NE
	Mercury	NA	NA	0.0444	NA	350	110	2,900
	Acetone	NA	NA	ND	NA	NE	NE	NE
	Acrylonitrile	NA	NA	ND	NA	4	40	1,100
	Benzene	NA	NA	0.00059 J	NA	37	380	11,000
	Bromobenzene	NA	NA	ND	NA	NE	NE	NE
	Bromodichloromethane	NA	NA	ND	NA	15	230	6,300
	Bromoform	NA	NA	ND	NA	260	2,700	74,000
	Bromomethane	NA	NA	ND	NA	750	370	10,000
	N-butylbenzene	NA	NA	ND	NA	NE	NE	NE
	Sec-butylbenzene	NA	NA	ND	NA	NE	NE	NE
	Tert-Butylbenzene Carbon tetrachloride	NA	NA	ND	NA	NE	NE	NE
	Chlorobenzene	NA	NA	ND	NA	34	320	8,900
	Chlorodibromomethane	NA	NA	ND	NA	8,700	4,700	130,000
	Chloroethane	NA NA	NA NA	ND ND	NA NA	17 NE	210 NE	5,800 NE
	Chloroform	NA	NA	ND	NA	26	410	11,000
	Chloromethane	NA	NA	ND	NA	25,000	25,000	700,000
	2-Chlorotoluene	NA	NA	ND	NA	25,000 NE	23,000 NE	700,000 NE
	4-Chlorotoluene	NA	NA	ND	NA	NE	NE	NE
	1,2-dibromo-3-chloropropane	NA	NA	ND	NA	NE	NE	NE
	1,2-dibromoethane	NA	NA	ND	NA	0.73	9	250
	Dibromomethane	NA	NA	ND	NA	NE	NE	NE
	1,2-dichlorobenzene	NA	NA	0.0223	NA	36,000	20,000	560,000
	1,3-dichlorobenzene	NA	NA	0.00091 J	NA	NE	20,000 NE	NE
	1,4-dichlorobenzene	NA	NA	0.00202	NA	64	1,300	36,000
	Dichlorodifluoromethane	NA	NA	ND	NA	NE	NE	NE
	1,1-dichloroethane	NA	NA	ND	NA	260	3,200	89,000
	1,2-dichloroethane	NA	NA	ND	NA	NE	NE	NE
	1,1-dichloroethene	NA	NA	ND	NA	29,000	13,000	370,000
	Cis-1,2-dichloroethene	NA	NA	ND	NA	2,300	710	20,000
	Trans-1,2-dichloroethene	NA	NA	ND	NA	23,000	7,100	200,000
	1,2-dichloropropane	NA	NA	ND	NA	NE	NE	200,000 NE
	1,1-dichloropropene	NA	NA	ND	NA	NE	NE	NE
VOCs	1,3-dichloropropane	NA	NA	ND	NA	NE	NE	NE
>	Cis-1,3-dichloropropene	NA	NA	ND	NA	NE	NE	NE
	Trans-1,3-dichloropropene	NA	NA	ND	NA	NE	NE	NE
	2,2-dichloropropane	NA	NA	ND	NA	NE	NE	NE
	Di-isopropyl ether	NA	NA	ND	NA	NE	NE	NE
	Ethylbenzene	NA	NA	ND	NA	150	1,700	49,000
	Hexachloro-1,3-butadiene	NA	NA	ND	NA	NE	NE	NE
	Isopropylbenzene	NA	NA	ND	NA	57,000	27,000	750,000
	P-isopropyltoluene	NA	NA	ND	NA	NE	NE	NE
	2-butanone (Mek)	NA	NA	ND	NA	NE	NE	NE
	Methylene chloride	NA	NA	ND	NA	NE	NE	NE
	4-methyl-2-pentanone (Mibk)	NA	NA	ND	NA	NE	NE	NE
	Methyl tert-butyl ether	NA	NA	ND	NA	1,100	12,000	320,000
	Naphthalene	NA	NA	ND	NA	23	580	16,000
	N-propylbenzene	NA	NA	ND	NA	NE	NE	NE
	Styrene	NA	NA	ND	NA	130,000	56,000	>Max
	1,1,1,2-tetrachloroethane	NA	NA	ND	NA	NE	NE	NE
	1,1,2,2-tetrachloroethane	NA	NA	ND	NA	NE	NE	NE
	1,1,2-trichlorotrifluoroethane	NA	NA	ND	NA	NE	NE	NE
	Tetrachloroethene	NA	NA	ND	NA	1,000	1,800	50,000
	Toluene	NA	NA	0.0102	NA	88,000	28,000	770,000
	1,2,3-trichlorobenzene	NA	NA	ND	NA	NE	20,000 NE	NE
	1,2,4-trichlorobenzene	NA	NA	ND	NA	NE	NE	NE



#### Table 12: SUMMARY OF NORTH AND SOUTH "LOWERATORS" AREA SOIL CHEMICAL DATA

					Concentrati	on (mg/kg)		
		North a	nd South "Lo	owerators" /	Area Soil	DEQ RBCs for Soil Ingestion, Dermal		
	Compound	Samples			Conta	ct, and Inhalatio		
		SL-180-10	SL-180-15	NL-182-5	NL-183-15	Occupational	Construction Worker	Excavation Worker
	1,1,1-trichloroethane	NA	NA	ND	NA	870,000	470,000	>Max
	1,1,2-trichloroethane	NA	NA	ND	NA	26	54	1,500
	Trichloroethene	NA	NA	ND	NA	51	130	3,700
	Trichlorofluoromethane	NA	NA	ND	NA	130,000	69,000	>Max
	1,2,3-trichloropropane	NA	NA	ND	NA	NE	NE	NE
	1,2,4-trimethylbenzene	NA	NA	0.00073 J	NA	6,900	6,900	81,000
	1,2,3-trimethylbenzene	NA	NA	0.00048 J	NA	NE	NE	NE
	1,3,5-trimethylbenzene	NA	NA	0.00032 J	NA	6,900	6,900	81,000
	Vinyl chloride	NA	NA	ND	NA	4.4	34	950
	Xylenes, total	NA	NA	ND	NA	25,000	20,000	560,000
	Anthracene	ND	0.0236 J	ND	ND	350,000	110,000	>Max
	Acenaphthene	ND	ND	ND	ND	70,000	21,000	590,000
	Acenaphthylene	ND	ND	ND	ND	NE	NE	NE
	Benzo(a)anthracene	ND	0.0446 J	ND	ND	21	170	4,800
	Benzo(a)pyrene	ND	0.887	0.00409 J	ND	2.1	17	490
	Benzo(b)fluoranthene	ND	0.17	ND	ND	21	170	4,900
	Benzo(g,h,i)perylene	ND	ND	ND	ND	NE	NE	NE
	Benzo(k)fluoranthene	ND	0.0235 J	ND	ND	210	1,700	49,000
ŝ	Chrysene	ND	0.0182 J	ND	ND	2,100	17,000	490,000
PAHs	Dibenz(a,h)anthracene	ND	1.1461 J	ND	ND	2.1	17	490
д_	Fluoranthene	ND	ND	ND	ND	30,000	10,000	280,000
	Fluorene	ND	0.0159 J	ND	ND	47,000	14,000	390,000
	Indeno(1,2,3-cd)pyrene	ND	0.0303 J	ND	ND	21	170	4,900
	Naphthalene	0.00519 J	ND	0.0264 J	ND	23	580	16,000
	Phenanthrene	ND	0.0158 J	ND	ND	NE	NE	NE
	Pyrene	ND	0.0387 J	0.00079 J	ND	23,000	7,500	210,000
	1-methylnaphthalene	ND	ND	ND	ND	NE	NE	NE
	2-methylnaphthalene	ND	0.0811 J	ND	ND	NE	NE	NE
	2-chloronaphthalene	ND	ND	ND	ND	NE	NE	NE
	Total PCBs	NA	NA	NA	NA	0.59	4.9	140
	Diesel-Range Organics	4440	26.6	166	NA	14,000	4,600	>Max
	Residual-Range Organics	61,500	348	1,560	NA	14,000	4,600	>Max
	Gasoline-Range Organics	NA	NA	NA	NA	20,000	9,700	>Max

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

V3: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. Below detection limit (BDL) results will be unaffected.

NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to pose risks in this scenario.

**Bold:** Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this compound.



#### Table 13: SUMMARY OF NORTH SOUTH LOWERATORS GROUNDWATER CHEMICAL DATA

			Concentration (n	
	Compound	North and South Low Sam	verators Groundwater ples	in Excavation
		SL-180-W	SL-186-W	Construction & Excavation Worker
	Antimony	0.000867 J	ND	NE
	Arsenic	0.00732	0.0164	6.3
	Beryllium	ND	ND	270
	Cadmium	ND	ND	130
	Chromium	0.00641 J	0.0218	9.4
s	Copper	0.00704 J	0.0119	5,400
Metals	Lead	0.00447	0.00229	> S
2	Nickel	ND	0.00975 J	>\$
	Selenium	ND	ND	NE
	Silver	ND	ND	1,100
	Thallium	ND	ND	ND
	Zinc	0.596	0.0259 J	NE
	Mercury	0.0000683 B J	0.0000747 B J	> S
	Acetone	ND J4	ND J4	NE
	Acrolein	ND J4	ND J4	NE
	Acrylonitrile	ND	ND	0.25
	Benzene	ND	ND	1.8
	Bromobenzene	ND	ND	NE
	Bromodichloromethane	ND	ND	0.45
	Bromoform	ND	ND	14
	Bromomethane	ND	ND	1.2
	N-butylbenzene	ND	ND	NE
	Sec-butylbenzene	ND	ND	NE
	Tert-Butylbenzene	ND	ND	NE
	Carbon tetrachloride	ND	ND	1.8
	Chlorobenzene	ND	ND	10
	Chlorodibromomethane	ND	ND	0.61
	Chloroethane	ND J4	ND J4	2,400
	Chloroform	ND	ND	0.72
	Chloromethane 2-Chlorotoluene	ND	ND	22
	4-Chlorotoluene	ND ND	ND ND	NE NE
	1,2-dibromo-3-chloropropane	ND	ND	NE
	1,2-dibromoethane	ND	ND	NE
	Dibromomethane	ND	ND	NE
	1,2-dichlorobenzene	ND	ND	37
	1,3-dichlorobenzene	ND	ND	NE
	1,4-dichlorobenzene	ND	ND	1.5
	Dichlorodifluoromethane	ND	ND	NE
	1,1-dichloroethane	ND	ND	10
	1,2-dichloroethane	ND	ND	NE
	1,1-dichloroethene	ND	ND	44
	Cis-1,2-dichloroethene	ND	ND	18
	Trans-1,2-dichloroethene	ND	ND	180
	1,2-dichloropropane	ND	ND	NE
S	1,1-dichloropropene	ND	ND	NE
VOCS	1,3-dichloropropane	ND	ND	NE
	Cis-1,3-dichloropropene	ND	ND	NE
	Trans-1,3-dichloropropene	ND	ND	NE
	2,2-dichloropropane	ND	ND	NE
	Di-isopropyl ether	ND	ND	NE
	Ethylbenzene	ND	ND	4.5
	Hexachloro-1,3-butadiene	ND	ND	NE
	Isopropylbenzene	ND	ND	51
	P-isopropyltoluene	ND	ND	NE
	2-butanone (Mek)	ND	ND	NE
	Methylene chloride	ND	ND	NE
	4-methyl-2-pentanone (Mibk)	ND	ND	NE
	Methyl tert-butyl ether	ND	ND	63
	Naphthalene	ND	ND	0.5
	N-propylbenzene	ND	ND	NE
	Styrene	ND	ND	170
	1,1,1,2-tetrachloroethane	ND	ND	NE
	1,1,2,2-tetrachloroethane	ND	ND	NE
	1,1,2-trichlorotrifluoroethane	ND	ND	>\$
	Latrachlaroothana	ND	ND	6
	Tetrachloroethene Toluene	ND	ND	220



#### Table 13: SUMMARY OF NORTH SOUTH LOWERATORS GROUNDWATER CHEMICAL DATA

		Concentration (mg/L)					
		North and South Low		DEQ RBCs for Groundwater			
	Compound	Sam	ples	in Excavation			
		SL-180-W	SL-186-W	Construction & Excavation Worker			
_	1,2,4-trichlorobenzene	ND	ND	NE			
	1,1,1-trichloroethane	ND	ND	1,100			
	1,1,2-trichloroethane	ND	ND	0.049			
	Trichloroethene	ND	ND	0.43			
	Trichlorofluoromethane	ND	ND	160			
	1,2,3-trichloropropane	ND	ND	NE			
	1,2,4-trimethylbenzene	ND	ND	6			
	1,2,3-trimethylbenzene	ND	ND	NE			
	1,3,5-trimethylbenzene	ND	ND	8			
	Vinyl chloride	ND	ND	0.96			
	Xylenes, total	ND	ND	23			
	Anthracene	ND	ND	>\$			
	Acenaphthene	ND	ND	>5			
	Acenaphthylene	ND	ND	NE			
	Benzo(a)anthracene	ND	ND	>\$			
	Benzo(a)pyrene	ND	ND	>\$			
	Benzo(b)fluoranthene	ND	ND	>\$			
	Benzo(g,h,i)perylene	ND	ND	NE			
	Benzo(k)fluoranthene	ND	ND	>\$			
s	Chrysene	ND	ND	>\$			
PAHs	Dibenz(a,h)anthracene	ND	ND	>\$			
Δ_	Fluoranthene	ND	ND	>\$			
	Fluorene	ND	ND	>\$			
	Indeno(1,2,3-cd)pyrene	ND	ND	>\$			
	Naphthalene	0.0000366 B J	0.0000447 B J	0.5			
	Phenanthrene	ND	ND	NE			
	Pyrene	ND	ND	>\$			
	1-methylnaphthalene	0.0000123 J	ND	NE			
	2-methylnaphthalene	ND	ND	NE			
	2-chloronaphthalene	ND	ND	NE			
	Diesel-Range Organics	7.58	0.0593 J	>\$			
	Residual-Range Organics	11.1	0.248 J	>\$			
	Gasoline-Range Organics	NA	ND	14			

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: Compound not analyzed for this sample.

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

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

NE: Value not established.

T8: Sample(s) received past/too close to holding time expiration.

>S: The groundwater Risk-Based Concentration exceeds the solubility limit.

**Bold:** Value exceeds the Risk-Based Concentration for groundwater in excavation for the construction and excavation worker receptor scenario for this compound.



#### Table 14: SUMMARY OF FORMER PAINT/MOBILE/FUEL SHOP AREA SOIL CHEMICAL DATA

		Former Paint/Mobile/Fuel	DEQ RBCs f	кg) or Soil Ingestion	, Dermal
	Compound	Shops Area Soil Samples	Conta	ct, and Inhalatio Construction	
		SH-177-5	Occupational	Worker	Worker
	Antimony	ND	NE	NE	NE
	Arsenic	4.33	1.9	15	420
	Beryllium	ND	2,300	700	19,000
	Cadmium Chromium	ND	1,100 6.3	350	9,700 1400
	Copper	6.15 0.944 J	47,000	49 14,000	390,000
Metals	Lead	1.62	800	800	800
Me	Nickel	3.45	22,000	7,000	190,000
	Selenium	ND	NE	NE	NE
	Silver	ND	5,800	1,800	49,000
	Thallium	ND	NE	NE	NE
	Zinc	7.93	NE	NE	NE
	Mercury	0.0443	350	110	2,900
	Acetone	ND	NE	NE	NE
	Acrylonitrile	ND	4	40	1,100
	Benzene	ND	37	380	11,000
	Bromobenzene	ND	NE	NE	NE
	Bromodichloromethane	ND	15	230	6,300
	Bromoform	ND	260	2,700	74,000
	Bromomethane	ND	750	370	10,000
	N-butylbenzene	ND	NE	NE	NE
	Sec-butylbenzene	ND	NE	NE	NE
	Tert-Butylbenzene	ND	NE	NE	NE
	Carbon tetrachloride	ND	34	320	8,900
	Chlorobenzene	ND	8,700	4,700	130,000
	Chlorodibromomethane	ND	17	210	5,800
	Chloroethane	ND	NE	NE	NE
	Chloroform	ND	26	410	11,000
	Chloromethane	ND	25,000	25,000	700,000
	2-Chlorotoluene 4-Chlorotoluene	ND ND	NE NE	NE NE	NE NE
	1,2-dibromo-3-chloropropane	ND	NE	NE	NE
	1,2-dibromoethane	ND	0.73	9	250
	Dibromomethane	ND	NE	NE	NE
	1,2-dichlorobenzene	ND	36,000	20,000	560,000
	1,3-dichlorobenzene	ND	NE	NE	NE
	1,4-dichlorobenzene	ND	64	1,300	36,000
	Dichlorodifluoromethane	ND	NE	NE	NE
	1,1-dichloroethane	ND	260	3,200	89,000
	1,2-dichloroethane	ND	NE	NE	NE
	1,1-dichloroethene	ND	29,000	13,000	370,000
	Cis-1,2-dichloroethene	ND	2,300	710	20,000
	Trans-1,2-dichloroethene	ND	23,000	7,100	200,000
	1,2-dichloropropane	ND	NE	NE	NE
S	1,1-dichloropropene	ND	NE	NE	NE
VOCS	1,3-dichloropropane	ND	NE	NE	NE
	Cis-1,3-dichloropropene	ND	NE	NE	NE
	Trans-1,3-dichloropropene	ND	NE	NE	NE
	2,2-dichloropropane	ND	NE	NE	NE
	Di-isopropyl ether	ND	NE	NE	NE
	Ethylbenzene	ND	150	1,700	49,000
	Hexachloro-1,3-butadiene	ND	NE	NE	NE
	Isopropylbenzene	ND	57,000	27,000	750,000
	P-isopropyltoluene	ND	NE	NE	NE
	2-butanone (Mek)	ND	NE	NE	NE
	Methylene chloride	ND	NE NE	NE	NE NE
	4-methyl-2-pentanone (Mibk) Methyl tert-butyl ether	ND ND	NE 1,100	NE 12,000	NE 320,000
	Naphthalene	ND	23	580	16,000
	N-propylbenzene	ND	23 NE	NE	16,000 NE
	Styrene	ND	130,000	56,000	>Max
	1,1,1,2-tetrachloroethane	ND	NE	56,000 NE	> Max NE
	1,1,2,2-tetrachloroethane	ND	NE	NE	NE
	1,1,2-trichlorotrifluoroethane	ND	NE	NE	NE
	Tetrachloroethene	ND	1,000	1,800	50,000
	Toluene	ND	88,000	28,000	770,000
	1,2,3-trichlorobenzene	ND	NE	20,000 NE	770,000 NE
	1,2,4-trichlorobenzene	ND	NE	NE	NE



#### Table 14: SUMMARY OF FORMER PAINT/MOBILE/FUEL SHOP AREA SOIL CHEMICAL DATA

		Co	oncentration (mg/	kg)	
		Former Paint/Mobile/Fuel	DEQ RBCs fo	or Soil Ingestion	,
	Compound	Shops Area Soil Samples	Conta	ct, and Inhalatio	
		SH-177-5	Occupational	Construction Worker	Excavation Worker
	1,1,1-trichloroethane	ND	870,000	470,000	NE
	1,1,2-trichloroethane	ND	26	54	1,500
	Trichloroethene	ND	51	130	3,700
	Trichlorofluoromethane	ND	130,000	69,000	>Max
	1,2,3-trichloropropane	ND	NE	NE	NE
	1,2,4-trimethylbenzene	ND	6,900	6,900	81,000
	1,2,3-trimethylbenzene	ND	NE	NE	NE
	1,3,5-trimethylbenzene	ND	6,900	6,900	81,000
	Vinyl chloride	ND	4.4	34	950
	Xylenes, total	ND	25,000	20,000	560,000
	Anthracene	ND	350,000	110,000	>Max
	Acenaphthene	ND	70,000	21,000	590,000
	Acenaphthylene	ND	NE	NE	NE
	Benzo(a)anthracene	ND	21	170	4,800
	Benzo(a)pyrene	ND	2.1	17	490
	Benzo(b)fluoranthene	ND	21	170	4,900
	Benzo(g,h,i)perylene	ND	NE	NE	NE
	Benzo(k)fluoranthene	ND	210	1,700	49,000
	Chrysene	ND	2,100	17,000	490,000
PAHs	Dibenz(a,h)anthracene	ND	2.1	17	490
۵.	Fluoranthene	ND	30,000	10,000	280,000
	Fluorene	ND	47,000	14,000	390,000
	Indeno(1,2,3-cd)pyrene	ND	21	170	4,900
	Naphthalene	0.00307	23	580	16,000
	Phenanthrene	ND	NE	NE	NE
	Pyrene	ND	23,000	7,500	210,000
	1-methylnaphthalene	ND	NE	NE	NE
	2-methylnaphthalene	0.00382	NE	NE	NE
	2-chloronaphthalene	ND	NE	NE	NE
	Total PCBs	NA	0.59	4.9	140
	Diesel-Range Organics	12.5	14,000	4,600	>Max
	Residual-Range Organics	29.8	14,000	4,600	>Max
	Gasoline-Range Organics	2.68	20,000	9,700	>Max

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

V3: The internal standard exhibited poor recovery due to sample matrix

interference. The analytical results will be biased high. Below detection NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to

**Bold:** Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this



#### Table 15: SUMMARY OF FORMER SHOPS GROUNDWATER CHEMICAL DATA

		Concentrati	on (mg/L)
	Compound	Former Shops Groundwater Samples	DEQ RBCs for Groundwater in Excavation
	compound	SH-176-W	Construction & Excavation
	Antimony	ND	Worker NE
	Arsenic	0.0127	6.3
	Beryllium	ND	270
	Cadmium	ND	130
	Chromium	0.0149	9.4
als	Copper	0.00657 J	5,400
Metals	Lead Nickel	0.00178 J 0.0076 J	> S > S
	Selenium	ND	NE
	Silver	ND	1,100
	Thallium	ND	NE
	Zinc	0.0102 J	NE
	Mercury	ND	>\$
	Acetone	ND J4	NE
	Acrolein	ND J4	NE
	Acrylonitrile	ND	0.25
	Benzene	ND	1.8
	Bromobenzene	ND	NE 0.45
	Bromodichloromethane Bromoform	ND ND	0.45
	Bromotorm	ND	14
	N-butylbenzene	ND	NE
	Sec-butylbenzene	ND	NE
	Tert-Butylbenzene	ND	NE
	Carbon tetrachloride	ND	1.8
	Chlorobenzene	ND	10
	Chlorodibromomethane	ND	0.61
	Chloroethane	ND J4	2,400
	Chloroform Chloromethane	ND ND	0.72
	2-Chlorotoluene	ND	NE
	4-Chlorotoluene	ND	NE
	1,2-dibromo-3-chloropropane	ND	NE
	1,2-dibromoethane	ND	NE
	Dibromomethane	ND	NE
	1,2-dichlorobenzene	ND	37
	1,3-dichlorobenzene	ND	NE
	1,4-dichlorobenzene Dichlorodifluoromethane	ND	1.5 NE
	1,1-dichloroethane	ND ND	10
	1,2-dichloroethane	ND	NE
	1,1-dichloroethene	ND	44
	Cis-1,2-dichloroethene	ND	18
	Trans-1,2-dichloroethene	ND	180
	1,2-dichloropropane	ND	NE
VOCs	1,1-dichloropropene	ND	NE
>	1,3-dichloropropane	ND	NE
	Cis-1,3-dichloropropene Trans-1,3-dichloropropene	ND ND	NE NE
	2,2-dichloropropane	ND	NE
	Di-isopropyl ether	ND	NE
	Ethylbenzene	ND	4.5
	Hexachloro-1,3-butadiene	ND	NE
	Isopropylbenzene	ND	51
	P-isopropyltoluene	ND	NE
	2-butanone (Mek)	ND	NE
	Methylene chloride 4-methyl-2-pentanone (Mibk)	ND ND	NE NE
	4-metnyi-2-pentanone (MIDK) Methyl tert-butyl ether	ND	63
	Naphthalene	ND	0.5
	N-propylbenzene	ND	NE
	Styrene	ND	170
	1,1,1,2-tetrachloroethane	ND	NE
	1,1,2,2-tetrachloroethane	ND	NE
	1,1,2-trichlorotrifluoroethane	ND	>\$
	Tetrachloroethene	ND	6
	Toluene	0.00103	220
	1,2,3-trichlorobenzene	ND	NE



#### Table 15: SUMMARY OF FORMER SHOPS GROUNDWATER CHEMICAL DATA

		Concentration (mg/L)				
Compound		Former Shops Groundwater Samples SH-176-W	DEQ RBCs for Groundwater in Excavation Construction & Excavation Worker			
	1,2,4-trichlorobenzene	ND	NE			
	1,1,1-trichloroethane	ND	1,100			
	1,1,2-trichloroethane	ND	0.049			
	Trichloroethene	ND	0.43			
	Trichlorofluoromethane	ND	160			
	1,2,3-trichloropropane	ND	NE			
	1,2,4-trimethylbenzene	ND	6			
	1,2,3-trimethylbenzene	ND	NE			
	1,3,5-trimethylbenzene	ND	8			
	Vinyl chloride	ND	0.96			
	Xylenes, total	ND	23			
	Anthracene	ND	>\$			
	Acenaphthene	ND	>\$			
	Acenaphthylene	ND	NE			
	Benzo(a)anthracene	ND	>\$			
	Benzo(a)pyrene	ND	>\$			
	Benzo(b)fluoranthene	ND	>\$			
	Benzo(g,h,i)perylene	ND	NE			
	Benzo(k)fluoranthene	ND	>\$			
s	Chrysene	ND	>\$			
PAHs	Dibenz(a,h)anthracene	ND	>\$			
Δ_	Fluoranthene	ND	>\$			
	Fluorene	ND	>S			
	Indeno(1,2,3-cd)pyrene	ND	>\$			
	Naphthalene	0.0000508 B J	0.5			
	Phenanthrene	ND	NE			
	Pyrene	ND	>S			
	1-methylnaphthalene	0.0000278 J	NE			
	2-methylnaphthalene	0.0000139 J	NE			
	2-chloronaphthalene	ND	NE			
	Diesel-Range Organics	0.159	> S			
	Residual-Range Organics	0.083 J	>S			
	Gasoline-Range Organics	ND	14			

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: Compound not analyzed for this sample.

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for prec

J4: The associated batch QC was outside the established quality control range for accu

NE: Value not established.

T8: Sample(s) received past/too close to holding time expiration.

>S: The groundwater Risk-Based

Bold: Value exceeds the RBC for groundwater in excavation for the construction and exca



#### Table 16: SUMMARY OF MOBILE SHOP AREA SOIL CHEMICAL DATA

		Concentration (mg/kg)           Mobile Shop Area         DEQ RBCs for Soil Ingestion, Dermal					
	Compound	Soil Samples	Conta	ct, and Inhalatic Construction			
		MO-173-14	Occupational	Worker	Worker		
	Antimony	ND	NE	NE	NE		
	Arsenic	3.78	1.9	15	420		
	Beryllium	ND	2,300	700	19,000		
	Cadmium Chromium	ND 5.45	1,100 6.3	350 49	9,700 1400		
	Copper	1.04 J	47,000	14,000	390,000		
Metals	Lead	1.39	800	800	800		
Š	Nickel	3.28	22,000	7,000	190,000		
	Selenium	ND	NE	NE	NE		
	Silver	ND	5,800	1,800	49,000		
	Thallium	ND	NE	NE	NE		
	Zinc	7.4	NE	NE	NE		
	Mercury	0.0443	350	110	2,900		
	Acetone	NA	NE	NE	NE		
	Acrylonitrile	NA	4	40	1,100		
	Benzene	NA	37	380	11,000		
	Bromobenzene	NA	NE	NE	NE		
	Bromodichloromethane Bromoform	NA	15	230	6,300		
	Bromotorm	NA NA	260 750	2,700 370	74,000 10,000		
	N-butylbenzene	NA	750 NE	370 NE	10,000 NE		
	Sec-butylbenzene	NA	NE	NE	NE		
	Tert-Butylbenzene	NA	NE	NE	NE		
	Carbon tetrachloride	NA	34	320	8,900		
	Chlorobenzene	NA	8,700	4,700	130,000		
	Chlorodibromomethane	NA	17	210	5,800		
	Chloroethane	NA	NE	NE	NE		
	Chloroform	NA	26	410	11,000		
	Chloromethane	NA	25,000	25,000	700,000		
	2-Chlorotoluene	NA	NE	NE	NE		
	4-Chlorotoluene	NA	NE	NE	NE		
	1,2-dibromo-3-chloropropane 1,2-dibromoethane	NA NA	NE 0.73	NE 9	NE 250		
	Dibromomethane	NA	NE	9 NE	230 NE		
	1,2-dichlorobenzene	NA	36,000	20,000	560,000		
	1,3-dichlorobenzene	NA	NE	NE	NE		
	1,4-dichlorobenzene	NA	64	1,300	36,000		
	Dichlorodifluoromethane	NA	NE	NE	NE		
	1,1-dichloroethane	NA	260	3,200	89,000		
	1,2-dichloroethane	NA	NE	NE	NE		
	1,1-dichloroethene	NA	29,000	13,000	370,000		
	Cis-1,2-dichloroethene	NA	2,300	710	20,000		
	Trans-1,2-dichloroethene	NA	23,000	7,100	200,000		
	1,2-dichloropropane	NA	NE	NE	NE		
VOCs	1,1-dichloropropene	NA	NE	NE	NE		
>	1,3-dichloropropane Cis-1,3-dichloropropene	NA	NE	NE	NE		
	Trans-1,3-dichloropropene	NA NA	NE NE	NE NE	NE NE		
	2,2-dichloropropane	NA	NE	NE	NE		
	Di-isopropyl ether	NA	NE	NE	NE		
	Ethylbenzene	NA	150	1,700	49,000		
	Hexachloro-1,3-butadiene	NA	NE	NE	NE		
	Isopropylbenzene	NA	57,000	27,000	750,000		
	P-isopropyltoluene	NA	NE	NE	NE		
	2-butanone (Mek)	NA	NE	NE	NE		
	Methylene chloride	NA	NE	NE	NE		
	4-methyl-2-pentanone (Mibk)	NA	NE	NE	NE		
	Methyl tert-butyl ether	NA	1,100	12,000	320,000		
	Naphthalene	NA	23	580	16,000		
	N-propylbenzene Styropo	NA	NE	NE	NE		
	Styrene 1,1,1,2-tetrachloroethane	NA NA	130,000 NE	56,000 NE	>Max NE		
	1,1,2,2-tetrachloroethane	NA NA	NE	NE	NE NE		
	1,1,2,2-terrachioroethane	NA	NE	NE	NE		
	Tetrachloroethene	NA	1,000	1,800	50,000		
	Toluene	NA	88,000	28,000	770,000		
	1,2,3-trichlorobenzene	NA	NE	20,000 NE	NE		
	1,2,4-trichlorobenzene	NA	NE	NE	NE		



#### Table 16: SUMMARY OF MOBILE SHOP AREA SOIL CHEMICAL DATA

			Concentration	(mg/kg)	
		Mobile Shop Area		or Soil Ingestion	, Dermal
	Compound	Soil Samples	Contact, and Inhalation		
		MO-173-14	Occupational	Construction Worker	Excavation Worker
	1,1,1-trichloroethane	NA	870,000	470,000	>Max
	1,1,2-trichloroethane	NA	26	54	1,500
	Trichloroethene	NA	51	130	3,700
	Trichlorofluoromethane	NA	130,000	69,000	>Max
	1,2,3-trichloropropane	NA	NE	NE	NE
	1,2,4-trimethylbenzene	NA	6,900	6,900	81,000
	1,2,3-trimethylbenzene	NA	NE	NE	NE
	1,3,5-trimethylbenzene	NA	6,900	6,900	81,000
	Vinyl chloride	NA	4.4	34	950
	Xylenes, total	NA	25,000	20,000	560,000
	Anthracene	ND	350,000	110,000	>Max
	Acenaphthene	ND	70,000	21,000	590,000
	Acenaphthylene	ND	NE	NE	NE
	Benzo(a)anthracene	ND	21	170	4,800
	Benzo(a)pyrene	ND	2.1	17	490
	Benzo(b)fluoranthene	ND	21	170	4,900
	Benzo(g,h,i)perylene	ND	NE	NE	NE
	Benzo(k)fluoranthene	ND	210	1,700	49,000
s	Chrysene	ND	2,100	17,000	490,000
PAHs	Dibenz(a,h)anthracene	ND	2.1	17	490
Δ_	Fluoranthene	ND	30,000	10,000	280,000
	Fluorene	ND	47,000	14,000	390,000
	Indeno(1,2,3-cd)pyrene	ND	21	170	4,900
	Naphthalene	ND	23	580	16,000
	Phenanthrene	ND	NE	NE	NE
	Pyrene	ND	23,000	7,500	210,000
	1-methylnaphthalene	ND	NE	NE	NE
	2-methylnaphthalene	ND	NE	NE	NE
	2-chloronaphthalene	ND	NE	NE	NE
	Total PCBs	NA	0.59	4.9	140
	Diesel-Range Organics	ND	14,000	4,600	>Max
	Residual-Range Organics	ND	14,000	4,600	>Max
	Gasoline-Range Organics	NA	20,000	9,700	>Max
		-			

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

 $\ensuremath{\mathsf{V3}}\xspace$  : The internal standard exhibited poor recovery due to sample

matrix interference. The analytical results will be biased high. NE: Value not established.

> Max: The constituent rbc for this pathway is calculated as greater than 1,000,000 mg/kg

Bold: Value exceeds the RBC for soil ingestion, dermal contact, and inhalation for the occupational receptor scena



#### Table 17: SUMMARY OF MOBILE SHOPS GROUNDWATER CHEMICAL DATA

		DEO PRCs for Croundwater		
Compound	Mobile	Shops Groundwate	DEQ RBCs for Groundwater in Excavation Construction & Excavation	
	MO-171-W	MO-173-W	MO-175-W	Worker
Antimony	NA	ND	0.00148 J	NE
Arsenic	NA	0.000956 J	0.00783	6.3
Beryllium	NA	ND	0.00104 J	270
Cadmium	NA	ND	0.000799 J	130
Chromium	NA	0.00749 J	0.117	9.4
Copper	NA	0.00553 J	0.103	5,400
Lead Nickel	NA	0.00172 J	0.0183	>\$
INICKCI	NA	0.00634 J	0.177	>5
Selenium Silver	NA NA	0.00924 J ND	ND ND	NE 1,100
Thallium —:	NA	ND	NA	NE
Zinc	NA	0.952	0.197	NE
Mercury	NA	ND	0.0000963 B J	> \$
Acetone	NA	ND J4	ND J J4	NE
Acrolein	NA	ND J4	ND J4	NE
Acrylonitrile	NA	ND	ND	0.25
Benzene	NA	ND	ND	1.8
Bromobenzene	NA	ND	ND	NE
Bromodichloromethane	NA	ND	ND	0.45
Bromoform	NA	ND	ND	14
Bromomethane	NA	ND	ND	1.2
N-butylbenzene	NA	ND	ND	NE
Sec-butylbenzene	NA	ND	ND	NE
Tert-Butylbenzene	NA	ND	ND	NE
Carbon tetrachloride	NA	ND	ND	1.8
Chlorobenzene	NA	ND	ND	10
Chlorodibromomethane	NA	ND	ND	0.61
Chloroethane	NA	ND J4	ND	2,400
Chloroform	NA	ND	ND	0.72
Chloromethane	NA	ND	ND	22
2-Chlorotoluene 4-Chlorotoluene	NA	ND	ND	NE
	NA NA	ND	ND	NE NE
1,2-dibromo-3-chloropropane	NA	ND ND	ND ND	NE
1,2-dibromoethane Dibromomethane	NA		ND	NE
	NA	ND ND	ND	
1,2-dichlorobenzene 1,3-dichlorobenzene	NA	ND	ND	37 NE
1,4-dichlorobenzene	NA	ND	ND	1.5
Dichlorodifluoromethane	NA	ND	ND	NE
1,1-dichloroethane	NA	ND	ND	10
1,2-dichloroethane	NA	ND	ND	NE
1,1-dichloroethene	NA	ND	ND	44
Cis-1,2-dichloroethene	NA	ND	ND	18
Trans-1,2-dichloroethene	NA	ND	ND	180
1,2-dichloropropane	NA	ND	ND	NE
	NA	ND	ND	NE
1,1-dichloropropene 1,3-dichloropropane	NA	ND	ND	NE
Cis-1,3-dichloropropene	NA	ND	ND	NE
Trans-1,3-dichloropropene	NA	ND	ND	NE
2,2-dichloropropane	NA	ND	ND	NE
Di-isopropyl ether	NA	ND	ND	NE
Ethylbenzene	NA	ND	ND	4.5
Hexachloro-1,3-butadiene	NA	ND	ND	NE
Isopropylbenzene	NA	ND	ND	51
P-isopropyltoluene	NA	ND	ND	NE
2-butanone (Mek)	NA	ND	ND	NE
Methylene chloride	NA	ND	ND	NE
4-methyl-2-pentanone (Mibk)	NA	ND	ND	NE
Methyl tert-butyl ether	NA	ND	ND	63
Naphthalene	NA	ND	ND	0.5
N-propylbenzene	NA	ND	ND	NE
Styrene	NA	ND	ND	170
1,1,1,2-tetrachloroethane	NA	ND	ND	NE
1,1,2,2-tetrachloroethane	NA	ND	ND	NE
1,1,2-trichlorotrifluoroethane	NA	ND	ND	>\$
Tetrachloroethene	NA	ND	ND	6
Toluene	NA	ND	ND	220
1,2,3-trichlorobenzene	NA	ND	ND	NE



Table 17: SUMMARY OF MOBILE SHOPS GROUNDWATER CHEMICAL DATA

		Concentration (mg/l)										
Co	mpound	Mobile	Shops Groundwater	Samples	DEQ RBCs for Groundwater in Excavation							
		MO-171-W	MO-173-W	MO-175-W	Construction & Excavation Worker							
1,2,4-trich	lorobenzene	NA	ND	ND	NE							
1,1,1-trich	loroethane	NA	ND	ND	1,100							
1,1,2-trich	loroethane	NA	ND	ND	0.049							
Trichloroe	thene	NA	ND	ND	0.43							
Trichlorofl	uoromethane	NA	ND	ND	160							
1,2,3-trich	loropropane	NA	ND	ND	NE							
1,2,4-trime	ethylbenzene	NA	ND	ND	6							
1,2,3-trime	ethylbenzene	NA	ND	ND	NE							
1,3,5-trime	ethylbenzene	NA	ND	ND	8							
Vinyl chlo	ride	NA	ND	ND	0.96							
Xylenes, to	otal	NA	ND	ND	23							
Anthracen	e	ND	ND	ND	>\$							
Acenaphth	iene	ND	ND	ND	>S							
Acenaphth	nylene	ND	ND	ND	NE							
Benzo(a)ar	nthracene	ND	ND	ND	>\$							
Benzo(a)py	yrene	ND	ND	ND	>\$							
Benzo(b)fl	uoranthene	ND	ND	ND	>\$							
Benzo(g,h,	,i)perylene	ND	ND	ND	NE							
Benzo(k)fl	uoranthene	ND	ND	ND	>S							
Chrysene		ND	ND	ND	>\$							
Here and Her	n)anthracene	ND	ND	ND	>\$							
- Fluoranthe	ene	ND	ND	ND	>\$							
Fluorene		ND	ND	ND	>\$							
Indeno(1,2	2,3-cd)pyrene	ND	ND	ND	>\$							
Naphthale	ne	0.0000509 B J	0.0000472 B J	0.0000503 B J	0.5							
Phenanthr	ene	ND	ND	ND	NE							
Pyrene		ND	ND	ND	>\$							
1-methylna	aphthalene	ND	ND	0.0000162 J	NE							
2-methylna	aphthalene	ND	ND	0.00002 J	NE							
2-chlorona	phthalene	ND	ND	ND	NE							
Diesel-R	ange Organics	ND	ND	1.44	>\$							
Residual-I	Range Organics	ND	ND	2.88	>\$							
Gasoline-	Range Organics	NA	ND	ND	14							

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: Compound not analyzed for this sample.

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

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

NE: Value not established.

T8: Sample(s) received past/too close to holding time expiration.

>S: The groundwater Risk-Based Concentration exceeds the solubility limit.

Bold: Value exceeds the rbc for groundwater in excavation for the construction and excavation worker



# Table 18: SUMMARY OF SOUTH JORDAN POINT DEBRIS AREA SOIL CHEMICAL DATA

					Concentrati	on (mg/kg)		
	Compound	South Jord	lan Point De	ebris Area So	oil Samples		or Soil Ingestion	
	Compound	JP-188-6	JP-189-7	JP-190-7	JP-191-8	Occupational	ict, and Inhalatio Construction Worker	DN Excavation Worker
	Antimony	ND	ND	ND	NA	NE	NE	NE
	Arsenic	2.39 J	4.66	7.07 J	NA	1.9	15	420
	Beryllium	ND	0.146 J	0.32 J	NA	2,300	700	19,000
	Cadmium	ND	ND	0.391 J	NA	1,100	350	9,700
	Chromium	19.7	15.6	38.3	NA	6.3	49	1400
als	Copper	19.5	10.6	44	NA	47,000	14,000	390,000
Metals	Lead	8.66	6.38	35.8	NA	800	800	800
	Nickel	22.4	13.2	34	NA	22,000 NE	7,000 NE	190,000
	Selenium Silver	ND ND	ND ND	ND ND	NA NA	5,800	1,800	NE 49,000
	Thallium	ND	ND	ND	NA	NE	NE	+3,000 NE
	Zinc	52.3	37.1	130	NA	NE	NE	NE
	Mercury	0.0223 J	0.0142	0.058 J	NA	350	110	2,900
	Acetone	NA	NA	NA	NA	NE	NE	NE
	Acrylonitrile	NA	NA	NA	NA	4	40	1,100
	Benzene	NA	NA	NA	NA	37	380	11,000
	Bromobenzene	NA	NA	NA	NA	NE	NE	NE
	Bromodichloromethane	NA	NA	NA	NA	15	230	6,300
	Bromoform	NA	NA	NA	NA	260	2,700	74,000
	Bromomethane	NA	NA	NA	NA	750	370	10,000
	N-butylbenzene	NA	NA	NA	NA	NE	NE	NE
	Sec-butylbenzene	NA	NA	NA	NA	NE	NE	NE
	Tert-Butylbenzene	NA	NA	NA	NA	NE	NE	NE
	Carbon tetrachloride	NA	NA	NA	NA	34	320	8,900
	Chlorobenzene	NA	NA	NA	NA	8,700	4,700	130,000
	Chlorodibromomethane	NA	NA	NA	NA	17	210	5,800
	Chloroethane	NA	NA	NA	NA	NE	NE	NE
	Chloroform	NA	NA	NA	NA	26	410	11,000
	Chloromethane	NA	NA	NA	NA	25,000	25,000	700,000
	2-Chlorotoluene	NA	NA	NA	NA	NE	NE	NE
	4-Chlorotoluene	NA	NA	NA	NA	NE	NE	NE
	1,2-dibromo-3-chloropropane	NA	NA	NA	NA	NE	NE	NE
	1,2-dibromoethane	NA	NA	NA	NA	0.73	9	250
	Dibromomethane	NA	NA	NA	NA	NE 26.000	NE	NE
	1,2-dichlorobenzene 1,3-dichlorobenzene	NA	NA NA	NA	NA	36,000	20,000	560,000
	1,4-dichlorobenzene	NA NA	NA	NA NA	NA NA	NE 64	NE 1,300	NE 36,000
	Dichlorodifluoromethane	NA	NA	NA	NA	NE	NE	36,000 NE
	1,1-dichloroethane	NA	NA	NA	NA	260	3,200	89,000
	1,2-dichloroethane	NA	NA	NA	NA	NE	NE	NE
	1,1-dichloroethene	NA	NA	NA	NA	29,000	13,000	370,000
	Cis-1,2-dichloroethene	NA	NA	NA	NA	2,300	710	20,000
	Trans-1,2-dichloroethene	NA	NA	NA	NA	23,000	7,100	200,000
	1,2-dichloropropane	NA	NA	NA	NA	NE	NE	NE
(0	1,1-dichloropropene	NA	NA	NA	NA	NE	NE	NE
VOCs	1,3-dichloropropane	NA	NA	NA	NA	NE	NE	NE
>	Cis-1,3-dichloropropene	NA	NA	NA	NA	NE	NE	NE
	Trans-1,3-dichloropropene	NA	NA	NA	NA	NE	NE	NE
	2,2-dichloropropane	NA	NA	NA	NA	NE	NE	NE
	Di-isopropyl ether	NA	NA	NA	NA	NE	NE	NE
	Ethylbenzene	NA	NA	NA	NA	150	1,700	49,000
	Hexachloro-1,3-butadiene	NA	NA	NA	NA	NE	NE	NE
	Isopropylbenzene	NA	NA	NA	NA	57,000	27,000	750,000
	P-isopropyltoluene	NA	NA	NA	NA	NE	NE	NE
	2-butanone (Mek)	NA	NA	NA	NA	NE	NE	NE
	Methylene chloride	NA	NA	NA	NA	NE	NE	NE
	4-methyl-2-pentanone (Mibk)	NA	NA	NA	NA	NE	NE	NE
	Methyl tert-butyl ether	NA	NA	NA	NA	1,100	12,000	320,000
	Naphthalene N-propylbenzene	NA	NA	NA	NA	23	580	16,000
	N-propylbenzene Styrene	NA NA	NA NA	NA NA	NA NA	NE 130,000	NE 56,000	NE >Max
	1,1,1,2-tetrachloroethane	NA NA	NA NA	NA	NA NA	130,000 NE	56,000 NE	> Max NE
	1,1,2,2-tetrachloroethane	NA NA	NA	NA	NA	NE	NE	NE
	1,1,2-trichlorotrifluoroethane	NA	NA	NA	NA	NE	NE	NE
	Tetrachloroethene	NA	NA	NA	NA	1,000	1,800	50,000
	Toluene	NA	NA	NA	NA	88,000	28,000	770,000
	1,2,3-trichlorobenzene	NA	NA	NA	NA	NE	20,000 NE	NE
	1,2,4-trichlorobenzene	NA	NA	NA	NA	NE	NE	NE
	·,_, · alemorobenzene					112	I NE	



#### Table 18: SUMMARY OF SOUTH JORDAN POINT DEBRIS AREA SOIL CHEMICAL DATA

					Concentrati	on (mg/kg)		
	Compound	South Jord	lan Point De	bris Area So	il Samples	•	or Soil Ingestion ct, and Inhalatio	
		JP-188-6	JP-189-7	JP-190-7	JP-191-8	Occupational	Construction Worker	Excavation Worker
	1,1,1-trichloroethane	NA	NA	NA	NA	870,000	470,000	>Max
	1,1,2-trichloroethane	NA	NA	NA	NA	26	54	1,500
	Trichloroethene	NA	NA	NA	NA	51	130	3,700
	Trichlorofluoromethane	NA	NA	NA	NA	130,000	69,000	>Max
	1,2,3-trichloropropane	NA	NA	NA	NA	NE	NE	NE
	1,2,4-trimethylbenzene	NA	NA	NA	NA	6,900	6,900	81,000
	1,2,3-trimethylbenzene	NA	NA	NA	NA	NE	NE	NE
	1,3,5-trimethylbenzene	NA	NA	NA	NA	6,900	6,900	81,000
	Vinyl chloride	NA	NA	NA	NA	4.4	34	950
	Xylenes, total	NA	NA	NA	NA	25,000	20,000	560,000
	Anthracene	0.0276	ND	0.00726 J	ND	350,000	110,000	>Max
	Acenaphthene	0.00559 J	0.00132 J	0.00393 J	ND	70,000	21,000	590,000
	Acenaphthylene	0.00429 J	0.00297 J	0.137	ND	NE	NE	NE
	Benzo(a)anthracene	0.00504 J	ND	0.0131 J	ND	21	170	4,800
	Benzo(a)pyrene	0.00173 J	ND	ND	ND	2.1	17	490
	Benzo(b)fluoranthene	0.00965 J	ND	0.00254 J	ND	21	170	4,900
	Benzo(g,h,i)perylene	0.0539	ND	0.00226 J	ND	NE	NE	NE
	Benzo(k)fluoranthene	0.00234 J	ND	ND	ND	210	1,700	49,000
	Chrysene	0.0148	ND	0.0116 J	ND	2,100	17,000	490,000
rans	Dibenz(a,h)anthracene	ND	ND	ND	ND	2.1	17	490
Ľ	Fluoranthene	0.0287	0.00164 J	0.0262	ND	30,000	10,000	280,000
	Fluorene	0.00858 J	ND	0.00271 J	ND	47,000	14,000	390,000
	Indeno(1,2,3-cd)pyrene	0.00191 J	ND	ND	ND	21	170	4,900
	Naphthalene	0.0547	0.00839 J	1.12	ND	23	580	16,000
	Phenanthrene	0.0815	0.00124 J	0.0643	ND	NE	NE	NE
	Pyrene	0.0406	0.00105 J	0.0188 J	ND	23,000	7,500	210,000
	1-methylnaphthalene	0.0281 J	ND	0.0598 J	ND	NE	NE	NE
	2-methylnaphthalene	0.0317 J	ND	0.0634 J	ND	NE	NE	NE
	2-chloronaphthalene	ND	ND	ND	ND	NE	NE	NE
	Total PCBs	NA	NA	ND	NA	0.59	4.9	140
	Diesel-Range Organics	48	NA	NA	ND	14,000	4,600	>Max
	Residual-Range Organics	1,980	NA	NA	ND	14,000	4,600	>Max
	Gasoline-Range Organics	NA	NA	NA	ND	20,000	9,700	>Max

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

V3: The internal standard exhibited poor recovery due to sample matrix interference. The

analytical results will be biased high. Below detection limit (BDL) results will be unaffected. NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to pose risks in this scenario.

**Bold:** Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this compound.



#### Table 19: SUMMARY OF JORDAN POINT GROUNDWATER CHEMICAL DATA

	Compound	Jordan Point Gro	Concentration undwater Samples	DEQ RBCs for Groundwate
		JP-188-W	JP-191-W	Construction & Excavation Worker
	Antimony	ND	ND	NE
	Arsenic	0.00613	0.00626	6.3
	Beryllium	ND	ND	270
	Cadmium	ND	ND	130
	Chromium	0.08	0.0147	9.4
s	Copper	0.11	0.00712 J	5,400
Metals	Lead	0.00424	0.00437	> S
Σ	Nickel	0.0379	0.00867 J	> \$
	Selenium	ND	ND	NE
	Silver	ND	ND	1,100
	Thallium	ND	ND	ND
	Zinc	0.0267 J	0.0162 J	NE
	Mercury	0.0000514 J	0.000102 J	>\$
	Acetone	ND	ND	NE
	Acrolein	ND	ND	NE
	Acrylonitrile	ND	ND	0.25
	Benzene	ND	ND	1.8
	Bromobenzene	ND	ND	NE
	Bromodichloromethane	ND	ND	0.45
	Bromoform	ND	ND	14
	Bromomethane	ND	ND	1.2
	N-butylbenzene	ND	ND	NE
	Sec-butylbenzene	ND	ND	NE
	Tert-Butylbenzene	ND	ND	NE
	Carbon tetrachloride	ND	ND	1.8
	Chlorobenzene	ND	ND	10
	Chlorodibromomethane	ND	ND	0.61
	Chloroethane	ND	ND	2,400
	Chloroform	ND	ND	0.72
	Chloromethane	ND	ND	22
	2-Chlorotoluene	ND	ND	NE
	4-Chlorotoluene	ND	ND	NE
	1,2-dibromo-3-chloropropane	ND	ND	NE
	1,2-dibromoethane	ND	ND	NE
	Dibromomethane	ND	ND	NE
	1,2-dichlorobenzene	ND	ND	37
	1,3-dichlorobenzene	ND	ND	NE
	1,4-dichlorobenzene	ND	ND	1.5
	Dichlorodifluoromethane	ND	ND	NE
	1,1-dichloroethane	ND	ND	10
	1,2-dichloroethane	ND	ND	NE
	1,1-dichloroethene	ND	ND	44
	Cis-1,2-dichloroethene	ND	ND	18
	Trans-1,2-dichloroethene	ND	ND	180
	1,2-dichloropropane	ND	ND	NE
VOCs	1,1-dichloropropene	ND	ND	NE
>	1,3-dichloropropane	ND	ND	NE
	Cis-1,3-dichloropropene	ND	ND	NE
	Trans-1,3-dichloropropene	ND	ND	NE
	2,2-dichloropropane	ND	ND	NE
	Di-isopropyl ether	ND	ND	NE
	Ethylbenzene	ND	ND	4.5
	Hexachloro-1,3-butadiene	ND	ND	NE
	Isopropylbenzene	ND	ND	51
	P-isopropyltoluene	ND	ND	NE
	2-butanone (Mek)	ND	ND	NE
	Methylene chloride	ND	ND	NE
	4-methyl-2-pentanone (Mibk)	ND	ND	NE
	Methyl tert-butyl ether	ND	ND	63
	Naphthalene	ND	ND	0.5
	N-propylbenzene	ND	ND	NE 170
	Styrene	ND	ND	170
	1,1,1,2-tetrachloroethane	ND	ND	NE
	1,1,2,2-tetrachloroethane	ND	ND	NE
	1,1,2-trichlorotrifluoroethane	ND ND	ND ND	> S 6
		NU	NU	h
	Tetrachloroethene Toluene	ND	ND	220



#### Table 19: SUMMARY OF JORDAN POINT GROUNDWATER CHEMICAL DATA

			Concentration	(mg/L)
	Compound	Jordan Point Gro	undwater Samples	DEQ RBCs for Groundwater in Excavation
		JP-188-W	JP-191-W	Construction & Excavation Worker
	1,2,4-trichlorobenzene	ND	ND	NE
	1,1,1-trichloroethane	ND	ND	1,100
	1,1,2-trichloroethane	ND	ND	0.049
	Trichloroethene	ND	ND	0.43
	Trichlorofluoromethane	ND	ND	160
	1,2,3-trichloropropane	ND	ND	NE
	1,2,4-trimethylbenzene	ND	ND	6
	1,2,3-trimethylbenzene	ND	ND	NE
	1,3,5-trimethylbenzene	ND	ND	8
	Vinyl chloride	ND	ND	0.96
	Xylenes, total	ND	ND	23
	Anthracene	ND	ND	>\$
	Acenaphthene	ND	ND	> 5
	Acenaphthylene	ND	ND	NE
	Benzo(a)anthracene	ND	ND	> 5
	Benzo(a)pyrene	ND	ND	>\$
	Benzo(b)fluoranthene	ND	ND	> \$
	Benzo(g,h,i)perylene	0.00000474 B J	ND	NE
	Benzo(k)fluoranthene	ND	ND	> 5
	Chrysene	ND	ND	>\$
PAHs	Dibenz(a,h)anthracene	ND	ND	>5
д_	Fluoranthene	ND	ND	>\$
	Fluorene	ND	ND	> \$
	Indeno(1,2,3-cd)pyrene	ND	ND	>\$
	Naphthalene	0.0000937 B J	0.0000543 B J	0.5
	Phenanthrene	ND	ND	NE
	Pyrene	ND	ND	> 5
	1-methylnaphthalene	ND	ND	NE
	2-methylnaphthalene	ND	0.00001 J	NE
	2-chloronaphthalene	ND	ND	NE
	Diesel-Range Organics	0.674	0.179	>\$
	Residual-Range Organics	1.31	0.21 J	>\$
	Gasoline-Range Organics	ND	ND	14

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: Compound not analyzed for this sample.

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precisio

J4: The associated batch QC was outside the established quality control range for accuracy

NE: Value not established.

T8: Sample(s) received past/too close to holding time expiration.

>S: The groundwater Risk-Based Concentration exceeds the solubility limit.

Bold: Value exceeds the rbc for groundwater in excavation for the construction and excavatic



# Table 20: SUMMARY OF BOILER AND POWERHOUSE AREA SOIL CHEMICAL DATA

# (BP-101-7 through BP-107-12)

	Compound				Boiler and	Powerhouse Area S	Soil Samples					DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation		
		BP-101-7	BP-101-30	BP-102-12	BP-102-20	BP-103-13	BP-104-13	BP-104-20	BP-106-13	BP-107-12	Occupational	Construction Worker	Excavatior Worker	
	Antimony	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Arsenic	NA	NA	3.68	NA	NA	NA	NA	NA	NA	1.9	15	420	
	Beryllium	NA	NA	0.146 J	NA	NA	NA	NA	NA	NA	2,300	700	19,000	
	Cadmium	NA	NA	ND	NA	NA	NA	NA	NA	NA	1,100	350	9,700	
	Chromium	NA	NA	11.6	NA	NA	NA	NA	NA	NA	6.3	49	1400	
s	Copper	NA	NA	10.8	NA	NA	NA	NA	NA	NA	47,000	14,000	390,000	
Metals	Lead	NA	NA	4.61	NA	NA	NA	NA	NA	NA	800	800	800	
Σ	Nickel	NA	NA	9.84	NA	NA	NA	NA	NA	NA	22,000	7,000	190,000	
	Selenium	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Silver	NA	NA	ND	NA	NA	NA	NA	NA	NA	5,800	1,800	49,000	
	Thallium	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Zinc	NA	NA	26.7	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Mercury	NA	NA	0.0416 B	NA	NA	NA	NA	NA	NA	350	110	2,900	
	Acetone	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Acrylonitrile	NA	NA	ND	NA	NA	NA	NA	NA	NA	4	40	1,100	
	Benzene	NA	NA	0.000374 J	NA	NA	NA	NA	NA	NA	37	380	11,000	
	Bromobenzene	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	, NE	
	Bromodichloromethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	15	230	6,300	
	Bromoform	NA	NA	ND	NA	NA	NA	NA	NA	NA	260	2,700	74,000	
	Bromomethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	750	370	10,000	
	N-butylbenzene	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Sec-butylbenzene	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Tert-Butylbenzene	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Carbon tetrachloride	NA	NA	ND	NA	NA	NA	NA	NA	NA	34	320	8,900	
	Chlorobenzene	NA	NA	ND	NA	NA	NA	NA	NA	NA	8,700	4,700	130,000	
	Chlorodibromomethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	17	210	5,800	
	Chloroethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Chloroform	NA	NA	ND	NA	NA	NA	NA	NA	NA	26	410	11,000	
	Chloromethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	25,000	25,000	700,000	
	2-Chlorotoluene	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	4-Chlorotoluene	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,2-dibromo-3-chloropropane	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,2-dibromoethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	0.73	9	250	
	Dibromomethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,2-dichlorobenzene	NA	NA	ND	NA	NA	NA	NA	NA	NA	36,000	20,000	560,000	
	1,3-dichlorobenzene	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,4-dichlorobenzene	NA	NA	ND	NA	NA	NA	NA	NA	NA	64	1,300	36,000	
	Dichlorodifluoromethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE	



# Table 20: SUMMARY OF BOILER AND POWERHOUSE AREA SOIL CHEMICAL DATA

# (BP-101-7 through BP-107-12)

				C	Concentration (mg/k	g)						
Compound				Boiler and	Powerhouse Area S	ioil Samples					or Soil Ingestion oct, and Inhalation	
1,1-dichloroethane1,2-dichloroethane1,2-dichloroetheneCis-1,2-dichloroetheneTrans-1,2-dichloroethene1,2-dichloropropane1,1-dichloropropane1,3-dichloropropane1,3-dichloropropane2,2-dichloropropaneDi-isopropyl etherEthylbenzeneHexachloro-1,3-butadiene2-butanone (Mek)Methylene chloride4-methyl-2-pentanone (Mibk)Methyl tert-butyl etherStyrene1,1,2,2-tetrachloroethane1,1,2,2-tetrachloroethane1,1,2,2-tetrachloroethane1,1,2,3-trichlorobenzene1,2,3-trichlorobenzene1,2,4-trichlorobenzene1,2,4-trichloroethane1,1,1-trichloroethane	BP-101-7	BP-101-30	BP-102-12	BP-102-20	BP-103-13	BP-104-13	BP-104-20	BP-106-13	BP-107-12	Occupational	Construction Worker	Excavation Worker
1,1-dichloroethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	260	3,200	89,000
1,2-dichloroethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
1,1-dichloroethene	NA	NA	ND	NA	NA	NA	NA	NA	NA	29,000	13,000	370,000
Cis-1,2-dichloroethene	NA	NA	ND	NA	NA	NA	NA	NA	NA	2,300	710	20,000
Trans-1,2-dichloroethene	NA	NA	ND	NA	NA	NA	NA	NA	NA	23,000	7,100	200,000
1,2-dichloropropane	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
1,1-dichloropropene	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
1,3-dichloropropane	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
Cis-1,3-dichloropropene	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
Trans-1,3-dichloropropene	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
2,2-dichloropropane	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
Di-isopropyl ether	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
Ethylbenzene	NA	NA	ND	NA	NA	NA	NA	NA	NA	150	1,700	49,000
Hexachloro-1,3-butadiene	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
Isopropylbenzene	NA	NA	ND	NA	NA	NA	NA	NA	NA	57,000	27,000	750,000
	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
Methylene chloride	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
4-methyl-2-pentanone (Mibk)	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
Methyl tert-butyl ether	NA	NA	ND	NA	NA	NA	NA	NA	NA	1,100	12,000	320,000
	NA	NA	0.0636 J	NA	NA	NA	NA	NA	NA	23	580	16,000
•	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
	NA	NA	ND	NA	NA	NA	NA	NA	NA	130,000	56,000	>Max
	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
	NA	NA	ND	NA	NA	NA	NA	NA	NA	1,000	1,800	50,000
	NA	NA	ND	NA	NA	NA	NA	NA	NA	88,000	28,000	770,000
	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
, ,	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	NE	NE
	NA	NA	ND	NA	NA	NA	NA	NA	NA	870,000	470,000	>Max
1,1,2-trichloroethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	26	54	1,500
Trichloroethene	NA	NA	ND	NA	NA	NA	NA	NA	NA	51	130	3,700
Trichlorofluoromethane	NA	NA	ND	NA	NA	NA	NA	NA	NA	130,000	69,000	>Max
1,2,3-trichloropropane	NA	NA	ND	NA	NA	NA	NA	NA	NA	NE	09,000 NE	NE
1,2,4-trimethylbenzene	NA	NA	0.000299 J	NA	NA	NA	NA	NA	NA	6,900	6,900	81,000
1,2,3-trimethylbenzene	NA	NA	0.000299 J ND	NA	NA	NA	NA	NA	NA	0,900 NE	0,900 NE	NE
1,3,5-trimethylbenzene	NA	NA	0.000368 J	NA	NA	NA	NA	NA	NA	6,900	6,900	81,000



#### Table 20: SUMMARY OF BOILER AND POWERHOUSE AREA SOIL CHEMICAL DATA

#### (BP-101-7 through BP-107-12)

	Concentration (mg/kg)													
CompoundVinyl chlorideXylenes, totalAnthraceneAcenaphtheneAcenaphthyleneBenzo(a)anthraceneBenzo(a)pyreneBenzo(a)pyreneBenzo(g,h,i)peryleneBenzo(g,h,i)peryleneChryseneDibenz(a,h)anthraceneFluorantheneFluoreneIndeno(1,2,3-cd)pyrene				Boiler and	Powerhouse Area S	oil Samples				DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation				
Compound	BP-101-7	BP-101-30	BP-102-12	BP-102-20	BP-103-13	BP-104-13	BP-104-20	BP-106-13	BP-107-12	Occupational	Construction Worker			
Vinyl chloride	NA	NA	ND	NA	NA	NA	NA	NA	NA	4.4	34	950		
Xylenes, total	NA	NA	ND	NA	NA	NA	NA	NA	NA	25,000	20,000	560,000		
Anthracene	0.0013 J	ND	0.0739	ND	ND	ND	ND	ND	ND	350,000	110,000	>Max		
Acenaphthene	0.00496 J	ND	0.0915	ND	ND	0.00542 J	ND	ND	ND	70,000	21,000	590,000		
Acenaphthylene	0.00951 J	ND	ND	ND	ND	0.0206 J	ND	ND	ND	NE	NE	NE		
Benzo(a)anthracene	0.00116 J	ND	0.00733 J	ND	ND	ND	ND	ND	ND	21	170	4,800		
Benzo(a)pyrene	ND	ND	0.00403 J	ND	ND	ND	ND	ND	ND	2.1	17	490		
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	170	4,900		
Benzo(g,h,i)perylene	ND	ND	0.00421 J	ND	ND	ND	ND	ND	ND	NE	NE	NE		
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	210	1,700	49,000		
Chrysene	ND	ND	0.00691 J	ND	ND	ND	ND	ND	ND	2,100	17,000	490,000		
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	17	490		
Fluoranthene	0.00216 J	ND	0.0217 J	ND	ND	0.00442 J	ND	ND	ND	30,000	10,000	280,000		
Fluorene	0.0012 J	ND	0.0308	ND	ND	ND	ND	ND	ND	47,000	14,000	390,000		
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	170	4,900		
Naphthalene	0.0785	ND	0.165	ND	ND	0.199	ND	ND	ND	23	580	16,000		
Phenanthrene	0.00455 J	ND	0.139	ND	ND	0.00907 J	ND	ND	ND	NE	NE	NE		
Pyrene	0.00179 J	ND	0.0641	ND	ND	0.00374 J	ND	ND	ND	23,000	7,500	210,000		
1-methylnaphthalene	0.016 J	ND	0.321	ND	ND	ND	ND	ND	ND	NE	NE	NE		
2-methylnaphthalene	0.0128 J	ND	0.409	ND	ND	ND	ND	ND	ND	NE	NE	NE		
2-chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE		
Total PCBs	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.59	4.9	140		
Diesel-Range Organics	NA	NA	697 J3	NA	NA	NA	NA	NA	NA	14,000	4,600	>Max		
Residual-Range Organics	NA	NA	757 J3	NA	NA	NA	NA	NA	NA	14,000	4,600	>Max		
Gasoline-Range Organics	NA	NA	0.803	NA	NA	NA	NA	NA	NA	20,000	9,700	>Max		

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

V3: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. Below detection limit (BDL) results will be unaffected.

NE: Value not established.

> Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to pose risks in this scenario. Bold: Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this compound.



### Table 20: SUMMARY OF BOILER AND POWERHOUSE AREA SOIL CHEMICAL DATA (BP-108-13 through BP-126-6)

					Concentrat	ion (mg/kg)							
	Compound			Boiler a	nd Powerhou	ise Area Soil	Samples			DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation			
		BP-108-13	BP-108-17	BP-119-8	BP-119-17	BP-119-33	BP-121-9	BP-125-13	BP-126-6	Occupational	Construction Worker	Excavation Worker	
	Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Arsenic	NA	NA	NA	NA	NA	NA	NA	NA	1.9	15	420	
	Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	2,300	700	19,000	
	Cadmium	NA	NA	NA	NA	NA	NA	NA	NA	1,100	350	9,700	
	Chromium	NA	NA	NA	NA	NA	NA	NA	NA	6.3	49	1400	
ls	Copper	NA	NA	NA	NA	NA	NA	NA	NA	47,000	14,000	390,000	
Metals	Lead	NA	NA	NA	NA	NA	NA	NA	NA	800	800	800	
2	Nickel	NA	NA	NA	NA	NA	NA	NA	NA	22,000	7,000	190,000	
	Selenium	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Silver	NA	NA	NA	NA	NA	NA	NA	NA	5,800	1,800	49,000	
	Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Zinc	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Mercury	NA	NA	NA	NA	NA	NA	NA	NA	350	110	2,900	
	Acetone	NA	NA	ND	0.0188 J	NA	NA	NA	NA	NE	NE	NE	
	Acrylonitrile	NA	NA	ND	ND	NA	NA	NA	NA	4	40	1,100	
	Benzene	NA	NA	ND	ND	NA	NA	NA	NA	37	380	11,000	
	Bromobenzene	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
	Bromodichloromethane	NA	NA	ND	ND	NA	NA	NA	NA	15	230	6,300	
	Bromoform	NA	NA	ND	ND	NA	NA	NA	NA	260	2,700	74,000	
	Bromomethane	NA	NA	ND	ND	NA	NA	NA	NA	750	370	10,000	
	N-butylbenzene	NA	NA	0.751	ND	NA	NA	NA	NA	NE	NE	NE	
	Sec-butylbenzene	NA	NA	0.101 J	ND	NA	NA	NA	NA	NE	NE	NE	
	Tert-Butylbenzene	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
	Carbon tetrachloride	NA	NA	ND	ND	NA	NA	NA	NA	34	320	8,900	
	Chlorobenzene	NA	NA	ND	ND	NA	NA	NA	NA	8,700	4,700	130,000	
	Chlorodibromomethane	NA	NA	ND	ND	NA	NA	NA	NA	17	210	5,800	
	Chloroethane	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
	Chloroform	NA	NA	ND	ND	NA	NA	NA	NA	26	410	11,000	
	Chloromethane	NA	NA	ND	ND	NA	NA	NA	NA	25,000	25,000	700,000	
	2-Chlorotoluene	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
	4-Chlorotoluene	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
	1,2-dibromo-3-chloropropane	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
	1,2-dibromoethane	NA	NA	ND	ND	NA	NA	NA	NA	0.73	9	250	
	Dibromomethane	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
	1,2-dichlorobenzene	NA	NA	ND	ND	NA	NA	NA	NA	36,000	20,000	560,000	
	1,3-dichlorobenzene	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
	1,4-dichlorobenzene	NA	NA	ND	ND	NA	NA	NA	NA	64	1,300	36,000	
	Dichlorodifluoromethane	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
	1,1-dichloroethane	NA	NA	ND	ND	NA	NA	NA	NA	260	3,200	89,000	
	1,2-dichloroethane	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
	1,1-dichloroethene	NA	NA	ND	ND	NA	NA	NA	NA	29,000	13,000	370,000	
	Cis-1,2-dichloroethene	NA	NA	ND	ND	NA	NA	NA	NA	2,300	710	20,000	
	Trans-1,2-dichloroethene	NA	NA	ND	ND	NA	NA	NA	NA	23,000	7,100	200,000	
	1,2-dichloropropane	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
Ś	1,1-dichloropropene	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
VOCs	1,3-dichloropropane	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	
>	Cis-1,3-dichloropropene	NA	NA	ND	ND	NA	NA	NA	NA	NE	NE	NE	



## Table 20: SUMMARY OF BOILER AND POWERHOUSE AREA SOIL CHEMICAL DATA (BP-108-13 through BP-126-6)

DECompound         DEC RRS: Soft Samples:         DEC RRS: Soft Samples: Contact, and Inhala           Trans: 1,3 dichloropropene         NA	on Excavation Worker
PF 108-13         PF 108-13         PF 108-13         PF 119-17         PF 12-33         PF 12-51         PF 12-50         Occupational         Worker           Itans 1, 3 dichloropropane         NA         NA         NA         ND         NA         NA	Worker
2.2-dichloropropaneNANANANANDNDNANANANANFNFDi-sopropyletherNANANANDNANANANANANANANANFNFEthylenzeneNANANANDNDNANANANANANENEIsopropylenzeneNANANAOd021NDNANANANANANENEPsiopropyllolaceneNANANANDNDNANANANANENF2-butanone (Mek)NANANANDNDNANANANENFMethylene chlorideNANANDNDNANANANANENFMethylene chlorideNANANDNDNANANANANENEMethylene chlorideNANANDNDNANANANANANANANANprophenzeneNANANDNDNAN	
Disspropylether         NA	NE
Ethylbenzene         NA	NE
Hexachloro-1,3-butadieneNA <td>NE</td>	NE
IsopropylbenzeneNA<	49,000
P-isopropyholueneNA	NE
2-butanone (Mek)NA<	750,000
Methylene chlorideNANANANANANANANANANA4-methyl-2-pentanone (Mibk)NANANANDNA	NE
4-methyl-2-pentanone (Mibk)NA<	NE
Methyl tert-butyl etherNANANANANANANA1,10012,000NaphthaleneNANANA12.7NDNANANANA23580NpropylbenzeneNANA0.549NDNANANANANE560001,1,1,2tetrachloroethaneNANANDNDNANANANANENE1,1,2,2tetrachloroethaneNANANDNDNANANANENE1,1,2,2tetrachloroethaneNANANDNDNANANANENE1,1,2,2tetrachloroethaneNANANDNDNANANANENE1,1,2,4trichloroothaneNANANDNDNANANANENE1,2,4trichlorobenzeneNANANDNDNANANANENE1,2,4trichloroothaneNANANDNDNANANANENE1,2,4trichloroothaneNANANDNDNANANANANENE1,2,4trichloroothaneNANANDNDNANANANANENE1,2,4trichloroothaneNANANDNDNANANANAS1130,00069,0001,2,3trichloroothaneNANANDNDNANANANANEN	NE
NaphthaleneNANANANANANANANA23580N-propylbenzeneNANANA0.549NDNANANANANENEStyreneNANANANDNDNANANANA130,00056,0001,1,2,2-tetrachloroethaneNANANDNDNANANANENE1,1,2,2-tetrachloroethaneNANANDNDNANANANENE1,1,2,2-tetrachloroethaneNANANDNDNANANANENE1,1,2,2-tetrachloroethaneNANANDNDNANANANENE1,1,2,2-tetrachloroethaneNANANDNDNANANANENE1,1,2,2-tetrachloroethaneNANANDNDNANANANENE1,1,2,2-tetrachloroethaneNANANDNDNANANANANENE1,1,2-tetrachloroethaneNANANDNDNANANANANENENE1,1,2-tetrachloroethaneNANANDNDNA <td>NE</td>	NE
N-propylbenzeneNA </td <td>320,000</td>	320,000
StyreneNANANANDNDNAN	16,000
1,1,2-tetrachloroethaneNANANANDNDNANANANANENE1,1,2,2-tetrachloroethaneNANANANDNDNANANANANENE1,1,2-trichlorotrifluoroethaneNANANDNDNANANANANENETetrachloroethaneNANANDNDNANANANANENETetrachloroethaneNANANDNDNANANANANANB1,2,3-trichlorobenzeneNANANDNDNANANANENENE1,2,3-trichlorobenzeneNANANDNDNANANANENENE1,1,1-trichlorobenzeneNANANDNDNANANANENENE1,1,2-trichloroethaneNANANDNDNANANANENENE1,1,1-trichloroethaneNANANDNDNANANAA26541,1,2-trichloroethaneNANANDNDNANANA130,00069,0001,2,3-trichloropropaneNANANDNDNANANANANANANA1,2,3-trimethylbenzeneNANANDNDNANANANANANANANANANANANA <td>NE</td>	NE
1,1,2,2-tetrachloroethaneNA <td>&gt;Max</td>	>Max
1,1,2-trichlorotrifluoroethaneNANANANANANANANENETetrachloroetheneNANANDNDNANANANA1,0001,800TolueneNANANANDNDNANANANA88,00028,0001,2,3-trichlorobenzeneNANANDNDNANANANANENE1,2,4-trichlorobenzeneNANANDNDNANANANANENE1,1,1-trichloroethaneNANANDNDNANANANA26541,1,2-trichloroethaneNANANDNDNANANA2654TrichlorofluoromethaneNANANDNDNANANA2654TrichlorofluoromethaneNANANDNDNANANA26541,2,3-trichloropopaneNANANDNDNANANA26541,2,3-trichloropopaneNANANDNDNANANA130,00069,0001,2,3-trimethylbenzeneNANANANDNANANANANENE1,3,5-trimethylbenzeneNANANANDNANANANANANANANANANA1,3,5-trimethylbenzeneNANANANANA <t< td=""><td>NE</td></t<>	NE
TetrachloroetheneNANANANANANANANANA1,0001,800TolueneNANANANDNDNANANANA88,00028,0001,2,3-trichlorobenzeneNANANDNDNANANANENE1,2,4-trichlorobenzeneNANANDNDNANANANENE1,1,1-trichloroethaneNANANDNDNANANA870,000470,0001,1,2-trichloroethaneNANANDNDNANANA2654TrichloroethaneNANANDNDNANANA2654TrichloroethaneNANANDNDNANANA51130TrichloroethaneNANANDNDNANANANENENE1,2,3-trichloropropaneNANANDNDNANANANENENE1,2,3-trinethylbenzeneNANANANDNANANANANENENE1,3,5-trimethylbenzeneNANANDNDNANANANAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA<	NE
TolueneNANANDNDNAN	NE
1,2,3-trichlorobenzeneNANANANDNANANANANANENE1,2,4-trichlorobenzeneNANANANDNDNANANANANENE1,1,1-trichloroethaneNANANANDNDNANANANA870,000470,0001,1,2-trichloroethaneNANANDNDNANANANA2654TrichloroethaneNANANDNDNANANANA2654TrichloroethaneNANANDNDNANANA51130TrichloroethaneNANANDNDNANANA511301,2,3-trichloropropaneNANANDNDNANANANA69,00069,0001,2,3-trimethylbenzeneNANA0.0239 JNDNANANANANENENE1,3,5-trimethylbenzeneNANANDNDNANANANAA6,9006,900Vinyl chlorideNANANANDNDNANANANA4.434Xylenes, totalNANANANANANANA25,00020,000Anthracene0.00391 JND30.60.00374 J0.0017 J0.0147 J350,000110,000Acenaphthene0.0134 JND </td <td>50,000</td>	50,000
1,2,4+trichlorobenzeneNANANANANANANANENE1,1,1-trichloroethaneNANANANDNDNANANANA870,000470,0001,1,2-trichloroethaneNANANANDNDNANANANA2654TrichloroetheneNANANANDNDNANANA2654TrichlorofluoromethaneNANANDNDNANANA511301,2,3-trichloropropaneNANANDNDNANANA69,00069,0001,2,3-trimethylbenzeneNANA0.0239 JNDNANANANANENENE1,3,5-trimethylbenzeneNANANANDNDNANANAA6,9006,900Vinyl chlorideNANANANDNDNANANAA4.434Xylenes, totalNANANDNDNANANAA4.435,000110,000Anthracene0.00391 JND30.70.00241 J0.00072 JND0.0147 J0.0147 J350,00021,000Acenaphthene0.0134 JNDND0.00376 J0.0014 JNDND0.0225 JNENENE	770,000
1,1,1-trichloroethaneNANANANDNDNANANANANA870,000470,0001,1,2-trichloroethaneNANANDNDNANANANA2654TrichloroethaneNANANDNDNANANAS1130TrichloroffluoromethaneNANANDNDNANANAS1130,00069,0001,2,3-trichloropropaneNANANDNDNANANANANENENE1,2,4-trimethylbenzeneNANA0.0239JNDNANANANANANANENE1,2,3-trimethylbenzeneNANA0.0239JNDNANANANANANENE1,3,5-trimethylbenzeneNANANDNDNANANANAA <td>NE</td>	NE
1,1,2-trichloroethaneNANANANANANANANANA2654TrichloroetheneNANANANDNDNANANANA51130TrichlorofluoromethaneNANANDNDNANANANA511301,2,3-trichloropropaneNANANDNDNANANANANENE1,2,3-trimethylbenzeneNANA0.0239 JNDNANANANA6,9006,9001,2,3-trimethylbenzeneNANA0.114NDNANANANANENE1,3,5-trimethylbenzeneNANANDNDNANANAA6,9006,900Vinyl chlorideNANANANDNDNANANAA4.434Xylenes, totalNANA0.0872 JNDNANANAA25,00020,000Acenaphthene0.00718 JND30.60.00376 J0.0014 JND0.0327 JND70,00021,000Acenaphthylene0.0134 JNDND0.00082 JND <td>NE</td>	NE
TrichloroetheneNANANANANANANANAS1130TrichlorofluoromethaneNANANANDNDNANANANANA130,00069,0001,2,3-trichloropropaneNANANANDNDNANANANANENE1,2,4-trimethylbenzeneNANA0.0239 JNDNANANANA6,9006,9001,2,3-trimethylbenzeneNANA0.0139 JNDNANANANA6,9006,9001,3,5-trimethylbenzeneNANANANDNDNANANANANENE1,3,5-trimethylbenzeneNANANANDNDNANANAAA6,9006,900Vinyl chlorideNANANANDNDNANANAAA4.434Xylenes, totalNANANANANANANA25,00020,000Anthracene0.00391 JND30.60.00376 J0.0014 JND0.0327ND70,00021,000Acenaphthene0.0134 JNDND0.0082 JNDNDNDNDNDNDNDNDNDND	>Max
TrichlorofluoromethaneNANANANDNANANANANA130,00069,0001,2,3-trichloropropaneNANANANDNDNANANANANENE1,2,4-trimethylbenzeneNANA0.0239 JNDNANANANA6,9006,9001,2,3-trimethylbenzeneNANA0.0114NDNANANANANENE1,3,5-trimethylbenzeneNANANANDNDNANANANA6,9006,900Vinyl chlorideNANANANDNDNANANAA4.434Xylenes, totalNANA0.0872 JNDNANANA25,00020,000Acenaphthene0.00718 JND30.60.00376 J0.0014 JND0.0327ND70,00021,000Acenaphthylene0.0134 JNDND0.0082 JNDNDNDNDNDNDNDND	1,500
1,2,3-trichloropropaneNANANANDNANANANANANANANENE1,2,3-trimethylbenzeneNANA0.0239 JNDNANANANA6,9006,9001,2,3-trimethylbenzeneNANA0.114NDNANANANANENE1,3,5-trimethylbenzeneNANANANANANANANENE1,3,5-trimethylbenzeneNANANDNDNANANANA6,9006,900Vinyl chlorideNANANANDNDNANANAA4.434Xylenes, totalNANA0.0872 JNDNANANANA25,00020,000Anthracene0.00391 JND30.60.00376 J0.0014 JND0.00327 JND30.205 JNDND0.0327 JNDND21,000Acenaphthylene0.0134 JNDND0.0082 JNDNDNDND0.0205 JNENE	3,700
1,2,4-trimethylbenzeneNANA0.0239 JNDNANANANA6,9006,9001,2,3-trimethylbenzeneNANA0.114NDNANANANANENE1,3,5-trimethylbenzeneNANANDNDNANANA6,9006,9001,3,5-trimethylbenzeneNANANDNDNANANA6,9006,900Vinyl chlorideNANANANDNDNANANA6,9006,900Vinyl chlorideNANANANDNDNANANA4.434Xylenes, totalNANA0.0872 JNDNANANA25,00020,000Anthracene0.00391 JND30.70.00241 J0.00072 JND0.0017 J0.0147 J350,000110,000Acenaphthene0.00718 JND30.60.00376 J0.0014 JNDND0.0225 JNENE	>Max
1,2,3-trimethylbenzeneNANA0.114NDNANANANANANENE1,3,5-trimethylbenzeneNANANANDNDNANANAAA6,9006,900Vinyl chlorideNANANANDNDNANANANA4.434Xylenes, totalNANA0.0872 JNDNANANANA25,00020,000Anthracene0.00391 JND30.70.00241 J0.00072 JND0.0017 J0.0147 J350,000110,000Acenaphthene0.00718 JND30.60.00376 J0.0014 JND0.0327ND70,00021,000Acenaphthylene0.0134 JNDND0.0082 JNDNDND0.0205 JNENE	NE
1,3,5-trimethylbenzeneNANANANDNDNANANANA6,9006,900Vinyl chlorideNANANANDNDNANANANA4.434Xylenes, totalNANA0.0872 JNDNANANANA25,00020,000Anthracene0.00391 JND30.70.00241 J0.0072 JND0.0017 J0.0147 J350,000110,000Acenaphthene0.00718 JND30.60.00376 J0.0014 JND0.0327ND70,00021,000Acenaphthylene0.0134 JNDND0.0082 JNDNDND0.0205 JNENE	81,000
Vinyl chloride         NA         NA         ND         NA         NA         NA         NA         A.4.         34           Xylenes, total         NA         NA         0.0872 J         ND         NA         NA         NA         25,000         20,000           Anthracene         0.00391 J         ND         30.7         0.00241 J         0.0072 J         ND         0.0017 J         0.0147 J         350,000         110,000           Acenaphthene         0.00718 J         ND         30.6         0.00376 J         0.0014 J         ND         0.0327         ND         70,000         21,000           Acenaphthylene         0.0134 J         ND         ND         0.0082 J         ND         ND         ND         0.0205 J         NE         NE	NE
Xylenes, total         NA         NA         0.0872 J         ND         NA         NA         NA         NA         25,000         20,000           Anthracene         0.00391 J         ND         30.7         0.00241 J         0.00072 J         ND         0.017 J         0.0147 J         350,000         110,000           Acenaphthene         0.00718 J         ND         30.6         0.00376 J         0.0014 J         ND         0.0327         ND         70,000         21,000           Acenaphthylene         0.0134 J         ND         ND         0.0082 J         ND         ND         ND         0.0205 J         NE         NE	81,000
Anthracene0.00391 JND30.70.00241 J0.00072 JND0.0017 J0.0147 J350,000110,000Acenaphthene0.00718 JND30.60.00376 J0.0014 JND0.0327ND70,00021,000Acenaphthylene0.0134 JNDND0.0082 JNDNDND0.0205 JNENE	950
Acenaphthene         0.00718 J         ND         30.6         0.00376 J         0.0014 J         ND         0.0327         ND         70,000         21,000           Acenaphthylene         0.0134 J         ND         ND         0.00082 J         ND         ND         ND         0.0205 J         NE         NE	560,000
Acenaphthylene 0.0134 J ND ND 0.00082 J ND ND ND 0.0205 J NE NE	>Max
	590,000
Benzo(a)anthracene         0.00254 J         ND         5.94         0.00109 J         ND         ND         0.0257 J         21         170	NE
	4,800
Benzo(a)pyrene         ND         ND         ND         ND         ND         0.0163 J         2.1         17	490
Benzo(b)fluoranthene         ND         ND         1.15         ND         ND         ND         0.0432 J         21         170	4,900
Benzo(g,h,i)perylene ND ND 0.998 ND ND ND ND 0.449 NE NE	NE
Benzo(k)fluoranthene         ND         ND         ND         ND         ND         0.0201 J         210         1,700	49,000
Chrysene ND ND 10.0 0.00073 J ND ND ND ND 2,100 17,000	490,000
StepNDNDNDNDNDNDNDNDNDNDDibenz(a,h)anthraceneNDND0.275 JNDNDNDND2.117	490
Fluoranthene 0.00467 J ND 4.45 ND ND ND 0.00377 J 0.0152 J 30,000 10,000	280,000
Fluorene 0.00271 J ND 28.8 0.00339 0.00128 J 0.00075 J 0.0109 ND 47,000 14,000	390,000
Indeno(1,2,3-cd)pyrene ND ND 0.179 J ND ND ND ND 0.0224 21 170	4,900
Naphthalene 0.106 ND 92.0 0.0129 J ND ND 0.02 J ND 23 580	16,000
Phenanthrene         0.012 J         ND         124         0.00928         0.00314 J         ND         ND         0.015 J         NE         NE	NE
Pyrene 0.00442 J ND 28.2 0.00229 J ND ND 0.00255 J 0.0199 J 23,000 7,500	210,000



#### Table 20: SUMMARY OF BOILER AND POWERHOUSE AREA SOIL CHEMICAL DATA (BP-108-13 through BP-126-6)

				Concentrat	tion (mg/kg)						
Compound			Boiler a		DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation						
	BP-108-13	BP-108-17	BP-119-8	BP-119-17	BP-119-33	BP-121-9	BP-125-13	BP-126-6	Occupational	Construction Worker	Excavation Worker
1-methylnaphthalene	ND	ND	138	0.0451	0.00855 J	ND	0.0032 J	ND	NE	NE	NE
2-methylnaphthalene	0.00785 J	ND	202	0.052	0.00959 J	ND	0.00403	ND	NE	NE	NE
2-chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE
Total PCBs	NA	NA	NA	NA	NA	NA	NA	NA	0.59	4.9	140
Diesel-Range Organics	85.1	NA	27,600 J3	ND	ND	NA	ND	NA	14,000	4,600	>Max
Residual-Range Organics	389	NA	14,000 J3	5.79	ND	NA	ND	NA	14,000	4,600	>Max
Gasoline-Range Organics	NA	NA	161	NA	NA	NA	NA	NA	20,000	9,700	>Max

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

V3: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. Below detection limit (BDL) results will be unaffected. NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to pose risks in this scenario.

Bold: Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this compound.



# Table 20: SUMMARY OF BOILER AND POWERHOUSE AREA SOIL CHEMICAL DATA(BP-127.8 through BP-202.10)

		Concentration (mg/kg)											
	Compound			Boiler a	and Powerhou	ise Area Soil	Samples			DEQ RBCs for So	oil Ingestion, Dermal Inhalation	Contact, and	
		BP-127-8	BP-129-8	BP-129-14	BP-187-11	BP-200-8	BP-200-13	BP-202-4	BP-202-10	Occupational	Construction Worker	Excavation Worker	
	Antimony	NA	NA	NA	NA	NA	NA	ND	NA	NE	NE	NE	
	Arsenic	NA	NA	NA	NA	NA	NA	4.17	NA	1.9	15	420	
	Beryllium	NA	NA	NA	NA	NA	NA	0.139 J	NA	2,300	700	19,000	
	Cadmium	NA	NA	NA	NA	NA	NA	0.151 J	NA	1,100	350	9,700	
	Chromium	NA	NA	NA	NA	NA	NA	13.8	NA	6.3	49	1400	
s	Copper	NA	NA	NA	NA	NA	NA	28.8	NA	47,000	14,000	390,000	
Metals	Lead	NA	NA	NA	NA	NA	NA	12.6	NA	800	800	800	
2	Nickel	NA	NA	NA	NA	NA	NA	13.7	NA	22,000	7,000	190,000	
	Selenium	NA	NA	NA	NA	NA	NA	ND	NA	NE	NE	NE	
	Silver	NA	NA	NA	NA	NA	NA	ND	NA	5,800	1,800	49,000	
	Thallium	NA	NA	NA	NA	NA	NA	ND	NA	NE	NE	NE	
	Zinc	NA	NA	NA	NA	NA	NA	56.9	NA	NE	NE	NE	
	Mercury	NA	NA	NA	NA	NA	NA	0.0367	NA	350	110	2,900	
	Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Acrylonitrile	NA	NA	NA	NA	NA	NA	NA	NA	4	40	1,100	
	Benzene	NA	NA	NA	NA	NA	NA	NA	NA	37	380	11,000	
	Bromobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	15	230	6,300	
	Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	260	2,700	74,000	
	Bromomethane	NA	NA	NA	NA	NA	NA	NA	NA	750	370	10,000	
	N-butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Sec-butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Tert-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	34	320	8,900	
	Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	8,700	4,700	130,000	
	Chlorodibromomethane	NA	NA	NA	NA	NA	NA	NA	NA	17	210	5,800	
	Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	26	410	11,000	
	Chloromethane	NA	NA	NA	NA	NA	NA	NA	NA	25,000	25,000	700,000	
	2-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	4-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,2-dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,2-dibromoethane	NA	NA	NA	NA	NA	NA	NA	NA	0.73	9	250	
	Dibromomethane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,2-dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	36,000	20,000	560,000	
	1,3-dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,4-dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	64	1,300	36,000	
	Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,1-dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	260	3,200	89,000	
	1,2-dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE	
	1,1-dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	29,000	13,000	370,000	
	Cis-1,2-dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	2,300	710	20,000	



# Table 20: SUMMARY OF BOILER AND POWERHOUSE AREA SOIL CHEMICAL DATA(BP-127.8 through BP-202.10)

Concentration (mg/kg)												
	Compound			Boiler a	nd Powerhou	se Area Soil	Samples			DEQ RBCs for Se	oil Ingestion, Dermal Inhalation	Contact, and
		BP-127-8	BP-129-8	BP-129-14	BP-187-11	BP-200-8	BP-200-13	BP-202-4	BP-202-10	Occupational	Construction Worker	Excavation Worker
	Trans-1,2-dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	23,000	7,100	200,000
	1,2-dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
S	1,1-dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
VOCs	1,3-dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
-	Cis-1,3-dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	Trans-1,3-dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	2,2-dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	Di-isopropyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	150	1,700	49,000
	Hexachloro-1,3-butadiene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	57,000	27,000	750,000
	P-isopropyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	2-butanone (Mek)	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	Methylene chloride	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	4-methyl-2-pentanone (Mibk)	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	1,100	12,000	320,000
	Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	23	580	16,000
	N-propylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	Styrene	NA	NA	NA	NA	NA	NA	NA	NA	130,000	56,000	>Max
	1,1,1,2-tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	1,1,2,2-tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	1,1,2-trichlorotrifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	Tetrachloroethene	NA	NA	NA	NA	NA	NA	NA	NA	1,000	1,800	50,000
	Toluene	NA	NA	NA	NA	NA	NA	NA	NA	88,000	28,000	770,000
	1,2,3-trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	1,2,4-trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	1,1,1-trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	870,000	470,000	>Max
	1,1,2-trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	26	54	1,500
	Trichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	51	130	6,700
	Trichlorofluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	130,000	69,000	>Max
	1,2,3-trichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	1,2,4-trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	6,900	6,900	81,000
	1,2,3-trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE	NE
	1,3,5-trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	6,900	6,900	81,000
	Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	4.4	34	950
	Xylenes, total	NA	NA	NA	NA	NA	NA	NA	NA	25,000	20,000	560,000
	Anthracene	ND	22.9	ND	ND	1.06	ND	0.00485 J	ND	350,000	110,000	>Max
	Acenaphthene	ND	16.1	0.00719 J	ND	1.46	ND	0.00078 J	ND	70,000	21,000	590,000
	Acenaphthylene	ND	3.64	ND	ND	0.182	ND	0.00184 J	ND	NE	NE	NE
	Benzo(a)anthracene	ND	3.88	0.00218 J	ND	0.0922	ND	0.0397	ND	21	170	4,800
	Benzo(a)pyrene	ND	1.76	0.00218 J	0.00073 J	0.0922 0.0405 J	ND	0.0368	ND	2.1	170	4,000
	Benzo(b)fluoranthene	ND	0.842	ND	ND	0.0431 J	ND	0.0300	ND	21	170	4,900



# Table 20: SUMMARY OF BOILER AND POWERHOUSE AREA SOIL CHEMICAL DATA(BP-127.8 through BP-202.10)

Concentration (mg/kg)													
	Compound			Boiler a	nd Powerhou	ise Area Soil S	Samples			DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation			
		BP-127-8	BP-129-8	BP-129-14	BP-187-11	BP-200-8	BP-200-13	BP-202-4	BP-202-10	Occupational	Construction Worker	Excavation Worker	
	Benzo(g,h,i)perylene	ND	0.836	ND	ND	0.0376 J	ND	0.0263	ND	NE	NE	NE	
	Benzo(k)fluoranthene	ND	0.16	ND	ND	0.0181 J	ND	0.0215	ND	210	1,700	49,000	
s	Chrysene	ND	7.08	0.00318 J	ND	0.172	ND	0.0407	ND	2,100	17,000	490,000	
PAH	Dibenz(a,h)anthracene	ND	0.228	ND	ND	0.00824 J	ND	0.00632 J	ND	2.1	17	490	
а.	Fluoranthene	ND	2.83	0.00191 J	ND	0.403	ND	0.0678	ND	30,000	10,000	280,000	
	Fluorene	ND	16.5	0.0048 J	ND	0.481	ND	0.00125 J	ND	47,000	14,000	390,000	
	Indeno(1,2,3-cd)pyrene	ND	0.130 J	ND	ND	0.0106 J	ND	0.0217	ND	21	170	4,900	
	Naphthalene	ND	50.4	0.00388 J	0.00449 J	0.153 J	ND	ND	ND	23	580	16,000	
	Phenanthrene	ND	86.0	0.0166	ND	0.508	ND	0.0146	ND	NE	NE	NE	
	Pyrene	ND	17.6	0.00812	ND	1.4	ND	0.0475	ND	23,000	7,500	210,000	
	1-methylnaphthalene	ND	258	0.0492	ND	0.455	ND	0.00308 J	ND	NE	NE	NE	
	2-methylnaphthalene	ND	35.8	0.00709 J	ND	0.400	ND	0.00463 J	ND	NE	NE	NE	
	2-chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE	
	Total PCBs	NA	NA	NA	NA	NA	NA	ND J3	NA	0.59	4.9	140	
	Diesel-Range Organics	NA	10,800	11.2	NA	2,360	NA	ND	NA	14,000	4,600	>Max	
	Residual-Range Organics	NA	5,100	ND J	NA	967	NA	98.2	NA	14,000	4,600	>Max	
	Gasoline-Range Organics	NA	NA	NA	NA	NA	NA	NA	NA	20,000	9,700	>Max	

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

V3: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. Below detection limit (BDL) results will be unaffected.

NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to pose risks in this scenario.

Bold: Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this compound.



#### Table 21: SUMMARY OF BOILER AND POWERHOUSE GROUNDWATER CHEMICAL DATA

		Concentration (mg/L)										
Compound		Boi	ler and Powerhous	e Groundwater	Samples		DEQ RBCs for Groundwat in Excavation					
	BP-102-W	BP-109-W	BP-119-W	BP-121-W	BP-187-W	BP-202-W	Construction & Excavatio Worker					
Antimony	ND	0.000828 J	ND	NA	ND	NA	NE					
Arsenic	0.0105	0.00301	0.00474	NA	0.00908	NA	6.3					
Beryllium	ND	ND	ND	NA	ND	NA	270					
Cadmium	ND	ND	ND	NA	ND	NA	130					
Chromium	0.0368	0.005 J	0.00313 J	NA	0.0215	NA	9.4					
୍ <u>ର</u> Copper ୟୁ Lead	0.0194 0.0103	ND 0.00184 B J	ND 0.000716 J	NA NA	ND 0.00529	NA NA	5,400 >S					
Lead Nickel	0.0193	0.00104 D J	ND	NA	0.0127	NA	>\$					
Selenium	ND	ND	ND	NA	ND	NA	NE					
Silver	ND	ND	ND	NA	ND	NA	1,100					
Thallium	0.000372 J	0.00028 B J	NA	NA	ND	NA	NE					
Zinc	0.0625	0.0079 J	ND	NA	0.0245 J	NA	NE					
Mercury	0.0000545 J J3	ND J3	0.0000542 J J3	NA	0.0000686 B J	NA	>\$					
Acetone	ND	ND	ND	NA	ND J4	NA	NE					
Acrolein	ND J4	ND J4	ND J4	NA	ND J4	NA	NE					
Acrylonitrile	ND	ND	ND	NA	ND	NA	0.25					
Benzene	ND	ND	ND	NA	ND	NA	1.8					
Bromobenzene	ND	ND	ND	NA	ND	NA	NE					
Bromodichlorometha		ND	ND	NA	ND	NA	0.45					
Bromoform	ND	ND	ND	NA	ND	NA	14					
Bromomethane	ND J3	ND	ND J3	NA	ND	NA	1.2					
N-butylbenzene	ND	ND	ND	NA	ND	NA	NE					
Sec-butylbenzene	ND	ND	ND	NA	ND	NA	NE					
Tert-Butylbenzene	ND	ND	ND	NA	ND	NA	NE					
Carbon tetrachloride	ND	ND	ND	NA	ND	NA	1.8					
Chlorobenzene	ND	ND	ND	NA	ND	NA	10					
Chlorodibromometha	ne ND	ND	ND	NA	ND	NA	0.61					
Chloroethane	ND J3	ND	ND J3	NA	ND J4	NA	2,400					
Chloroform	ND	ND	ND	NA	ND	NA	0.72					
Chloromethane	ND J3 J4	ND	ND J3 J4	NA	ND	NA	22					
2-Chlorotoluene	ND	ND	ND	NA	ND	NA	NE					
4-Chlorotoluene	ND	ND	ND	NA	ND	NA	NE					
1,2-dibromo-3-chloro		ND	ND	NA	ND	NA	NE					
1,2-dibromoethane	ND	ND	ND	NA	ND	NA	NE					
Dibromomethane	ND	ND	ND	NA	ND	NA	NE					
1,2-dichlorobenzene	ND	ND	ND	NA	ND	NA	37					
1,3-dichlorobenzene	ND	ND	ND	NA	ND	NA	NE					
1,4-dichlorobenzene Dichlorodifluorometh	ND ND	ND ND	ND ND	NA NA	ND ND	NA	1.5 NE					
	ND ND	ND	ND	NA	ND	NA NA	10					
1,1-dichloroethane 1,2-dichloroethane	ND	ND	ND	NA	ND	NA	NE					
1,1-dichloroethene	ND J3	ND	ND J3	NA	ND	NA	44					
Cis-1,2-dichloroether		ND	ND J3	NA	ND	NA	18					
Trans-1,2-dichloroeth		ND	ND	NA	ND	NA	180					
1,2-dichloropropane	ND	ND	ND	NA	ND	NA	NE					
	ND	ND	ND	NA	ND	NA	NE					
<ul><li>1,1-dichloropropene</li><li>1,3-dichloropropane</li></ul>	ND	ND	ND	NA	ND	NA	NE					
Cis-1,3-dichloroprope		ND	ND	NA	ND	NA	NE					
Trans-1,3-dichloropro		ND	ND	NA	ND	NA	NE					
2,2-dichloropropane	ND J3	ND	ND J3	NA	ND	NA	NE					
Di-isopropyl ether	ND	ND	ND	NA	ND	NA	NE					
Ethylbenzene	ND	ND	ND	NA	ND	NA	4.5					
Hexachloro-1,3-butac	liene ND	ND	ND	NA	ND	NA	NE					
Isopropylbenzene	ND	ND	ND	NA	ND	NA	51					
P-isopropyltoluene	ND	ND	ND	NA	ND	NA	NE					
2-butanone (Mek)	ND	ND	ND	NA	ND	NA	NE					
Methylene chloride	ND	ND	ND	NA	ND	NA	NE					
4-methyl-2-pentanone		ND	ND	NA	ND	NA	NE					
Methyl tert-butyl ethe		ND	ND	NA	ND	NA	63					
Naphthalene	ND	ND	0.0249	NA	ND	NA	0.5					
N-propylbenzene	ND	ND	0.000686 J	NA	ND	NA	NE					
Styrene	ND	ND	ND	NA	ND	NA	170					
1,1,1,2-tetrachloroeth		ND	ND	NA	ND	NA	NE					
1,1,2,2-tetrachloroeth		ND	ND	NA	ND	NA	NE					
1,1,2-trichlorotrifluor		ND	ND J3	NA	ND	NA	> S					
Tetrachloroethene	ND	ND	ND	NA	ND	NA	6					
Toluene	ND	ND	ND	NA	ND	NA	220					
1,2,3-trichlorobenzer	e ND	ND	ND	NA	ND	NA	NE					



#### Table 21: SUMMARY OF BOILER AND POWERHOUSE GROUNDWATER CHEMICAL DATA

Handback Hardback Handba	lorobenzene loroethane loroethane thene uoromethane loropropane ethylbenzene ethylbenzene ethylbenzene thylbenzene ethylbenzene thylbenzene ethylbenzene ethylbenzene ethylbenzene ethylbenzene ethylbenzene ethylbenzene	BP-102-W ND ND ND ND ND ND ND ND ND ND ND ND ND	BP-109-W ND	r and Powerhous BP-119-W ND	se Groundwater BP-121-W NA NA NA NA NA NA NA NA NA NA NA NA	BP-187-W ND ND ND ND ND ND ND ND ND ND ND	BP-202-W NA NA NA NA NA NA NA NA NA NA	DEQ RBCs for Groundwater in Excavation Construction & Excavation Worker NE 1,100 0.049 0.43 160 NE 6 NE 8
Handback Hardback Handba	loroethane loroethane thene uoromethane loropropane ethylbenzene ethylbenzene thylbenzene thylbenzene thylbenzene thylbenzene ethylbenzene ethylbenzene ethylbenzene ene	ND ND ND ND J3 ND ND ND ND ND ND J3 J4 ND ND	ND ND ND ND ND ND ND ND ND ND ND ND	ND ND ND ND J3 ND ND ND ND ND ND J3 J4	NA NA NA NA NA NA NA NA	ND ND ND ND ND ND ND ND ND ND	NA NA NA NA NA NA NA	Worker           NE           1,100           0.049           0.43           160           NE           6           NE
Handback Hardback Handba	loroethane loroethane thene uoromethane loropropane ethylbenzene ethylbenzene thylbenzene thylbenzene thylbenzene thylbenzene ethylbenzene ethylbenzene ethylbenzene ene	ND ND ND J3 ND ND ND ND ND J3 J4 ND ND	ND ND ND ND ND ND ND ND ND ND ND	ND ND ND J3 ND ND ND ND ND ND J3 J4	NA NA NA NA NA NA NA	ND ND ND ND ND ND ND ND	NA NA NA NA NA NA	1,100 0.049 0.43 160 NE 6 NE
1,1,2-trichl         Trichloroett         Trichloroft         1,2,3-trichl         1,2,3-trime         1,2,3-trime         1,3,5-trime         Vinyl chlor         Xylenes, to         Anthracene         Acenaphthe         Benzo(a)an         Benzo(b)flu         Benzo(b)flu         Dibenz(a,h)         Fluoranther	loroethane thene uoromethane loropropane ethylbenzene ethylbenzene thylbenzene tide otal e	ND ND J3 ND ND ND ND ND J3 J4 ND ND	ND ND ND ND ND ND ND ND ND	ND ND J3 ND ND ND ND ND J3 J4	NA NA NA NA NA NA	ND ND ND ND ND ND	NA NA NA NA NA	0.049 0.43 160 NE 6 NE
Trichloroet         Trichloroft         Trichloroft         1,2,3-trichl         1,2,3-trime         1,2,3-trime         1,2,3-trime         1,3,5-trime         Vinyl chlor         Xylenes, to         Anthracene         Acenaphthe         Benzo(a)an         Benzo(b)flu         Benzo(c)k)flu         Chrysene         Dibenz(a,h         Fluoranther	thene uoromethane loropropane ethylbenzene ethylbenzene thylbenzene ride otal	ND ND J3 ND ND ND ND ND J3 J4 ND ND	ND ND ND ND ND ND ND ND	ND ND J3 ND ND ND ND ND J3 J4	NA NA NA NA NA	ND ND ND ND ND ND	NA NA NA NA	0.43 160 NE 6 NE
Henzo(a)an Benzo(a)an Benzo(b)flu Benzo(b)flu Chrysene Fluoranther Fluoranther	uoromethane loropropane ethylbenzene ethylbenzene thylbenzene ride otal e ene	ND J3 ND ND ND ND J3 J4 ND ND	ND ND ND ND ND ND ND	ND J3 ND ND ND ND ND J3 J4	NA NA NA NA	ND ND ND ND ND	NA NA NA NA	160 NE 6 NE
Handback Harrishi Harris	loropropane ethylbenzene ethylbenzene ethylbenzene ride otal e ene	ND ND ND ND J3 J4 ND ND	ND ND ND ND ND ND	ND ND ND ND ND J3 J4	NA NA NA NA	ND ND ND ND	NA NA NA	NE 6 NE
High and the second sec	ethylbenzene ethylbenzene ethylbenzene ride otal e ene	ND ND ND J3 J4 ND ND	ND ND ND ND ND	ND ND ND ND J3 J4	NA NA NA	ND ND ND	NA NA	6 NE
Harrow Ha	ethylbenzene ethylbenzene ride otal e ene	ND ND ND J3 J4 ND ND	ND ND ND ND	ND ND ND J3 J4	NA NA	ND ND	NA	NE
Harrow Constraints of the second seco	ethylbenzene ride otal e ene	ND ND J3 J4 ND ND	ND ND ND	ND ND J3 J4	NA	ND		
Yinyl chlor Xylenes, to Anthracene Acenaphth Benzo(a)an Benzo(a)flu Benzo(b)flu Benzo(b)flu Chrysene Dibenz(a,h Fluoranther	ride otal e ene	ND J3 J4 ND ND	ND ND	ND J3 J4			NA	0
Xylenes, to         Anthracene         Acenaphthe         Acenaphthe         Benzo(a)an         Benzo(b)flu         Benzo(c),h,i         Benzo(k)flu         Chrysene         Dibenz(a,h         Fluoranthe         Fluorene	otal e ene	ND ND	ND		NA			8
Anthracene Acenaphthe Acenaphthe Benzo(a)an Benzo(a)py Benzo(b)flu Benzo(g,h,i Benzo(k)flu Chrysene Dibenz(a,h Fluoranther Fluorene	e iene	ND		ND		ND	NA	0.96
Harrow Constant of Acenaphthe Acenaphthe Benzo(a)an Benzo(b)flu Benzo(b)flu Benzo(k)flu Chrysene Dibenz(a,h Fluoranther Fluorene	ene			ND	NA	ND	NA	23
Acenaphth Benzo(a)an Benzo(a)py Benzo(b)flu Benzo(g,h,i Benzo(k)flu Chrysene Dibenz(a,h Fluoranther Fluorene		ND	ND T8	0.000436	ND	ND	ND	>S
Henzo(a)an Benzo(a)py Benzo(b)flu Benzo(g,h,i Benzo(k)flu Chrysene Dibenz(a,h Fluoranther Fluorene	ylene		ND T8	0.00439	ND	ND	ND	>S
Benzo(a)py Benzo(b)flu Benzo(g,h,i Benzo(k)flu Chrysene Dibenz(a,h Fluoranther Fluorene		ND	ND T8	ND	ND	ND	ND	NE
Henzo(b)flu Benzo(g,h,i Benzo(k)flu Chrysene Dibenz(a,h Fluoranther Fluorene	nthracene	ND	ND T8	ND	ND	ND	ND	>S
Benzo(g,h,i Benzo(k)flu Chrysene Dibenz(a,h Fluoranther Fluorene	/rene	ND	ND T8	ND	ND	ND	ND	>S
Benzo(k)flu Chrysene Dibenz(a,h Fluoranther Fluorene	uoranthene	0.0000068 B J	0.00000535 J T8	0.000014 B J	ND	ND	ND	>\$
H Chrysene Dibenz(a,h Fluoranther Fluorene	i)perylene	0.00000662 B J	0.00000313 J T8	0.000026 B J	ND	ND	0.00000589 B J	NE
dibenz(a,h Fluoranther Fluorene	uoranthene	ND	ND T8	ND	ND	ND	ND	>\$
Fluoranther Fluorene		ND	ND T8	ND	ND	ND	ND	>\$
Fluorene	n)anthracene	ND	ND T8	ND	ND	ND	ND	>\$
	ne	ND	ND T8	ND	ND	ND	ND	>\$
		ND	ND T8	0.00345	ND	ND	ND	>\$
Indeno(1,2	,3-cd)pyrene	ND	ND T8	ND	ND	ND	ND	>\$
Naphthaler	ne	0.0000978 B J	ND T8	0.0423	0.0000872 J	0.0000305 B J	0.0000552 B J	0.5
Phenanthre	ene	ND	ND T8	0.0041	ND	ND	ND	NE
Pyrene		ND	ND T8	0.000159 J	ND	ND	ND	> S
1-methylna	aphthalene	ND	ND T8	0.103	0.000037 J	ND	ND	NE
2-methylna	aphthalene	ND	ND T8	0.0955	0.0000355 J	ND	ND	NE
2-chlorona	phthalene	ND	ND T8	ND	ND	ND	ND	NE
Diesel-Rang	<u> </u>	0.0428 J	NA	1.34	NA	0.0577 J	0.0854 J	>S
Residual-Ran	ge Organics	ND	NA	1.25	NA	0.148 J	0.272	>\$
Gasoline-Ran			NA	0.0929 J	NA	ND	NA	14

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: Compound not analyzed for this sample.

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

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

NE: Value not established.

T8: Sample(s) received past/too close to holding time expiration.

>S: The groundwater Risk-Based Concentration exceeds the solubility limit.

Bold: Value exceeds the RBC for groundwater in excavation for the construction and excavation worker receptor scenario for this compound.



### Table 22: SUMMARY OF DEBARKER AREA SOIL CHEMICAL DATA

							Co	oncentration (	mg/kg)						
Compound					D	ebarker Area	Soil Samples						DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation		
compound	DB-159-7	DB-161-13	DB-161-30	DB-162-10	DB-162-21	DB-163-11	DB-165-10	DB-166-11	DB-169-12	DB-169-16	DB-170-1	3 DB-199-11		Construction Worker	
Antimony	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Arsenic	NA	NA	NA	3.75	NA	NA	NA	NA	NA	NA	NA	3.87	1.9	15	420
Beryllium	NA	NA	NA	0.122 J	NA	NA	NA	NA	NA	NA	NA	0.104 J	2,300	700	19,000
Cadmium	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	ND	1,100	350	9,700
Chromium	NA	NA	NA	6.28	NA	NA	NA	NA	NA	NA	NA	7.46	6.3	49	1400
Copper	NA	NA	NA	0.984 J	NA	NA	NA	NA	NA	NA	NA	ND	47,000	14,000	390,000
Lead	NA	NA	NA	1.13	NA	NA	NA	NA	NA	NA	NA	1.48	800	800	800
Nickel	NA	NA	NA	3.63	NA	NA	NA	NA	NA	NA	NA	3.88	22,000	7,000	190,000
Selenium	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Silver	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	ND	5,800	1,800	49,000
Thallium	NA	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Zinc	NA	NA	NA	7.89	NA	NA	NA	NA	NA	NA	NA	8.18	NE	NE	NE
Mercury	NA	NA	NA	0.0352 J3	NA	NA	NA	NA	NA	NA	NA	0.00717 J	350	110	2,900
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Acrylonitrile	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4	40	1,100
Benzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	37	380	11,000
Bromobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	, NE
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	15	230	6,300
Bromoform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	260	2,700	74,000
Bromomethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	750	370	10,000
N-butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Sec-butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND J4	NE	NE	NE
Tert-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Carbon tetrachloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	34	320	8,900
Chlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	8,700	4,700	130,000
Chlorodibromomethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	17	210	5,800
Chloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Chloroform	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	26	410	11,000
Chloromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	25,000	25,000	700,000
2-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
4-Chlorotoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,2-dibromo-3-chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,2-dibromoethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.73	9	250
Dibromomethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,2-dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	36,000	20,000	560,000
1,3-dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,4-dichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	64	1,300	36,000
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE



### Table 22: SUMMARY OF DEBARKER AREA SOIL CHEMICAL DATA

							Co	oncentration (	mg/kg)						
Compound					D	ebarker Area	Soil Samples							or Soil Ingestion ct, and Inhalatio	
	DB-159-7	DB-161-13	DB-161-30	DB-162-10	DB-162-21	DB-163-11	DB-165-10	DB-166-11	DB-169-12	DB-169-16	DB-170-13	B DB-199-11	Occupational	Construction Worker	Excavation Worker
1,1-dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	260	3,200	89,000
1,2-dichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,1-dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	29,000	13,000	370,000
Cis-1,2-dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	2,300	710	20,000
Trans-1,2-dichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	23,000	7,100	200,000
1,2-dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,1-dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,3-dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Cis-1,3-dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Trans-1,3-dichloropropene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
2,2-dichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Di-isopropyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Ethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	150	1,700	49,000
Hexachloro-1,3-butadiene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND J4	57,000	27,000	750,000
P-isopropyltoluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
2-butanone (Mek)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Methylene chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
4-methyl-2-pentanone (Mibk)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Methyl tert-butyl ether	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	1,100	12,000	320,000
Naphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	23	580	16,000
N-propylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Styrene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	130,000	56,000	>Max
1,1,1,2-tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,1,2,2-tetrachloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,1,2-trichlorotrifluoroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
Tetrachloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	1,000	1,800	50,000
Toluene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	88,000	28,000	770,000
1,2,3-trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,2,4-trichlorobenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,1,1-trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	870,000	470,000	>Max
1,1,2-trichloroethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	26	54	1,500
Trichloroethene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	51	130	3,700
Trichlorofluoromethane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	130,000	69,000	>Max
1,2,3-trichloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,2,4-trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND J4	6,900	6,900	81,000
1,2,3-trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	NE	NE	NE
1,3,5-trimethylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND J4	6,900	6,900	81,000



#### Table 22: SUMMARY OF DEBARKER AREA SOIL CHEMICAL DATA

							Co	oncentration (	mg/kg)						
Compound					D	ebarker Area	Soil Samples						DEQ RBCs for Soil Ingestion, Dermal Contact, and Inhalation		
	DB-159-7	DB-161-13	DB-161-30	DB-162-10	DB-162-21	DB-163-11	DB-165-10	DB-166-11	DB-169-12	DB-169-16	DB-170-13	DB-199-11	Occupational	Construction Worker	Excavation Worker
Vinyl chloride	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	4.4	34	950
Xylenes, total	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	25,000	20,000	560,000
Anthracene	ND	0.0014 J	0.00082 J	0.288	ND	ND	ND	ND	0.00338 J	ND	ND	ND	350,000	110,000	>Max
Acenaphthene	ND	0.00681 J	0.00247 J	0.0372	ND	0.00077 J	0.00253	0.00238 J	0.00439 J	0.00190 J	ND	ND	70,000	21,000	590,000
Acenaphthylene	ND	ND	ND	0.0316	ND	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE
Benzo(a)anthracene	ND	ND	ND	0.0317	0.00077 J	ND	ND	0.00235 J	ND	ND	ND	ND	21	170	4,800
Benzo(a)pyrene	ND	ND	ND	0.201	0.00084 J	ND	ND	ND	ND	ND	ND	ND	2.1	17	490
Benzo(b)fluoranthene	0.00784 J	ND	ND	0.0471	0.00085 J	ND	ND	ND	ND	ND	ND	ND	21	170	4,900
Benzo(g,h,i)perylene	ND	ND	ND	0.00998	0.00102 J	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE
Benzo(k)fluoranthene	ND	ND	ND	0.0527	ND	ND	ND	ND	ND	ND	ND	ND	210	1,700	49,000
Chrysene	ND	ND	ND	0.123	0.0072 J	ND	ND	ND	ND	ND	ND	ND	2,100	17,000	490,000
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	17	490
Fluoranthene	0.0295 J	0.00104 J	0.00271 J	0.0459	ND	ND	ND	0.00106 J	0.00219 J	ND	ND	ND	30,000	10,000	280,000
Fluorene	ND	ND	ND	0.111	ND	ND	ND	ND	ND	ND	ND	ND	47,000	14,000	390,000
Indeno(1,2,3-cd)pyrene	ND	ND	ND	0.00203 J	ND	ND	ND	ND	ND	ND	ND	ND	21	170	4,900
Naphthalene	ND	ND	0.00288 J	0.0108 J	ND	ND	0.00233 J	ND	0.00273 J	ND	ND	ND	23	580	16,000
Phenanthrene	0.0074 J	ND	0.00352 J	0.510	ND	0.00086 J	0.0011 J	0.000795 J	0.00301 J	ND	ND	ND	NE	NE	NE
Pyrene	0.00746 J	ND	0.0013 J	0.0979	ND	ND	0.00073 J	ND	0.00146 J	ND	ND	ND	23,000	7,500	210,000
1-methylnaphthalene	ND	ND	ND	0.0671	ND	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE
2-methylnaphthalene	ND	ND	ND	0.00496 J	ND	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE
2-chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE
Total PCBs	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.59	4.9	140
Diesel-Range Organics	NA	NA	NA	1,480	ND	ND	NA	1.6 J	ND	ND	ND	ND	14,000	4,600	>Max
Residual-Range Organics	NA	NA	NA	6,130	ND	26	NA	17.3	4.15	ND J3	ND	ND	14,000	4,600	>Max
Gasoline-Range Organics	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	20,000	9,700	>Max

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

V3: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. Below detection limit (BDL) results will be unaffected.

NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to pose risks in this scenario.

Bold: Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this compound.



#### Table 23: SUMMARY OF DEBARKER GROUNDWATER CHEMICAL DATA

			Conc				
	Compound	Deb	arker Groundwater Sa	-	DEQ RBCs for Groundwater in Excavation Construction & Excavation		
		DB-162-W	DB-163-W	DB-199-W	Worker		
	Antimony	NA	ND	NA	NE		
	Arsenic	NA	0.0125	NA	6.3		
	Beryllium Cadmium	NA NA	ND ND	ND ND	270 130		
	Chromium	NA	0.119	0.0396	9.4		
	Copper	NA	0.0304	0.0390	5,400		
Metals	Lead	NA	0.0119	0.00701	>\$		
Me	Nickel	NA	0.0421	0.0473	>\$		
	Selenium	NA	ND	ND	NE		
	Silver	NA	ND	ND	1,100		
	Thallium	NA	0.000207 J	NA	ND		
	Zinc	NA	0.0682	0.0368 J	NE		
	Mercury	NA	0.0000958 B J	0.0000602 J	>\$		
	Acetone	ND J3	ND J4	ND	NE		
	Acrolein	ND	ND J4	ND J4	NE		
	Acrylonitrile	ND	ND	ND	0.25		
	Benzene	ND	ND	ND	1.8		
	Bromobenzene	ND	ND	ND	NE		
	Bromodichloromethane	ND	ND	ND	0.45		
	Bromoform	ND	ND	ND	14		
	Bromomethane	ND	ND	ND	1.2		
	N-butylbenzene	ND	ND	ND	NE		
	Sec-butylbenzene	ND	ND	ND	NE		
	Tert-Butylbenzene	ND	ND	ND	NE 1.0		
	Carbon tetrachloride Chlorobenzene	ND ND	ND ND	ND ND	1.8		
	Chlorodibromomethane	ND	ND	ND	0.61		
	Chloroethane	ND	ND J4	ND	2,400		
	Chloroform	ND	ND	ND	0.72		
	Chloromethane	ND	ND	ND	22		
	2-Chlorotoluene	ND	ND	ND	NE		
	4-Chlorotoluene	ND	ND	ND	NE		
	1,2-dibromo-3-chloropropane	ND	ND	ND	NE		
	1,2-dibromoethane	ND	ND	ND	NE		
	Dibromomethane	ND	ND	ND	NE		
	1,2-dichlorobenzene	ND	ND	ND	37		
	1,3-dichlorobenzene	ND	ND	ND	NE		
	1,4-dichlorobenzene	ND	ND	ND	1.5		
	Dichlorodifluoromethane	ND	ND	ND	NE		
	1,1-dichloroethane	ND	ND	ND	10		
	1,2-dichloroethane	ND	ND	ND	NE		
	1,1-dichloroethene	ND	ND	ND	44		
	Cis-1,2-dichloroethene	ND	ND	ND	18		
	Trans-1,2-dichloroethene 1,2-dichloropropane	ND ND	ND ND	ND ND	180 NE		
S	1,1-dichloropropene	ND	ND	ND	NE		
NUCS	1,3-dichloropropane	ND	ND	ND	NE		
	Cis-1,3-dichloropropene	ND	ND	ND	NE		
	Trans-1,3-dichloropropene	ND	ND	ND	NE		
	2,2-dichloropropane	ND	ND	ND	NE		
	Di-isopropyl ether	ND	ND	ND	NE		
	Ethylbenzene	ND	ND	ND	4.5		
	Hexachloro-1,3-butadiene	ND	ND	ND	NE		
	Isopropylbenzene	ND	ND	ND	51		
	P-isopropyltoluene	ND	ND	ND	NE		
	2-butanone (Mek)	ND	ND	ND	NE		
	Methylene chloride	ND	ND	ND	NE		
	4-methyl-2-pentanone (Mibk)	ND	ND	ND	NE		
	Methyl tert-butyl ether	ND	ND	ND	63		
	Naphthalene	ND	ND	ND	0.5		
	N-propylbenzene	ND	ND	ND	NE		
	Styrene	ND	ND	ND	170		
	1,1,1,2-tetrachloroethane	ND	ND	ND	NE		
	1,1,2,2-tetrachloroethane	ND	ND	ND	NE		
	1,1,2-trichlorotrifluoroethane Tetrachloroethene	ND ND	ND ND	ND ND	>5		
	Toluene	ND ND	ND ND	ND ND	6 220		
	ioluciic	IND.	IND.	IND	220		



	Concentration (mg/L)									
Compound	Deba	arker Groundwater S	amples	DEQ RBCs for Groundwater in Excavation						
	DB-162-W	DB-163-W	DB-199-W	Construction & Excavation Worker						
1,2,4-trichlorobenzene	ND	ND	ND	NE						
1,1,1-trichloroethane	ND	ND	ND	1,100						
1,1,2-trichloroethane	ND	ND	ND	0.049						
Trichloroethene	ND	ND	ND	0.43						
Trichlorofluoromethane	ND	ND	ND	160						
1,2,3-trichloropropane	ND	ND	ND	NE						
1,2,4-trimethylbenzene	ND	ND	ND	6						
1,2,3-trimethylbenzene	0.000369 J	ND	ND	NE						
1,3,5-trimethylbenzene	ND	ND	ND	8						
Vinyl chloride	ND	ND	ND	0.96						
Xylenes, total	ND	ND	ND	23						
Anthracene	0.0000575	ND	ND	>\$						
Acenaphthene	0.000205	0.00466	ND	> \$						
Acenaphthylene	ND	ND	ND	NE						
Benzo(a)anthracene	ND	ND	ND	> \$						
Benzo(a)pyrene	ND	ND	ND	>\$						
Benzo(b)fluoranthene	ND	ND	ND	>\$						
Benzo(g,h,i)perylene	ND	ND	0.00000504 J B	NE						
Benzo(k)fluoranthene	ND	ND	ND	> S						
Chrysene	ND	ND	ND	>\$						
Dibenz(a,h)anthracene	ND J3	ND	0.00000462 J	>5						
Fluoranthene	0.0000182 J	ND	ND	>5						
Fluorene	0.000178	0.0000207 J	ND	> S						
Indeno(1,2,3-cd)pyrene	ND J3	ND	ND	>5						
Naphthalene	0.0000266 J	0.000065 B J	0.0000462 J B	0.5						
Phenanthrene	0.000325	0.0000245 J	ND	NE						
Pyrene	0.0000154 J	ND	ND	> \$						
1-methylnaphthalene	0.000206 J	0.00000952 J	ND	NE						
2-methylnaphthalene	0.0000266 J	0.0000131 J	ND	NE						
2-chloronaphthalene	ND	ND	ND	NE						
Diesel-Range Organics	NA	0.0494 J	NA	>\$						
Residual-Range Organics	NA	ND	NA	>5						
Gasoline-Range Organics	NA	0.0324 B J	ND	14						

#### Table 23: SUMMARY OF DEBARKER GROUNDWATER CHEMICAL DATA

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: Compound not analyzed for this sample.

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

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

NE: Value not established.

T8: Sample(s) received past/too close to holding time expiration.

>S: The groundwater Risk-Based Concentration exceeds the solubility limit.

**Bold:** Value exceeds the Risk-Based Concentration for groundwater in excavation for the construction and excavation worker receptor scenario for this compound.



		Fire Suppression AST Soil Sample	entration (mg/kg) DEQ RBCs for Soil Ingestion, Dermal				
	Compound			ct, and Inhalatio Construction			
		FSDAST	Occupational	Worker	Worker		
	Antimony	4.55	NE	NE	NE		
	Arsenic	3.07	1.9	15	420		
	Beryllium	0.0899 J	2,300	700	19,000		
	Cadmium	1.01	1,100	350	9,700		
	Chromium	743	6.3	49	1400		
als	Copper	126 202	47,000	14,000 800	390,000		
Metals	Lead Nickel	-	800		800		
	Selenium	346 ND	22,000 NE	7,000 NE	190,000 NE		
	Silver	ND	5,800	1,800	49,000		
	Thallium	ND	5,800 NE	NE	49,000 NE		
	Zinc	543	NE	NE	NE		
		0.0644	350		2,900		
	Mercury			110	,		
	Acetone	NA	NE	NE	NE		
	Acrylonitrile	NA	4	40	1,100		
	Benzene	NA	37	380	11,000		
	Bromobenzene	NA	NE 1E	NE	NE		
	Bromodichloromethane	NA	15	230	6,300		
	Bromoform Bromomethano	NA	260	2,700	74,000		
	Bromomethane	NA	750	370	10,000		
	N-butylbenzene	NA	NE NE	NE NE	NE NE		
	Sec-butylbenzene	NA					
	Tert-Butylbenzene Carbon tetrachloride	NA	NE 34	NE	NE 8.000		
	Carbon tetrachioride Chlorobenzene	NA		320	8,900		
	Chlorodibromomethane	NA	8,700	4,700	130,000 5,800		
	Chloroethane	NA	17 NE	210 NE	5,800 NE		
	Chloroform	NA	26	410	11,000		
	Chloromethane	NA	25,000		700,000		
	2-Chlorotoluene	NA	25,000 NE	25,000 NE	700,000 NE		
	4-Chlorotoluene	NA	NE	NE	NE		
	1,2-dibromo-3-chloropropane	NA	NE	NE	NE		
	1,2-dibromoethane	NA	0.73	9	250		
	Dibromomethane	NA	NE	NE	NE		
	1,2-dichlorobenzene	NA	36,000	20,000	560,000		
	1,3-dichlorobenzene	NA	NE	20,000 NE	NE		
	1,4-dichlorobenzene	NA	64	1,300	36,000		
	Dichlorodifluoromethane	NA	NE	NE	NE		
	1,1-dichloroethane	NA	260	3,200	89,000		
	1,2-dichloroethane	NA	NE	NE	NE		
	1,1-dichloroethene	NA	29,000	13,000	370,000		
	Cis-1,2-dichloroethene	NA	2,300	710	20,000		
	Trans-1,2-dichloroethene	NA	23,000	7,100	200,000		
	1,2-dichloropropane	NA	NE	NE	200,000 NE		
	1,1-dichloropropene	NA	NE	NE	NE		
s n n	1,3-dichloropropane	NA	NE	NE	NE		
>	Cis-1,3-dichloropropene	NA	NE	NE	NE		
	Trans-1,3-dichloropropene	NA	NE	NE	NE		
	2,2-dichloropropane	NA	NE	NE	NE		
	Di-isopropyl ether	NA	NE	NE	NE		
	Ethylbenzene	NA	150	1,700	49,000		
	Hexachloro-1,3-butadiene	NA	NE	NE	+3,000 NE		
	Isopropylbenzene	NA	57,000	27,000	750,000		
	P-isopropyltoluene	NA	NE	NE	NE		
	2-butanone (Mek)	NA	NE	NE	NE		
	Methylene chloride	NA	NE	NE	NE		
	4-methyl-2-pentanone (Mibk)	NA	NE	NE	NE		
	Methyl tert-butyl ether	NA	1,100	12,000	320,000		
	Naphthalene	NA	23	580	16,000		
	N-propylbenzene	NA	NE	NE	NE		
	Styrene	NA	130,000	56,000	>Max		
	1,1,1,2-tetrachloroethane	NA	NE	NE	NE		
	1,1,2,2-tetrachloroethane	NA	NE	NE	NE		
	1,1,2-trichlorotrifluoroethane	NA	NE	NE	NE		
	Tetrachloroethene	NA	1,000	1,800	50,000		
	Toluene	NA	88,000	28,000	770,000		
	1,2,3-trichlorobenzene	NA	NE	28,000 NE	770,000 NE		
		1.1/1		1 1 1	1 1 1		



		Conce	entration (mg/kg)		
		Fire Suppression AST Soil Sample		or Soil Ingestion	, Dermal
	Compound	Fire Suppression AST Soll Sample	Conta	ct, and Inhalatio	
		FSDAST	Occupational	Construction Worker	Excavation Worker
	1,1,1-trichloroethane	NA	870,000	470,000	>Max
	1,1,2-trichloroethane	NA	26	54	1,500
	Trichloroethene	NA	51	130	3,700
	Trichlorofluoromethane	NA	130,000	69,000	>Max
	1,2,3-trichloropropane	NA	NE	NE	NE
	1,2,4-trimethylbenzene	NA	6,900	6,900	81,000
	1,2,3-trimethylbenzene	NA	NE	NE	NE
	1,3,5-trimethylbenzene	NA	6,900	6,900	81,000
	Vinyl chloride	NA	4.4	34	950
	Xylenes, total	NA	25,000	20,000	560,000
	Anthracene	0.0459 J	350,000	110,000	>Max
	Acenaphthene	0.0135 J	70,000	21,000	590,000
	Acenaphthylene	0.0177 J	NE	NE	NE
	Benzo(a)anthracene	0.0362 J	21	170	4,800
	Benzo(a)pyrene	0.00989 J	2.1	17	490
	Benzo(b)fluoranthene	0.0144 J	21	170	4,900
	Benzo(g,h,i)perylene	0.0109 J	NE	NE	NE
	Benzo(k)fluoranthene	ND	210	1,700	49,000
(0	Chrysene	0.0176 J	2,100	17,000	490,000
PAHs	Dibenz(a,h)anthracene	ND	2.1	17	490
Ъ	Fluoranthene	0.0755	30,000	10,000	280,000
	Fluorene	0.0257 J	47,000	14,000	390,000
	Indeno(1,2,3-cd)pyrene	0.0075 J	21	170	4,900
	Naphthalene	0.166 J	23	580	16,000
	Phenanthrene	0.177	NE	NE	NE
	Pyrene	0.127	23,000	7,500	210,000
	1-methylnaphthalene	0.0939 J	NE	NE	NE
	2-methylnaphthalene	0.248	NE	NE	NE
	2-chloronaphthalene	ND	NE	NE	NE
	Total PCBs	NA	0.59	4.9	140
	Diesel-Range Organics	701	14,000	4,600	>Max
	Residual-Range Organics	361	14,000	4,600	>Max
	Gasoline-Range Organics	NA	20,000	9,700	>Max
			1		

Notes:

ND: Not detected at concentration greater than method detection limit.

NA: NA: Compound not analyzed for this sample.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

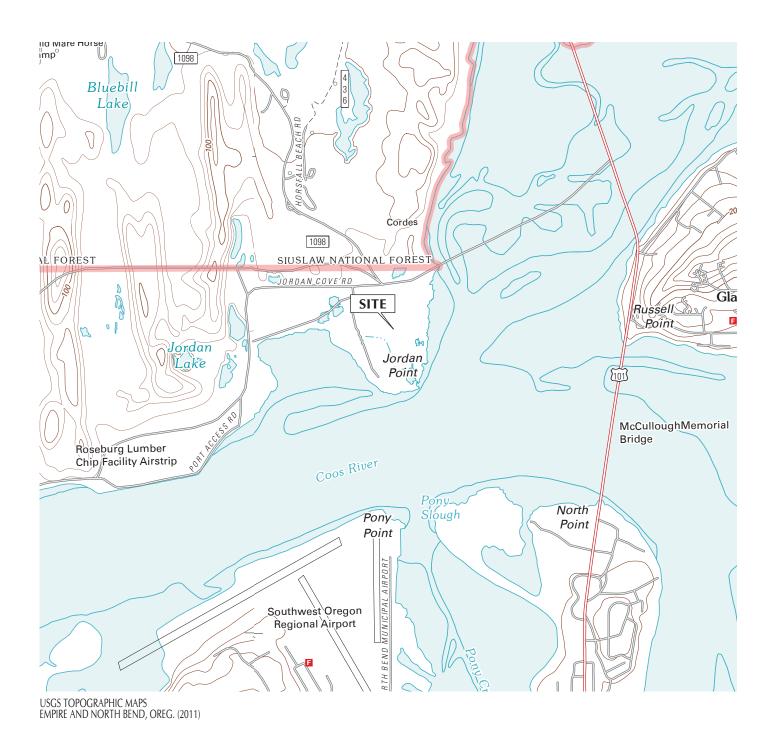
V3: The internal standard exhibited poor recovery due to sample matrix interference.

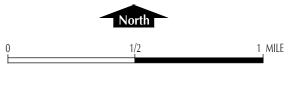
The analytical results will be biased high. Below detection limit (BDL) results will NE: Value not established.

>Max: The constituent Risk-Based Concentration for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed not to pose risks in this

**Bold:** Value exceeds the Risk-Based Concentration for soil ingestion, dermal contact, and inhalation for the occupational receptor scenario for this compound.







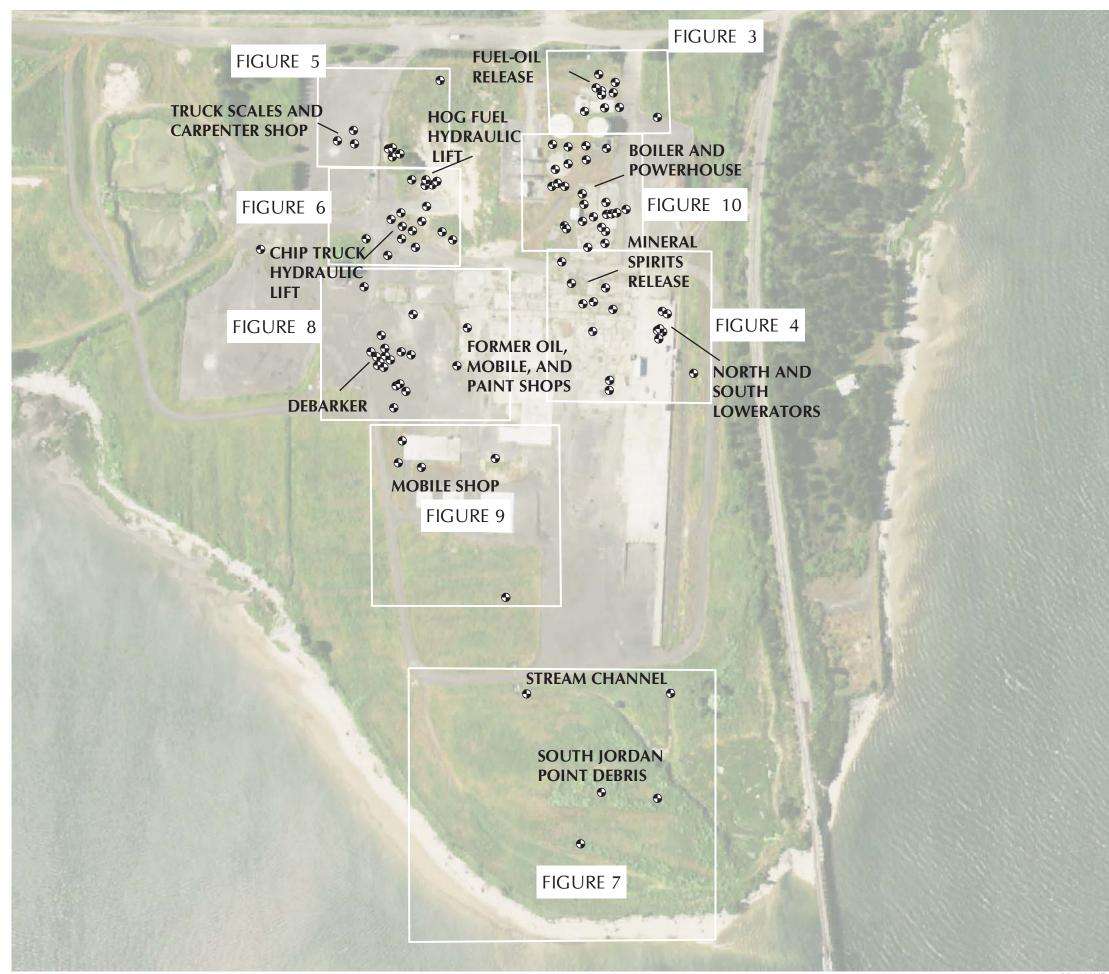


JORDAN COVE, LLC DATA GAP INVESTIGATION

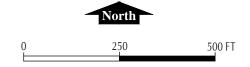
# VICINITY MAP

JULY 2018

JOB NO. 5764-1195





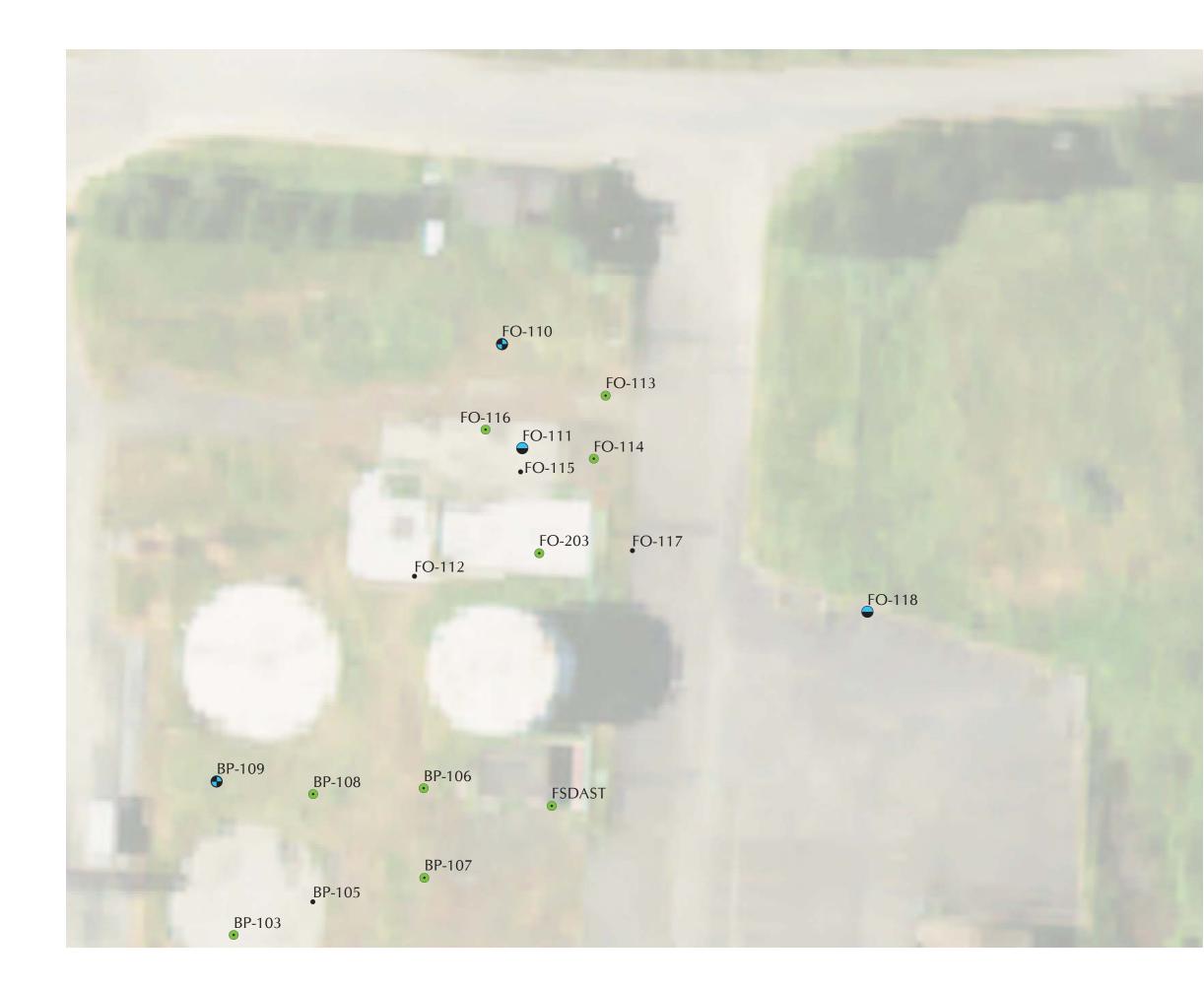




# **EXPLORATION LOCATIONS**

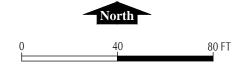
JULY 2018

JOB NO. 5764-1195



- SOIL AND GROUNDWATER ANALYZED
- GROUNDWATER SAMPLE ANALYZED
- SOIL SAMPLE ANALYZED ullet
- FIELD SCREENED : NO ANALYSIS ٠

2014 NAIP AERIAL PHOTO





## EXPLORATION LOCATIONS (FUEL OIL RELEASE AREA)

JULY 2018

JOB NO. 5764-1195

FIG. 3

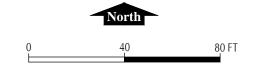






- GROUNDWATER SAMPLE ANALYZED •
- SOIL SAMPLE ANALYZED ullet
- FIELD SCREENED : NO ANALYSIS ٠

2014 NAIP AERIAL PHOTO





# EXPLORATION LOCATIONS (MINERAL SPIRITS AND LOWERATORS)

JULY 2018

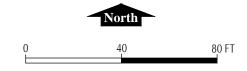
JOB NO. 5764-1195

FIG. 4



- SOIL AND GROUNDWATER ANALYZED
- GROUNDWATER SAMPLE ANALYZED
- SOIL SAMPLE ANALYZED  $\bullet$
- FIELD SCREENED : NO ANALYSIS ٠

2014 NAIP AERIAL PHOTO





## EXPLORATION LOCATIONS (TRUCK SCALES AND CARPENTER SHOP)

JULY 2018

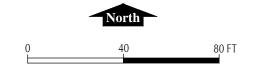
JOB NO. 5764-1195

FIG. 5



- SOIL AND GROUNDWATER ANALYZED
- GROUNDWATER SAMPLE ANALYZED  $\bigcirc$
- SOIL SAMPLE ANALYZED  $\bullet$
- FIELD SCREENED : NO ANALYSIS ۰

2014 NAIP AERIAL PHOTO





# EXPLORATION LOCATIONS (CHIP TRUCK LIFT AND HOG FUEL LIFT)

JULY 2018

JOB NO. 5764-1195

FIG. 6



 $\bullet$ 

٠

orth 150 FT 75

SOIL AND GROUNDWATER ANALYZED

GROUNDWATER SAMPLE ANALYZED

FIELD SCREENED : NO ANALYSIS

SOIL SAMPLE ANALYZED

2014 NAIP AERIAL PHOTO





# EXPLORATION LOCATIONS (JORDAN POINT AND STREAM CHANNEL AREA)

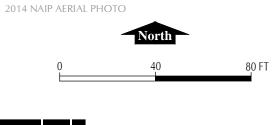
JULY 2018

JOB NO. 5764-1195

FIG. 7



- SOIL AND GROUNDWATER ANALYZED
- GROUNDWATER SAMPLE ANALYZED •
- SOIL SAMPLE ANALYZED ullet
- FIELD SCREENED : NO ANALYSIS •





## EXPLORATION LOCATIONS (FORMER SHOPS AND DEBARKER)

JULY 2018

JOB NO. 5764-1195

FIG. 8



JOB NO. 5764-1195

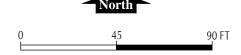
EXPLORATION LOCATIONS

(MOBILE SHOPS)

FIG. 9

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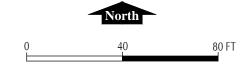
- FIELD SCREENED : NO ANALYSIS
- SOIL SAMPLE ANALYZED
- GROUNDWATER SAMPLE ANALYZED
- SOIL AND GROUNDWATER ANALYZED

EXPLORATION LOCATION



- SOIL AND GROUNDWATER ANALYZED
- GROUNDWATER SAMPLE ANALYZED •
- SOIL SAMPLE ANALYZED •
- FIELD SCREENED : NO ANALYSIS •

2014 NAIP AERIAL PHOTO



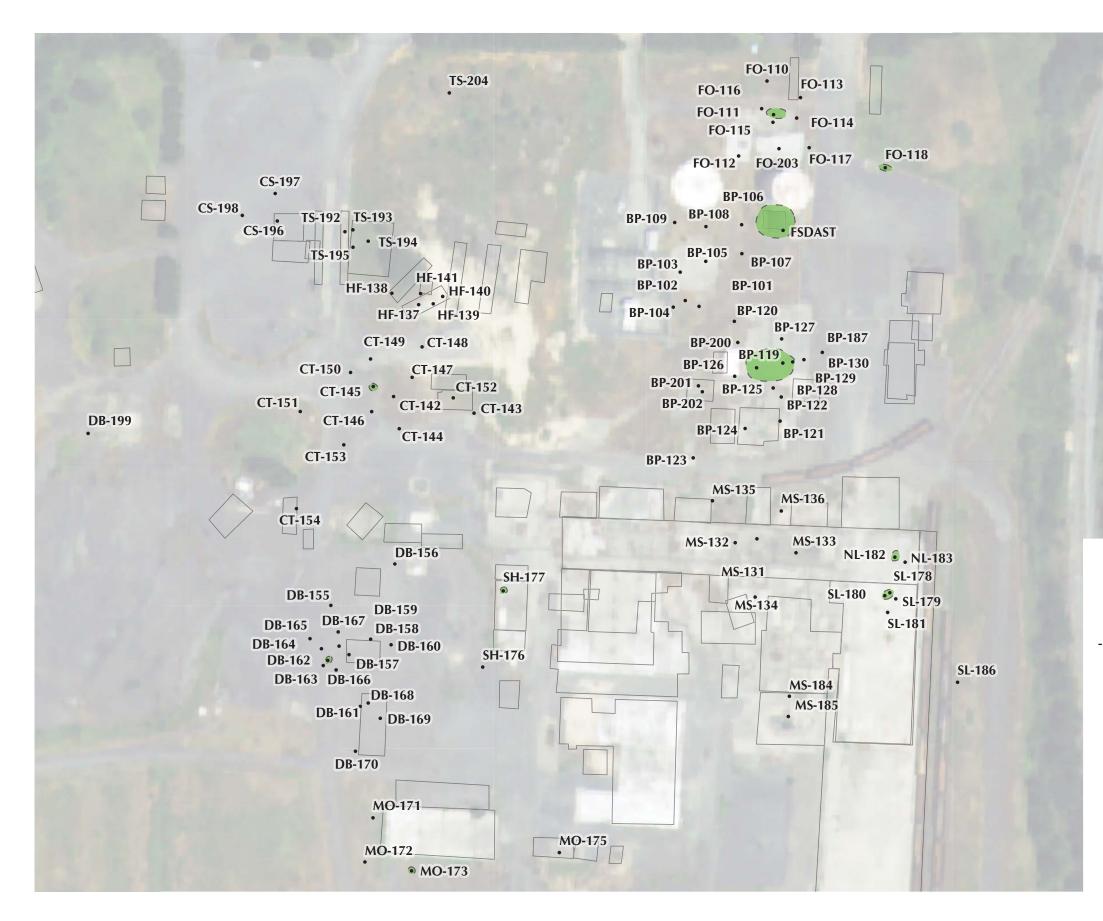


## EXPLORATION LOCATIONS (BOILER AND POWERHOUSE)

JULY 2018

JOB NO. 5764-1195

FIG. 10

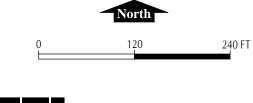






## FORMER WEYERHAEUSER FACILITY 📕 RBC EXCEEDANCE IN SOIL EXPLORATION LOCATION

- 
 - 
 - APPROXIMATE BOUNDARY BASED ON CHEMICAL ANALYSIS, FIELD SCREENING, INTERPRETATION, AND WORK PREVIOUSLY DONE BY OTHERS. SEE REPORT FOR MORE DETAILS.





# **RBC EXCEEDANCE IN SOIL** NORTH AREA



# RBC EXCEEDANCE IN SOIL South Area

JOB NO. 5764-1195

# APPENDIX A Boring Logs

#### BORING AND TEST PIT LOG LEGEND

#### SOIL SYMBOLS Symbol

<u>x 1/7</u> . x
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2
[7:7]
<u>/:/:/</u>
EDRO

LANDSCAPE MATERIALS

**Typical Description** 

FILL

GRAVEL; clean to some silt, clay, and sand Sandy GRAVEL; clean to some silt and clay Silty GRAVEL; up to some clay and sand Clayey GRAVEL; up to some silt and sand SAND; clean to some silt, clay, and gravel Gravelly SAND; clean to some silt and clay Silty SAND; up to some clay and gravel Clayey SAND; up to some silt and gravel SILT; up to some clay, sand, and gravel Gravelly SILT; up to some clay and sand Sandy SILT; up to some clay and gravel Clayey SILT; up to some sand and gravel CLAY; up to some silt, sand, and gravel Gravelly CLAY; up to some silt and sand Sandy CLAY; up to some silt and gravel Silty CLAY; up to some sand and gravel PEAT

#### В **CK SYMBOLS**

Symbol	Typical Description
+++ +++ +++	BASALT
	MUDSTONE
	SILTSTONE
••=••	SANDSTONE

#### SURFACE MATERIAL SYMBOLS Sy

ymbol	Typical Description
	Asphalt concrete PAVEMENT
	Portland cement concrete PAVEMENT
0°	Crushed rock BASE COURSE

#### SAMPLER SYMBOLS

Symbol	Sampler Description						
Ī	2.0-in. O.D. split-spoon sampler and Standard Penetration Test with recovery (ASTM D1586)						
I	Shelby tube sampler with recovery (ASTM D1587)						
$\blacksquare$	3.0-in. O.D. split-spoon sampler with recovery (ASTM D3550)						
X	Grab Sample						
	Rock core sample interval						
	Sonic core sample interval						
	Geoprobe sample interval						

#### INSTALLATION SYMBOLS

Symbol	Symbol Description				
	Flush-mount monument set in concrete				
	Concrete, well casing shown where applicable				
	Bentonite seal, well casing shown where applicable				
	Filter pack, machine-slotted well casing shown where applicable				
	Grout, vibrating-wire transducer cable shown where applicable				
P	Vibrating-wire pressure transducer				
	1-indiameter solid PVC				
	1-indiameter hand-slotted PVC				
	Grout, inclinometer casing shown where applicable				
FIELD ME	FIELD MEASUREMENTS				

Symbol	Typical Description
Ţ	Groundwater level during drilling and date measured
Ţ	Groundwater level after drilling and date measured
	Rock core recovery (%)
	Rock quality designation (RQD, %)

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, trace to some gravel, trace silt, gray-brown, fine to coarse grained, contains trace organics gravel absent, brown, fine to medium grained below 1.5 ft			Run 1		└──1.8 ft (1/29/2018) Run 1 recovery 36 in.
5		gray below 6.75 ft		0	Run 2 BP-101-7		Run 2 recovery 60 in. Slight sheen between depths of 7 to 12 ft
10— — — —				0	Run 3		Run 3 recovery 60 in.
15— — — — —		fine grained below 15 ft		0	Run 4		Run 4 recovery 60 in.
20— — — — 25—				0	Run 5		Run 5 recovery 56 in.
20 		light gray below 28.5 ft		0	Run 6 BP-101-30		Run 6 recovery 60 in.
35		(1/29/2018)	- 35.0		Run 7		Run 7 recovery 60 in.
_ _ 					,	0	1.0

Logged By: C. Smerdon	Corporation		
Date Started: 1/29/18	Date Started: 1/29/18 Coordinates: 43.43561° N		
Drilling Method: Direct Pu	Hammer Type: Not Used		
Equipment: Geoprob	Weight:		
Hole Diameter: 3 in.	Drop:		
Note: See Legend for Expla	Energy Ratio:		





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ДЕРТН, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, light brown, fine to medium grained, contains gravel to a depth of 3 in.			Run 1		⊈2.2 ft (1/29/2018) Run 1 recovery 32 in.
5— — — — — — —		gray below 8 ft		2.1	Run 2		Run 2 recovery 48 in. Heavy sheen and slight odor between depths of 8 to 17 ft
10— — — — — 15—					Run 3 BP-102-12		Run 3 recovery 60 in.
			20.0	0	Run 4		Run 4 recovery 60 in.
		(1/29/2018)					
-							
						D	1.0

Logged By: C. Smerdon	Corporation	
Date Started: 1/29/18	Coordinates: 43.43563° N	-124.23975° W (WGS 84)
Drilling Method: Direct Pu	Hammer Type: Not Used	
Equipment: Geoprob	Weight:	
Hole Diameter: 3 in.	Drop:	
Note: See Legend for Expla	Energy Ratio:	





Logged By: C. Smerdon	Drilled by: Stratus	Corporation
Date Started: 1/29/18	Coordinates: 43.43563° N	-124.23975° W (WGS 84)
Drilling Method: Direct Pu	Hammer Type: Not Used	
Equipment: Geoprob	Weight:	
Hole Diameter: 3 in.	Drop:	
Note: See Legend for Expla	Energy Ratio:	

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, light brown, fine grained			Run 1		⊻1.9 ft (1/30/2018) Run 1 recovery 33 in.
5		dark gray/discolored below 5 ft gray to gray-brown, discoloration absent below 8 ft			Run 2		Run 2 recovery 54 in.
10— — —		gray to dark gray/discolored below 12.5 ft	14.0	0	Run 3 BP-103-13		Run 2 recovery 60 in.
15— — —		SILT, gray	15.0		Run 4		Run 4 recovery 60 in.
20		(1/30/2018)	20.0				
25— — —							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 1/30/18	Coordinates: 43.43572° N	-124.23978° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	e 7822DT	Weight:		
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





JOB NO. 5764-1195

FIG. 3A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, trace to some gravel, trace silt, gray-brown, fine to medium grained gravel absent, light brown, fine grained below 1 ft			Run 1		<sup>,</sup> <sup>,</sup> <sup>,</sup> <sup>,</sup> <sup>,</sup> <sup>,</sup> <sup>,</sup> <sup>,</sup>
5		dark gray to black, contains woody organics below 8 ft			Run 2		Run 2 recovery 42 in.
				0	Run 3 BP-104-13		Slight sheen between depths of 10 to 14 ft Run 3 recovery 60 in.
			20.0		Run 4 BP-104-20		Run 4 recovery 60 in.
25		(1/30/2018)					
-							
ENVIRONMENTAL BORING GRI DATA TEMPLATE GDT 7/26/18						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 1/30/18	Coordinates: 43.4356° N	-124.23981° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	e 7822DT	Weight:		
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			

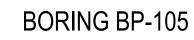




<b>DEPTH</b> , FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, trace to some gravel, trace silt, gray-brown, fine grained brown, gravel absent below 0.5 ft			Run 1		⊈2.3 ft (1/30/2018) Run 1 recovery 27 in.
5— 		dark brown below 5 ft			1	-	
_ _ 10—		black below 8.5 ft		0.6	Run 2	-	Run 2 recovery 52 in. Moderate sheen between depths of 8.5 to 13.5 ft
		gray below 12.5 ft m	- 13.5	0.0	Run 3		Run 3 recovery 60 in.
		SAND, gray, fine grained	- 14.5			-	
_  20—		(1/30/2018)	- 20.0		Run 4		Run 4 recovery 60 in.
-							
25— — —							
 30—							
35— — —							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 1/30/18	Coordinates: 43.43576° N	-124.23966° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	e 7822DT	Weight:		
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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JOB NO. 5764-1195
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ДЕРТН, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, trace silt, brown, fine grained light brown below 0.5 ft			Run 1		<sup>I</sup> <sup>I</sup> Z2.5 ft (1/30/2018)6 in.
5— — — — 10—		gray below 8.5 ft		0	Run 2		Run 2 recovery 45 in.
  15—		SAND, gray/	14.0 14.5		Run 3 BP-106-13		Run 3 recovery 60 in.
  20		(1/30/2018)	20.0		Run 4		Run 4 recovery 60 in.
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus (	Drilled by: Stratus Corporation		
Date Started: 1/30/18	Coordinates: 43.4359° N -	124.2395° W (WGS 84)		
Drilling Method: Direct Pu	ush Probe	Hammer Type: Not Used		
Equipment: Geoprob	e 7822DT	Weight:		
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
  5		SAND, trace to some silt and gravel, brown, fine grained brown to black, gravel absent, contains wood debris and organics below 1 ft light brown, wood debris and organics absent below 5 ft			Run 1		⊻1.8 ft (1/30/2018) Run 1 recovery 36 in.
- - - 10		gray below 7.5 ft			Run 2		Run 2 reocvery 52 in.
10 		SILT, dark gray	· 13.0 · 14.0		Run 3 BP-107-12		Run 3 reocvery 60 in.
- - - 20		light gray below 16 ft	20.0		Run 4		Run 4 recovery 60 in.
_ _ _ 25—		(1/30/2018)					
30— — — — —							
35— — — —							

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 1/30/18	Coordinates: 43.4358° N	-124.23949° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	e 7822DT	Weight:		
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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ДЕРТН, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, trace silt, brown to light brown, fine grained, contains organics light brown, organics absent below 0.5 ft			Run 1		⊈2.5 ft (1/30/2018) Run 1 recovery 33 in
		black below 8 ft		0	Run 2		Run 2 recovery 60 in. Slight sheen between depths of 8.7 to 14.5 ft
	ПП	SILT, gray	14.5 15.0		Run 3 BP-108-13	3	Run 3 recovery 60 in.
		SAND, gray, fine grained (1/30/2018)	20.0		Run 4 BP-108-17		Run 4 recovery 60 in.
						0	1.0

Logged By: C. Smerdon			Drilled by: Stratus Corporation		
Date Started: 1/30/18 Coordin			nates:43.43588° N	-124.23967° W (WGS 84)	
	Drilling Method: Direct Pu	Hammer Type: Not Used			
	Equipment: Geoprob	Weight:			
	Hole Diameter: 3 in.	Drop:			
	Note: See Legend for Explanation of Symbols			Energy Ratio:	





ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, trace silt, brown, fine grained, contains organics light brown, organics absent below 0.5 ft			Run 1		Run 1 recovery 36 in. ⊻2.8 ft (1/30/2018)
5— — —		gray below 8.5 ft			Run 2		Run 2 recovery 50 in.
10— — —		(1/30/2018)	- 10.0				
20							
 25							
MPLATE.GDT 7/26/18							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
- ENVIRONMENTALE						)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation			
Date Started: 1/30/18	Coordinates: 43.43589° N	-124.23982° W (WGS 84)			
Drilling Method: Direct Pu	Hammer Type: Not Used				
Equipment: Geoprob	e 7822DT	Weight:			
Hole Diameter: 3 in.	Drop:				
Note: See Legend for Expla	Energy Ratio:				





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, trace to some silt, brown, fine grained light brown below 0.5 ft			Run 1		Run 1 recovery 36 in. ⊻2.8 ft (1/30/2018)
5-		gray-brown, grades to gray with depth below 7 ft			Run 2		Run 2 recovery 51 in.
10- - - - - 15-		_SILT, graySAND, gray, fine grained	13.5 14.2 15.0		Run 3		Run 3 recovery 60 in.
	-	(1/30/2018)	10.0				
	-						
-	-						
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18	-						
ENVIRONMENTAL BORI	-					0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation			
Date Started: 1/30/18	Coordinates: 43.4364° N -	124.23941° W (WGS 84)			
Drilling Method: Direct Pu	Hammer Type: Not Used				
Equipment: Geoprob	Weight:				
Hole Diameter: 3 in.	Drop:				
Note: See Legend for Expla	anation of Symbols	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, some gravel, trace silt, brown to gray, fine to medium grainedgravel absent, light brown, fine grained below 3 ft			Run 1		Run 1 recovery 35 in. ⊻3.5 ft (1/30/2018)
5- - - - 10-		gray-brown, contains wood debris below 8 ft		32.5	Run 2 FO-111-8		Run 2 recovery 48 in. Slight sheen and odor between depths of 8 to 10 ft
- - - 15- -	- - - 	SILT, gray SAND, gray, fine grained	14.0 15.0		Run 3	-	Run 3 recovery 60 in.
- - 20- - -		(1/30/2018)	20.0		Run 4		Run 4 recovery 60 in.
- 25- - 81/92//	-						
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18	-						
- 35	-					0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation			
Date Started: 1/30/18	Coordinates: 43.43628° N	-124.23937° W (WGS 84)			
Drilling Method: Direct Pu	Hammer Type: Not Used				
Equipment: Geoprob	Weight:				
Hole Diameter: 3 in.	Drop:				
Note: See Legend for Expla	Energy Ratio:				





ДЕРТН, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, light brown, fine grained			Run 1		⊻2.4 ft (1/30/2018) Run 1 recovery 32 in.
5—		grades to gray-brown, contains organics below 7 ft			Run 2 FO-112-9		Run 2 recovery 60 in.
10— — — —	]]]	dark gray below 10 ft SILT, gray SAND, gray, fine grained	13.0		Run 3		Run 3 recovery 60 in.
15— — — —		(1/30/2018)	15.0				
20—							
25							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
NMENTAL BORING GRI							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 1/30/18	Coordinates: 43.43613° N	-124.23953° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	e 7822DT	Weight:		
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	anation of Symbols	Energy Ratio:		





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
- - - 5-		Asphalt concrete PAVEMENT (11 in.) SAND, trace to some gravel, trace silt, brown, fine to medium grained gravel absent, light brown, fine grained below 3 ft	0.9		Run 1		Run 1 recovery 36 in. ⊈3.5 ft (1/30/2018)
		light gray-brown below 7.5 ft contains wood debris at 8 ft			Run 2 FO-113-8	3	Run 2 recovery 55 in.
		grades to silty material below 12.5 ft SILT, gray SAND, dark gray, fine grained	13.5		Run 3		Run 3 recovery 60 in.
	-	(1/30/2018)	15.0				
25	-						
-	-						
	-						
ENVIRONMENTAL BORING GRI DATA TEMPLATE GDT 7/26/18	-					0	1.0

Logged By: C. Smerdon			Drilled by: Stratus Corporation			
Date Started: 1/30/18 Coordin			nates:43.43634° N	-124.23925° W (WGS 84)		
	Drilling Method: Direct Pu	Hammer Type: Not Used				
	Equipment: Geoprob	Weight:				
	Hole Diameter: 3 in.	Drop:				
	Note: See Legend for Expla	Energy Ratio:				





	UEPIH, FI	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
			SAND, trace to some gravel, trace silt, brown, fine to medium grained gravel absent, light brown, fine grained below 3.5 ft			Run 1		Run 1 recovery 32 in. ⊻3.4 ft (1/30/2018)
			gray-brown below 9 ft contains wood debris at 9.2 ft			Run 2		Run 2 recovery 44 in. Slight sheen between depths of 9.2 to 12.5 ft
			SILT, some fine-grained sand, gray (1/30/2018)	14.0 15.0		Run 3 FO-114-13		Run 3 recovery 60 in.
	 20 							
	_ 25— _ _ _							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18	30							
ENVIRONMENTAL BORING	35— — — _ 						)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 1/30/18	Coordinates: 43.43627° N	-124.23926° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	e 7822DT	Weight:		
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Asphalt concrete PAVEMENT (12 in.)	1.0		Run 1		⊊Run 1 recovery 32 in. ⊊3.1 ft (1/30/2018)
5— 5—		grades to gray-brown below 5 ft			Run 2		Run 2 recovery 52 in.
		gray below 8.5 ft dark gray below 10 ft		8.1			Slight sheen and odor between depths of 8.5 to 17.5 ft
		Sandy SILT, gray, fine-grained sand	- 13.5 - 14.5	6.1	Run 3		Run 3 recovery 60 in.
			20.0	3.7	Run 4		Run 4 recovery 60 in.
-		(1/30/2018)					
25- - 81/9 -							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
BORING GRI DATA 							
– – – – – – – – – – – – – – – – – – –						)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Corporation
Date Started: 1/30/18	Coordinates: 43.43625° N	-124.23937° W (WGS 84)
Drilling Method: Direct Pu	ish Probe	Hammer Type: Not Used
Equipment: Geoprob	e 7822DT	Weight:
Hole Diameter: 3 in.	Drop:	
Note: See Legend for Expla	anation of Symbols	Energy Ratio:





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<b>DEPTH</b> , FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, some gravel, trace silt, brown, fine grained gravel absent, light brown below 1 ft			Run 1		Run 1 recovery 37 in. ⊻3.6 ft (1/31/2018)
5—		grades to gray-brown below 7 ft gray below 9 ft			Run 2		Run 2 recovery 48 in.
10— — — —		SILT, some fine-grained sand, gray, contains	- 14.0	1.9	Run 3 FO-116-14		Moderate odor at 10 ft Run 3 recovery 60 in.
15— — — —		organics (1/31/2018)	15.0	1.5	PO-110-14		
20							
25— — — —							
35— 							
40						0	1.0

	Logged By: C. Smerdon		Drilled by: Stratus C	orporation
Date Started: 1/31/18 Coordi			nates:43.4363° N -1	24.23943° W (WGS 84)
	Drilling Method: Direct Pu	ush Probe	Э	Hammer Type: Not Used
	Equipment: Geoprob	e 7822D	Т	Weight:
	Hole Diameter: 3 in.			Drop:
	Note: See Legend for Expla	anation of	f Symbols	Energy Ratio:





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Asphalt concrete PAVEMENT (4 in.)/ SAND, some gravel, trace to some silt, dark brown, fine to medium grained gravel absent, light brown, fine grained below 1 ft	0.3		Run 1		Run 1 recovery 37 in. ⊻3.1 ft (1/31/2018)
5		light gray below 8 ft		0.7	Run 2		Run 2 recovery 49 in.
10— — — —		some silt, gray below 13 ft up to trace silt below 14 ft		0	Run 3 FO-117-13		Run 3 recovery 60 in.
15— — — —		(1/31/2018)	15.0	0			
20							
25— — 							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
XONMENTAL BORING GI							
					(	)	1.0

	Logged By: C. Smerdon		Drilled by: Stratus	Corporation
Date Started: 1/31/18 Coordi			nates:43.43617° N	-124.2392° W (WGS 84)
	Drilling Method: Direct Pu	ush Probe	9	Hammer Type: Not Used
	Equipment: Geoprob	e 7822D	Т	Weight:
	Hole Diameter: 3 in.			Drop:
	Note: See Legend for Expla	anation of	f Symbols	Energy Ratio:





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, trace silt and gravel, brown, fine to medium grained gravel absent, light brown below 0.5 ft gray-brown, contains organics below 4 ft			Run 1		⊈2.4 ft (1/31/2018) Run 1 recovery 32 in.
5		organics absent below 7 ft gray below 8 ft		0	FO-118-4		Run 2 recovery 60 in.
 10 			40.5				
- - 15		Sandy SILT, gray, fine-grained sand, sandier material in graded interbeds / SAND, light gray, fine grained (1/31/2018)	12.5 13.5 15.0	0	Run 3		Run 3 recovery 60 in.
- - - 25-							
-							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
- NTAL BORING GRI I - 32 							
– ENVIRONMEI – 40–						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Corporation
Date Started: 1/31/18	Coordinates: 43.43611° N	-124.23883° W (WGS 84)
Drilling Method: Direct Pu	ush Probe	Hammer Type: Not Used
Equipment: Geoprob	e 7822DT	Weight:
Hole Diameter: 3 in.		Drop:
Note: See Legend for Expla	anation of Symbols	Energy Ratio:





DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
_		Asphalt concrete PAVEMENT (3 in.)	0.2				
-		SAND, light brown, fine grained			Run 1		Run 1 recovery 30 in.
5— —		trace silt below 5 ft				-	
-		dark brown to gray below 8 ft		70 58	Run 2 BP-119-8		Run 2 recovery 49 in. Heavy odor between depths of 8 to 20 ft
10— — —						-	Heavy sheen between depths of 11 to 24 ft
_ _ 15—				55	Run 3		Run 3 recovery 60 in.
10-				33			
_		gray below 17 ft			Run 4 BP-119-17		Run 4 recovery 60 in.
20— —				30.2		-	Moderate odor between depths of 20 to 28 ft
_					Run 5		Run 5 recovery 60 in.
 25—							Moderate sheen between depths of 24 to 26 ft
25-				28			Slight sheen between depths of 26 to 29 ft
-					Run 6		Run 6 recovery 60 in. Slight odor between depths of 28 to 43.5 ft
30—				0.7			Slight staining or sheen on acetate sleeves between depths of 29 to 43.5 ft
-		light gray below 33 ft		0	Run 7 BP-119-33		Run 7 recovery 60 in.
35— — —					Run 8		Run 8 recovery 60 in.
_							
40	<u>e segui</u> d	(CONTINUED NEXT PAGE)	1	1	1	0	1.0
Logged Date Sta		Smerdon         Drilled by: Stratus Corporation           1/31/18         Coordinates:43.4354° N         -124.2394° W (WGS)	5 84)				
Drilling I	Metho ipmer	d: Direct Push Probe Hammer Type: N ht: Geoprobe 7822DT Weight:			(		<b>R</b> BORING BP-119

JOB NO. 5764-1195

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FIG. 19A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
- - - 45- -		SAND, trace silt, light gray, fine grained contains shell fragments at 43.5 ft (1/31/2018) Depth to groundwater not measured due to caving	- 45.0		Run 9		Slight odor and staining or sheen on acetate sleeves to 43.5 ft Run 9 recovery 60 in.
- 50- - -	-						
	-						
60   65 	-						
	-						





<b>DEPTH</b> , FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, some gravel, trace silt, brown with scattered red mottling, fine to medium grained gravel absent, light brown, fine grained below 1 ft			Run 1		Run 1 recovery 34 in. ⊻3.2 ft (2/1/2018)
5— — — — 10—		light gray to light brown below 7 ft dark gray below 8 ft		1 2.9	Run 2 BP-120-8		Run 2 recovery 45 in. Moderate sheen and odor between depths of 8 to 9 ft
		trace to some silt below 14 ft up to trace silt, gray-brown below 15 ft			BP-120-11 X		Run 3 recovery 60 in.
		(2/1/2018)	- 20.0		Run 4		Run 4 recovery 35 in.
  25	-						
  30—	-						
 	-					0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Corporation
Date Started: 2/1/18	Coordinates: 43.43556° N	-124.23951° W (WGS 84)
Drilling Method: Direct Pu	ish Probe	Hammer Type: Not Used
Equipment: Geoprob	e 7822DT	Weight:
Hole Diameter: 3 in.		Drop:
Note: See Legend for Expla	anation of Symbols	Energy Ratio:



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DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT		COMMENTS AND ADDITIONAL TESTS
		SAND, trace silt and gravel, light brown to dark brown, fine to coarse grained gravel absent, light brown, fine grained below 1.5 ft			Run 1		Run 1 recovery 32 in. ⊻3.8 ft (2/1/2018)
		contains organics at 9 ft, light gray-brown below 9 ft		3.3	Run 2 BP-121-9	X	Run 2 recovery 50 in. Possible slight odor at 9 ft
					Run 3		Run 3 recovery 60 in.
  					Run 4		Run 4 recovery 40 in.
25-		trace to some silt at 23 ft			Run 5		Run 5 recovery 45 in.
		(2/1/2018)	- 30.0		Run 6		Run 6 recovery 43 in.
40-	Bv: C	Smerdon Drilled by: Stratus Corporation				0	1.0
Date Sta Drilling Equ Hole D	arted: 2 Metho uipmer iamete	Coordinates:43.43522° N         -124.23928° W (W           d: Direct Push Probe         Hammer Type: N           it: Geoprobe 7822DT         Weight:			(		BORING BP-121

Docu	ment No:	J1-680-RGL-GRI-00001-00
2000		)! 000 1102 011 00001 00

ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18



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Revision: 1

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FIG. 21A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, trace to some silt and gravel, brown, fine to medium grained gravel absent, up to trace silt, light brown mottled brown, fine grained, contains organics			Run 1		Run 1 recovery 22 in. ⊻3.7 ft (2/1/2018)
5		contains metal fragments below 5 ft metal fragments absent below 7 ft light gray, organics absent below 8 ft		1	Run 2 BP-122-7	X	Slight odor between depths of 6 to 7 ft Run 2 recovery 48 in.
10— — —		gray below 10 ft			Run 3		Run 3 recovery 60 in.
 15 		(2/1/2018)	• 15.0				
 20— 							
 25							
40						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/1/18	Coordinates: 43.43531° N	nates:43.43531° N -124.23928° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			



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GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
	SAND, trace silt, light brown, fine grained			Run 1		Run 1 recovery 28 in. ⊻3.8 ft (2/1/2018)
	contains woody debris at 8.5 ft, gray below 8.5 ft		3.2	Run 2 BP-123-8		Run 2 recovery 47 in.
			0	Run 3		Run 3 recovery 60 in.
<u>e la freidae</u>	(2/1/2018)	- 15.0		-		
	GRAPHIC LOG	SAND, trace silt, light brown, fine grained	SAND, trace silt, light brown, fine grainedcontains woody debris at 8.5 ft, gray below 8.5 ft	SAND, trace silt, light brown, fine grainedcontains woody debris at 8.5 ft, gray below 8.5 ft 3.2	SAND, trace silt, light brown, fine grained Run 1 contains woody debris at 8.5 ft, gray below 8.5 ft Run 2 BP-123-8 Run 3 Run 3	SAND, trace silt, light brown, fine grained Run 1 contains woody debris at 8.5 ft, gray below 8.5 ft BP-123-8 Run 2 3.2 BP-123-8 Run 3 Run 3

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/1/18	Coordinates: 43.43508° N	nates:43.43508° N -124.23968° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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JOB NO. 5764-1195
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DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
  5		SAND, some gravel, trace silt, brown to red-brown, fine grained, contains organics gravel absent, light brown to brown mottled dark brown below 0.5 ft			Run 1		Run 1 recovery 34 in. ⊻3.7 ft (2/1/2018)
  10—		gray below 8.5 ft		0.6	Run 2		Run 2 recovery 49 in.
  15		dark gray below 13 ft SILT, trace to some fine-grained sand, dark gray, contains organics (2/1/2018)	- 14.0 - 15.0		Run 3		Run 3 recovery 60 in.
 25							
 30							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/1/18	Coordinates: 43.43519° N	-124.23944° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Asphalt concrete PAVEMENT (4 in.)/ SAND, light brown mottled dark brown, fine grained, contains organics	0.3		Run 1		Run 1 recovery 24 in. ⊻3.6 ft (2/1/2018)
		gray below 8.5 ft			Run 2		Run 2 recovery 45 in.
		Sandy SILT, gray, fine-grained sand	14.0	0	Run 3 BP-125-13		Run 3 recovery 60 in. Slight odor at 14 ft
		Silty SAND, gray, fine grained	20.0		Run 4		Run 4 recovery 42 in.
		(2/1/2018)					
						)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/1/18	Coordinates: 43.43534° N	-124.23932° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Asphalt concrete PAVEMENT (3 in.)/ SAND, trace to some silt, light brown to dark brown, fine grained, contains organics	0.2		Run 1		Run 1 recovery 14 in. ⊻3.3 ft (2/1/2018)
5—		up to trace silt, light brown, organics absent below 7 ft dark gray-brown at 8.5 ft		0.3	BP-126-6 X		Slight sheen between depths of 5 and 6 ft Run 2 recovery 51 in.
10— — —		gray below 10 ft			Run 3		Run 3 recovery 60 in.
		dark gray, trace to some silt below 14 ft (2/1/2018)	15.0	0			
20							
25-							
					(	)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/1/18	Coordinates: 43.43537° N	-124.2395° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Portland cement CONCRETE (5 in.) /	0.4		Run 1		Run 1 recovery 27 in.
5		trace silt, gray to dark gray below 8.5 ft		0	Run 2 BP-127-8		Run 2 recovery 45 in. Slight sheen at 9 ft
		(2/1/2018)	15.0		Run 3 BP-127-13		Run 3 recovery 60 in.
20-		Depth to groundwater not measured due to caving					
 25							
35-							
40						)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/1/18	Coordinates: 43.43551° N	-124.23929° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, light brown, fine grained	0.5		Run 1		Run 1 recovery 36 in.
5	-	3-inthick lens of organics at 4 ft		0			⊻3.8 ft (2/2/2018)
	-	trace silt, black below 7.5 ft		107	Run 2 BP-128-9		Run 2 recovery 45 in. Moderate sheen and heavy odor between depths of 7.5 and 14 ft
-	-			11 0	Run 3 BP-128-15		Run 3 recovery 60 in.
15— — —	-	(2/2/2018)	15.0				
20— 	-						
 25—	-						
	-						
35— — —	-						
40-						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/2/18	Coordinates: 43.43542° N	-124.23927° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Asphalt concrete PAVEMENT (3 in.)/	0.2		Run 1		Run 1 recovery 32 in. ⊻4.0 ft (2/2/2018)
5— — —		dark brown below 6 ft		1	Run 2		Heavy odor at 6.5 ft Run 2 recovery 45 in.
 10—		dark gray below 9 ft		140	BP-129-8		Slight to moderate sheen between depths of 8 to 10 ft Moderate to heavy sheen, moderate odor between depths of 10 to 13.5 ft
		trace to some silt, gray below 13 ft		60	Run 3 BP-129-14		Run 3 recovery 60 in.
15— 		(2/2/2018)	15.0				
 20—							
  25							
30— 							

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/2/18	Coordinates: 43.43543° N	-124.23923° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, trace to some silt, trace gravel, brown, fine to medium grained trace silt, light brown mottled brown, fine grained below 0.5 ft gravel lens at 4.5 ft			Run 1		⊻2.0 ft (2/2/2018) Run 1 recovery 32 in.
5—		(2/2/2018) Practical refusal at 5.5 ft	5.5		Run 2		Run 2 recovery 6 in.
10— — —							
15— — —							
20— — — —							
25							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
MENTAL BORING GRI E							
					(	)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/2/18	Coordinates: 43.43544° N	-124.23918° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			

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FIG. 30A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Asphalt concrete PAVEMENT (3 in.)/ SAND, light brown, fine grained	0.2		Run 1		Run 1 recovery 26 in. ⊻4.8 ft (2/2/2018)
		trace silt, light gray below 8.5 ft		300	Run 2 MS-131-9		Run 2 recovery 44 in. Moderate odor between depths of 8.5 to 10 ft Heavy odor between depths of 10 to 15 ft
		silty, gray below 14 ft trace silt below 15 ft			Run 3		Run 3 recovery 60 in. Slight to moderate odor between depths of 15 to 20 ft
20-				0.9	Run 4		Run 4 recovery 40 in.
		silty sand lens at 24 ft (2/2/2018)	25.0	0	MS-131-21 X		Run 5 recovery 43 in. Slight odor between depths of 23 to 24 ft
40						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/2/18	Coordinates:43.43481° N			
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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FIG. 31A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		ר <u>Asphalt concrete PAVEMENT (5 in.)</u>	0.4		Run 1		Run 1 recovery 15 in. ⊻4.6 ft (2/2/2018)
5— — — —		light gray, contains organics below 8.5 ft			Run 2		Run 2 recovery 47 in.
10— — —	T TT	light gray to gray below 10 ft silty, gray below 14 ft		2	MS-132-9 Run 3		Run 3 recovery 60 in.
15— — —		(2/2/2018)	15.0				
20— — —							
 25— 							
 30— 							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/2/18	Coordinates: 43.4348° N	-124.23946° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





<b>DEPTH</b> , FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, light brown, fine grained			Run 1		Run 1 recovery 31 in.
5— — — — 10—		light gray to gray below 8.5 ft		0.3	Run 2 MS-133-9		Run 2 recovery 51 in. ∑8.3 ft (2/2/2018)
		trace to some silt, gray below 14 ft (2/2/2018)	— 15.0	0.3	Run 3		Run 3 recovery 60 in.
20-							
 25—							
35— — —							
40						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/2/18	Coordinates: 43.43477° N	-124.23917° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





<b>DEPTH</b> , FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Asphalt concrete PAVEMENT (2 in.)/	0.2		Run 1		Approximately 3-inthick concrete slab or fragment encountered at depth of 2 ft Run 1 recovery 31 in.
5— — — —		trace silt, gray to light gray below 8.5 ft contains organics at 9 ft		0.3	Run 2	-	⊈4.7 ft (2/2/2018) Run 2 recovery 57 in.
10— — — —		trace to some silt, gray below 13.5 ft		0	Run 3		Run 3 recovery 60 in.
15— — — —		(2/2/2018)	15.0				
20—							
25— — —							
30— 							
35— 							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/2/18	Coordinates: 43.43461° N	-124.23936° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





<b>DEPTH</b> , FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, trace silt and gravel, brown, fine to medium grained, contains organics gravel and organics absent, light brown, fine grained below 0.7 ft			Run 1		Run 1 recovery 34 in.
5— — —				0	Run 2		⊈4.5 ft (2/5/2018) Run 2 recovery 51 in.
 10—		light gray below 8.5 ft contains wood debris at 9 ft		0	-	-	
-		trace to some silt, gray below 13 ft	45.0	0	Run 3		Run 3 recovery 60 in.
15— — —		(2/5/2018)	- 15.0		-		
 20							
 25—							
30— 							

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/5/18	Coordinates: 43.43494° N	-124.23958° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





SAND, light brown, fine grained  SAND, light brown, fine grained  Run 1  Run 1  Run 2  Run 2  MS-136-9	Run 1 recovery 37 in. ⊈4.5 ft (2/5/2018) Run 2 recovery 60 in.
Run 2	
Run 3	Run 3 recovery 60 in.

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/5/18	-124.23925° W (WGS 84)			
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		ר <u>Portland cement CONCRETE (5 in.)</u> SAND, light brown, fine grained	0.4		Run 1		Run 1 recovery 34 in. ⊈3.6 ft (2/5/2018)
5		Sandy GRAVEL, trace silt, fine- to medium-grained sand sand SAND, light brown, fine grained	4.5 5.5	0.9	Run 2		Run 2 recovery 58 in.
10— — —			13.5	0.8 0.5	Run 3		Run 3 recovery 60 in.
		SILT, some fine-grained sand, gray some clay, trace sand below 14.5 ft SAND, trace silt, gray to light gray, fine grained	15.5	0.5 0.4	HF-137-16 Run 4		Very slight sheen between depths of 13 to 20 ft Run 4 recovery 45 in.
20		(2/5/2018)	20.0				
 25—	-						
	-						
	-					0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Corporation
Date Started: 2/5/18	-124.24101° W (WGS 84)	
Drilling Method: Direct Pu	Hammer Type: Not Used	
Equipment: Geoprob	Weight:	
Hole Diameter: 3 in.	Drop:	
Note: See Legend for Expla	Energy Ratio:	





JOB NO. 5764-1195

FIG. 37A

<b>DEPTH</b> , FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, trace to some silt, light brown, fine grained, contains organics up to trace silt, organics absent below 0.5 ft			Run 1		Run 1 recovery 34 in. ⊻3.3 ft (2/5/2018)
5— — —		contains wood debris at 8.5 ft		1.6	Run 2	-	Run 2 recovery 55 in.
10— — —		trace silt, light brown-gray below 9 ft	10.5	0	Run 3	-	Run 3 recovery 60 in.
		Clayey SILT, trace fine-grained sand, gray (2/5/2018)	- 13.5 - 15.0	0			
20-							
 25							
						0	1.0

Logged By: C. Smerdon	Corporation	
Date Started: 2/5/18	-124.24114° W (WGS 84)	
Drilling Method: Direct Pu	Hammer Type: Not Used	
Equipment: Geoprob	Weight:	
Hole Diameter: 3 in.	Drop:	
Note: See Legend for Expla	Energy Ratio:	





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, light brown, fine grained			Run 1		Run 1 recovery 19 in. ⊈3.2 ft (2/5/2018)
5—		contains organics at 5 ft, trace silt, brown below 5 ft (2/5/2018)	7.0	0.2 0.2	Run 2		Run 2 recovery 16 in.
		Refusal on obstruction at 7 ft					
 15—							
20-							
DT 7/26/18							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
MENTAL BORING GR							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/5/18	Coordinates: 43.43557° N	-124.24094° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			



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DEPTH, FT GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-	Portland cement CONCRETE (5 in.) / Portland cement CONCRETE (5 in.) / SAND, light brown, fine grained	0.4		Run 1		Run 1 recovery 24 in. ⊻3.5 ft (2/5/2018)
5	trace to some silt below 8 ft		0	Run 2		Run 2 recovery 48 in.
	coarse sand with some gravel lens at 8.5 ft light brown-gray below 10 ft gray below 13 ft		0	Run 3		Run 3 recovery 60 in.
	- Clayey SILT, gray (2/5/2018)	14.5 15.0	0	HF-140-13		
 20						
 25—						
  30						
-						

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/5/18	-124.2409° W (WGS 84)			
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, light brown, fine grained			Run 1		Run 1 recovery 22 in. ⊈3.8 ft (2/5/2018)
5		4.5 ft		0.6	Run 2 HF-141-8		Run 2 recovery 52 in.
10— — — —	ТПТ	SILT, some clay and fine-grained sand, gray grades to clayey silt/silty clay below 14.5 ft	13.5	0.6 0.8	Run 3		Run 3 recovery 60 in.
15— — — —	***	grades to clayey silt/silty clay below 14.5 ft (2/5/2018)	15.0				
20— — — —							
25 							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
MENTAL BORING GRID 32 1 1 1 28 1 1 1 1 1 1 1 1 1 1 1 1 1							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/5/18	Date Started: 2/5/18 Coordinates: 43.43561° N			
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, soem silt, fine- to coarse-grained sand			Run 1		Run 1 recovery 42 in. ⊻4.3 ft (2/5/2018)
5		silty below 5 ft SAND, trace silt, gray to light gray, fine grained	8.5		Run 2		Run 2 recovery 27 in.
		SAND, trace sin, gray to ignt gray, line grained		0 0	CT-142-11		Moderate sheen and odor between depths of 9 to 11 ft Run 3 recovery 60 in.
		Sandy SILT, gray, fine-grained sand	· 14.0 · 15.0	0	Run 4		Run 4 recovery 43 in.
20		silt with some clay lens at 19 ft (2/5/2018)	· 20.0				
- 25- -							
30-							
						)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/5/18	Coordinates: 43.43525° N	-124.24111° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, light brown, fine grained			Run 1		Run 1 recovery 36 in. ⊻3.6 ft (2/5/2018)
		trace silt, light gray below 8.5 ft		0.5	Run 2		Run 2 recovery 55 in.
		Clayey SILT, gray	13.5	0.6	CT-143-11		Run 3 recovery 60 in.
EMPLATE.GDT 7/26/18							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
					(	)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/5/18	Coordinates: 43.4352° N	-124.24073° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, trace silt, fine-graiend sand	1.0		Run 1		Run 1 recovery 36 in. ⊻3.5 ft (2/5/2018)
5— — — —		trace silt below 5 ft contains wood debris at 8.5 ft, light gray-brown below 8.5 ft		0	Run 2		Run 2 recovery 60 in.
10— — — —		SILT, some clay and fine-grained sand, gray	14.0	0	Run 3		Run 3 recovery 60 in.
15— — — —		contains wood debris near 15 ft / SAND, trace silt, gray, fine grained/	15.0		Run 4		Run 4 recovery 44 in.
20— — — —		(2/5/2018)	20.0		-		
25- - 81/97/2 -							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
CONMENTAL BORING G							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/5/18	Coordinates: 43.43514° N	-124.24108° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand, contains organics organics absent below 0.5 ft increasing sand content with depth	5.0		Run 1		Run 1 recovery 41 in. ⊻3.8 ft (2/6/2018)
-		Silty SAND, some gravel, red-brown, fine to medium grainedtrace silt, gray, fine grained below 8 ft	0.0	0	Run 2 CT-145-7	X	Run 2 recovery 34 in. Moderate sheen and discoloration, moderate to heavy odor between depths of 7 to 14 ft
10— — — —		trace to some silt below 10 ft 	13.5	0	Run 3		Run 3 recovery 55 in.
15— — —		SAND, trace to some silt, gray, fine grained,	15.0	0	CT-145-16 Run 4	X	Run 4 recovery 44 in.
 20 		SILT, some clay, gray	19.5 20.0				
 25 	-						
 30	-						
- - 35-							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/6/18	Coordinates: 43.43528° N	-124.24121° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, some silt to silty, fine- to coarse-grained sand/ SAND, light brown, fine grained	- 1.0		Run 1		Run 1 recovery 38 in. ⊻4.2 ft (2/6/2018)
5— — — —		trace silt, light brown-gray, contains organics below 8.5 ft		0	Run 2		Run 2 recovery 60 in. Slight sheen between depths of 8.5 to 20 ft
10— — — —		trace to some silt below 12 ft clayey silt with some sand lens at 14 ft some silt, gray below 14.5 ft		0	Run 3 CT-146-13		Run 3 recovery 60 in.
15— — — —		clayey silt lens at 17 ft			Run 4		Run 4 recovery 42 in.
20		(2/6/2018)	20.0				
25— — —							
30— 							
35— 							
40						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/6/18	Coordinates: 43.43519° N	-124.24121° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, light brown, fine grained Sandy GRAVEL, some silt to silty, fine- to coarse-grained sand	- 1.0		Run 1		Run 1 recovery 32 in.
5		SAND, light brown, fine grained	- 5.0	0	Run 2		<ul> <li> <sup>1</sup> G.2 ft (2/6/2018)     </li> <li>         Run 2 recovery 44 in.         Moderate odor between depths of 8 to 14 ft     </li> <li>         Slight sheen between depths of 9 to 20 ft     </li> </ul>
		trace to some silt, light gray below 12.5 ft gray, contains organics below 14 ft		0	Run 3	-	Run 3 recovery 60 in. Moderate sheen at 14 ft
		clayey silt lenses up to 3 in. thick at 17 ft (2/6/2018)	- 20.0	0	Run 4		Run 4 recovery 50 in.
- - - 25-	-						
	-						
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/6/18	Coordinates: 43.43532° N	-124.24103° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





<b>DEPTH</b> , FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Asphalt concrete PAVEMENT (7.5 in.) Sandy GRAVEL, trace silt, fine- to coarse-grained sand	0.6		Run 1		Run 1 recovery 27 in.
5		SAND, light brown, fine grained	4.5				⊻4.6 ft (2/6/2018)
- - 10-		trace silt, light gray-brown below 8.5 ft		0	Run 2 CT-148-9		Run 2 recovery 55 in.
-		Clayey sandy SILT, gray, fine-grained sand	13.5	0	Run 3		Run 3 recovery 60 in.
15		(2/6/2018)	15.0				
 20—	-						
-	-						
25-	-						
	-						
	-						
40-						)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/6/18	Coordinates: 43.43542° N	-124.24099° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





ОЕРТН, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL	ELEVATION, FT DEPTH, FT	O, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
DE	GF	Surface Elevation: Not Available		PID,	SA AN	Ň	
_		Asphalt concrete PAVEMENT (8 in.) Sandy GRAVEL, some silt, fine- to coarse-grained sand	0.6				Dur d recence 40 in
-		SAND, light brown, fine grained	2.5		Run 1		Run 1 recovery 40 in.
5-							⊻4.5 ft (2/6/2018)
		trace silt, light gray below 8.5 ft			Run 2		Run 2 recovery 52 in.
-		some silt, contains wood debris below 12 ft Clayey SILT, some fine-grained sand, gray, contains wood debris	- 13.0	0	Run 3 CT-149-13		Run 3 recovery 60 in. Slight sheen between depths of 13 to 25 ft
15- - -		grades to clay below 14.5 ft SAND, some silt, light gray, fine grained, contains organics and wood debris silt with some clay lens at 18 ft	- 15.0	0	Run 4		Run 4 recovery 45 in.
20-		silt with some clay lens at 20 ft					
- - 25- -					Run 5		Run 5 recovery 45 in.
01/07//					Run 6		Run 6 recovery 45 in.
		(2/6/2018)	30.0		CT-149-29		
35- 35- -							
<u>40</u> –40–					(	)	1.0
Logaed	By: C.	Smerdon Drilled by: Stratus Corporation					
Date St	arted:	2/6/18 Coordinates:43.43537° N -124.24123° W (					
Eq	uipmer	d: Direct Push Probe Hammer Type: t: Geoprobe 7822DT Weight:					
Hole D	)iamete	er: 3 in. Drop:				J	<b>R</b> BORING CT-149
Note: S	Note: See Legend for Explanation of Symbols Energy Ratio:						

Docu	ument No:	J1-680-RGL-	GRI-00001-00	



JOB NO. 5764-1195

Revision: 1

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FIG. 49A

DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
	•0°	SAND, light brown, fine grained	2.0		Run 1		Run 1 recovery 52 in. ∑3.4 ft (2/6/2018) Slight sheen between depths of 4 to 20 ft
5		trace silt below 5 ft trace to some silt, light gray, contains organics below 8.5 ft			Run 2		Run 2 recovery 60 in.
10		some silt below 10 ft	13.5		Run 3 CT-150-13		Run 3 recovery 60 in.
15— — —	ШИ Ц	SAND, some silt, gray, fine grained, contains organics	15.0		Run 4		Run 4 recovery 45 in.
20	ХЙ	Clayey SILT, trace fine-grained sand, gray (2/6/2018)	19.0 20.0				
25— 							
	-						
35-							
					(	0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/6/18	Coordinates: 43.43533° N	-124.24132° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Asphalt concrete PAVEMENT (4 in.)/ Sandy GRAVEL, some silt, fine- to coarse-grained sand/ SAND, light brown, fine grained	0.3 2.0		Run 1		<sup>,</sup> ⊈2.5 ft (2/6/2018) Run 1 recovery 24 in.
5		light gray-brown below 7.5 ft			Run 2		Run 2 recovery 60 in.
10— — —	W	Clayey SILT, trace to some fine-grained sand, gray	12.5		Run 3 CT-151-12		Slight sheen below 12 ft Run 3 recovery 60 in.
		SAND, some silt, gray, fine grained (2/6/2018)	· 14.0 · 15.0				
20-							
25- -							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
AL BORING GRI DATA							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/6/18	Coordinates: 43.43518° N	-124.24155° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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ДЕРТН, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Silty SAND, brown, fine grained, contains organics up to trace silt, light brown below 1 ft			Run 1		Run 1 recovery 36 in. ⊈3.9 ft (2/6/2018)
5— — — —		trace to some silt, light brown-gray below 6 ft contains organics between depths of 8 to 9 ft			Run 2		Run 2 recovery 52 in. Slight sheen between depths of 8 to 15 ft
10— — —		some silt, gray, contains organics and wood debris below 10 ft			Run 3 CT-152-13		Run 3 recovery 60 in.
15 <u></u>  	XX.	Clayey SILT, trace fine-grained sand, gray (2/6/2018)	14.0 15.0				
20— 							
25-							
PLAIE-GUI //26/18							
						)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/6/18	Coordinates: 43.43525° N	-124.24083° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-	000	Asphalt cocnrete PAVEMENT (4 in.) / Sandy GRAVEL, some silt, fine- to coarse-grained / sand/ SAND, light brown, fine grained	0.3		Run 1		⊻2.4 ft (2/7/2018) Run 1 recovery 45 in.
5— — —		trace to some silt, gray below 5 ft gray mottled brown, contains organics and wood debris at 8 ft		0	Run 2		Run 2 recovery 60 in.
10— — —			13.0	0	Run 3		Run 3 recovery 60 in.
 15—		SILT, some clay and fine-grained sand, gray SAND, some silt, gray, fine grained (2/7/2018)	14.0 15.0	0			
20-							
 25—							
					(		1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/7/18	Coordinates: 43.43507° N	-124.24134° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand (Fill)			Run 1		Run 1 recovery 19 in.
5		SAND, light brown, fine grained, contains organics	5.0	0	Run 2		⊊4.5 ft (2/7/2018) Run 2 recovery 27 in.
		trace to some silt, light brown-gray below 8.5 ft gray below 10 ft		0	Run 3	-	
	ИX.	Clayey SILT, trace to some fine-grained sand, gray, contains wood debris (2/7/2018)	· 14.0 · 15.0	0	Ruli 3		Run 3 recovery 60 in.
20-	-						
	-						
_	-						
	-						
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/7/18	Coordinates: 43.43485° N	-124.24155° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Asphalt concrete PAVEMENT (5 in.) Asphalt concrete PAVEMENT (5 in.) / Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand (Fill)	0.4		Run 1		Run 1 recovery 26 in.
5		SAND, some gravel, trace to some silt, brown-gray, fine to coarse grained (Fill) (2/7/2018) Practical refusal at 7 ft	5.0 7.0		Run 2		Run 2 recovery 15 in.
10— — —		Groundwater not encountered					
20							
25— 25— 							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
ITAL BORING GRI DAT.							
- ENVIRONMEN - 40					(	)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/7/18	Coordinates: 43.43452° N	-124.24136° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Asphalt concrete PAVEMENT (3 in.) / SAND, some silt, trace gravel, dark brown, fine to coarse grained up to trace silt, gravel absent, light brown-gray, fine grained below 1 ft	0.2		Run 1		⊻1.6 ft (2/7/2018) Run 1 recovery 26 in.
5		trace to some silt, contains wood debris 5 ft (2/7/2018)	• 7.5	0.4	Run 2 DB-156-6		Run 2 recovery 18 in. Slight odor and sheen between depths of 6 to 7 ft
10— — —		Practical refusal at 7.5 ft					
15— — —							
 20 							
 25—							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
- BORING GRI DATATI 							
ENVIRONMENTAL 						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/7/18	Coordinates: 43.43467° N	-124.24107° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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<b>DEPTH</b> , FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Asphalt concrete PAVEMENT (5 in.) / Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand (Fill) SAND, light brown, fine grained	0.4		Run 1		Run 1 recovery 37 in.
5		(2/7/2018) Practical refusal at 5.3 ft Groundwater not encountered	5.3		DB-157-5 Run 2		Run 2 recovery 4 in.
10— — —							
20							
25							
MPLATE.GDT 7/26/18							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
ENVIRONMENTAL B 						)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/7/18	Coordinates:43.43435° N	1		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			



JULY 2018



DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		,	4.0		Run 1		Run 1 recovery 37 in.
5 - -		SAND, light gray, fine grained (2/7/2018) Practical refusal at 5.1 ft Groundwater not encountered	5.1	0.2	Run 2 💻		Run 2 recovery 1 in.
	-						
	-						
20	-						
25	-						
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18	-						
L BORING GRI DATA T 	-						
- ENVIRONMENTA 	-				(	0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/7/18	Coordinates: 43.43441° N	-124.24117° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			



JULY 2018



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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand	0.4		Run 1		Run 1 recovery 18 in.
5 - -		SAND, light brown to brown-gray, fine grained (2/7/2018)	4.5 7.7	0.6 0.3	Run 2 DB-159-7		Run 2 recovery 20 in. ⊈6.8 ft (2/7/2018) Slight odor below 7 ft
	-	Practical refusal at 7.7 ft					
- 15- -	-						
- 20- -	-						
- - 25- -	-						
MPLATE.GDT 7/26/18	-						
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
- ENVIRONMENTAL E	-					)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/7/18	Coordinates: 43.43438° N	-124.24132° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, trace silt, fine- to coarse-grained sand	• 4.0		Run 1		Run 1 recovery 35 in.
5		SAND, light brown, fine grained			Run 2		⊻5.2 ft (2/7/2018) Run 2 recovery 45 in.
		trace to some silt, gray below 10 ft		0.4 0.4	Run 3		Run 3 recovery 55 in.
- - 15- -	XX.	Clayey SILT, trace to some fine-grained sand, gray (2/7/2018)	· 14.0 · 15.0	0.4	Run 3 DB-160-12		
	-						
- - - 25-	-						
DI //26/18	-						
	-						
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/7/18	Coordinates: 43.43439° N	-124.24107° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





Reissued for Use

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND			Run 1		Run 1 recovery 16 in.
-		¬ Portland cement CONCRETE (6 in.) / · SAND, light brown, fine grained	1.5 2.0		Run 2		Probe refusal on concrete at 1.5 ft; driller uses destructive drill bit to penetrate to 2 ft Run 2 recovery 17 in.
5—				0.1	-		
-		contains wood debris at 8.5 ft, contains organics below 8.5 ft			Run 3		Run 3 recovery 48 in.
10—		trace to some silt, gray below 10 ft			-		
_					Run 4 DB-161-13		Run 4 recovery 60 in. Sight sheen between depths of 13 to 30 ft
 15		some silt below 15 ft					Sight sheet between depths of 13 to 30 ft
_				0.2	Run 5		Run 5 recovery 40 in.
_							
20—							
_					Run 6		Run 6 recovery 41 in.
 25—				0.5	-		
_					Run 7		Run 7 recovery 44 in.
- 30-		(27)2242	30.0	0.4	DB-161-30		
_		(2/7/2018) Depth to groundwater not measured due to caving,					
_		observed to be at least 10 ft below existing grade					
 35							
_							
-							
-40	· · · · ·		·	·	[(	)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/7/18	Coordinates: 43.43417° N	-124.2412° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	anation of Symbols	Energy Ratio:		





Reissued for Use

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand	4.0		Run 1		Run 1 recovery 37 in.
5		SAND, light brown, fine grained, contains wood debris and organics		1.8 0.1	Run 2		Slight to moderate odor between depths of 5 to 8 ft ↓7.3 ft (2/7/2018) Run 2 recovery 47 in. Moderate to heavy odor between depths of 8 to 10 ft Moderate to heavy sheen between depths of 8 to 11 ft
		12-inthick layer of wood debris with some sand and trace silt at 9 ft trace to some silt, light brown-gray below 10 ft		1.2	DB-162-10		Moderate to heavy sheen between depths of 8 to 11 ft Run 3 recovery 49 in. Slight sheen between depths of 12 to 20 ft
					 Run 4		Run 4 recovery 34 in.
 20—		Sandy SILT, some clay, gray, fine-grained sand	18.0 20.5 21.0		DB-162-21		Run 5 recovery 39 in.
- 25- -		(2/7/2018)	25.0				
30-							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/7/18	Coordinates: 43.43433° N	-124.24137° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18

JOB NO. 5764-1195

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand	4.3		Run 1		Run 1 recovery 33 in.
5— — —		SAND, light brown, fine grained	7.0	0.8	Run 2		Run 2 recovery 50 in.
		trace silt below 10 ft		1.3	DB-163-11		⊻11.3 ft (2/8/2018) Run 3 recovery 60 in.
		(2/8/2018)	- 15.0				
20	-						
 25—							
MPLAIE.GDI //26/18							
- ENVIRONMENTALE					(	)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/8/18	Coordinates: 43.43431° N	-124.24139° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand	3.5		Run 1		Run 1 recovery 35 in.
5 - -		SAND, some silt, gray to dark brown, fine to medium grained, contains wood debris light brown below 5.5 ft (2/8/2018)	7.5	1.2	Run 2		Run 2 recovery 26 in.
	-	Practical refusal at 7.5 ft Groundwater not encountered					
 15 	-						
_  	-						
- - 25-	-						
ATE.GDT 7/26/18	-						
	-						
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18	-						

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/8/18	Coordinates: 43.43437° N	-124.2414° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand	4.0		Run 1		Run 1 recovery 40 in.
5		SAND, light brown, fine grained trace silt, contains wood debris and organics below 5 ft	4.0		Run 2		Run 2 recovery 41 in.
		12-inthick layer of wood debris with some sand at 9 ft trace to some silt below 10 ft		1.4	DB-165-10		
- - 15-		grades to gray below 14 ft (2/8/2018)	15.0	1.3	Run 3		Run 3 recovery 60 in.
	-	Depth to groundwater not measured due to caving, observed to be at least 8 ft below existing grade					
	-						
25- - 81/97// -	-						
	-						
	-					0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/8/18	Coordinates: 43.4344° N	-124.24146° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





<b>DEPTH</b> , FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand SAND, light brown, fine grained 4-inthick layer of clayey sandy silt at 4 ft	3.0		Run 1		Run 1 recovery 36 in.
		trace silt, contains organic debris at 8.5 ft trace to some silt below 10 ft		1.2	Run 2		Run 2 recovery 44 in. Slight odor at 8.5 ft
		light gray below 14 ft	15.0	0.5	DB-166-11		Run 3 recovery 58 in.
20-		(2/8/2018) Depth to groundwater not measured due to caving, observed to be at least 10 ft below existing grade					
GDT 7/26/18 06 							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
ENVIRONMENTAL BORIT 00 01 01 01 01 01 01 01 01 01 01 01 01						)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/8/18	Coordinates: 43.4343° N	124.24133° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			

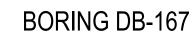




DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, trace silt, fine- to coarse-grained sand SAND, gray to light brown, fine grained	- 2.5		Run 1		Run 1 recovery 34 in.
5		trace gravel below 5 ft (2/8/2018) Practical refusal at 7 ft	- 7.0		Run 2 DB-167-6		Run 2 recovery 20 in.
10— — —		Groundwater not encountered					
20-	-						
 25—							
APLATE.GDT 7/26/18							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
ENVIRONMENTAL B						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/8/18	Coordinates: 43.43443° N	-124.24132° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, trace silt, fine- to coarse-grained sand SAND Portland cement CONCRETE (6 in.) / SAND, light brown, fine grained	1.5 2.0 2.5		Run 1		Run 1 recovery 22 in. Run 2 recovery 14 in.
5— — —		trace silt, contains wood debris below 5 ft		0.3	Run 3		⊻5.6 ft (2/8/2018) Run 3 recovery 41 in.
		trace to some silt below 10 ft some silt, gray-brown below 12.5 ft		0.9	 Run 4		Run 4 recovery 60 in.
  15		(2/8/2018)	15.0	0.9	DB-168-13		
-							
35— 35— - -							
						)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/8/18	Coordinates: 43.43419° N	-124.24117° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





ДЕРТН, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
- - - 5-	0 0 0 0 0	Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand Portland cement CONCRETE (6 in.) SAND, light brown, fine grained, contains wood debris contains organics below 5 ft	2.5 3.5		Run 1	-	Run 1 recovery 31 in. ⊈5.5 ft (2/8/2018)
- - - 10-		trace silt, light brown-gray below 10.5 ft		0.3	Run 2		Run 2 recovery 43 in. Slight sheen between depths of 8 to 15 ft
- - - 15-		trace to some silt, light gray below 13 ft SILT, some fine-grained sand to sandy, trace to	15.0	0.2	Run 3 DB-169-12		Run 3 recovery 60 in.
   20—		Some clay, gray         CLAY, some silt, gray         SILT, some fine-grained sand to sandy, trace to         some clay, gray	18.0 19.0 20.0	0.4 0.5	DB-169-16		Run 4 recovery 28 in.
  25	-	(2/8/2018)					
	-						
– – – 35–	-						
	-					0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/8/18	Coordinates: 43.43414° N	-124.24111° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





JOB NO. 5764-1195

FIG. 69A

DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand SAND, light brown, fine grained 6-inthick silty organic layer at 4.5 ft light brown-gray, contains abundant wood debris below 5 ft	2.5		Run 1		Run 1 recovery 32 in. ⊈4.8 ft (2/8/2018)
		trace to some silt, gray-brown to gray, wood debris absent below 11 ft		0.6	Run 2		Run 2 recovery 35 in.
		some silt to silty, gray, contains organics below		1	Run 3 DB-170-13		Run 3 recovery 55 in. Slight sheen between depths of 12 to 20 ft
	-/-/	15 ft <u>CLAY, trace to some silt, gray</u> SAND, some silt to silty, gray, fine grained, contains organics (2/8/2018)	18.0 18.5 20.0	0.3 0.7	Run 4		Run 4 recovery 38 in.
					C	1	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/8/18	Coordinates: 43.43402° N	-124.24122° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





JOB NO. 5764-1195

FIG. 70A

<b>DEPTH</b> , FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, Igiht brown, fine grained			Run 1		Run 1 recovery 23 in. ⊻3.5 ft (2/8/2018)
5—		trace silt, contains wood debris below 7 ft grades to light brown-gray below 8 ft		0.8	Run 2		Run 2 recovery 54 in.
10— — — —		trace to some silt, gray below 10 ft Sandy SILT, some clay, gray, fine-grained sand,	14.0	0.8	Run 3 MO-171-13		Run 3 recovery 60 in.
15— — — —		contains wood debris (2/8/2018)	15.0				
20							
25							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
ONMENTAL BORING GF							
					(	0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/8/18	Coordinates: 43.43379° N	-124.24112° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-	2 2 2	Sandy GRAVEL, trace silt, fine- to coarse-grained sand SAND, light brown, fine grained	- 1.5		Run 1		Run 1 recovery 32 in. ⊻3.8 ft (2/8/2018)
5		trace silt, contains wood debris and organics below 5 ft		0.7	Run 2		Run 2 recovery 46 in.
		light gray-brown, wood debris absent below 10 ft		0.3			
		some silt below 14 ft (2/8/2018)	- 15.0	0.1	Run 3 MO-172-12		Run 3 recovery 60 in.
20-							
-							
25— — •1/07/							
					(	)	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/8/18	Coordinates: 43.43364° N	-124.24115° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, some silt to silty, fine- to coarse-grained sand	- 3.5		Run 1		Run 1 recovery 17 in. ⊻3.3 ft (2/8/2018)
		light brown-gray below 7.5 ft trace to some silt below 10 ft		0.2	Run 2		Run 2 recovery 23 in.
10— — — — — — —			- 15.0	0.7	Run 3 MO-173-14		Steel fragment encountered at 10 ft Run 3 recovery 60 in. Slight sheen between depths of 14 to 15 ft
		(2/8/2018)	15.0				
25							
-							
G GRI DATA TEMPLATE	-						

Logged By: C. Smerdon	Drilled by: Stratus (	Drilled by: Stratus Corporation			
Date Started: 2/8/18	Coordinates: 43.43361° N	-124.24093° W (WGS 84)			
Drilling Method: Direct Pu	Hammer Type: Not Used				
Equipment: Geoprob	Weight:				
Hole Diameter: 3 in.	Drop:				
Note: See Legend for Expla	Energy Ratio:				





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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand SAND, light brown, fine grained	2.0		Run 1		Run 1 recovery 37 in.
5— — —				0	Run 2	-	Run 2 recovery 50 in.
10— — —		trace to some silt, light brown-gray below 10 ft		0	MO-174-9		Run 3 recovery 60 in.
		(2/9/2018) Groundwater not encountered	- 15.0	0.3		_	
20							
 25							
30-							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/9/18	Coordinates: 43.4333° N	-124.24041° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
	9 <del>2</del> 1	Sandy GRAVEL, some silt, fine- to coarse-grained sand SAND, light brown, fine grained brown, contains organics below 2 ft organics absent below 3 ft Portland cement CONCRETE (8 in.) SAND, trace silt, light brown, fine grained	4.0 4.6	0.4	Run 1		,
  10		gray, contains wood debris and organics trace silt, light gray, organics and wood debris absent below 9.5 ft		0.2	Run 2 MO-175-9		Run 2 recovery 48 in.
  15	XX.	some silt below 12 ft Silty CLAY, some fine-grained sand, gray (2/9/2018)	- 14.0 - 15.0	0.8	Run 3		Run 3 recovery 60 in.
	-						
 25	-						
 30	-						
 35 -							
						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation			
Date Started: 2/9/18	Coordinates: 43.4337° N	-124.24023° W (WGS 84)			
Drilling Method: Direct Pu	ush Probe	Hammer Type: Not Used			
Equipment: Geoprob	Weight:				
Hole Diameter: 3 in.	Drop:				
Note: See Legend for Expla	Energy Ratio:				





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Sandy GRAVEL, trace to some silt, fine- to coarse-grained sand SAND, light brown, fine grained	- 1.5		Run 1		Run 1 recovery 36 in.
5				0.5	-		⊻4.3 ft (2/9/2018)
		trace silt, light gray-brown, contains organics below 8.5 ft			Run 2 SH-176-10	3	Run 2 recovery 48 in.
-		some silt, gray below 13 ft		0.6	Run 3		Run 3 recovery 60 in.
		(2/9/2018)	- 15.0	0			
20-							
25	-						
01/07//	-						
40-						0	1.0

Logged By: C. Smerdon	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/9/18	Coordinates: 43.43433° N	-124.24063° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Portland cement CONCRETE (3 in.)/ SAND, trace to some gravel, trace silt, light brown to gray, fine grained gravel absent below 2 ft	0.2	0	Run 1		⊻1.7 ft (2/9/2018) Run 1 recovery 34 in.
	<u>5</u>	2-inthick layer of sandy gravel at 5 ft 12-inthick layer of sandy gravel at 6 ft		0	SH-177-5	X	Slight sheen and odor at 5 ft
	<u></u>				Run 2		Run 2 recovery 45 in.
				0	Run 3		Run 3 recovery 60 in.
 15		silty below 14.5 ft (2/12/2018)	15.0	0			
20—							
25							
)T 7/26/18 							
A TEMPLATE.GC 30 1 1 2							
ORING GRI DAT							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
Zu40						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/9/18	Coordinates: 43.43459° N	-124.24055° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, brown, fine grained			Run 1		Run 1 recovery 30 in.
5— — — —		contains gravel and concrete fragments below 6 ft (2/12/2018) Refusal on obstruction at 7 ft	• 7.0	0	Run 2		Run 2 recovery 22 in.
10— — — —		Groundwater not encountered					
 15—							
20							
 25 							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
					(	)	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/12/18	Coordinates: 43.43465° N	-124.23872° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, brown, fine grained		0	Run 1		Run 1 recovery 31 in.
5		(2/12/2018) Refusal on obstruction at 7 ft	- 7.0	0	Run 2		Run 2 recovery 18 in.
10— — —		Groundwater not encountered					
	-						
20							
 25—	-						
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
BORING GRI DATA TE 							
- ENVIRONMENTAL						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/12/18	Coordinates: 43.43463° N	-124.23869° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		ר <u>Portland cement CONCRETE (5.5 in.)</u>	0.5		Run 1		Run 1 recovery 22 in.
5		gray below 5 ft contains wood debris below 6 ft		0 20	Run 2		∑5.8 ft (2/12/2018) Moderate odor between depths of 6 to 10 ft Run 2 recovery 27 in.
		wood debris absent below 9 ft		2.8 0.5	SL-180-10		
		(2/12/2018)	15.0	0.2	Run 3 SL-180-15		Run 3 recovery 41 in.
-							
20							
25— 							
30							

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/12/18	Coordinates: 43.43464° N	-124.23874° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Portland cement CONCRETE (5.5 in.) SAND, brown, fine grained	0.5		Run 1		Run 1 recovery 32 in.
5- - -	-			0.4	Run 2		Run 2 recovery 41 in.
- 10- -	- - -	gray below 10 ft dark gray below 12.5 ft		0.4	Run 3		Run 3 recovery 60 in.
- - 15- -		(2/12/2018)	15.0	0.1	SL-181-15		
	-	Depth to groundwater not measured due to caving, observed to be at least 5 ft below existing grade					
	-						
-	-						
ATA TEMPLATE.GDT	-						
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18	-						
- ENVIRONMEL - 40-							1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/12/18	Coordinates: 43.43458° N	-124.23873° W (WGS 84)		
Drilling Method: Direct Pr	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





ДЕРТН, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		<u>Portland cement CONCRETE (2.5 in.)</u> / SAND, gray, fine grained	0.2		Run 1		<ul> <li>✓0.7 ft (2/12/2018)</li> <li>Moderate to heavy sheen, moderate odor throughout</li> <li>Run 1 recovery 27 in.</li> </ul>
5— — —		(2/12/2018) Refusal on obstruction at 5 ft	5.0	0.3	NL-182-5		
 15 							
 20							
 25—							
IPLATE.GDT 7/26/18							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
ENVIRONMENTAL B 06 1 1 1 1						)	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/12/18	Coordinates: 43.43477° N	-124.2387° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





<b>DEPTH</b> , FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		<u>ר Portland cement CONCRETE (6 in.)</u> / SAND, brown, fine grained	0.5		Run 1		Run 1 recovery 10 in.
5— — —		gray below 8 ft		0.3	Run 2		Run 2 recovery 32 in.
				0.3	Run 3	-	Run 3 recovery 60 in.
 15		dark gray below 14 ft (2/12/2018) Depth to groundwater not measured due to caving,	15.0	0.1	NL-183-15		
_  20— 		Depth to groundwater not measured due to caving, observed to be at least 5 ft below existing grade					
_ _ 25—							
30							
35— — —							
						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/12/18	Coordinates: 43.43476° N	-124.23865° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
	<u>5</u>	GRAVEL, some silt and fine-grained sand/-SAND, brown, fine grained	0.5	1.4	Run 1		Run 1 recovery 28 in.
		Refusal on obstruction at 4 ft Groundwater not encountered					
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
=						)	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/12/18	Coordinates: 43.43428° N	-124.23917° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			



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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
	<u>5</u>	Sandy GRAVEL, trace to some silt, fine- to //coarse-grained sand // SAND, brown, fine grained	0.5		Run 1		⊻0.5 ft (2/12/2018) Run 1 recovery 35 in.
5				3.8	MS-185-4		Run 2 recovery 30 in.
 10—	<u>, p</u>	6-inthick layer of gravelly sand with some silt at 8.5 ft gray, contains wood debris below 9 ft		1.5			
		trace to some silt, dark gray below 13 ft (2/12/2018)	- 15.0	2.1	Run 3		Run 3 recovery 60 in.
-							
25— — —							
30— 							
						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/12/18	Coordinates: 43.43421° N	-124.23917° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-	ন্দ্র	Silty GRAVEL, some fine-grained sand, brown/-	0.5		Run 1		Run 1 recovery 34 in. ⊈3.8 ft (2/12/2018)
5— — — —		lisht source to be a C 5 A		1.3	Run 2		Run 2 recovery 44 in.
10— — —		light gray below 9.5 ft (2/12/2018)	10.0	1			
15— — —							
20— 							
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/12/18	Coordinates: 43.43435° N	-124.23838° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





JOB NO. 5764-1195

<b>DEPTH</b> , FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-	.0(	Asphalt concrete PAVEMENT (6 in.) over crushed rock BASE COURSE (6 in.) / - Sandy GRAVEL, trace to some silt, fine-grained /- sand (Fill) / SAND, brown, fine grained, contains wood fragments	1.0 2.0		Run 1		Run 1 recovery 42 in.
5—		gray below 8 ft		1.5	Run 2		Run 2 recovery 52 in.
10— — —				2.2 2.4	BP-187-11		Run 3 recovery 60 in.
15— 		(2/12/2018) Depth to groundwater not measured due to caving, observed to be at least 5 ft below existing grade	15.0	0.3			
 20— 							
 25							
 30—							
						)	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/12/18	Coordinates: 43.43547° N	-124.23909° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			



JULY 2018



DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, light brown to gray, grass at ground surface		0	Run 1		Run 1 recovery 32 in.
5		organics and wood debris absent below 7.5 ft		0	JP-188-6 Run 2		⊈7.5 ft (2/13/2018) Run 2 recovery 60 in.
10		(2/13/2018)	- 10.0				
15— — —							
20— — —							
25— 							
						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/13/18	Coordinates: 43.43105° N	-124.23925° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			



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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, brown, fine grained, grass at ground surface			Run 1		Run 1 recovery 32 in.
5		dark gray, wood debris and organics absent below 7 ft light gray below 8.5 ft		0	Run 2 JP-189-7		<sup>,</sup> <sup>,</sup> <sup>,</sup> <sup>,</sup> <sup>,</sup> <sup>,</sup> <sup>,</sup> <sup>,</sup>
		(2/13/2018)	- 10.0		-		
20							
35 							

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/13/18	Coordinates: 43.43142° N	-124.23908° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, brown, fine grainedcontains organics and wood debris below 4.5 ft			Run 1		Run 1 recovery 35 in.
5		dark gray, abundant organics below 6 ft gray, organics absent below 8 ft		0	Run 2 JP-190-7	×	∑7.0 ft (2/13/2018) Run 2 recovery 48 in.
		(2/13/2018)	- 10.0	0			
 15—							
20-							
_  25— 							
AIE:601 //2018 							
NG GRIDALA LEMPL 32 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation			
Date Started: 2/13/18	Coordinates: 43.43139° N	-124.23854° W (WGS 84)			
Drilling Method: Direct Pu	Hammer Type: Not Used				
Equipment: Geoprob	e 7822DT	Weight:			
Hole Diameter: 3 in.	Drop:				
Note: See Legend for Expla	Energy Ratio:				





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, brown, fine grained, contains organics			Run 1		Run 1 recovery 39 in.
5—		gray below 8 ft		0.6 0.6	Run 2 JP-191-8		<sup>I</sup>
10— — —				0.8	Run 3		Run 3 recovery 52 in.
		(2/13/2018)	- 15.0	2.1			
20							
25—							
35—							
40-						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/13/18	Coordinates: 43.43274° N	-124.24007° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	e 7822DT	Weight:		
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-	-	SAND, brown, fine grained, contains organics			Run 1		⊻1.5 ft (2/13/2018) Run 1 recovery 39 in.
5— — —				4.2 4	Run 2 TS-192-8		Slight odor between depths of 6 to 9 ft Run 2 recovery 42 in.
		gray below 10 ft 6-inthick layer of silt with trace clay at 12.5 ft		1.3	Run 3		Run 3 recovery 44 in.
		(2/13/2018)	- 15.0	0.5			
20	-						
 25—	-						
30-	-						
	-					0	1.0

Logged By: N. Utevsky			Drilled by: Stratus Corporation			
	Date Started: 2/13/18	Coordi	nates:43.43581° N	-124.24138° W (WGS 84)		
	Drilling Method: Direct Pu	Hammer Type: Not Used				
	Equipment: Geoprob	Weight:				
	Hole Diameter: 3 in.	Drop:				
	Note: See Legend for Expla	Energy Ratio:				





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, brown, fine grained, contains roots, organics, and wood debris			Run 1		⊻1.5 ft (2/13/2018) Run 1 recovery 25 in.
5— — —		organics absent below 5 ft gray below 6 ft		1.5	Run 2		Run 2 recovery 60 in.
10— 		6-inthick layer of silt with trace clay at 12.5 ft		1	Run 3		Slight odor between depths of 10 to 15 ft Run 3 recovery 60 in.
		dark gray below 13 ft (2/13/2018)	15.0	1	TS-193-15		
 20—							
35— — — —							
40-					(	)	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/13/18	Coordinates: 43.43582° N	-124.24134° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Equipment: Geoprobe 7822DT			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, brown, fine grained, contains organics organics absent below 1 ft			Run 1		⊈2.0 ft (2/13/2018) Run 1 recovery 36 in.
5				1	Run 2		Run 2 recovery 44 in.
10— — —		gray below 11 ft 3-inthick layer of silt with trace clay and sand at 13 ft		1.6	Run 3 TS-194-13		Run 3 recovery 47 in.
15— — —		(2/13/2018)	15.0	1			
20							
25— 							
AL BORING GRI DATA							
						0	1.0

Logged By: N. Utevsky			Drilled by: Stratus Corporation			
	Date Started: 2/13/18	Coordi	nates:43.43578° N	-124.24126° W (WGS 84)		
	Drilling Method: Direct Pu	Hammer Type: Not Used				
	Equipment: Geoprob	Weight:				
	Hole Diameter: 3 in.	Drop:				
	Note: See Legend for Expla	Energy Ratio:				





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, brown, fine grained, contains organics organics absent below 1 ft			Run 1		⊻0.5 ft (2/13/2018) Run 1 recovery 32 in.
5—				0.5		-	
		contains wood debris below 7.5 ft dark gray, wood debris absent below 8.5 ft		1.6	Run 2		Run 2 recovery 32 in. Slight odor at 9 ft
10— — —		6-inthick layer of silt with some clay to clayey and trace sand, contains organics at 12.5 ft		1.8	TS-195-11		Run 3 recovery 60 in.
 15—		(2/13/2018)	- 15.0	1.1		-	
20							
25							
01/07/1							
30- 							
40-						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/13/18	Coordinates: 43.43576° N	-124.24134° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		Asphalt concrete PAVEMENT (6 in.) over crushed rock BASE COURSE (18 in.) SAND, brown, fine grained, contains organics	- 2.0		Run 1		Run 1 recovery 42 in. ⊻3.2 ft (2/13/2018)
5	-	gray below 5.5 ft		3.4			- 5.2 it (2/15/2010)
					Run 2 CS-196-8	3	Run 2 recovery 41 in.
-		dark gray below 10.5 ft 8-inthick layer of clayey silt at 13 ft		0.3	Run 3		Run 3 recovery 43 in.
		(2/13/2018)	- 15.0	0.8			
- - 20-	-						
-							
25-	-						
	-						
2017 35 - - - -							
						0	1.0

Logged By: N. Utevsky	Drilled by: Stratu	Drilled by: Stratus Corporation		
Date Started: 2/13/18	Coordinates: 43.43584° N	I -124.2417° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-	٥ • ^	Asphalt concrete PAVEMENT (6 in.) over crushed rock BASE COURSE (12 in.) SAND, brown, fine grained, contains organics	1.5		Run 1		Run 1 recovery 37 in.
5—		gray below 5.5 ft		0.5			
		contains wood debris below 8 ft wood debris absent below 9 ft			Run 2 CS-197-7		Run 2 recovery 43 in.
	- - 	6-inthick layer of clayey silt at 13 ft		0	Run 3		Run 3 recovery 60 in.
 15—		(2/13/2018) Depth to groundwater not measured due to caving,	15.0				
20-	-	Depth to groundwater not measured due to caving, observed to be at least 2 ft below existing grade					
-	-						
25	-						
	-						
40-						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/13/18	Coordinates: 43.43593° N	-124.24172° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			



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<b>DEPTH</b> , FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-	•0°	Asphalt concrete PAVEMENT (6 in.) over crushed rock BASE COURSE (15 in.) SAND, brown, fine grained 1-inthick layer of gravel at 3 ft	- 1.7		Run 1		⊈2.1 ft (2/13/2018) Run 1 recovery 35 in.
5  		gray below 8 ft		1.5	Run 2		Run 2 recovery 39 in.
10 		6-inthick layer of clayey silt at 13 ft		1.4	CS-198-9		Run 3 recovery 37 in.
 15—		(2/13/2018)	- 15.0	1.3			
20-							
 25—							
30-							
						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/13/18	Coordinates: 43.43585° N	-124.24187° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Asphalt concrete PAVEMENT (3 in.) SAND, brown, fine grained	0.3		Run 1		Run 1 recovery 26 in.
5— _				0.7	1		
_		gray below 7.5 ft dark gray at 9.5 ft			Run 2		Run 2 recovery 40 in.
10— —		uark gray at 9.5 it	10.0	1.2	DB-199-11		
_		Clayey SILT, gray to dark brown	12.0 13.5		Run 3		Run 3 recovery 34 in.
15—		(2/14/2018) Depth to groundwater not measured due to caving.	15.0	1			
_		Depth to groundwater not measured due to caving, observed to be at least 3 ft below existing grade					
20—							
_							
25— 							
 30—							
						)	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/14/18	Coordinates: 43.43507° N	-124.24255° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			





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ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18

DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		ר Portland cement CONCRETE (4 in.)	0.3		Run 1		Run 1 recovery 33 in.
5		dark brown below 4.5 ft gray below 6 ft		1.7			Heavy odor and moderate sheen between depths of 6 to 9.5 ft
  10—				13 1.2	Run 2 BP-200-8		Run 2 recovery 32 in.
-		6-inthick layer of silt with some clay to clayey and trace sand		0.9	Run 3 BP-200-13		Run 3 recovery 30 in.
15— — —		(2/14/2018) Depth to groundwater not measured due to caving, observed to be at least 3 ft below existing grade	15.0		-		
 20	-						
 25—							
-	-						
30— — —							
 35 -							
						)	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation			
Date Started: 2/14/18	Coordinates: 43.43549° N	-124.23949° W (WGS 84)			
Drilling Method: Direct Pu	Hammer Type: Not Used				
Equipment: Geoprob	Weight:				
Hole Diameter: 3 in.	Drop:				
Note: See Legend for Expla	Energy Ratio:				



JULY 2018



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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		SAND, brown, fine grainedcontains possible asbestos fibers at 2.5 ft			Run 1		Run 1 recovery 30 in. Sample not opened due to possible asbestos
5		(2/14/2018) Groundwater not encountered	5.0				
10— — —	-						
	-						
20-	-						
- 25- -	-						
EMPLATE.GDT 7/26/18	-						
ENVIRONMENTAL BORING GRI DATA TEMPLATE.GDT 7/26/18							
- ENVIRONMENTAL 					(	)	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Drilled by: Stratus Corporation		
Date Started: 2/14/18	Coordinates: 43.43533° N	-124.23967° W (WGS 84)		
Drilling Method: Direct Pu	Hammer Type: Not Used			
Equipment: Geoprob	Weight:			
Hole Diameter: 3 in.	Drop:			
Note: See Legend for Expla	Energy Ratio:			



JULY 2018



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DEPTH, FT	<b>GRAPHIC LOG</b>	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, brown, fine grained, contains organics, brick fragments, gravel, and scattered clay clods (Possible Fill)			Run 1		<sup>IZ</sup> 2.0 ft (2/14/2018) Run 1 recovery 23 in.
5— —		fragments absent below 5 ft		0	BP-202-4		Run 2 recovery 39 in.
 10		gray below 9 ft (2/14/2018)	10.0	0.5	BP-202-10		
-							
20—							
25							
35— 							
40						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Corporation
Date Started: 2/14/18	Coordinates: 43.43531° N	-124.23965° W (WGS 84)
Drilling Method: Direct Pu	Hammer Type: Not Used	
Equipment: Geoprob	e 7822DT	Weight:
Hole Diameter: 3 in.	Drop:	
Note: See Legend for Expla	Energy Ratio:	





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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
		Portland cement CONCRETE (10.5 in.) SAND, brown, fine grained, contains organics	- 0.8		Run 1		Run 1 recovery 34 in.
5		up to trace gravel below 6 ft gray below 7 ft		1.3	Run 2		Run 2 recovery 40 in.
		(2/14/2018) Depth to groundwater not measured due to caving, observed to be at least 4 ft below existing grade	- 10.0	0.2	FO-203-9	X	
	-						
 20—	-						
- - 25-	-						
	-						
	-						
35	-						

Logged By: N. Utevsky	Drilled by: Stratus	Corporation
Date Started: 2/14/18	Coordinates: 43.43616° N	-124.23934° W (WGS 84)
Drilling Method: Direct Pu	ush Probe	Hammer Type: Not Used
Equipment: Geoprob	e 7822DT	Weight:
Hole Diameter: 3 in.	Drop:	
Note: See Legend for Expla	Energy Ratio:	





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DEPTH, FT	GRAPHIC LOG	CLASSIFICATION OF MATERIAL Surface Elevation: Not Available	ELEVATION, FT DEPTH, FT	PID, PPM	SAMPLE NO. AND DEPTH, FT	INSTALLATION	COMMENTS AND ADDITIONAL TESTS
-		SAND, brown, fine grained, contains wood debris and organics			Run 1		Run 1 recovery 41 in. ⊻3.0 ft (2/14/2018)
5		organics and wood debris absent below 4.5 ft gray below 6 ft			Run 2		Run 2 recovery 42 in.
		(2/14/2018)	- 10.0	1.4		-	
20-							
-							
						0	1.0

Logged By: N. Utevsky	Drilled by: Stratus	Corporation
Date Started: 2/14/18	Coordinates: 43.43631° N	-124.24091° W (WGS 84)
Drilling Method: Direct Pu	ish Probe	Hammer Type: Not Used
Equipment: Geoprob	e 7822DT	Weight:
Hole Diameter: 3 in.	Drop:	
Note: See Legend for Expla	Energy Ratio:	





APPENDIX B Analytical Laboratory Reports



# ANALYTICAL REPORT

February 07, 2018



## **GRI** - Beaverton, OR

Sample Delivery Group: Samples Received: Project Number: Description:

L967603 02/03/2018 5764-1195 5764-1195

Report To:

Nora Utevsky 9750 SW Nimbus Avenue Beaverton, OR 97008

Entire Report Reviewed By: Buan Ford

Brian Ford Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

Document No: J1-680-RGL-GRI-00001-00 Revision: 1 12065 Lebanon Rd Mount Juliet. TN 37122 615-758-5858 800-767-5859

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Document No: J1-680-RGL-GRI-00001-00	Revision: 1
ACCOUNT:	PROJECT:
GRI - Beaverton, OR	5764-1195

SDG:

L967603

## SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

霥

BP-102-12 L967603-01 Solid			Collected by N. Utevsky	Collected date/time 01/29/18 16:43	Received date/time 02/03/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1070464	1	02/06/18 14:30	02/06/18 14:43	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1069747	1	01/29/18 16:43	02/06/18 23:04	LRL
/olatile Organic Compounds (GC/MS) by Method 8260B	WG1070279	1	01/29/18 16:43	02/06/18 14:19	BMB
olatile Organic Compounds (GC/MS) by Method 8260B	WG1070279	25	01/29/18 16:43	02/07/18 12:03	ACG
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1069926	20.8	02/05/18 08:38	02/05/18 16:02	ACM
emi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1069800	3	02/03/18 22:40	02/04/18 16:47	KM
			Collected by	Collected date/time	Received date/time
3P-102-W L967603-02 GW			N. Utevsky	01/30/18 10:02	02/03/18 08:45
Nethod	Batch	Dilution	Preparation	Analysis data/time	Analyst
/olatile Organic Compounds (GC) by Method NWTPHGX	WG1069970	1	date/time 02/04/18 22:36	date/time 02/04/18 22:36	BMB
/olatile Organic Compounds (GC/ by Method NWTPHGX /olatile Organic Compounds (GC/MS) by Method 8260B	WG1069970 WG1069715	1	02/04/18 22:36	02/04/18 22:36	DWR
/olatile Organic Compounds (GC/MS) by Method 8260B	WG1069715 WG1069715	1	02/04/18 03.22	02/04/18 03.22	LRL
Semi-Volatile Organic Compounds (GC/MS) by Method 82606	WG1069715 WG1069801	1	02/05/18 05:43	02/05/18 20:40	LRL
Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1069935	2	02/03/18 05:43	02/05/18 20:40	KM
	W01003333	Z	02/04/10 21.35	02/03/18 08.32	IZIVI
			Collected by	Collected date/time	Received date/time
FO-111-8 L967603-03 Solid			N. Utevsky	01/30/18 15:00	02/03/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Eatal Salida by Mathad 2E40 C 2011	WC1070464	1			KDW
otal Solids by Method 2540 G-2011	WG1070464	1	02/06/18 14:30	02/06/18 14:43	KDW
olatile Organic Compounds (GC) by Method NWTPHGX	WG1069747	1	01/30/18 15:00	02/05/18 20:17	DWR
/olatile Organic Compounds (GC/MS) by Method 8260B	WG1070279	25	01/30/18 15:00	02/06/18 13:58	BMB
/olatile Organic Compounds (GC/MS) by Method 8260B	WG1070279	2500	01/30/18 15:00	02/07/18 02:22	JHH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1069926	10	02/05/18 08:38	02/05/18 16:17	MTJ
emi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1069800	3	02/03/18 22:40	02/04/18 17:09	KM
			Collected by	Collected date/time	Received date/time
FO-111-W L967603-04 GW			N. Utevsky	01/31/18 09:20	02/03/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
(alatila Organic Compounds (CC) by Mathed NWTDUCY	WIC1060070	1			BMB
/olatile Organic Compounds (GC) by Method NWTPHGX	WG1069970	1	02/04/18 23:00	02/04/18 23:00	
/olatile Organic Compounds (GC/MS) by Method 8260B	WG1069715	1	02/04/18 03:41	02/04/18 03:41	DWR
/olatile Organic Compounds (GC/MS) by Method 8260B	WG1069715	1	02/06/18 21:42	02/06/18 21:42	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1069801	1	02/05/18 05:43 02/04/18 21:39	02/05/18 20:56	LM KM
emi volatile Organic Compounds (GC/MS) by Method 82700-SIM	WG1069935	1	02/04/18 21:39	02/05/18 03:45	KIVI
			Collected by	Collected date/time	Received date/time
BP-119-W L967603-05 GW			N. Utevsky	01/31/18 15:30	02/03/18 08:45
Aethod	Batch	Dilution	Preparation	Analysis	Analyst
(alatile Organic Compounds (CC) by Mathed NWTD (CV)	WC10C0070	4	date/time	date/time	
/olatile Organic Compounds (GC) by Method NWTPHGX	WG1069970	1	02/04/18 23:23	02/04/18 23:23	BMB
/olatile Organic Compounds (GC/MS) by Method 8260B	WG1069715	1	02/04/18 04:00	02/04/18 04:00	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1069715	1	02/06/18 22:02	02/06/18 22:02	LRL
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1069801	1	02/05/18 05:43	02/05/18 21:12	LM
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1069935	5	02/04/18 21:39	02/05/18 09:37	KM

Document No: J1-680-RGL-GRI-00001-00	Revision:	1	Reissued for	Use
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
GRI - Beaverton, OR	5764-1195	L967603	02/07/18 17:58	3 of 52

## SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

			Collected by N. Utevsky	Collected date/time 01/31/18 15:55	Received date/time 02/03/18 08:45
BP-119-8 L967603-06 Solid	N. ULEVSKY	01/31/16 15.55	02/03/16 06.45		
Method	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
Total Solids by Method 2540 G-2011	WG1070464	1	02/06/18 14:30	02/06/18 14:43	KDW
Volatile Organic Compounds (GC) by Method NWTPHGX	WG1069747	100	01/31/18 15:55	02/05/18 20:39	DWR
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1069771	100	01/31/18 15:55	02/03/18 23:18	JHH
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1069926	200	02/05/18 08:38	02/05/18 17:01	MTJ
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1069800	100	02/03/18 22:40	02/06/18 04:14	DMG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1069800	60	02/03/18 22:40	02/04/18 17:31	KM

³S	S
<sup>4</sup> C	'n
⁵S	r
<sup>6</sup> C	)c
<sup>7</sup> G	il
<sup>8</sup> A	l
°S	С

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SDG: L967603 Reissued for Use DATE/TIME: 02/07/18 17:58

## 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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

Brian Ford Technical Service Representative

<sup>1</sup> Cp <sup>2</sup> Tc <sup>3</sup> Ss <sup>4</sup> Cn <sup>5</sup> Sr <sup>6</sup> Qc <sup>7</sup> GI <sup>8</sup> AI	
<sup>3</sup> Ss <sup>4</sup> Cn <sup>5</sup> Sr <sup>6</sup> Qc <sup>7</sup> Gl	
<sup>4</sup> Cn <sup>5</sup> Sr <sup>6</sup> Qc <sup>7</sup> Gl	<sup>2</sup> Tc
<sup>5</sup> Sr <sup>6</sup> Qc <sup>7</sup> Gl	<sup>3</sup> Ss
<sup>6</sup> Qc <sup>7</sup> Gl	<sup>4</sup> Cn
<sup>7</sup> Gl	
8	<sup>6</sup> Qc
<sup>8</sup> Al	<sup>7</sup> Gl
	<sup>8</sup> Al
<sup>9</sup> Sc	<sup>9</sup> Sc

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#### SAMPLE RESULTS - 01 L967603

ONE LAB. NATIONWIDE.

#### Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch	
Analyte	%			date / time		2
Total Solids	80.3		1	02/06/2018 14:43	WG1070464	ŤΤ

## Volatile Organic Compounds (GC) by Method NWTPHGX

	Result	Qualifier	Dilution	Analysis	Batch			
Analyte	%			date / time				
Total Solids	80.3		1	02/06/2018 14:43	WG10704	464		
Volatile Organic Comp	ounds (GC)	by Method	NWTPH	HGX				
	Result (dry)	Qualifier	MDL (c	lry) RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Gasoline Range Organics-NWTPH	0.803		0.0422	0.125	1	02/06/2018 23:04	WG1069747	
(S) a,a,a-Trifluorotoluene(FID)	97.2			77.0-120		02/06/2018 23:04	WG1069747	
Volatile Organic Comp	ounds (GC/	MS) by Met	hod 826	60B				

## Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	<sup>6</sup> Qc
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Acetone	U		0.0125	0.0623	1	02/06/2018 14:19	WG1070279	<sup>7</sup> Gl
Acrylonitrile	U		0.00223	0.0125	1	02/06/2018 14:19	WG1070279	OI
Benzene	0.000374	J	0.000336	0.00125	1	02/06/2018 14:19	WG1070279	8
Bromobenzene	U		0.000354	0.00125	1	02/06/2018 14:19	WG1070279	ĬAĬ
Bromodichloromethane	U		0.000316	0.00125	1	02/06/2018 14:19	WG1070279	
Bromoform	U		0.000528	0.00125	1	02/06/2018 14:19	WG1070279	°Sc
Bromomethane	U		0.00167	0.00623	1	02/06/2018 14:19	WG1070279	50
n-Butylbenzene	U		0.000321	0.00125	1	02/06/2018 14:19	WG1070279	
sec-Butylbenzene	U		0.000250	0.00125	1	02/06/2018 14:19	WG1070279	
tert-Butylbenzene	U		0.000257	0.00125	1	02/06/2018 14:19	WG1070279	
Carbon tetrachloride	U		0.000409	0.00125	1	02/06/2018 14:19	WG1070279	
Chlorobenzene	U		0.000264	0.00125	1	02/06/2018 14:19	WG1070279	
Chlorodibromomethane	U		0.000465	0.00125	1	02/06/2018 14:19	WG1070279	
Chloroethane	U		0.00118	0.00623	1	02/06/2018 14:19	WG1070279	
Chloroform	U		0.000285	0.00623	1	02/06/2018 14:19	WG1070279	
Chloromethane	U		0.000467	0.00311	1	02/06/2018 14:19	WG1070279	
2-Chlorotoluene	U		0.000375	0.00125	1	02/06/2018 14:19	WG1070279	
4-Chlorotoluene	U		0.000299	0.00125	1	02/06/2018 14:19	WG1070279	
1,2-Dibromo-3-Chloropropane	U		0.00131	0.00623	1	02/06/2018 14:19	WG1070279	
1,2-Dibromoethane	U		0.000427	0.00125	1	02/06/2018 14:19	WG1070279	
Dibromomethane	U		0.000476	0.00125	1	02/06/2018 14:19	WG1070279	
1,2-Dichlorobenzene	U		0.000380	0.00125	1	02/06/2018 14:19	WG1070279	
1,3-Dichlorobenzene	U		0.000298	0.00125	1	02/06/2018 14:19	WG1070279	
1,4-Dichlorobenzene	U		0.000281	0.00125	1	02/06/2018 14:19	WG1070279	
Dichlorodifluoromethane	U		0.000888	0.00623	1	02/06/2018 14:19	WG1070279	
1,1-Dichloroethane	U		0.000248	0.00125	1	02/06/2018 14:19	WG1070279	
1,2-Dichloroethane	U		0.000330	0.00125	1	02/06/2018 14:19	WG1070279	
1,1-Dichloroethene	U		0.000377	0.00125	1	02/06/2018 14:19	WG1070279	
cis-1,2-Dichloroethene	U		0.000293	0.00125	1	02/06/2018 14:19	WG1070279	
trans-1,2-Dichloroethene	U		0.000329	0.00125	1	02/06/2018 14:19	WG1070279	
1,2-Dichloropropane	U		0.000446	0.00125	1	02/06/2018 14:19	WG1070279	
1,1-Dichloropropene	U		0.000395	0.00125	1	02/06/2018 14:19	WG1070279	
1,3-Dichloropropane	U		0.000258	0.00125	1	02/06/2018 14:19	WG1070279	
cis-1,3-Dichloropropene	U		0.000326	0.00125	1	02/06/2018 14:19	WG1070279	
trans-1,3-Dichloropropene	U		0.000333	0.00125	1	02/06/2018 14:19	WG1070279	
2,2-Dichloropropane	U		0.000347	0.00125	1	02/06/2018 14:19	WG1070279	
Di-isopropyl ether	U		0.000309	0.00125	1	02/06/2018 14:19	WG1070279	
Ethylbenzene	U		0.000370	0.00125	1	02/06/2018 14:19	WG1070279	
Hexachloro-1,3-butadiene	U		0.000426	0.00125	1	02/06/2018 14:19	WG1070279	
Isopropylbenzene	U		0.000303	0.00125	1	02/06/2018 14:19	WG1070279	
p-lsopropyltoluene	U		0.000254	0.00125	1	02/06/2018 14:19	WG1070279	
2-Butanone (MEK)	U		0.00583	0.0125	1	02/06/2018 14:19	WG1070279	
Methylene Chloride	U		0.00125	0.00623	1	02/06/2018 14:19	WG1070279	
4-Methyl-2-pentanone (MIBK)	U		0.00234	0.0125	1	02/06/2018 14:19	WG1070279	
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## SAMPLE RESULTS - 01

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### Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Methyl tert-butyl ether	U		0.000264	0.00125	1	02/06/2018 14:19	WG1070279	
Naphthalene	0.0636	J	0.0311	0.156	25	02/07/2018 12:03	WG1070279	
n-Propylbenzene	U		0.000257	0.00125	1	02/06/2018 14:19	WG1070279	
Styrene	U		0.000291	0.00125	1	02/06/2018 14:19	WG1070279	
1,1,1,2-Tetrachloroethane	U		0.000329	0.00125	1	02/06/2018 14:19	WG1070279	
1,1,2,2-Tetrachloroethane	U		0.000455	0.00125	1	02/06/2018 14:19	WG1070279	
1,1,2-Trichlorotrifluoroethane	U		0.000455	0.00125	1	02/06/2018 14:19	WG1070279	
Tetrachloroethene	U		0.000344	0.00125	1	02/06/2018 14:19	WG1070279	
Toluene	U		0.000541	0.00623	1	02/06/2018 14:19	WG1070279	
1,2,3-Trichlorobenzene	U		0.000381	0.00125	1	02/06/2018 14:19	WG1070279	
1,2,4-Trichlorobenzene	U		0.000483	0.00125	1	02/06/2018 14:19	WG1070279	
1,1,1-Trichloroethane	U		0.000356	0.00125	1	02/06/2018 14:19	WG1070279	
1,1,2-Trichloroethane	U		0.000345	0.00125	1	02/06/2018 14:19	WG1070279	
Trichloroethene	U		0.000347	0.00125	1	02/06/2018 14:19	WG1070279	
Trichlorofluoromethane	U		0.000476	0.00623	1	02/06/2018 14:19	WG1070279	
1,2,3-Trichloropropane	U		0.000923	0.00311	1	02/06/2018 14:19	WG1070279	
1,2,4-Trimethylbenzene	0.000299	J	0.000263	0.00125	1	02/06/2018 14:19	WG1070279	
1,2,3-Trimethylbenzene	U		0.000357	0.00125	1	02/06/2018 14:19	WG1070279	
1,3,5-Trimethylbenzene	0.000368	J	0.000331	0.00125	1	02/06/2018 14:19	WG1070279	
Vinyl chloride	U		0.000362	0.00125	1	02/06/2018 14:19	WG1070279	
Xylenes, Total	U		0.000869	0.00374	1	02/06/2018 14:19	WG1070279	
(S) Toluene-d8	87.4			80.0-120		02/06/2018 14:19	WG1070279	
(S) Toluene-d8	42.2	<u>J2</u>		80.0-120		02/07/2018 12:03	WG1070279	
(S) Dibromofluoromethane	95.6			74.0-131		02/07/2018 12:03	WG1070279	
(S) Dibromofluoromethane	117			74.0-131		02/06/2018 14:19	WG1070279	
(S) 4-Bromofluorobenzene	130			64.0-132		02/06/2018 14:19	WG1070279	
(S) 4-Bromofluorobenzene	102			64.0-132		02/07/2018 12:03	WG1070279	

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	697	<u>J3</u>	34.1	104	20.8	02/05/2018 16:02	WG1069926
Residual Range Organics (RRO)	757	<u>J3</u>	85.4	259	20.8	02/05/2018 16:02	WG1069926
(S) o-Terphenyl	89.0			18.0-148		02/05/2018 16:02	WG1069926

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

GRI - Beaverton, OR

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	0.0739		0.00224	0.0224	3	02/04/2018 16:47	WG1069800	
Acenaphthene	0.0915		0.00224	0.0224	3	02/04/2018 16:47	WG1069800	
Acenaphthylene	U		0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Benzo(a)anthracene	0.00733	J	0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Benzo(a)pyrene	0.00403	J	0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Benzo(b)fluoranthene	U		0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Benzo(g,h,i)perylene	0.00421	J	0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Benzo(k)fluoranthene	U		0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Chrysene	0.00691	J	0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Dibenz(a,h)anthracene	U		0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Fluoranthene	0.0217	J	0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Fluorene	0.0308		0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Indeno(1,2,3-cd)pyrene	U		0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Naphthalene	0.165		0.00747	0.0747	3	02/04/2018 16:47	<u>WG1069800</u>	
Phenanthrene	0.139		0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
Pyrene	0.0641		0.00224	0.0224	3	02/04/2018 16:47	<u>WG1069800</u>	
1-Methylnaphthalene	0.321		0.00747	0.0747	3	02/04/2018 16:47	WG1069800	
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## SAMPLE RESULTS - 01

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		L
2-Methylnaphthalene	0.409		0.00747	0.0747	3	02/04/2018 16:47	WG1069800	2.
2-Chloronaphthalene	U		0.00747	0.0747	3	02/04/2018 16:47	WG1069800	
(S) Nitrobenzene-d5	63.5			14.0-149		02/04/2018 16:47	WG1069800	3
(S) 2-Fluorobiphenyl	70.1			34.0-125		02/04/2018 16:47	WG1069800	5
(S) p-Terphenyl-d14	60.1			23.0-120		02/04/2018 16:47	WG1069800	
								4

#### Sample Narrative:

L967603-01 WG1069800: Dilution due to sample volume

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#### SAMPLE RESULTS - 02 L967603



## Volatile Organic Compounds (GC) by Method NWTPHGX

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
e Range s-NWTPH	U		31.6	100	1	02/04/2018 22:36	WG1069970
ifluorotoluene(FID)	102			77.0-122		02/04/2018 22:36	<u>WG1069970</u>

## Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	L
Analyte	ug/l		ug/l	ug/l		date / time		5
Acetone	U		10.0	50.0	1	02/04/2018 03:22	WG1069715	5
Acrolein	U	<u>J4</u>	8.87	50.0	1	02/04/2018 03:22	WG1069715	
Acrylonitrile	U		1.87	10.0	1	02/04/2018 03:22	WG1069715	6
Benzene	U		0.331	1.00	1	02/04/2018 03:22	WG1069715	
Bromobenzene	U		0.352	1.00	1	02/04/2018 03:22	WG1069715	7
Bromodichloromethane	U		0.380	1.00	1	02/04/2018 03:22	WG1069715	/
Bromoform	U		0.469	1.00	1	02/04/2018 03:22	WG1069715	
Bromomethane	U	<u>J3</u>	0.866	5.00	1	02/04/2018 03:22	WG1069715	8
-Butylbenzene	U	_	0.361	1.00	1	02/04/2018 03:22	WG1069715	
ec-Butylbenzene	U		0.365	1.00	1	02/04/2018 03:22	WG1069715	9
ert-Butylbenzene	U		0.399	1.00	1	02/04/2018 03:22	WG1069715	
Carbon tetrachloride	U		0.379	1.00	1	02/04/2018 03:22	WG1069715	L
Chlorobenzene	U		0.348	1.00	1	02/04/2018 03:22	WG1069715	
Chlorodibromomethane	U		0.327	1.00	1	02/04/2018 03:22	WG1069715	
Chloroethane	U	<u>J3</u>	0.453	5.00	1	02/04/2018 03:22	WG1069715	
Chloroform	U	<u></u>	0.324	5.00	1	02/04/2018 03:22	WG1069715	
Chloromethane	U	<u>J3 J4</u>	0.276	2.50	1	02/04/2018 03:22	WG1069715	
-Chlorotoluene	U	<u> </u>	0.276	1.00	1	02/04/2018 03:22	WG1069715	
-Chlorotoluene	U		0.351	1.00	1	02/04/2018 03:22	WG1069715	
2-Dibromo-3-Chloropropane	U		1.33	5.00	1	02/04/2018 03:22	WG1069715	
	U		0.381	1.00	1	02/04/2018 03:22	WG1069715	
2-Dibromoethane	U		0.346	1.00	1	02/04/2018 03:22		
ibromomethane							WG1069715	
2-Dichlorobenzene	U		0.349	1.00	1	02/04/2018 03:22	WG1069715	
3-Dichlorobenzene			0.220	1.00	1	02/04/2018 03:22	WG1069715	
4-Dichlorobenzene	U		0.274	1.00	1	02/04/2018 03:22	WG1069715	
ichlorodifluoromethane	U		0.551	5.00	1	02/06/2018 21:22	WG1069715	
1-Dichloroethane	U		0.259	1.00	1	02/04/2018 03:22	WG1069715	
2-Dichloroethane	U	10	0.361	1.00	1	02/04/2018 03:22	WG1069715	
1-Dichloroethene	U	<u>J3</u>	0.398	1.00	1	02/04/2018 03:22	WG1069715	
is-1,2-Dichloroethene	U		0.260	1.00	1	02/04/2018 03:22	WG1069715	
ans-1,2-Dichloroethene	U		0.396	1.00	1	02/04/2018 03:22	WG1069715	
2-Dichloropropane	U		0.306	1.00	1	02/04/2018 03:22	WG1069715	
1-Dichloropropene	U		0.352	1.00	1	02/04/2018 03:22	WG1069715	
3-Dichloropropane	U		0.366	1.00	1	02/04/2018 03:22	WG1069715	
s-1,3-Dichloropropene	U		0.418	1.00	1	02/04/2018 03:22	<u>WG1069715</u>	
ans-1,3-Dichloropropene	U		0.419	1.00	1	02/04/2018 03:22	WG1069715	
,2-Dichloropropane	U	<u>J3</u>	0.321	1.00	1	02/04/2018 03:22	WG1069715	
i-isopropyl ether	U		0.320	1.00	1	02/04/2018 03:22	WG1069715	
thylbenzene	U		0.384	1.00	1	02/04/2018 03:22	WG1069715	
exachloro-1,3-butadiene	U		0.256	1.00	1	02/04/2018 03:22	WG1069715	
opropylbenzene	U		0.326	1.00	1	02/04/2018 03:22	WG1069715	
-Isopropyltoluene	U		0.350	1.00	1	02/04/2018 03:22	WG1069715	
-Butanone (MEK)	U		3.93	10.0	1	02/04/2018 03:22	WG1069715	
lethylene Chloride	U		1.00	5.00	1	02/04/2018 03:22	WG1069715	
-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	02/04/2018 03:22	WG1069715	
lethyl tert-butyl ether	U		0.367	1.00	1	02/04/2018 03:22	WG1069715	
laphthalene	U		1.00	5.00	1	02/04/2018 03:22	WG1069715	
-Propylbenzene	U		0.349	1.00	1	02/04/2018 03:22	WG1069715	
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## SAMPLE RESULTS - 02



#### Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	i (
Analyte	ug/l		ug/l	ug/l		date / time		
Styrene	U		0.307	1.00	1	02/04/2018 03:22	WG1069715	2
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	02/04/2018 03:22	WG1069715	
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	02/04/2018 03:22	WG1069715	3
1,1,2-Trichlorotrifluoroethane	U	<u>J3</u>	0.303	1.00	1	02/04/2018 03:22	WG1069715	5
Tetrachloroethene	U		0.372	1.00	1	02/04/2018 03:22	WG1069715	
Toluene	U		0.412	1.00	1	02/04/2018 03:22	WG1069715	4
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/04/2018 03:22	WG1069715	
1,2,4-Trichlorobenzene	U		0.355	1.00	1	02/04/2018 03:22	WG1069715	5
1,1,1-Trichloroethane	U		0.319	1.00	1	02/04/2018 03:22	WG1069715	5
1,1,2-Trichloroethane	U		0.383	1.00	1	02/04/2018 03:22	WG1069715	
Trichloroethene	U		0.398	1.00	1	02/04/2018 03:22	WG1069715	6
Trichlorofluoromethane	U	<u>J3</u>	1.20	5.00	1	02/04/2018 03:22	WG1069715	
1,2,3-Trichloropropane	U		0.807	2.50	1	02/04/2018 03:22	WG1069715	7
1,2,4-Trimethylbenzene	U		0.373	1.00	1	02/04/2018 03:22	WG1069715	,
1,2,3-Trimethylbenzene	U		0.321	1.00	1	02/04/2018 03:22	WG1069715	
1,3,5-Trimethylbenzene	U		0.387	1.00	1	02/04/2018 03:22	WG1069715	8
Vinyl chloride	U	<u>J3 J4</u>	0.259	1.00	1	02/04/2018 03:22	WG1069715	
Xylenes, Total	U		1.06	3.00	1	02/04/2018 03:22	WG1069715	9
(S) Toluene-d8	99.0			80.0-120		02/06/2018 21:22	WG1069715	5
(S) Toluene-d8	102			80.0-120		02/04/2018 03:22	WG1069715	
(S) Dibromofluoromethane	88.1			76.0-123		02/04/2018 03:22	WG1069715	
(S) Dibromofluoromethane	93.1			76.0-123		02/06/2018 21:22	WG1069715	
(S) 4-Bromofluorobenzene	98.1			80.0-120		02/04/2018 03:22	WG1069715	
(S) 4-Bromofluorobenzene	106			80.0-120		02/06/2018 21:22	WG1069715	

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	42.8	J	33.0	100	1	02/05/2018 20:40	<u>WG1069801</u>
Residual Range Organics (RRO)	U		82.5	250	1	02/05/2018 20:40	WG1069801
(S) o-Terphenyl	86.1			31.0-160		02/05/2018 20:40	WG1069801

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Anthracene	U		0.0280	0.100	2	02/05/2018 08:32	WG1069935	
Acenaphthene	U		0.0200	0.100	2	02/05/2018 08:32	WG1069935	
Acenaphthylene	U		0.0240	0.100	2	02/05/2018 08:32	WG1069935	
Benzo(a)anthracene	U		0.00820	0.100	2	02/05/2018 08:32	WG1069935	
Benzo(a)pyrene	U		0.0232	0.100	2	02/05/2018 08:32	WG1069935	
Benzo(b)fluoranthene	0.00680	<u>B J</u>	0.00424	0.100	2	02/05/2018 08:32	WG1069935	
Benzo(g,h,i)perylene	0.00662	<u>B J</u>	0.00454	0.100	2	02/05/2018 08:32	WG1069935	
Benzo(k)fluoranthene	U		0.0272	0.100	2	02/05/2018 08:32	WG1069935	
Chrysene	U		0.0216	0.100	2	02/05/2018 08:32	WG1069935	
Dibenz(a,h)anthracene	U		0.00792	0.100	2	02/05/2018 08:32	WG1069935	
Fluoranthene	U		0.0314	0.100	2	02/05/2018 08:32	WG1069935	
Fluorene	U		0.0170	0.100	2	02/05/2018 08:32	WG1069935	
Indeno(1,2,3-cd)pyrene	U		0.0296	0.100	2	02/05/2018 08:32	WG1069935	
Naphthalene	0.0978	<u>BJ</u>	0.0396	0.500	2	02/05/2018 08:32	WG1069935	
Phenanthrene	U		0.0164	0.100	2	02/05/2018 08:32	WG1069935	
Pyrene	U		0.0234	0.100	2	02/05/2018 08:32	WG1069935	
1-Methylnaphthalene	U		0.0164	0.500	2	02/05/2018 08:32	WG1069935	
2-Methylnaphthalene	U		0.0180	0.500	2	02/05/2018 08:32	WG1069935	
2-Chloronaphthalene	U		0.0129	0.500	2	02/05/2018 08:32	WG1069935	
(S) Nitrobenzene-d5	82.0			31.0-160		02/05/2018 08:32	WG1069935	
Docume	ent No: 11-680-	RGI-GRI-0000	1-00	Rev	ision: 1			Reissued for Use

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BP-102-W		
Collected date/time:	01/30/18	10:02

## SAMPLE RESULTS - 02

ONE LAB. NATIONWIDE.

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	 <sup>1</sup> Cp
Analyte	ug/l		ug/l	ug/l		date / time		
(S) 2-Fluorobiphenyl	102			48.0-148		02/05/2018 08:32	WG1069935	<sup>2</sup> Tc
(S) p-Terphenyl-d14	73.4			37.0-146		02/05/2018 08:32	WG1069935	

#### Sample Narrative:

L967603-02 WG1069935: Dilution due to matrix impact during extraction procedure

<sup>2</sup> Tc
<sup>3</sup> Ss
<sup>4</sup> Cn
⁵Sr
<sup>6</sup> Qc
<sup>7</sup> Gl
<sup>°</sup> Gl

Docume	nt No: J1-680-RGL-GRI-00001-00
AC	COUNT:
GRI - Be	eaverton, OR

#### SAMPLE RESULTS - 03 L967603

ONE LAB. NATIONWIDE.

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#### Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch	
Analyte	%			date / time		2
Total Solids	81.8		1	02/06/2018 14:43	WG1070464	ŤΤ

## Volatile Organic Compounds (GC) by Method NWTPHGX

	Result	Qualifier	Dilution	Analysis	Batch		
Analyte	%			date / time			
Total Solids	81.8		1	02/06/2018 14:43	WG1070	464	
Volatile Organic Comp	ounds (GC)	by Method	NWTP	IGX			
	Result (dry)	Qualifier	MDL (	ry) RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Gasoline Range Organics-NWTPH	1.66		0.0414	0.122	1	02/05/2018 20:17	WG1069747
(S) a,a,a-Trifluorotoluene(FID)	94.2			77.0-120		02/05/2018 20:17	WG1069747
Volatile Organic Comp	ounds (GC/	'MS) by Met	hod 82	60B			

## Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	<sup>6</sup> Qc
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Acetone	U		0.306	1.53	25	02/06/2018 13:58	WG1070279	<sup>7</sup> Gl
Acrylonitrile	U		0.0548	0.306	25	02/06/2018 13:58	WG1070279	U
Benzene	U		0.00825	0.0306	25	02/06/2018 13:58	WG1070279	8
Bromobenzene	U		0.00868	0.0306	25	02/06/2018 13:58	WG1070279	Ă
Bromodichloromethane	U		0.00776	0.0306	25	02/06/2018 13:58	WG1070279	
Bromoform	U		0.0130	0.0306	25	02/06/2018 13:58	WG1070279	°Sc
Bromomethane	U		0.0410	0.153	25	02/06/2018 13:58	WG1070279	50
n-Butylbenzene	U		0.00789	0.0306	25	02/06/2018 13:58	WG1070279	
sec-Butylbenzene	0.0797		0.00614	0.0306	25	02/06/2018 13:58	WG1070279	
tert-Butylbenzene	U		0.00630	0.0306	25	02/06/2018 13:58	WG1070279	
Carbon tetrachloride	U		0.0100	0.0306	25	02/06/2018 13:58	WG1070279	
Chlorobenzene	U		0.00648	0.0306	25	02/06/2018 13:58	WG1070279	
Chlorodibromomethane	U		0.0114	0.0306	25	02/06/2018 13:58	WG1070279	
Chloroethane	U		0.0289	0.153	25	02/06/2018 13:58	WG1070279	
Chloroform	U		0.00699	0.153	25	02/06/2018 13:58	WG1070279	
Chloromethane	U		0.0115	0.0764	25	02/06/2018 13:58	WG1070279	
2-Chlorotoluene	U		0.00919	0.0306	25	02/06/2018 13:58	WG1070279	
4-Chlorotoluene	U		0.00734	0.0306	25	02/06/2018 13:58	WG1070279	
1,2-Dibromo-3-Chloropropane	U		0.0320	0.153	25	02/06/2018 13:58	WG1070279	
1,2-Dibromoethane	U		0.0105	0.0306	25	02/06/2018 13:58	WG1070279	
Dibromomethane	U		0.0117	0.0306	25	02/06/2018 13:58	WG1070279	
1,2-Dichlorobenzene	U		0.00932	0.0306	25	02/06/2018 13:58	WG1070279	
1,3-Dichlorobenzene	U		0.00731	0.0306	25	02/06/2018 13:58	WG1070279	
1,4-Dichlorobenzene	U		0.00691	0.0306	25	02/06/2018 13:58	WG1070279	
Dichlorodifluoromethane	U		0.0218	0.153	25	02/06/2018 13:58	WG1070279	
1,1-Dichloroethane	U		0.00609	0.0306	25	02/06/2018 13:58	WG1070279	
1,2-Dichloroethane	U		0.00809	0.0306	25	02/06/2018 13:58	WG1070279	
1,1-Dichloroethene	U		0.00927	0.0306	25	02/06/2018 13:58	WG1070279	
cis-1,2-Dichloroethene	U		0.00719	0.0306	25	02/06/2018 13:58	WG1070279	
trans-1,2-Dichloroethene	U		0.00807	0.0306	25	02/06/2018 13:58	WG1070279	
1,2-Dichloropropane	U		0.0109	0.0306	25	02/06/2018 13:58	WG1070279	
1,1-Dichloropropene	U		0.00968	0.0306	25	02/06/2018 13:58	WG1070279	
1,3-Dichloropropane	U		0.00633	0.0306	25	02/06/2018 13:58	WG1070279	
cis-1,3-Dichloropropene	U		0.00801	0.0306	25	02/06/2018 13:58	WG1070279	
trans-1,3-Dichloropropene	U		0.00817	0.0306	25	02/06/2018 13:58	WG1070279	
2,2-Dichloropropane	U		0.00853	0.0306	25	02/06/2018 13:58	WG1070279	
Di-isopropyl ether	U		0.00758	0.0306	25	02/06/2018 13:58	WG1070279	
Ethylbenzene	0.0158	J	0.00907	0.0306	25	02/06/2018 13:58	WG1070279	
Hexachloro-1,3-butadiene	U		0.0105	0.0306	25	02/06/2018 13:58	WG1070279	
Isopropylbenzene	0.0297	J	0.00743	0.0306	25	02/06/2018 13:58	WG1070279	
p-lsopropyltoluene	0.0133	J	0.00624	0.0306	25	02/06/2018 13:58	WG1070279	
2-Butanone (MEK)	U		0.143	0.306	25	02/06/2018 13:58	WG1070279	
Methylene Chloride	U		0.0306	0.153	25	02/06/2018 13:58	WG1070279	
4-Methyl-2-pentanone (MIBK)	U		0.0575	0.306	25	02/06/2018 13:58	WG1070279	
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## SAMPLE RESULTS - 03

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## Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Methyl tert-butyl ether	U		0.00648	0.0306	25	02/06/2018 13:58	WG1070279	
Naphthalene	46.8		3.06	15.3	2500	02/07/2018 02:22	WG1070279	
n-Propylbenzene	0.00794	J	0.00630	0.0306	25	02/06/2018 13:58	WG1070279	
Styrene	U		0.00715	0.0306	25	02/06/2018 13:58	WG1070279	
1,1,1,2-Tetrachloroethane	U		0.00807	0.0306	25	02/06/2018 13:58	WG1070279	
1,1,2,2-Tetrachloroethane	U		0.0112	0.0306	25	02/06/2018 13:58	WG1070279	
1,1,2-Trichlorotrifluoroethane	U		0.0112	0.0306	25	02/06/2018 13:58	WG1070279	
Tetrachloroethene	U		0.00844	0.0306	25	02/06/2018 13:58	WG1070279	
Toluene	U		0.0132	0.153	25	02/06/2018 13:58	WG1070279	
1,2,3-Trichlorobenzene	U		0.00935	0.0306	25	02/06/2018 13:58	WG1070279	
1,2,4-Trichlorobenzene	U		0.0119	0.0306	25	02/06/2018 13:58	WG1070279	
1,1,1-Trichloroethane	U		0.00874	0.0306	25	02/06/2018 13:58	WG1070279	
1,1,2-Trichloroethane	U		0.00846	0.0306	25	02/06/2018 13:58	WG1070279	
Trichloroethene	U		0.00853	0.0306	25	02/06/2018 13:58	WG1070279	
Trichlorofluoromethane	U		0.0117	0.153	25	02/06/2018 13:58	WG1070279	
1,2,3-Trichloropropane	U		0.0226	0.0764	25	02/06/2018 13:58	WG1070279	
1,2,4-Trimethylbenzene	0.0546		0.00646	0.0306	25	02/06/2018 13:58	WG1070279	
1,2,3-Trimethylbenzene	0.0263	J	0.00878	0.0306	25	02/06/2018 13:58	WG1070279	
1,3,5-Trimethylbenzene	0.0261	J	0.00813	0.0306	25	02/06/2018 13:58	WG1070279	
Vinyl chloride	U		0.00890	0.0306	25	02/06/2018 13:58	WG1070279	
Xylenes, Total	0.0325	J	0.0213	0.0917	25	02/06/2018 13:58	WG1070279	
(S) Toluene-d8	101			80.0-120		02/07/2018 02:22	WG1070279	
(S) Toluene-d8	73.0	<u>J2</u>		80.0-120		02/06/2018 13:58	WG1070279	
(S) Dibromofluoromethane	100			74.0-131		02/06/2018 13:58	WG1070279	
(S) Dibromofluoromethane	102			74.0-131		02/07/2018 02:22	WG1070279	
(S) 4-Bromofluorobenzene	103			64.0-132		02/07/2018 02:22	WG1070279	
(S) 4-Bromofluorobenzene	100			64.0-132		02/06/2018 13:58	WG1070279	

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	375	<u>J3</u>	16.1	48.9	10	02/05/2018 16:17	WG1069926
Residual Range Organics (RRO)	477	<u>J3</u>	40.3	122	10	02/05/2018 16:17	WG1069926
(S) o-Terphenyl	93.6			18.0-148		02/05/2018 16:17	WG1069926

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

GRI - Beaverton, OR

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	0.173		0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Acenaphthene	0.267		0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Acenaphthylene	U		0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Benzo(a)anthracene	0.0626		0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Benzo(a)pyrene	0.0234		0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Benzo(b)fluoranthene	0.0275		0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Benzo(g,h,i)perylene	0.00965	J	0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Benzo(k)fluoranthene	0.00710	J	0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Chrysene	0.0914		0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Dibenz(a,h)anthracene	0.00453	J	0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Fluoranthene	0.222		0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Fluorene	0.188		0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Indeno(1,2,3-cd)pyrene	0.00405	J	0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Naphthalene	0.372		0.00734	0.0734	3	02/04/2018 17:09	WG1069800	
Phenanthrene	0.455		0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
Pyrene	0.287		0.00220	0.0220	3	02/04/2018 17:09	WG1069800	
1-Methylnaphthalene	0.0774		0.00734	0.0734	3	02/04/2018 17:09	WG1069800	
Document No: J1-680-RGL-GRI-00001-00		00001-00	F	Revision: 1			Reissued for U	se
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## SAMPLE RESULTS - 03 L967603

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		L
2-Methylnaphthalene	0.121		0.00734	0.0734	3	02/04/2018 17:09	WG1069800	:
2-Chloronaphthalene	U		0.00734	0.0734	3	02/04/2018 17:09	WG1069800	
(S) Nitrobenzene-d5	83.7			14.0-149		02/04/2018 17:09	WG1069800	5
(S) 2-Fluorobiphenyl	76.2			34.0-125		02/04/2018 17:09	WG1069800	
(S) p-Terphenyl-d14	72.7			23.0-120		02/04/2018 17:09	WG1069800	L
( <i>S) μ- τειμπει</i> ΙΥΙ-014	12.1			23.0-120		02/04/2018 17.09	<u>w01003800</u>	

#### Sample Narrative:

L967603-03 WG1069800: Dilution due to sample volume

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#### SAMPLE RESULTS - 04 L967603



## Volatile Organic Compounds (GC) by Method NWTPHGX

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
9	ug/l		ug/l	ug/l		date / time	
ie Range cs-NWTPH	U		31.6	100	1	02/04/2018 23:00	<u>WG1069970</u>
rifluorotoluene(FID)	101			77.0-122		02/04/2018 23:00	WG1069970

## Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		5
Acetone	U		10.0	50.0	1	02/04/2018 03:41	WG1069715	ິS၊
Acrolein	U	<u>J4</u>	8.87	50.0	1	02/04/2018 03:41	WG1069715	
Acrylonitrile	U		1.87	10.0	1	02/04/2018 03:41	WG1069715	ŮQ
Benzene	U		0.331	1.00	1	02/04/2018 03:41	WG1069715	
Bromobenzene	U		0.352	1.00	1	02/04/2018 03:41	WG1069715	7
Bromodichloromethane	U		0.380	1.00	1	02/04/2018 03:41	WG1069715	Í G
Bromoform	U		0.469	1.00	1	02/04/2018 03:41	WG1069715	
Bromomethane	U	<u>J3</u>	0.866	5.00	1	02/04/2018 03:41	WG1069715	Å
n-Butylbenzene	U		0.361	1.00	1	02/04/2018 03:41	WG1069715	
sec-Butylbenzene	U		0.365	1.00	1	02/04/2018 03:41	WG1069715	9
ert-Butylbenzene	U		0.399	1.00	1	02/04/2018 03:41	WG1069715	S
Carbon tetrachloride	U		0.379	1.00	1	02/04/2018 03:41	WG1069715	
Chlorobenzene	U		0.348	1.00	1	02/04/2018 03:41	WG1069715	
Chlorodibromomethane	U		0.327	1.00	1	02/04/2018 03:41	WG1069715	
Chloroethane	U	<u>J3</u>	0.453	5.00	1	02/04/2018 03:41	WG1069715	
Chloroform	U		0.324	5.00	1	02/04/2018 03:41	WG1069715	
Chloromethane	U	<u>J3 J4</u>	0.276	2.50	1	02/04/2018 03:41	WG1069715	
2-Chlorotoluene	U	0001	0.375	1.00	1	02/04/2018 03:41	WG1069715	
-Chlorotoluene	U		0.351	1.00	1	02/04/2018 03:41	WG1069715	
,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	02/04/2018 03:41	WG1069715	
2-Dibromoethane	U		0.381	1.00	1	02/04/2018 03:41	WG1069715	
libromomethane	U		0.346	1.00	1			
	U		0.346	1.00		02/04/2018 03:41	WG1069715	
2-Dichlorobenzene	U				1	02/04/2018 03:41	WG1069715	
,3-Dichlorobenzene	U		0.220	1.00	1	02/04/2018 03:41	WG1069715	
,4-Dichlorobenzene			0.274	1.00	1	02/04/2018 03:41	WG1069715	
ichlorodifluoromethane	U		0.551	5.00	1	02/06/2018 21:42	WG1069715	
1-Dichloroethane	U		0.259	1.00	1	02/04/2018 03:41	WG1069715	
,2-Dichloroethane	U	10	0.361	1.00	1	02/04/2018 03:41	WG1069715	
,1-Dichloroethene	U	<u>J3</u>	0.398	1.00	1	02/04/2018 03:41	WG1069715	
is-1,2-Dichloroethene	U		0.260	1.00	1	02/04/2018 03:41	WG1069715	
rans-1,2-Dichloroethene	U		0.396	1.00	1	02/04/2018 03:41	WG1069715	
,2-Dichloropropane	U		0.306	1.00	1	02/04/2018 03:41	<u>WG1069715</u>	
1-Dichloropropene	U		0.352	1.00	1	02/04/2018 03:41	<u>WG1069715</u>	
,3-Dichloropropane	U		0.366	1.00	1	02/04/2018 03:41	WG1069715	
is-1,3-Dichloropropene	U		0.418	1.00	1	02/04/2018 03:41	WG1069715	
rans-1,3-Dichloropropene	U		0.419	1.00	1	02/04/2018 03:41	WG1069715	
,2-Dichloropropane	U	<u>J3</u>	0.321	1.00	1	02/04/2018 03:41	WG1069715	
Di-isopropyl ether	U		0.320	1.00	1	02/04/2018 03:41	WG1069715	
thylbenzene	U		0.384	1.00	1	02/04/2018 03:41	WG1069715	
lexachloro-1,3-butadiene	U		0.256	1.00	1	02/04/2018 03:41	WG1069715	
sopropylbenzene	U		0.326	1.00	1	02/04/2018 03:41	WG1069715	
-Isopropyltoluene	U		0.350	1.00	1	02/04/2018 03:41	WG1069715	
-Butanone (MEK)	U		3.93	10.0	1	02/04/2018 03:41	WG1069715	
lethylene Chloride	U		1.00	5.00	1	02/04/2018 03:41	WG1069715	
-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	02/04/2018 03:41	WG1069715	
Nethyl tert-butyl ether	U		0.367	1.00	1	02/04/2018 03:41	WG1069715	
laphthalene	U		1.00	5.00	1	02/04/2018 03:41	WG1069715	
-Propylbenzene	U		0.349	1.00	1	02/04/2018 03:41	WG1069715	
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## SAMPLE RESULTS - 04



#### Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Styrene	U		0.307	1.00	1	02/04/2018 03:41	WG1069715	
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	02/04/2018 03:41	WG1069715	
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	02/04/2018 03:41	WG1069715	
1,1,2-Trichlorotrifluoroethane	U	<u>J3</u>	0.303	1.00	1	02/04/2018 03:41	WG1069715	
Tetrachloroethene	U		0.372	1.00	1	02/04/2018 03:41	WG1069715	
Toluene	U		0.412	1.00	1	02/04/2018 03:41	WG1069715	
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/04/2018 03:41	WG1069715	
1,2,4-Trichlorobenzene	U		0.355	1.00	1	02/04/2018 03:41	WG1069715	
1,1,1-Trichloroethane	U		0.319	1.00	1	02/04/2018 03:41	WG1069715	
1,1,2-Trichloroethane	U		0.383	1.00	1	02/04/2018 03:41	WG1069715	
Trichloroethene	U		0.398	1.00	1	02/04/2018 03:41	WG1069715	
Trichlorofluoromethane	U	<u>J3</u>	1.20	5.00	1	02/04/2018 03:41	WG1069715	
1,2,3-Trichloropropane	U		0.807	2.50	1	02/04/2018 03:41	WG1069715	
1,2,4-Trimethylbenzene	U		0.373	1.00	1	02/04/2018 03:41	WG1069715	
1,2,3-Trimethylbenzene	U		0.321	1.00	1	02/04/2018 03:41	WG1069715	
1,3,5-Trimethylbenzene	U		0.387	1.00	1	02/04/2018 03:41	WG1069715	
Vinyl chloride	U	<u>J3 J4</u>	0.259	1.00	1	02/04/2018 03:41	WG1069715	
Xylenes, Total	U		1.06	3.00	1	02/04/2018 03:41	WG1069715	
(S) Toluene-d8	96.6			80.0-120		02/06/2018 21:42	WG1069715	
(S) Toluene-d8	100			80.0-120		02/04/2018 03:41	WG1069715	
(S) Dibromofluoromethane	89.0			76.0-123		02/04/2018 03:41	WG1069715	
(S) Dibromofluoromethane	94.7			76.0-123		02/06/2018 21:42	WG1069715	
(S) 4-Bromofluorobenzene	96.7			80.0-120		02/04/2018 03:41	WG1069715	
(S) 4-Bromofluorobenzene	100			80.0-120		02/06/2018 21:42	WG1069715	

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	41.6	J	33.0	100	1	02/05/2018 20:56	<u>WG1069801</u>
Residual Range Organics (RRO)	U		82.5	250	1	02/05/2018 20:56	<u>WG1069801</u>
(S) o-Terphenyl	90.4			31.0-160		02/05/2018 20:56	WG1069801

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Anthracene	U		0.0140	0.0500	1	02/05/2018 03:45	WG1069935	
Acenaphthene	U		0.0100	0.0500	1	02/05/2018 03:45	WG1069935	
Acenaphthylene	U		0.0120	0.0500	1	02/05/2018 03:45	WG1069935	
Benzo(a)anthracene	U		0.00410	0.0500	1	02/05/2018 03:45	WG1069935	
Benzo(a)pyrene	U		0.0116	0.0500	1	02/05/2018 03:45	WG1069935	
Benzo(b)fluoranthene	0.00721	<u>B J</u>	0.00212	0.0500	1	02/05/2018 03:45	WG1069935	
Benzo(g,h,i)perylene	0.00248	<u>B J</u>	0.00227	0.0500	1	02/05/2018 03:45	WG1069935	
Benzo(k)fluoranthene	U		0.0136	0.0500	1	02/05/2018 03:45	WG1069935	
Chrysene	U		0.0108	0.0500	1	02/05/2018 03:45	WG1069935	
Dibenz(a,h)anthracene	U		0.00396	0.0500	1	02/05/2018 03:45	WG1069935	
Fluoranthene	U		0.0157	0.0500	1	02/05/2018 03:45	WG1069935	
luorene	U		0.00850	0.0500	1	02/05/2018 03:45	WG1069935	
ndeno(1,2,3-cd)pyrene	U		0.0148	0.0500	1	02/05/2018 03:45	WG1069935	
Naphthalene	0.0242	<u>B J</u>	0.0198	0.250	1	02/05/2018 03:45	WG1069935	
Phenanthrene	U		0.00820	0.0500	1	02/05/2018 03:45	WG1069935	
Pyrene	U		0.0117	0.0500	1	02/05/2018 03:45	WG1069935	
1-Methylnaphthalene	U		0.00821	0.250	1	02/05/2018 03:45	WG1069935	
2-Methylnaphthalene	U		0.00902	0.250	1	02/05/2018 03:45	WG1069935	
2-Chloronaphthalene	U		0.00647	0.250	1	02/05/2018 03:45	WG1069935	
(S) Nitrobenzene-d5	93.0			31.0-160		02/05/2018 03:45	WG1069935	
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## SAMPLE RESULTS - 04

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	Ср
Analyte	ug/l		ug/l	ug/l		date / time		
(S) 2-Fluorobiphenyl	120			48.0-148		02/05/2018 03:45	<u>WG1069935</u>	$^{2}Tc$
(S) p-Terphenyl-d14	108			37.0-146		02/05/2018 03:45	WG1069935	

<sup>3</sup> Ss
<sup>4</sup> Cn
⁵Sr
<sup>6</sup> Qc
<sup>7</sup> Gl
<sup>8</sup> AI
⁰Sc

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#### SAMPLE RESULTS - 05 L967603



## Volatile Organic Compounds (GC) by Method NWTPHGX

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
/te	ug/l		ug/l	ug/l		date / time	
line Range nics-NWTPH	92.9	J	31.6	100	1	02/04/2018 23:23	WG1069970
-Trifluorotoluene(FID)	102			77.0-122		02/04/2018 23:23	WG1069970

## Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	L
Analyte	ug/l		ug/l	ug/l		date / time		5
Acetone	U		10.0	50.0	1	02/04/2018 04:00	WG1069715	5
Acrolein	U	<u>J4</u>	8.87	50.0	1	02/04/2018 04:00	WG1069715	
Acrylonitrile	U		1.87	10.0	1	02/04/2018 04:00	WG1069715	6
Benzene	U		0.331	1.00	1	02/04/2018 04:00	WG1069715	
Bromobenzene	U		0.352	1.00	1	02/04/2018 04:00	WG1069715	7
Bromodichloromethane	U		0.380	1.00	1	02/04/2018 04:00	WG1069715	· · · · · · · · · · · · · · · · · · ·
Bromoform	U		0.469	1.00	1	02/04/2018 04:00	WG1069715	
Bromomethane	U	<u>J3</u>	0.866	5.00	1	02/04/2018 04:00	WG1069715	8
n-Butylbenzene	U	_	0.361	1.00	1	02/04/2018 04:00	WG1069715	
ec-Butylbenzene	U		0.365	1.00	1	02/04/2018 04:00	WG1069715	9
ert-Butylbenzene	U		0.399	1.00	1	02/04/2018 04:00	WG1069715	
Carbon tetrachloride	U		0.379	1.00	1	02/04/2018 04:00	WG1069715	L
Chlorobenzene	U		0.348	1.00	1	02/04/2018 04:00	WG1069715	
Chlorodibromomethane	U		0.348	1.00	1	02/04/2018 04:00	WG1069715	
Chloroethane	U	13	0.453	5.00	1	02/04/2018 04:00	WG1069715	
Chloroform	U	<u>J3</u>	0.324	5.00	1	02/04/2018 04:00	WG1069715	
Chloromethane	U	13 14	0.324	2.50	1	02/04/2018 04:00	WG1069715	
-Chlorotoluene	U	<u>J3 J4</u>	0.276	1.00	1	02/04/2018 04:00	WG1069715	
	U			1.00			WG1069715	
-Chlorotoluene			0.351		1	02/04/2018 04:00		
2-Dibromo-3-Chloropropane	U		1.33	5.00	1	02/04/2018 04:00	WG1069715	
2-Dibromoethane	U		0.381	1.00	1	02/04/2018 04:00	WG1069715	
ibromomethane	U		0.346	1.00	1	02/04/2018 04:00	WG1069715	
2-Dichlorobenzene	U		0.349	1.00	1	02/04/2018 04:00	WG1069715	
3-Dichlorobenzene	U		0.220	1.00	1	02/04/2018 04:00	WG1069715	
4-Dichlorobenzene	U		0.274	1.00	1	02/04/2018 04:00	WG1069715	
ichlorodifluoromethane	U		0.551	5.00	1	02/06/2018 22:02	WG1069715	
1-Dichloroethane	U		0.259	1.00	1	02/04/2018 04:00	WG1069715	
2-Dichloroethane	U		0.361	1.00	1	02/04/2018 04:00	WG1069715	
,1-Dichloroethene	U	<u>J3</u>	0.398	1.00	1	02/04/2018 04:00	WG1069715	
is-1,2-Dichloroethene	U		0.260	1.00	1	02/04/2018 04:00	WG1069715	
ans-1,2-Dichloroethene	U		0.396	1.00	1	02/04/2018 04:00	WG1069715	
2-Dichloropropane	U		0.306	1.00	1	02/04/2018 04:00	WG1069715	
1-Dichloropropene	U		0.352	1.00	1	02/04/2018 04:00	WG1069715	
3-Dichloropropane	U		0.366	1.00	1	02/04/2018 04:00	WG1069715	
is-1,3-Dichloropropene	U		0.418	1.00	1	02/04/2018 04:00	WG1069715	
ans-1,3-Dichloropropene	U		0.419	1.00	1	02/04/2018 04:00	WG1069715	
,2-Dichloropropane	U	<u>J3</u>	0.321	1.00	1	02/04/2018 04:00	WG1069715	
i-isopropyl ether	U		0.320	1.00	1	02/04/2018 04:00	WG1069715	
thylbenzene	U		0.384	1.00	1	02/04/2018 04:00	WG1069715	
lexachloro-1,3-butadiene	U		0.256	1.00	1	02/04/2018 04:00	WG1069715	
opropylbenzene	U		0.326	1.00	1	02/04/2018 04:00	WG1069715	
-Isopropyltoluene	U		0.350	1.00	1	02/04/2018 04:00	WG1069715	
-Butanone (MEK)	U		3.93	10.0	1	02/04/2018 04:00	WG1069715	
lethylene Chloride	U		1.00	5.00	1	02/04/2018 04:00	WG1069715	
-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	02/04/2018 04:00	WG1069715	
lethyl tert-butyl ether	U		0.367	1.00	1	02/04/2018 04:00	WG1069715	
laphthalene	24.9		1.00	5.00	1	02/04/2018 04:00	WG1069715	
-Propylbenzene	0.686	J	0.349	1.00	1	02/04/2018 04:00	WG1069715	
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### SAMPLE RESULTS - 05 L967603



#### Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		L
Styrene	U		0.307	1.00	1	02/04/2018 04:00	WG1069715	
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	02/04/2018 04:00	WG1069715	
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	02/04/2018 04:00	WG1069715	E
1,1,2-Trichlorotrifluoroethane	U	<u>J3</u>	0.303	1.00	1	02/04/2018 04:00	WG1069715	
Tetrachloroethene	U		0.372	1.00	1	02/04/2018 04:00	WG1069715	L
Toluene	U		0.412	1.00	1	02/04/2018 04:00	WG1069715	
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/04/2018 04:00	WG1069715	
1,2,4-Trichlorobenzene	U		0.355	1.00	1	02/04/2018 04:00	WG1069715	
1,1,1-Trichloroethane	U		0.319	1.00	1	02/04/2018 04:00	WG1069715	
1,1,2-Trichloroethane	U		0.383	1.00	1	02/04/2018 04:00	WG1069715	
Trichloroethene	U		0.398	1.00	1	02/04/2018 04:00	WG1069715	
Trichlorofluoromethane	U	<u>J3</u>	1.20	5.00	1	02/04/2018 04:00	WG1069715	
1,2,3-Trichloropropane	U		0.807	2.50	1	02/04/2018 04:00	WG1069715	Г
1,2,4-Trimethylbenzene	U		0.373	1.00	1	02/04/2018 04:00	WG1069715	
1,2,3-Trimethylbenzene	U		0.321	1.00	1	02/04/2018 04:00	WG1069715	L
1,3,5-Trimethylbenzene	U		0.387	1.00	1	02/04/2018 04:00	WG1069715	
Vinyl chloride	U	<u>J3 J4</u>	0.259	1.00	1	02/04/2018 04:00	WG1069715	
Xylenes, Total	U		1.06	3.00	1	02/04/2018 04:00	WG1069715	E
(S) Toluene-d8	104			80.0-120		02/04/2018 04:00	WG1069715	
(S) Toluene-d8	95.5			80.0-120		02/06/2018 22:02	WG1069715	L
(S) Dibromofluoromethane	88.9			76.0-123		02/04/2018 04:00	WG1069715	
(S) Dibromofluoromethane	95.4			76.0-123		02/06/2018 22:02	WG1069715	
(S) 4-Bromofluorobenzene	101			80.0-120		02/06/2018 22:02	WG1069715	
(S) 4-Bromofluorobenzene	97.8			80.0-120		02/04/2018 04:00	WG1069715	

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Diesel Range Organics (DRO)	1340		33.0	100	1	02/05/2018 21:12	WG1069801
Residual Range Organics (RRO)	1250		82.5	250	1	02/05/2018 21:12	WG1069801
(S) o-Terphenyl	96.2			31.0-160		02/05/2018 21:12	WG1069801

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Anthracene	0.436		0.0700	0.250	5	02/05/2018 09:37	WG1069935	
Acenaphthene	4.39		0.0500	0.250	5	02/05/2018 09:37	<u>WG1069935</u>	
Acenaphthylene	U		0.0600	0.250	5	02/05/2018 09:37	WG1069935	
Benzo(a)anthracene	U		0.0205	0.250	5	02/05/2018 09:37	WG1069935	
Benzo(a)pyrene	U		0.0580	0.250	5	02/05/2018 09:37	WG1069935	
Benzo(b)fluoranthene	0.0140	<u>B J</u>	0.0106	0.250	5	02/05/2018 09:37	WG1069935	
Benzo(g,h,i)perylene	0.0260	<u>B J</u>	0.0114	0.250	5	02/05/2018 09:37	WG1069935	
Benzo(k)fluoranthene	U		0.0680	0.250	5	02/05/2018 09:37	WG1069935	
Chrysene	U		0.0540	0.250	5	02/05/2018 09:37	WG1069935	
Dibenz(a,h)anthracene	U		0.0198	0.250	5	02/05/2018 09:37	WG1069935	
Fluoranthene	U		0.0785	0.250	5	02/05/2018 09:37	WG1069935	
Fluorene	3.45		0.0425	0.250	5	02/05/2018 09:37	WG1069935	
Indeno(1,2,3-cd)pyrene	U		0.0740	0.250	5	02/05/2018 09:37	WG1069935	
Naphthalene	42.3		0.0990	1.25	5	02/05/2018 09:37	WG1069935	
Phenanthrene	4.10		0.0410	0.250	5	02/05/2018 09:37	WG1069935	
Pyrene	0.159	J	0.0585	0.250	5	02/05/2018 09:37	WG1069935	
1-Methylnaphthalene	103		0.0410	1.25	5	02/05/2018 09:37	WG1069935	
2-Methylnaphthalene	95.5		0.0451	1.25	5	02/05/2018 09:37	<u>WG1069935</u>	
2-Chloronaphthalene	U		0.0324	1.25	5	02/05/2018 09:37	WG1069935	
(S) Nitrobenzene-d5	81.0			31.0-160		02/05/2018 09:37	WG1069935	
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5764-1195

L967603

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BP-119-W		
Collected date/time:	01/31/18 15:30	

## SAMPLE RESULTS - 05

ONE LAB. NATIONWIDE.

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	(C	Ср
Analyte	ug/l		ug/l	ug/l		date / time			
(S) 2-Fluorobiphenyl	100			48.0-148		02/05/2018 09:37	WG1069935	<sup>2</sup> T	Тс
(S) p-Terphenyl-d14	77.5			37.0-146		02/05/2018 09:37	WG1069935		

#### Sample Narrative:

L967603-05 WG1069935: Dilution due to matrix

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#### SAMPLE RESULTS - 06 L967603

ONE LAB. NATIONWIDE.

#### Total Solids by Method 2540 G-2011

Total Solids by Method 2540 G-2011								
	Result	Qualifier	Dilution	Analysis	Batch		Ср	l
Analyte	%			date / time			2	i
Total Solids	89.6		1	02/06/2018 14:43	WG1070464		Tc	L

## Volatile Organic Compounds (GC) by Method NWTPHGX

Analyte	%		date	/ time				2			
Total Solids	89.6		1 02/0	02/06/2018 14:43 WG1070464				Tc			
Volatile Organic Comp	ounds (GC) b	y Method I	NWTPHG>	<				<sup>3</sup> Ss			
	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch				
Analyte	mg/kg		mg/kg	mg/kg		date / time		<sup>4</sup> Cn			
Gasoline Range Organics-NWTPH	161		3.79	11.2	100	02/05/2018 20:39	WG1069747				
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120		02/05/2018 20:39	WG1069747	5			
								⁵Sr			
Volatile Organic Comp	Volatile Organic Compounds (GC/MS) by Method 8260B										
	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	<sup>6</sup> Qc			

## Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	်ီပူင
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Acetone	U		1.12	5.58	100	02/03/2018 23:18	WG1069771	<sup>7</sup> Gl
Acrylonitrile	U		0.200	1.12	100	02/03/2018 23:18	WG1069771	UI
Benzene	U		0.0301	0.112	100	02/03/2018 23:18	WG1069771	8
Bromobenzene	U		0.0317	0.112	100	02/03/2018 23:18	WG1069771	ĨAĨ
Bromodichloromethane	U		0.0284	0.112	100	02/03/2018 23:18	WG1069771	
Bromoform	U		0.0473	0.112	100	02/03/2018 23:18	WG1069771	°Sc
Bromomethane	U		0.150	0.558	100	02/03/2018 23:18	WG1069771	50
n-Butylbenzene	0.751		0.0288	0.112	100	02/03/2018 23:18	WG1069771	
sec-Butylbenzene	0.101	J	0.0224	0.112	100	02/03/2018 23:18	WG1069771	
tert-Butylbenzene	U		0.0230	0.112	100	02/03/2018 23:18	WG1069771	
Carbon tetrachloride	U		0.0366	0.112	100	02/03/2018 23:18	WG1069771	
Chlorobenzene	U		0.0237	0.112	100	02/03/2018 23:18	WG1069771	
Chlorodibromomethane	U		0.0416	0.112	100	02/03/2018 23:18	WG1069771	
Chloroethane	U		0.106	0.558	100	02/03/2018 23:18	WG1069771	
Chloroform	U		0.0256	0.558	100	02/03/2018 23:18	WG1069771	
Chloromethane	U		0.0419	0.279	100	02/03/2018 23:18	WG1069771	
2-Chlorotoluene	U		0.0336	0.112	100	02/03/2018 23:18	WG1069771	
4-Chlorotoluene	U		0.0268	0.112	100	02/03/2018 23:18	WG1069771	
1,2-Dibromo-3-Chloropropane	U		0.117	0.558	100	02/03/2018 23:18	WG1069771	
1,2-Dibromoethane	U		0.0383	0.112	100	02/03/2018 23:18	WG1069771	
Dibromomethane	U		0.0427	0.112	100	02/03/2018 23:18	WG1069771	
1,2-Dichlorobenzene	U		0.0341	0.112	100	02/03/2018 23:18	WG1069771	
1,3-Dichlorobenzene	U		0.0267	0.112	100	02/03/2018 23:18	WG1069771	
1,4-Dichlorobenzene	U		0.0252	0.112	100	02/03/2018 23:18	WG1069771	
Dichlorodifluoromethane	U		0.0796	0.558	100	02/03/2018 23:18	WG1069771	
1,1-Dichloroethane	U		0.0222	0.112	100	02/03/2018 23:18	WG1069771	
1,2-Dichloroethane	U		0.0296	0.112	100	02/03/2018 23:18	WG1069771	
1,1-Dichloroethene	U		0.0338	0.112	100	02/03/2018 23:18	WG1069771	
cis-1,2-Dichloroethene	U		0.0262	0.112	100	02/03/2018 23:18	WG1069771	
trans-1,2-Dichloroethene	U		0.0295	0.112	100	02/03/2018 23:18	WG1069771	
1,2-Dichloropropane	U		0.0400	0.112	100	02/03/2018 23:18	WG1069771	
1,1-Dichloropropene	U		0.0354	0.112	100	02/03/2018 23:18	WG1069771	
1,3-Dichloropropane	U		0.0231	0.112	100	02/03/2018 23:18	WG1069771	
cis-1,3-Dichloropropene	U		0.0293	0.112	100	02/03/2018 23:18	WG1069771	
trans-1,3-Dichloropropene	U	<u>J4</u>	0.0298	0.112	100	02/03/2018 23:18	WG1069771	
2,2-Dichloropropane	U		0.0312	0.112	100	02/03/2018 23:18	WG1069771	
Di-isopropyl ether	U		0.0277	0.112	100	02/03/2018 23:18	WG1069771	
Ethylbenzene	0.0402	J	0.0332	0.112	100	02/03/2018 23:18	WG1069771	
Hexachloro-1,3-butadiene	U		0.0382	0.112	100	02/03/2018 23:18	WG1069771	
Isopropylbenzene	0.0773	J	0.0271	0.112	100	02/03/2018 23:18	WG1069771	
p-lsopropyltoluene	0.0310	J	0.0228	0.112	100	02/03/2018 23:18	WG1069771	
2-Butanone (MEK)	U		0.523	1.12	100	02/03/2018 23:18	WG1069771	
Methylene Chloride	U		0.112	0.558	100	02/03/2018 23:18	WG1069771	
4-Methyl-2-pentanone (MIBK)	U		0.210	1.12	100	02/03/2018 23:18	WG1069771	
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## SAMPLE RESULTS - 06



### Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		L
Methyl tert-butyl ether	U		0.0237	0.112	100	02/03/2018 23:18	WG1069771	:
Naphthalene	12.7		0.112	0.558	100	02/03/2018 23:18	WG1069771	
n-Propylbenzene	0.549		0.0230	0.112	100	02/03/2018 23:18	WG1069771	5
Styrene	U		0.0261	0.112	100	02/03/2018 23:18	WG1069771	
1,1,1,2-Tetrachloroethane	U		0.0295	0.112	100	02/03/2018 23:18	WG1069771	L
1,1,2,2-Tetrachloroethane	U		0.0408	0.112	100	02/03/2018 23:18	WG1069771	•
1,1,2-Trichlorotrifluoroethane	U		0.0408	0.112	100	02/03/2018 23:18	WG1069771	
Tetrachloroethene	U		0.0308	0.112	100	02/03/2018 23:18	WG1069771	
Toluene	U		0.0485	0.558	100	02/03/2018 23:18	WG1069771	
1,2,3-Trichlorobenzene	U		0.0342	0.112	100	02/03/2018 23:18	WG1069771	
1,2,4-Trichlorobenzene	U		0.0433	0.112	100	02/03/2018 23:18	WG1069771	
1,1,1-Trichloroethane	U		0.0319	0.112	100	02/03/2018 23:18	WG1069771	
1,1,2-Trichloroethane	U		0.0309	0.112	100	02/03/2018 23:18	WG1069771	F
Trichloroethene	U		0.0312	0.112	100	02/03/2018 23:18	WG1069771	
Trichlorofluoromethane	U		0.0427	0.558	100	02/03/2018 23:18	WG1069771	L
1,2,3-Trichloropropane	U		0.0827	0.279	100	02/03/2018 23:18	WG1069771	8
1,2,4-Trimethylbenzene	0.0239	J	0.0236	0.112	100	02/03/2018 23:18	WG1069771	
1,2,3-Trimethylbenzene	0.114		0.0320	0.112	100	02/03/2018 23:18	WG1069771	9
1,3,5-Trimethylbenzene	U		0.0297	0.112	100	02/03/2018 23:18	WG1069771	
Vinyl chloride	U		0.0325	0.112	100	02/03/2018 23:18	WG1069771	L
Xylenes, Total	0.0872	J	0.0779	0.335	100	02/03/2018 23:18	WG1069771	
(S) Toluene-d8	98.0			80.0-120		02/03/2018 23:18	WG1069771	
(S) Dibromofluoromethane	102			74.0-131		02/03/2018 23:18	WG1069771	
(S) 4-Bromofluorobenzene	106			64.0-132		02/03/2018 23:18	WG1069771	

#### Sample Narrative:

L967603-06 WG1069771: Non-target and target compounds too high to run at a lower dilution.

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	27600	<u>J3</u>	295	893	200	02/05/2018 17:01	WG1069926
Residual Range Organics (RRO)	14000	<u>J3</u>	737	2230	200	02/05/2018 17:01	WG1069926
(S) o-Terphenyl	0.000	<u>J7</u>		18.0-148		02/05/2018 17:01	WG1069926

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	30.7		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Acenaphthene	30.6		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Acenaphthylene	U		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Benzo(a)anthracene	5.94		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Benzo(a)pyrene	2.27		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Benzo(b)fluoranthene	1.15		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Benzo(g,h,i)perylene	0.998		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Benzo(k)fluoranthene	0.0605	Ţ	0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Chrysene	10.0		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Dibenz(a,h)anthracene	0.275	Ţ	0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Fluoranthene	4.45		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Fluorene	28.8		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Indeno(1,2,3-cd)pyrene	0.179	J	0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Naphthalene	92.0		0.134	1.34	60	02/04/2018 17:31	<u>WG1069800</u>	
Phenanthrene	124		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
Pyrene	28.2		0.0402	0.402	60	02/04/2018 17:31	<u>WG1069800</u>	
1-Methylnaphthalene	138		0.223	2.23	100	02/06/2018 04:14	WG1069800	
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## SAMPLE RESULTS - 06

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
2-Methylnaphthalene	202		0.223	2.23	100	02/06/2018 04:14	WG1069800	<sup>2</sup> Tc
2-Chloronaphthalene	U		0.134	1.34	60	02/04/2018 17:31	WG1069800	
(S) Nitrobenzene-d5	143	<u>J7</u>		14.0-149		02/04/2018 17:31	WG1069800	3
(S) Nitrobenzene-d5	84.7	<u>J7</u>		14.0-149		02/06/2018 04:14	WG1069800	Šs
(S) 2-Fluorobiphenyl	128	<u>J7</u>		34.0-125		02/06/2018 04:14	WG1069800	
(S) 2-Fluorobiphenyl	124	<u>J7</u>		34.0-125		02/04/2018 17:31	WG1069800	<sup>4</sup> Cr
(S) p-Terphenyl-d14	135	<u>J7</u>		23.0-120		02/04/2018 17:31	WG1069800	C
(S) p-Terphenyl-d14	135	<u>J7</u>		23.0-120		02/06/2018 04:14	WG1069800	5

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## WG1070464

Total Solids by Method 2540 G-2011

#### QUALITY CONTROL SUMMARY L967603-01,03,06

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### Method Blank (MB)

Method Blank	(IVIB)				1
(MB) R3284523-1 (	02/06/18 14:43				
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	%		%	%	~_
Total Solids	0.001				
					3

### L967090-02 Original Sample (OS) • Duplicate (DUP)

(OS) L967090-02 02/06	6/18 14:43 • (DUF	e) R3284523-3	; 02/06/18	14:43		
	Original Resul	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	68.1	68.3	1	0		5

## Laboratory Control Sample (LCS)

(LCS) R3284523-2 02	LCS) R3284523-2 02/06/18 14:43										
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier						
Analyte	%	%	%	%							
Total Solids	50.0	50.0	100	85-115							

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## WG1069747

Volatile Organic Compounds (GC) by Method NWTPHGX

#### QUALITY CONTROL SUMMARY L967603-01,03,06

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## Method Blank (MB)

HG C6 - C12 U 0.0339 0.100	ivietnoù Blank (ivie	5)					
alyte         mg/kg         mg/kg         mg/kg           HG C6 - C12         U         0.0339         0.100	MB) R3284327-3 02/05	5/18 14:06					
HG C6 - C12 U 0.0339 0.100		MB Result	MB Qualifier	MB MDL	MB RDL		
	Analyte	mg/kg		mg/kg	mg/kg		
S) 102 77.0-120	TPHG C6 - C12	U		0.0339	0.100		
	(S) a,a,a-Trifluorotoluene(FID)	102			77.0-120		

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

(LCS) R3284327-1 02/05/	/18 12:58 • (LCSI	D) R3284327-2	2 02/05/18 13:1	9						
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
TPHG C6 - C12	5.50	4.30	4.16	78.3	75.6	70.0-133			3.47	20
(S) a,a,a-Trifluorotoluene(FID)				101	100	77.0-120				

#### L967411-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L967411-02 02/05/18	3 15:21 • (MS) R3	284327-4 02/	05/18 22:07 •	(MSD) R32843	27-5 02/05/18	22:29							- L
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	ç
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	
TPHG C6 - C12	5.50	91.7	213	204	88.5	81.8	25	10.0-146			4.39	30	
(S) a,a,a-Trifluorotoluene(FID)					99.0	99.1		77.0-120					

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## WG1069970

Volatile Organic Compounds (GC) by Method NWTPHGX

#### QUALITY CONTROL SUMMARY L967603-02,04,05

ONE LAB. NATIONWIDE.

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### Method Blank (MB)

Method Blank (ME	∃)					<sup>1</sup> Cp
(MB) R3284123-3 02/04/18 18:43						
	MB Result	MB Qualifier	MB MDL	MB RDL		2
Analyte	ug/l		ug/l	ug/l		⁻Tc
Gasoline Range Organics-NWTPH	U		31.6	100		3
(S) a,a,a-Trifluorotoluene(FID)	102			77.0-122		Ss
						<sup>4</sup> Cn

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

(LCS) R3284123-1 02/04/18 17:34 • (LCSD) R3284123-2 02/04/18 17:57										
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%
Gasoline Range Organics-NWTPH	5500	4830	4910	87.9	89.3	72.0-134			1.59	20
(S) a,a,a-Trifluorotoluene(FID)				101	101	77.0-122				

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

## QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

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## Method Blank (MB)

Method Blank (MB) (MB) R3284308-3 02/03/								Ср
(MB) R3284308-3 02/03/		MD Qualifiar						
Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l				<sup>2</sup> Tc
Acetone	U		10.0	50.0				
Acrolein	U		8.87	50.0				<sup>3</sup> Cc
Acrylonitrile	U		1.87	10.0				ິSs
Benzene	U		0.331	1.00				4
Bromobenzene	U		0.352	1.00				<sup>°</sup> Cn
Bromodichloromethane	U		0.380	1.00				
Bromoform	U		0.469	1.00				<sup>5</sup> Sr
Bromomethane	U		0.866	5.00				
n-Butylbenzene	U		0.361	1.00				6
sec-Butylbenzene	U		0.365	1.00				<sup>6</sup> Qc
tert-Butylbenzene	U		0.399	1.00				
Carbon tetrachloride	U		0.379	1.00				<sup>7</sup> Gl
Chlorobenzene	U		0.348	1.00				
Chlorodibromomethane	U		0.327	1.00				8
Chloroethane	U		0.453	5.00				A
Chloroform	U		0.324	5.00				
Chloromethane	U		0.276	2.50				Sc
2-Chlorotoluene	U		0.375	1.00				
4-Chlorotoluene	U		0.351	1.00				
1,2-Dibromo-3-Chloropropane			1.33	5.00				
1,2-Dibromoethane	U		0.381	1.00				
Dibromomethane	U		0.346	1.00				
1,2-Dichlorobenzene	U		0.349	1.00				
1,3-Dichlorobenzene	U		0.220	1.00				
1,4-Dichlorobenzene	U		0.274	1.00				
Dichlorodifluoromethane	U		0.551	5.00				
1,1-Dichloroethane	U		0.259	1.00				
1,2-Dichloroethane	U		0.361	1.00				
1,1-Dichloroethene	U		0.398	1.00				
cis-1,2-Dichloroethene	U		0.260	1.00				
trans-1,2-Dichloroethene	U		0.396	1.00				
1,2-Dichloropropane	U U		0.306 0.352	1.00 1.00				
1,1-Dichloropropene								
1,3-Dichloropropane cis-1,3-Dichloropropene	U U		0.366 0.418	1.00 1.00				
trans-1,3-Dichloropropene	U		0.418	1.00				
2,2-Dichloropropane	U		0.419	1.00				
Di-isopropyl ether	U		0.321	1.00				
Ethylbenzene	U		0.320	1.00				
Hexachloro-1,3-butadiene	U		0.256	1.00				
		RGL-GRI-00001			Revision: 1		Reissued for Use	
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## WG1069715

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

## QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

## Method Blank (MB)

(MB) R3284308-3 02/03/	18 21:44				-   Cp
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	ug/l		ug/l	ug/l	Tc
Isopropylbenzene	U		0.326	1.00	
p-Isopropyltoluene	U		0.350	1.00	<sup>3</sup> Ss
2-Butanone (MEK)	U		3.93	10.0	00
Methylene Chloride	U		1.00	5.00	4
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	Cn
Methyl tert-butyl ether	U		0.367	1.00	
Naphthalene	U		1.00	5.00	<sup>5</sup> Sr
n-Propylbenzene	U		0.349	1.00	
Styrene	U		0.307	1.00	6
1,1,1,2-Tetrachloroethane	U		0.385	1.00	<sup>6</sup> Qc
1,1,2,2-Tetrachloroethane	U		0.130	1.00	
Tetrachloroethene	U		0.372	1.00	<sup>7</sup> Gl
Toluene	U		0.412	1.00	Ŭ1
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	8
1,2,3-Trichlorobenzene	U		0.230	1.00	A
1,2,4-Trichlorobenzene	U		0.355	1.00	
1,1,1-Trichloroethane	U		0.319	1.00	<sup>9</sup> Sc
1,1,2-Trichloroethane	U		0.383	1.00	00
Trichloroethene	U		0.398	1.00	
Trichlorofluoromethane	U		1.20	5.00	
1,2,3-Trichloropropane	U		0.807	2.50	
1,2,3-Trimethylbenzene	U		0.321	1.00	
1,2,4-Trimethylbenzene	U		0.373	1.00	
1,3,5-Trimethylbenzene	U		0.387	1.00	
Vinyl chloride	U		0.259	1.00	
Xylenes, Total	U		1.06	3.00	
(S) Toluene-d8	103			80.0-120	
(S) Dibromofluoromethane	88.4			76.0-123	
(S) 4-Bromofluorobenzene	99.7			80.0-120	

(LCS) R3284308-1 02	2/03/18 20:48 • (LCS	D) R3284308	3-2 02/03/18 21	:07							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%	
Acetone	125	160	145	128	116	10.0-160			10.0	23	
Acrolein	125	359	345	287	276	10.0-160	<u>J4</u>	<u>J4</u>	3.90	20	
Acrylonitrile	125	112	106	89.6	85.0	60.0-142			5.22	20	
Benzene	25.0	22.0	19.2	88.0	76.8	69.0-123			13.6	20	
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## QUALITY CONTROL SUMMARY

Ср

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

## (I CS) R3284308-1 02/03/18 20:48 • (I CSD) R3284308-2 02/03/18 21:07

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits		2
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%		Tc
Bromobenzene	25.0	22.8	20.8	91.3	83.2	79.0-120			9.18	20		
Bromodichloromethane	25.0	23.0	21.4	92.1	85.8	76.0-120			7.15	20		<sup>3</sup> Ss
Bromoform	25.0	25.1	23.9	100	95.5	67.0-132			4.94	20		00
Bromomethane	25.0	21.1	17.1	84.4	68.4	18.0-160		<u>J3</u>	20.8	20		4
n-Butylbenzene	25.0	25.4	21.7	102	86.7	72.0-126			15.8	20		<sup>-</sup> Cn
sec-Butylbenzene	25.0	24.6	21.2	98.3	84.9	74.0-121			14.7	20		
tert-Butylbenzene	25.0	24.9	21.4	99.7	85.8	75.0-122			15.0	20		⁵Sr
Carbon tetrachloride	25.0	22.9	18.7	91.6	74.9	63.0-122			20.0	20		
Chlorobenzene	25.0	25.6	23.0	102	91.9	79.0-121			10.9	20		6
Chlorodibromomethane	25.0	25.2	23.8	101	95.2	75.0-125			5.58	20		ଁQc
Chloroethane	25.0	20.6	15.3	82.5	61.3	47.0-152		<u>J3</u>	29.6	20		
Chloroform	25.0	22.2	19.5	88.9	78.1	72.0-121			13.0	20		<sup>7</sup> Gl
Chloromethane	25.0	18.0	10.6	71.8	42.3	48.0-139		<u>J3 J4</u>	51.8	20		
2-Chlorotoluene	25.0	23.9	21.0	95.6	84.0	74.0-122			13.0	20		8
4-Chlorotoluene	25.0	23.7	20.8	94.8	83.2	79.0-120			13.0	20		ĬĂ
1,2-Dibromo-3-Chloropropane	25.0	24.0	23.5	95.9	93.8	64.0-127			2.19	20		
1,2-Dibromoethane	25.0	25.3	24.1	101	96.2	77.0-123			4.97	20		<sup>9</sup> Sc
Dibromomethane	25.0	25.0	24.0	99.8	96.1	78.0-120			3.83	20		SC
1,2-Dichlorobenzene	25.0	24.9	22.6	99.8	90.5	80.0-120			9.78	20		
1,3-Dichlorobenzene	25.0	24.6	21.8	98.6	87.3	72.0-123			12.1	20		
1,4-Dichlorobenzene	25.0	23.6	21.3	94.3	85.2	77.0-120			10.2	20		
1,1-Dichloroethane	25.0	22.1	18.8	88.4	75.3	70.0-126			16.0	20		
1,2-Dichloroethane	25.0	21.4	20.0	85.7	79.9	67.0-126			6.90	20		
1,1-Dichloroethene	25.0	22.6	18.4	90.5	73.7	64.0-129		<u>J3</u>	20.5	20		
cis-1,2-Dichloroethene	25.0	22.2	19.7	88.9	78.9	73.0-120		_	11.9	20		
trans-1,2-Dichloroethene	25.0	22.4	18.8	89.7	75.0	71.0-121			17.8	20		
1,2-Dichloropropane	25.0	23.4	21.3	93.5	85.1	75.0-125			9.38	20		
1,1-Dichloropropene	25.0	22.7	19.2	90.6	76.7	71.0-129			16.7	20		
1,3-Dichloropropane	25.0	24.5	23.4	98.1	93.8	80.0-121			4.55	20		
cis-1,3-Dichloropropene	25.0	24.4	22.2	97.5	88.9	79.0-123			9.17	20		
trans-1,3-Dichloropropene	25.0	26.7	24.9	107	99.6	74.0-127			6.86	20		
2,2-Dichloropropane	25.0	23.0	18.5	91.9	74.1	60.0-125		<u>J3</u>	21.5	20		
Di-isopropyl ether	25.0	20.9	19.0	83.7	76.0	59.0-133		_	9.59	20		
Ethylbenzene	25.0	26.0	22.8	104	91.3	77.0-120			13.0	20		
Hexachloro-1,3-butadiene	25.0	28.2	23.4	113	93.6	64.0-131			18.7	20		
Isopropylbenzene	25.0	24.8	21.3	99.3	85.2	75.0-120			15.3	20		
p-lsopropyltoluene	25.0	25.4	21.8	101	87.1	74.0-126			15.2	20		
2-Butanone (MEK)	125	140	136	112	109	37.0-158			3.06	20		
Methylene Chloride	25.0	19.5	17.4	78.1	69.6	66.0-121			11.6	20		
4-Methyl-2-pentanone (MIBK)	125	123	119	98.1	95.1	59.0-143			3.10	20		
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## QUALITY CONTROL SUMMARY

Ср

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

#### (LCS) R3284308-1 02/03/18 20:48 • (LCSD) R3284308-2 02/03/18 21:07

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%	
Methyl tert-butyl ether	25.0	21.5	19.9	85.8	79.7	64.0-123			7.36	20	
Naphthalene	25.0	24.4	22.9	97.6	91.6	62.0-128			6.29	20	
n-Propylbenzene	25.0	25.0	21.7	100	86.7	79.0-120			14.5	20	
Styrene	25.0	25.0	22.5	99.8	90.1	78.0-124			10.3	20	
1,1,1,2-Tetrachloroethane	25.0	25.6	23.4	102	93.8	75.0-122			8.88	20	
1,1,2,2-Tetrachloroethane	25.0	23.3	22.5	93.2	89.9	71.0-122			3.69	20	
Tetrachloroethene	25.0	26.4	23.3	106	93.1	70.0-127			12.6	20	
Toluene	25.0	24.8	21.5	99.1	85.8	77.0-120			14.3	20	
1,1,2-Trichlorotrifluoroethane	25.0	24.4	19.6	97.7	78.3	61.0-136		<u>J3</u>	22.1	20	
1,2,3-Trichlorobenzene	25.0	26.5	23.9	106	95.6	61.0-133			10.4	20	
1,2,4-Trichlorobenzene	25.0	26.4	24.1	106	96.3	69.0-129			9.37	20	
1,1,1-Trichloroethane	25.0	23.2	19.7	92.6	78.6	68.0-122			16.4	20	
1,1,2-Trichloroethane	25.0	25.1	23.7	101	94.7	78.0-120			5.97	20	
Trichloroethene	25.0	25.8	22.1	103	88.5	78.0-120			15.3	20	
Trichlorofluoromethane	25.0	24.2	18.4	96.7	73.6	56.0-137		<u>J3</u>	27.1	20	
1,2,3-Trichloropropane	25.0	24.6	23.3	98.4	93.3	72.0-124			5.29	20	
1,2,3-Trimethylbenzene	25.0	24.1	21.5	96.4	86.2	75.0-120			11.2	20	
1,2,4-Trimethylbenzene	25.0	23.9	21.5	95.5	86.0	75.0-120			10.5	20	
1,3,5-Trimethylbenzene	25.0	23.9	21.1	95.7	84.3	75.0-120			12.6	20	
Vinyl chloride	25.0	22.6	14.0	90.5	56.0	64.0-133		<u>J3 J4</u>	47.0	20	
Xylenes, Total	75.0	76.7	68.1	102	90.8	77.0-120			11.9	20	
(S) Toluene-d8				101	101	80.0-120					
(S) Dibromofluoromethane				87.6	87.9	76.0-123					
(S) 4-Bromofluorobenzene				96.9	97.2	80.0-120					

LCS) R3284396-1 02/06/18 13:57 • (LCSD) R3284396-2 02/06/18 14:17												
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits		
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%		
Dichlorodifluoromethane	25.0	25.9	25.1	104	100	49.0-155			3.34	20		
(S) Toluene-d8				99.8	99.2	80.0-120						
(S) Dibromofluoromethane				93.6	91.9	76.0-123						
(S) 4-Bromofluorobenzene				107	107	80.0-120						

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

## QUALITY CONTROL SUMMARY L967603-06

## Method Blank (MB)

(MB) R3284295-3 02/03/	18 13:07								
	MB Result	MB Qualifier	MB MDL	MB RDL					2
Analyte	mg/kg		mg/kg	mg/kg					Tc
Acetone	U		0.0100	0.0500					
Acrylonitrile	U		0.00179	0.0100					<sup>3</sup> Ss
Benzene	U		0.000270	0.00100					0.5
Bromobenzene	U		0.000284	0.00100					4
Bromodichloromethane	U		0.000254	0.00100					Ċn
Bromoform	U		0.000424	0.00100					
Bromomethane	U		0.00134	0.00500					⁵Sr
n-Butylbenzene	U		0.000258	0.00100					01
sec-Butylbenzene	U		0.000201	0.00100					6
tert-Butylbenzene	U		0.000206	0.00100					ଁQc
Carbon tetrachloride	U		0.000328	0.00100					
Chlorobenzene	U		0.000212	0.00100					<sup>7</sup> Gl
Chlorodibromomethane	U		0.000373	0.00100					
Chloroethane	U		0.000946	0.00500					8
Chloroform	U		0.000229	0.00500					A
Chloromethane	U		0.000375	0.00250					
2-Chlorotoluene	U		0.000301	0.00100					°Sc
4-Chlorotoluene	U		0.000240	0.00100					00
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500					
1,2-Dibromoethane	U		0.000343	0.00100					
Dibromomethane	U		0.000382	0.00100					
1,2-Dichlorobenzene	U		0.000305	0.00100					
1,3-Dichlorobenzene	U		0.000239	0.00100					
1,4-Dichlorobenzene	U		0.000226	0.00100					
Dichlorodifluoromethane	U		0.000713	0.00500					
1,1-Dichloroethane	U		0.000199	0.00100					
1,2-Dichloroethane	U		0.000265	0.00100					
1,1-Dichloroethene	U		0.000303	0.00100					
cis-1,2-Dichloroethene	U		0.000235	0.00100					
trans-1,2-Dichloroethene	U		0.000264	0.00100					
1,2-Dichloropropane	U		0.000358	0.00100					
1,1-Dichloropropene	U		0.000317	0.00100					
1,3-Dichloropropane	U		0.000207	0.00100					
cis-1,3-Dichloropropene	U		0.000262	0.00100					
trans-1,3-Dichloropropene	U		0.000267	0.00100					
2,2-Dichloropropane	U		0.000279	0.00100					
Di-isopropyl ether	U		0.000248	0.00100					
Ethylbenzene	U		0.000297	0.00100					
Hexachloro-1,3-butadiene	U		0.000342	0.00100					
Isopropylbenzene	U		0.000243	0.00100					
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## WG1069771

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

## QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

## Method Blank (MB)

(MB) R3284295-3 02/03/	18 13:07				
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	mg/kg		mg/kg	mg/kg	Tc
p-lsopropyltoluene	U		0.000204	0.00100	
2-Butanone (MEK)	U		0.00468	0.0100	<sup>3</sup> Ss
Methylene Chloride	U		0.00100	0.00500	
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100	4
Methyl tert-butyl ether	U		0.000212	0.00100	Cr
Naphthalene	U		0.00100	0.00500	
n-Propylbenzene	U		0.000206	0.00100	⁵Sr
Styrene	U		0.000234	0.00100	
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100	6_
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100	ଁ Q
Tetrachloroethene	U		0.000276	0.00100	
Toluene	U		0.000434	0.00500	<sup>7</sup> Gl
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100	
1,2,3-Trichlorobenzene	U		0.000306	0.00100	8
1,2,4-Trichlorobenzene	U		0.000388	0.00100	A
1,1,1-Trichloroethane	U		0.000286	0.00100	
1,1,2-Trichloroethane	U		0.000277	0.00100	Sc
Trichloroethene	U		0.000279	0.00100	
Trichlorofluoromethane	U		0.000382	0.00500	
1,2,3-Trichloropropane	U		0.000741	0.00250	
1,2,3-Trimethylbenzene	U		0.000287	0.00100	
1,2,4-Trimethylbenzene	U		0.000211	0.00100	
1,3,5-Trimethylbenzene	U		0.000266	0.00100	
Vinyl chloride	U		0.000291	0.00100	
Xylenes, Total	U		0.000698	0.00300	
(S) Toluene-d8	102			80.0-120	
(S) Dibromofluoromethane	108			74.0-131	
(S) 4-Bromofluorobenzene	102			64.0-132	

(LCS) R3284295-1 02/0	03/18 12:04 • (LCS	D) R3284295	-2 02/03/18 12:	25							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
Acetone	0.125	0.166	0.167	133	134	11.0-160			0.657	23	
Acrylonitrile	0.125	0.131	0.129	105	104	61.0-143			1.14	20	
Benzene	0.0250	0.0268	0.0265	107	106	71.0-124			0.993	20	
Bromobenzene	0.0250	0.0284	0.0281	114	112	78.0-120			1.09	20	
Bromodichloromethane	0.0250	0.0279	0.0269	112	107	75.0-120			3.77	20	
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## QUALITY CONTROL SUMMARY L967603-06

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(LCS) R3284295-1 02/03	3/18 12:04 • (LCSI	D) R3284295	-2 02/03/18 12:	25		
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%
Bromoform	0.0250	0.0264	0.0260	106	104	65.0-133
Bromomethane	0.0250	0.0287	0.0285	115	114	26.0-160

(200) 10204200 1 02/00/	Spike Amount	-	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
Bromoform	0.0250	0.0264	0.0260	106	104	65.0-133			1.62	20	
Bromomethane	0.0250	0.0287	0.0285	115	114	26.0-160			0.678	20	
n-Butylbenzene	0.0250	0.0288	0.0282	115	113	73.0-126			2.00	20	
sec-Butylbenzene	0.0250	0.0288	0.0288	115	115	75.0-121			0.257	20	
tert-Butylbenzene	0.0250	0.0280	0.0280	112	112	74.0-122			0.131	20	
Carbon tetrachloride	0.0250	0.0248	0.0243	99.2	97.1	66.0-123			2.21	20	
Chlorobenzene	0.0250	0.0275	0.0262	110	105	79.0-121			4.80	20	
Chlorodibromomethane	0.0250	0.0269	0.0262	108	105	74.0-128			2.79	20	
Chloroethane	0.0250	0.0290	0.0278	116	111	51.0-147			4.38	20	
Chloroform	0.0250	0.0281	0.0279	112	112	73.0-123			0.545	20	
Chloromethane	0.0250	0.0228	0.0217	91.4	86.6	51.0-138			5.37	20	
2-Chlorotoluene	0.0250	0.0278	0.0277	111	111	72.0-124			0.259	20	
4-Chlorotoluene	0.0250	0.0284	0.0279	114	112	78.0-120			1.66	20	
1,2-Dibromo-3-Chloropropane	0.0250	0.0229	0.0226	91.8	90.3	65.0-126			1.66	20	
1,2-Dibromoethane	0.0250	0.0282	0.0271	113	108	78.0-122			4.18	20	
Dibromomethane	0.0250	0.0261	0.0252	104	101	79.0-120			3.53	20	
1,2-Dichlorobenzene	0.0250	0.0263	0.0257	105	103	80.0-120			2.20	20	
1,3-Dichlorobenzene	0.0250	0.0273	0.0267	109	107	72.0-123			2.16	20	
1,4-Dichlorobenzene	0.0250	0.0266	0.0260	107	104	77.0-120			2.28	20	
Dichlorodifluoromethane	0.0250	0.0259	0.0257	104	103	49.0-155			0.884	20	
1,1-Dichloroethane	0.0250	0.0265	0.0262	106	105	70.0-128			1.22	20	
1,2-Dichloroethane	0.0250	0.0311	0.0312	124	125	69.0-128			0.432	20	
1,1-Dichloroethene	0.0250	0.0288	0.0288	115	115	63.0-131			0.0206	20	
cis-1,2-Dichloroethene	0.0250	0.0263	0.0260	105	104	74.0-123			1.14	20	
trans-1,2-Dichloroethene	0.0250	0.0253	0.0253	101	101	72.0-122			0.0700	20	
1,2-Dichloropropane	0.0250	0.0270	0.0264	108	106	75.0-126			1.98	20	
1,1-Dichloropropene	0.0250	0.0267	0.0270	107	108	72.0-130			1.06	20	
1,3-Dichloropropane	0.0250	0.0304	0.0288	121	115	80.0-121			5.41	20	
cis-1,3-Dichloropropene	0.0250	0.0304	0.0291	122	116	80.0-125			4.45	20	
trans-1,3-Dichloropropene	0.0250	0.0327	0.0313	131	125	75.0-129	<u>J4</u>		4.64	20	
2,2-Dichloropropane	0.0250	0.0249	0.0240	99.6	96.0	60.0-129			3.74	20	
Di-isopropyl ether	0.0250	0.0251	0.0249	100	99.7	62.0-133			0.688	20	
Ethylbenzene	0.0250	0.0260	0.0251	104	100	77.0-120			3.44	20	
Hexachloro-1,3-butadiene	0.0250	0.0240	0.0236	96.1	94.4	68.0-128			1.75	20	
Isopropylbenzene	0.0250	0.0275	0.0278	110	111	75.0-120			0.743	20	
p-Isopropyltoluene	0.0250	0.0280	0.0276	112	110	74.0-125			1.55	20	
2-Butanone (MEK)	0.125	0.161	0.160	129	128	37.0-159			0.472	20	
Methylene Chloride	0.0250	0.0243	0.0243	97.3	97.3	67.0-123			0.0756	20	
4-Methyl-2-pentanone (MIBK)	0.125	0.127	0.123	102	98.5	60.0-144			3.39	20	
Methyl tert-butyl ether	0.0250	0.0273	0.0269	109	108	66.0-125			1.39	20	
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## QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

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

(LCS) R3284295-1 02/03/	18 12:04 • (LCSI	D) R3284295	-2 02/03/18 12::	25							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
Naphthalene	0.0250	0.0243	0.0239	97.2	95.8	64.0-125			1.49	20	
n-Propylbenzene	0.0250	0.0284	0.0275	113	110	78.0-120			3.15	20	
Styrene	0.0250	0.0285	0.0282	114	113	78.0-124			1.11	20	
1,1,1,2-Tetrachloroethane	0.0250	0.0233	0.0223	93.1	89.3	74.0-124			4.16	20	
1,1,2,2-Tetrachloroethane	0.0250	0.0281	0.0281	112	112	73.0-120			0.103	20	
Tetrachloroethene	0.0250	0.0256	0.0244	102	97.7	70.0-127			4.58	20	
Toluene	0.0250	0.0258	0.0247	103	99.0	77.0-120			4.19	20	
1,1,2-Trichlorotrifluoroethane	0.0250	0.0263	0.0257	105	103	64.0-135			2.48	20	
1,2,3-Trichlorobenzene	0.0250	0.0238	0.0231	95.0	92.3	68.0-126			2.92	20	
1,2,4-Trichlorobenzene	0.0250	0.0242	0.0235	96.8	94.0	70.0-127			2.97	20	
1,1,1-Trichloroethane	0.0250	0.0273	0.0271	109	108	69.0-125			0.754	20	
1,1,2-Trichloroethane	0.0250	0.0276	0.0268	111	107	78.0-120			3.09	20	
Trichloroethene	0.0250	0.0253	0.0247	101	98.6	79.0-120			2.46	20	
Trichlorofluoromethane	0.0250	0.0272	0.0270	109	108	59.0-136			0.791	20	
1,2,3-Trichloropropane	0.0250	0.0264	0.0265	106	106	73.0-124			0.497	20	
1,2,3-Trimethylbenzene	0.0250	0.0277	0.0268	111	107	76.0-120			3.35	20	
1,2,4-Trimethylbenzene	0.0250	0.0272	0.0273	109	109	75.0-120			0.253	20	
1,3,5-Trimethylbenzene	0.0250	0.0277	0.0277	111	111	75.0-120			0.0525	20	
Vinyl chloride	0.0250	0.0270	0.0264	108	106	63.0-134			2.29	20	
Xylenes, Total	0.0750	0.0769	0.0736	103	98.1	77.0-120			4.39	20	
(S) Toluene-d8				101	98.4	80.0-120					
(S) Dibromofluoromethane				98.8	101	74.0-131					
(S) 4-Bromofluorobenzene				103	105	64.0-132					

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## WG1070279

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

## QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

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## Method Blank (MB)

(MB) R3284470-3 02/06/	18 11:51									-
	MB Result	MB Qualifier	MB MDL	MB RDL						2
Analyte	mg/kg		mg/kg	mg/kg						
Acetone	U		0.0100	0.0500						
Acrylonitrile	U		0.00179	0.0100						3
Benzene	U		0.000270	0.00100						
Bromobenzene	U		0.000284	0.00100						4
Bromodichloromethane	U		0.000254	0.00100						
Bromoform	U		0.000424	0.00100						
Bromomethane	U		0.00134	0.00500						5
n-Butylbenzene	U		0.000258	0.00100						
sec-Butylbenzene	U		0.000201	0.00100						6
tert-Butylbenzene	U		0.000206	0.00100						
Carbon tetrachloride	U		0.000328	0.00100						
Chlorobenzene	U		0.000212	0.00100						7
Chlorodibromomethane	U		0.000373	0.00100						
Chloroethane	U		0.000946	0.00500						8
Chloroform	U		0.000229	0.00500						- 1
Chloromethane	U		0.000375	0.00250						
2-Chlorotoluene	U		0.000301	0.00100						9
4-Chlorotoluene	U		0.000240	0.00100						
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500						
1,2-Dibromoethane	U		0.000343	0.00100						
Dibromomethane	U		0.000382	0.00100						
1,2-Dichlorobenzene	U		0.000305	0.00100						
1,3-Dichlorobenzene	U		0.000239	0.00100						
1,4-Dichlorobenzene	U		0.000226	0.00100						
Dichlorodifluoromethane	U		0.000713	0.00500						
1,1-Dichloroethane	U		0.000199	0.00100						
1,2-Dichloroethane	U		0.000265	0.00100						
1,1-Dichloroethene	U		0.000303	0.00100						
cis-1,2-Dichloroethene	U		0.000235	0.00100						
trans-1,2-Dichloroethene	U		0.000264	0.00100						
1,2-Dichloropropane	U		0.000358	0.00100						
1,1-Dichloropropene	U		0.000317	0.00100						
1,3-Dichloropropane	U		0.000207	0.00100						
cis-1,3-Dichloropropene	U		0.000262	0.00100						
trans-1,3-Dichloropropene	U		0.000267	0.00100						
2,2-Dichloropropane	U		0.000279	0.00100						
Di-isopropyl ether	U		0.000248	0.00100						
Ethylbenzene	U		0.000297	0.00100						
Hexachloro-1,3-butadiene	U		0.000342	0.00100						
Isopropylbenzene	U		0.000243	0.00100						
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## WG1070279

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

## QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

## Method Blank (MB)

(MB) R3284470-3 02/06/1	18 11:51				
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	mg/kg		mg/kg	mg/kg	
p-lsopropyltoluene	U		0.000204	0.00100	
2-Butanone (MEK)	U		0.00468	0.0100	3
Methylene Chloride	U		0.00100	0.00500	
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100	4
Methyl tert-butyl ether	U		0.000212	0.00100	
Naphthalene	U		0.00100	0.00500	
n-Propylbenzene	U		0.000206	0.00100	5
Styrene	U		0.000234	0.00100	
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100	6
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100	0
Tetrachloroethene	U		0.000276	0.00100	
Toluene	U		0.000434	0.00500	7
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100	
1,2,3-Trichlorobenzene	U		0.000306	0.00100	8
1,2,4-Trichlorobenzene	U		0.000388	0.00100	
1,1,1-Trichloroethane	U		0.000286	0.00100	
1,1,2-Trichloroethane	U		0.000277	0.00100	9
Trichloroethene	U		0.000279	0.00100	
Trichlorofluoromethane	U		0.000382	0.00500	
1,2,3-Trichloropropane	U		0.000741	0.00250	
1,2,3-Trimethylbenzene	U		0.000287	0.00100	
1,2,4-Trimethylbenzene	U		0.000211	0.00100	
1,3,5-Trimethylbenzene	U		0.000266	0.00100	
Vinyl chloride	U		0.000291	0.00100	
Xylenes, Total	U		0.000698	0.00300	
(S) Toluene-d8	103			80.0-120	
(S) Dibromofluoromethane	104			74.0-131	
(S) 4-Bromofluorobenzene	103			64.0-132	

(LCS) R3284470-1 02/0	6/18 10:06 • (LCS	D) R3284470	-2 02/06/18 10:	27						
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits LCS Qualif	er LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%		%	%	
Acetone	0.125	0.157	0.134	126	107	11.0-160		15.9	23	
Acrylonitrile	0.125	0.125	0.115	99.9	92.0	61.0-143		8.23	20	
Benzene	0.0250	0.0257	0.0249	103	99.7	71.0-124		2.85	20	
Bromobenzene	0.0250	0.0253	0.0257	101	103	78.0-120		1.38	20	
Bromodichloromethane	0.0250	0.0253	0.0252	101	101	75.0-120		0.367	20	
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## QUALITY CONTROL SUMMARY

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(LCS) R3284470-1	02/06/18 10:06 •	(ICSD)	R3284470-2	02/06/18 10.27	

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
Bromoform	0.0250	0.0236	0.0229	94.6	91.7	65.0-133			3.09	20	
Bromomethane	0.0250	0.0284	0.0275	114	110	26.0-160			3.17	20	
n-Butylbenzene	0.0250	0.0272	0.0271	109	109	73.0-126			0.261	20	
sec-Butylbenzene	0.0250	0.0275	0.0279	110	111	75.0-121			1.45	20	
tert-Butylbenzene	0.0250	0.0267	0.0272	107	109	74.0-122			1.61	20	
Carbon tetrachloride	0.0250	0.0248	0.0239	99.4	95.4	66.0-123			4.06	20	
Chlorobenzene	0.0250	0.0240	0.0245	95.9	98.0	79.0-121			2.18	20	
Chlorodibromomethane	0.0250	0.0241	0.0233	96.3	93.4	74.0-128			3.07	20	
Chloroethane	0.0250	0.0287	0.0277	115	111	51.0-147			3.41	20	
Chloroform	0.0250	0.0276	0.0265	111	106	73.0-123			4.28	20	
Chloromethane	0.0250	0.0227	0.0219	90.8	87.8	51.0-138			3.36	20	
2-Chlorotoluene	0.0250	0.0263	0.0268	105	107	72.0-124			1.81	20	
4-Chlorotoluene	0.0250	0.0256	0.0260	102	104	78.0-120			1.79	20	
1,2-Dibromo-3-Chloropropane	0.0250	0.0219	0.0219	87.7	87.4	65.0-126			0.238	20	
l,2-Dibromoethane	0.0250	0.0232	0.0233	92.8	93.2	78.0-122			0.379	20	
Dibromomethane	0.0250	0.0236	0.0233	94.5	93.2	79.0-120			1.35	20	
,2-Dichlorobenzene	0.0250	0.0250	0.0251	100	101	80.0-120			0.423	20	
3-Dichlorobenzene	0.0250	0.0258	0.0258	103	103	72.0-123			0.134	20	
4-Dichlorobenzene	0.0250	0.0247	0.0246	98.8	98.2	77.0-120			0.603	20	
Dichlorodifluoromethane	0.0250	0.0259	0.0253	104	101	49.0-155			2.57	20	
,1-Dichloroethane	0.0250	0.0260	0.0254	104	101	70.0-128			2.39	20	
,2-Dichloroethane	0.0250	0.0282	0.0272	113	109	69.0-128			3.83	20	
,1-Dichloroethene	0.0250	0.0289	0.0279	116	112	63.0-131			3.35	20	
is-1,2-Dichloroethene	0.0250	0.0262	0.0256	105	102	74.0-123			2.57	20	
rans-1,2-Dichloroethene	0.0250	0.0256	0.0252	102	101	72.0-122			1.60	20	
,2-Dichloropropane	0.0250	0.0251	0.0247	100	98.7	75.0-126			1.62	20	
,1-Dichloropropene	0.0250	0.0261	0.0252	104	101	72.0-130			3.38	20	
,3-Dichloropropane	0.0250	0.0251	0.0249	101	99.6	80.0-121			1.02	20	
sis-1,3-Dichloropropene	0.0250	0.0255	0.0259	102	104	80.0-125			1.56	20	
rans-1,3-Dichloropropene	0.0250	0.0265	0.0260	106	104	75.0-129			1.82	20	
2,2-Dichloropropane	0.0250	0.0254	0.0242	102	96.7	60.0-129			4.92	20	
)i-isopropyl ether	0.0250	0.0246	0.0236	98.5	94.2	62.0-133			4.41	20	
thylbenzene	0.0250	0.0234	0.0241	93.4	96.3	77.0-120			3.05	20	
lexachloro-1,3-butadiene	0.0250	0.0242	0.0236	96.9	94.6	68.0-128			2.37	20	
sopropylbenzene	0.0250	0.0267	0.0267	107	107	75.0-120			0.0243	20	
-Isopropyltoluene	0.0250	0.0270	0.0268	108	107	74.0-125			0.431	20	
P-Butanone (MEK)	0.125	0.140	0.126	112	101	37.0-159			10.4	20	
Nethylene Chloride	0.0250	0.0241	0.0236	96.4	94.3	67.0-123			2.13	20	
1-Methyl-2-pentanone (MIBK)	0.125	0.114	0.109	91.4	86.9	60.0-144			5.04	20	
Methyl tert-butyl ether	0.0250	0.0266	0.0254	106	101	66.0-125			4.80	20	
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## QUALITY CONTROL SUMMARY

(LCS) R3284470-1 02/06/	·	'									
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
Naphthalene	0.0250	0.0245	0.0238	98.0	95.2	64.0-125			2.87	20	
n-Propylbenzene	0.0250	0.0264	0.0264	106	106	78.0-120			0.0904	20	
Styrene	0.0250	0.0256	0.0253	103	101	78.0-124			1.45	20	
1,1,1,2-Tetrachloroethane	0.0250	0.0223	0.0228	89.4	91.1	74.0-124			1.92	20	
1,1,2,2-Tetrachloroethane	0.0250	0.0256	0.0252	103	101	73.0-120			1.64	20	
Tetrachloroethene	0.0250	0.0229	0.0235	91.4	94.0	70.0-127			2.82	20	
Toluene	0.0250	0.0227	0.0232	90.9	92.8	77.0-120			2.04	20	
1,1,2-Trichlorotrifluoroethane	0.0250	0.0284	0.0265	113	106	64.0-135			6.74	20	
1,2,3-Trichlorobenzene	0.0250	0.0242	0.0236	96.8	94.5	68.0-126			2.40	20	
1,2,4-Trichlorobenzene	0.0250	0.0245	0.0243	97.9	97.3	70.0-127			0.529	20	
1,1,1-Trichloroethane	0.0250	0.0271	0.0266	109	106	69.0-125			2.09	20	
1,1,2-Trichloroethane	0.0250	0.0239	0.0235	95.5	94.0	78.0-120			1.52	20	
Trichloroethene	0.0250	0.0244	0.0243	97.4	97.3	79.0-120			0.133	20	
Trichlorofluoromethane	0.0250	0.0283	0.0272	113	109	59.0-136			3.75	20	
1,2,3-Trichloropropane	0.0250	0.0238	0.0233	95.2	93.4	73.0-124			1.88	20	
1,2,3-Trimethylbenzene	0.0250	0.0260	0.0261	104	105	76.0-120			0.687	20	
1,2,4-Trimethylbenzene	0.0250	0.0259	0.0259	104	104	75.0-120			0.211	20	
1,3,5-Trimethylbenzene	0.0250	0.0268	0.0271	107	108	75.0-120			0.977	20	
Vinyl chloride	0.0250	0.0265	0.0255	106	102	63.0-134			3.76	20	
Xylenes, Total	0.0750	0.0708	0.0718	94.4	95.7	77.0-120			1.40	20	
(S) Toluene-d8				98.8	101	80.0-120					
(S) Dibromofluoromethane				107	103	74.0-131					
(S) 4-Bromofluorobenzene				100	101	64.0-132					

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## QUALITY CONTROL SUMMARY L967603-02,04,05

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## Method Blank (MB)

(MB) R3284340-1 02/05/18	3 15:17			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l		ug/l	ug/l
Diesel Range Organics (DRO)	U		33.3	100
Residual Range Organics (RRO)	U		83.3	250
(S) o-Terphenyl	78.6			31.0-160

(LCS) R3284340-2 02/05/	18 15:33 • (LCS	D) R3284340-	3 02/05/18 15:	49						
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%
Diesel Range Organics (DRO)	750	792	778	106	104	50.0-150			1.72	20
Residual Range Organics (RRO)	750	642	660	85.6	88.0	50.0-150			2.80	20
(S) o-Terphenyl				98.8	96.4	31.0-160				

Document No: J1-680-RGL-GRI-00001-00	R	evision: 1	Re	issued for Use
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GRI - Beaverton, OR	5764-1195	L967603	02/07/18 17:58	39 of 52

#### QUALITY CONTROL SUMMARY L967603-01,03,06

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Method Blank (MB)

iviethod Blank (IVIB)					
(MB) R3284028-1 02/05/1	8 11:50				
	MB Result	MB Qualifier	MB MDL	MB RDL	
Analyte	mg/kg		mg/kg	mg/kg	
Diesel Range Organics (DRO)	U		1.33	4.00	
Residual Range Organics (RRO)	U		3.33	10.0	
(S) o-Terphenyl	85.2			18.0-148	

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

(LCS) R3284028-2 02/05/	18 12:05 • (LCS	D) R3284028	3-3 02/05/18 12	::19						
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Diesel Range Organics (DRO)	30.0	22.0	28.4	73.4	94.7	50.0-150		<u>J3</u>	25.4	20
Residual Range Organics (RRO)	30.0	23.7	30.6	78.9	102	50.0-150		<u>J3</u>	25.4	20
(S) o-Terphenyl				72.5	90.9	18.0-148				

## L967646-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L967646-02 02/05/18 14:50 • (MS) R3284028-4 02/05/18 15:04 • (MSD) R3284028-5 02/05/18 15:19												[	
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	
Diesel Range Organics (DRO)	30.0	ND	29.3	27.2	95.4	88.5	1	50.0-150			7.36	20	
Residual Range Organics (RRO)	30.0	ND	29.9	28.3	92.6	87.2	1	50.0-150			5.52	20	
(S) o-Terphenyl					85.5	73.2		18.0-148					

Document No: J1-680-RGL-GRI-00001-00	R	evision: 1	R	eissued for Use
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#### Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

## QUALITY CONTROL SUMMARY

L967603-01,03,06

(MB) R3283931-3 02/04/	/18 02:41				- Cp
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	mg/kg		mg/kg	mg/kg	Tc
Anthracene	U		0.000600	0.00600	
Acenaphthene	U		0.000600	0.00600	<sup>3</sup> Ss
Acenaphthylene	U		0.000600	0.00600	00
Benzo(a)anthracene	U		0.000600	0.00600	4
Benzo(a)pyrene	U		0.000600	0.00600	<sup>≁</sup> Cn
Benzo(b)fluoranthene	U		0.000600	0.00600	
Benzo(g,h,i)perylene	U		0.000600	0.00600	⁵Sr
Benzo(k)fluoranthene	U		0.000600	0.00600	
Chrysene	U		0.000600	0.00600	6 _
Dibenz(a,h)anthracene	U		0.000600	0.00600	ိပ္ရင
Fluoranthene	U		0.000600	0.00600	-
Fluorene	U		0.000600	0.00600	<sup>7</sup> Gl
Indeno(1,2,3-cd)pyrene	U		0.000600	0.00600	01
Naphthalene	U		0.00200	0.0200	8
Phenanthrene	U		0.000600	0.00600	A
Pyrene	U		0.000600	0.00600	
1-Methylnaphthalene	U		0.00200	0.0200	<sup>9</sup> Sc
2-Methylnaphthalene	U		0.00200	0.0200	
2-Chloronaphthalene	U		0.00200	0.0200	
(S) Nitrobenzene-d5	73.6			14.0-149	
(S) 2-Fluorobiphenyl	73.0			34.0-125	
(S) p-Terphenyl-d14	71.1			23.0-120	

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

ACCOUNT:

GRI - Beaverton, OR

(LCS) R3283931-1 02/04	(LCS) R3283931-1 02/04/18 01:57 • (LCSD) R3283931-2 02/04/18 02:19										
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
Anthracene	0.0800	0.0802	0.0812	100	101	50.0-125			1.26	20	
Acenaphthene	0.0800	0.0684	0.0711	85.6	88.9	52.0-120			3.87	20	
Acenaphthylene	0.0800	0.0688	0.0719	86.0	89.9	51.0-120			4.47	20	
Benzo(a)anthracene	0.0800	0.0669	0.0680	83.6	84.9	46.0-121			1.62	20	
Benzo(a)pyrene	0.0800	0.0706	0.0716	88.3	89.5	42.0-121			1.34	20	
Benzo(b)fluoranthene	0.0800	0.0670	0.0681	83.8	85.1	42.0-123			1.57	20	
Benzo(g,h,i)perylene	0.0800	0.0755	0.0743	94.4	92.9	43.0-128			1.58	20	
Benzo(k)fluoranthene	0.0800	0.0739	0.0732	92.3	91.5	45.0-128			0.938	20	
Chrysene	0.0800	0.0724	0.0740	90.5	92.5	48.0-127			2.11	20	
Dibenz(a,h)anthracene	0.0800	0.0735	0.0732	91.9	91.5	43.0-132			0.382	20	
Fluoranthene	0.0800	0.0763	0.0759	95.4	94.9	49.0-129			0.510	20	
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## QUALITY CONTROL SUMMARY

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

(LCS) R3283931-1 02/04	CS) R3283931-1 02/04/18 01:57 • (LCSD) R3283931-2 02/04/18 02:19											
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits		
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%		
Fluorene	0.0800	0.0658	0.0680	82.2	85.0	50.0-120			3.35	20		
Indeno(1,2,3-cd)pyrene	0.0800	0.0743	0.0739	92.8	92.4	44.0-131			0.505	20		
Naphthalene	0.0800	0.0655	0.0681	81.9	85.2	50.0-120			3.89	20		
Phenanthrene	0.0800	0.0700	0.0688	87.5	86.0	48.0-120			1.76	20		
Pyrene	0.0800	0.0721	0.0709	90.2	88.7	48.0-135			1.71	20		
1-Methylnaphthalene	0.0800	0.0752	0.0780	94.0	97.5	52.0-122			3.57	20		
2-Methylnaphthalene	0.0800	0.0705	0.0730	88.2	91.3	52.0-120			3.47	20		
2-Chloronaphthalene	0.0800	0.0679	0.0701	84.9	87.6	50.0-120			3.06	20		
(S) Nitrobenzene-d5				83.7	83.6	14.0-149						
(S) 2-Fluorobiphenyl				80.5	80.6	34.0-125						
(S) p-Terphenyl-d14				81.2	79.0	23.0-120						

## L967387-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

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S) L967387-04 02/04/18 14:57 • (MS) R3283931-4 02/04/18 15:19 • (MSD) R3283931-5 02/04/18 15:41												
•	5					Dilution		MS Qualifier	MSD Qualifier			
mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	
0.0800	ND	0.0639	0.0670	79.9	83.7	1	20.0-136			4.67	24	
0.0800	ND	0.0556	0.0634	69.5	79.2	1	29.0-124			13.0	20	
0.0800	ND	0.0585	0.0660	73.2	82.6	1	35.0-120			12.0	20	
0.0800	ND	0.0557	0.0625	69.6	78.2	1	13.0-132			11.6	27	
0.0800	ND	0.0560	0.0635	70.0	79.3	1	14.0-138			12.5	27	
0.0800	ND	0.0501	0.0572	62.7	71.5	1	10.0-129			13.2	31	
0.0800	ND	0.0566	0.0626	69.6	77.0	1	10.0-133			9.99	30	
0.0800	ND	0.0574	0.0645	71.8	80.6	1	15.0-131			11.6	27	
0.0800	ND	0.0592	0.0665	74.0	83.2	1	15.0-137			11.7	25	
0.0800	ND	0.0594	0.0639	74.3	79.9	1	15.0-132			7.25	27	
0.0800	ND	0.0568	0.0621	71.0	77.6	1	13.0-139			9.01	28	
0.0800	ND	0.0529	0.0597	66.1	74.6	1	27.0-122			12.1	22	
0.0800	ND	0.0574	0.0623	71.8	77.9	1	11.0-133			8.18	29	
0.0800	ND	0.0568	0.0634	71.0	79.3	1	18.0-136			11.0	21	
0.0800	ND	0.0531	0.0609	66.4	76.1	1	15.0-133			13.7	25	
0.0800	ND	0.0557	0.0636	67.8	77.8	1	11.0-146			13.3	29	
0.0800	ND	0.0638	0.0661	79.7	82.6	1	24.0-137			3.49	22	
0.0800	ND	0.0602	0.0621	75.3	77.6	1	23.0-136			3.01	22	
0.0800	ND	0.0609	0.0632	76.1	78.9	1	36.0-120			3.71	20	
				68.7	77.6		14.0-149					
				69.9	71.5		34.0-125					
				64.1	70.4		23.0-120					
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	Spike Amount           mg/kg           0.0800	Spike Amount         Original Result           mg/kg         mg/kg           0.0800         ND           0.0800         ND	Spike Amount         Original Result mg/kg         MS Result mg/kg           0.0800         ND         0.0639           0.0800         ND         0.0556           0.0800         ND         0.0557           0.0800         ND         0.0557           0.0800         ND         0.0557           0.0800         ND         0.0560           0.0800         ND         0.0561           0.0800         ND         0.0561           0.0800         ND         0.0561           0.0800         ND         0.0574           0.0800         ND         0.0592           0.0800         ND         0.0594           0.0800         ND         0.0529           0.0800         ND         0.0574           0.0800         ND         0.0638           0.0800         ND         0.0602      0	Spike Amount         Original Result         MS Result         MSD Result           mg/kg         mg/kg         mg/kg         mg/kg           0.0800         ND         0.0639         0.0670           0.0800         ND         0.0556         0.0634           0.0800         ND         0.0557         0.0625           0.0800         ND         0.0557         0.0625           0.0800         ND         0.0560         0.0572           0.0800         ND         0.0566         0.0626           0.0800         ND         0.0566         0.0626           0.0800         ND         0.0574         0.0645           0.0800         ND         0.0592         0.0665           0.0800         ND         0.0594         0.0623           0.0800         ND         0.0574         0.0623           0.0800         ND         0.0574         0.0623           0.0800         ND         0.0574         0.0623           0.0800         ND         0.0574         0.0636           0.0800         ND         0.0574         0.0636           0.0800         ND         0.0577         0.0636 <td< td=""><td>Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MSD Result mg/kg         MS Rec. mg/kg           0.0800         ND         0.0639         0.0670         79.9           0.0800         ND         0.0556         0.0634         69.5           0.0800         ND         0.0556         0.0634         69.5           0.0800         ND         0.0557         0.0625         69.6           0.0800         ND         0.0560         0.0635         70.0           0.0800         ND         0.0560         0.0625         69.6           0.0800         ND         0.0560         0.0625         69.6           0.0800         ND         0.0574         0.0645         71.8           0.0800         ND         0.0574         0.0665         74.0           0.0800         ND         0.0574         0.0632         71.8           0.0800         ND         0.0574         0.0623         71.8           0.0800         ND         0.0574         0.0623         71.8           0.0800         ND         0.0574         0.0633         71.6           0.0800         ND         0.0571         0.0636         67.8</td><td>Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MS Result mg/kg         MS Rec. mg/kg         MSD Result mg/kg         MS Rec. mg/kg         MSD Result mg/kg         MSD Result mg/kg<!--</td--><td>Spike Amoun         Original Result         MS Result         MSD Result         MS Rec.         MSD Rec.         MSD Rec.         Dilution           mg/kg         mg/kg         mg/kg         0.0670         79.9         83.7         1           0.0800         ND         0.0556         0.0634         69.5         79.2         1           0.0800         ND         0.0556         0.0660         73.2         82.6         1           0.0800         ND         0.0557         0.0625         69.6         78.2         1           0.0800         ND         0.0560         0.0635         70.0         79.3         1           0.0800         ND         0.0560         0.0626         69.6         77.0         1           0.0800         ND         0.0564         0.0626         69.6         77.0         1           0.0800         ND         0.0574         0.0655         74.0         83.2         1           0.0800         ND         0.0594         0.0637         74.3         79.9         1           0.0800         ND         0.0574         0.0623         71.8         77.9         1           0.0800         ND         <td< td=""><td>Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MSD Result mg/kg         MSD Rec. %         Dilution %         Rec. Limits %           0.0800         ND         0.0639         0.0670         79.9         83.7         1         20.0136           0.0800         ND         0.0556         0.0634         69.5         79.2         1         29.0124           0.0800         ND         0.0557         0.0625         69.6         78.2         1         35.0120           0.0800         ND         0.0557         0.0625         69.6         78.2         1         10.0132           0.0800         ND         0.0560         0.0635         70.0         79.3         1         10.0129           0.0800         ND         0.0561         0.0625         67.6         71.5         1         10.0129           0.0800         ND         0.0564         0.0635         71.6         1         15.0131           0.0800         ND         0.0574         0.0665         74.0         83.2         1         15.0132           0.0800         ND         0.0584         0.0621         71.0         77.6         1         10.0133           0.0800</td><td>Spike Amount       Original Result       MSD Result       MSD Rec.       MSD Rec.       Dilution       Rec. Limits       MS Qualifier         mg/kg       mg/kg       mg/kg       %<!--</td--><td>Spike Amount         Original Result         MS Result         MS Decsult         MS Pace.         MSD Rec.         Dilution         Rec. Limits         MS Qualifier         MSD Qualifier           mg/kg         mg/kg         %         <td< td=""><td>Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MS Decsit mg/kg         MSD Result %         MSD Result %         MSD Result %</td><td>Spike Amoun         Original Resul         MS Result         MS Result         MS Result         MS Dec.         MS Dec.         MISD         Res.         MS Dec.         MS Dec.</td></td<></td></td></td<></td></td></td<>	Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MSD Result mg/kg         MS Rec. mg/kg           0.0800         ND         0.0639         0.0670         79.9           0.0800         ND         0.0556         0.0634         69.5           0.0800         ND         0.0556         0.0634         69.5           0.0800         ND         0.0557         0.0625         69.6           0.0800         ND         0.0560         0.0635         70.0           0.0800         ND         0.0560         0.0625         69.6           0.0800         ND         0.0560         0.0625         69.6           0.0800         ND         0.0574         0.0645         71.8           0.0800         ND         0.0574         0.0665         74.0           0.0800         ND         0.0574         0.0632         71.8           0.0800         ND         0.0574         0.0623         71.8           0.0800         ND         0.0574         0.0623         71.8           0.0800         ND         0.0574         0.0633         71.6           0.0800         ND         0.0571         0.0636         67.8	Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MS Result mg/kg         MS Rec. mg/kg         MSD Result mg/kg         MS Rec. mg/kg         MSD Result mg/kg         MSD Result mg/kg </td <td>Spike Amoun         Original Result         MS Result         MSD Result         MS Rec.         MSD Rec.         MSD Rec.         Dilution           mg/kg         mg/kg         mg/kg         0.0670         79.9         83.7         1           0.0800         ND         0.0556         0.0634         69.5         79.2         1           0.0800         ND         0.0556         0.0660         73.2         82.6         1           0.0800         ND         0.0557         0.0625         69.6         78.2         1           0.0800         ND         0.0560         0.0635         70.0         79.3         1           0.0800         ND         0.0560         0.0626         69.6         77.0         1           0.0800         ND         0.0564         0.0626         69.6         77.0         1           0.0800         ND         0.0574         0.0655         74.0         83.2         1           0.0800         ND         0.0594         0.0637         74.3         79.9         1           0.0800         ND         0.0574         0.0623         71.8         77.9         1           0.0800         ND         <td< td=""><td>Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MSD Result mg/kg         MSD Rec. %         Dilution %         Rec. Limits %           0.0800         ND         0.0639         0.0670         79.9         83.7         1         20.0136           0.0800         ND         0.0556         0.0634         69.5         79.2         1         29.0124           0.0800         ND         0.0557         0.0625         69.6         78.2         1         35.0120           0.0800         ND         0.0557         0.0625         69.6         78.2         1         10.0132           0.0800         ND         0.0560         0.0635         70.0         79.3         1         10.0129           0.0800         ND         0.0561         0.0625         67.6         71.5         1         10.0129           0.0800         ND         0.0564         0.0635         71.6         1         15.0131           0.0800         ND         0.0574         0.0665         74.0         83.2         1         15.0132           0.0800         ND         0.0584         0.0621         71.0         77.6         1         10.0133           0.0800</td><td>Spike Amount       Original Result       MSD Result       MSD Rec.       MSD Rec.       Dilution       Rec. Limits       MS Qualifier         mg/kg       mg/kg       mg/kg       %<!--</td--><td>Spike Amount         Original Result         MS Result         MS Decsult         MS Pace.         MSD Rec.         Dilution         Rec. Limits         MS Qualifier         MSD Qualifier           mg/kg         mg/kg         %         <td< td=""><td>Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MS Decsit mg/kg         MSD Result %         MSD Result %         MSD Result %</td><td>Spike Amoun         Original Resul         MS Result         MS Result         MS Result         MS Dec.         MS Dec.         MISD         Res.         MS Dec.         MS Dec.</td></td<></td></td></td<></td>	Spike Amoun         Original Result         MS Result         MSD Result         MS Rec.         MSD Rec.         MSD Rec.         Dilution           mg/kg         mg/kg         mg/kg         0.0670         79.9         83.7         1           0.0800         ND         0.0556         0.0634         69.5         79.2         1           0.0800         ND         0.0556         0.0660         73.2         82.6         1           0.0800         ND         0.0557         0.0625         69.6         78.2         1           0.0800         ND         0.0560         0.0635         70.0         79.3         1           0.0800         ND         0.0560         0.0626         69.6         77.0         1           0.0800         ND         0.0564         0.0626         69.6         77.0         1           0.0800         ND         0.0574         0.0655         74.0         83.2         1           0.0800         ND         0.0594         0.0637         74.3         79.9         1           0.0800         ND         0.0574         0.0623         71.8         77.9         1           0.0800         ND <td< td=""><td>Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MSD Result mg/kg         MSD Rec. %         Dilution %         Rec. Limits %           0.0800         ND         0.0639         0.0670         79.9         83.7         1         20.0136           0.0800         ND         0.0556         0.0634         69.5         79.2         1         29.0124           0.0800         ND         0.0557         0.0625         69.6         78.2         1         35.0120           0.0800         ND         0.0557         0.0625         69.6         78.2         1         10.0132           0.0800         ND         0.0560         0.0635         70.0         79.3         1         10.0129           0.0800         ND         0.0561         0.0625         67.6         71.5         1         10.0129           0.0800         ND         0.0564         0.0635         71.6         1         15.0131           0.0800         ND         0.0574         0.0665         74.0         83.2         1         15.0132           0.0800         ND         0.0584         0.0621         71.0         77.6         1         10.0133           0.0800</td><td>Spike Amount       Original Result       MSD Result       MSD Rec.       MSD Rec.       Dilution       Rec. Limits       MS Qualifier         mg/kg       mg/kg       mg/kg       %<!--</td--><td>Spike Amount         Original Result         MS Result         MS Decsult         MS Pace.         MSD Rec.         Dilution         Rec. Limits         MS Qualifier         MSD Qualifier           mg/kg         mg/kg         %         <td< td=""><td>Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MS Decsit mg/kg         MSD Result %         MSD Result %         MSD Result %</td><td>Spike Amoun         Original Resul         MS Result         MS Result         MS Result         MS Dec.         MS Dec.         MISD         Res.         MS Dec.         MS Dec.</td></td<></td></td></td<>	Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MSD Result mg/kg         MSD Rec. %         Dilution %         Rec. Limits %           0.0800         ND         0.0639         0.0670         79.9         83.7         1         20.0136           0.0800         ND         0.0556         0.0634         69.5         79.2         1         29.0124           0.0800         ND         0.0557         0.0625         69.6         78.2         1         35.0120           0.0800         ND         0.0557         0.0625         69.6         78.2         1         10.0132           0.0800         ND         0.0560         0.0635         70.0         79.3         1         10.0129           0.0800         ND         0.0561         0.0625         67.6         71.5         1         10.0129           0.0800         ND         0.0564         0.0635         71.6         1         15.0131           0.0800         ND         0.0574         0.0665         74.0         83.2         1         15.0132           0.0800         ND         0.0584         0.0621         71.0         77.6         1         10.0133           0.0800	Spike Amount       Original Result       MSD Result       MSD Rec.       MSD Rec.       Dilution       Rec. Limits       MS Qualifier         mg/kg       mg/kg       mg/kg       % </td <td>Spike Amount         Original Result         MS Result         MS Decsult         MS Pace.         MSD Rec.         Dilution         Rec. Limits         MS Qualifier         MSD Qualifier           mg/kg         mg/kg         %         <td< td=""><td>Spike Amount mg/kg         Original Result mg/kg         MS Result mg/kg         MS Decsit mg/kg         MSD Result %         MSD Result %         MSD Result %</td><td>Spike Amoun         Original Resul         MS Result         MS Result         MS Result         MS Dec.         MS Dec.         MISD         Res.         MS Dec.         MS Dec.</td></td<></td>	Spike Amount         Original Result         MS Result         MS Decsult         MS Pace.         MSD Rec.         Dilution         Rec. 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#### Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

## QUALITY CONTROL SUMMARY

L967603-02,04,05

Ср

### Method Blank (MB)

(MB) R3284224-3 02/05	5/18 03:01			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l		ug/l	ug/l
Anthracene	U		0.0140	0.0500
Acenaphthene	U		0.0100	0.0500
Acenaphthylene	U		0.0120	0.0500
Benzo(a)anthracene	U		0.00410	0.0500
Benzo(a)pyrene	U		0.0116	0.0500
Benzo(b)fluoranthene	0.00299	J	0.00212	0.0500
Benzo(g,h,i)perylene	0.00295	J	0.00227	0.0500
Benzo(k)fluoranthene	U		0.0136	0.0500
Chrysene	U		0.0108	0.0500
Dibenz(a,h)anthracene	U		0.00396	0.0500
Fluoranthene	U		0.0157	0.0500
Fluorene	U		0.00850	0.0500
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500
Naphthalene	0.0206	J	0.0198	0.250
Phenanthrene	U		0.00820	0.0500
Pyrene	U		0.0117	0.0500
1-Methylnaphthalene	U		0.00821	0.250
2-Methylnaphthalene	U		0.00902	0.250
2-Chloronaphthalene	U		0.00647	0.250
(S) Nitrobenzene-d5	91.9			31.0-160
(S) 2-Fluorobiphenyl	120			48.0-148
(S) p-Terphenyl-d14	107			37.0-146

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

(LCS) R3284224-1 02/0	05/18 02:17 • (LCSI	D) R3284224-	2 02/05/18 02	:39							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%	
Anthracene	2.00	2.31	2.43	116	121	64.0-142			4.93	20	
Acenaphthene	2.00	2.08	2.16	104	108	66.0-132			3.86	20	
Acenaphthylene	2.00	2.09	2.19	105	109	65.0-132			4.48	20	
Benzo(a)anthracene	2.00	1.95	2.05	97.7	102	59.0-134			4.67	20	
Benzo(a)pyrene	2.00	2.18	2.28	109	114	61.0-145			4.55	20	
Benzo(b)fluoranthene	2.00	2.02	2.11	101	106	57.0-136			4.71	20	
Benzo(g,h,i)perylene	2.00	2.24	2.35	112	118	54.0-140			4.73	20	
Benzo(k)fluoranthene	2.00	2.25	2.36	112	118	57.0-141			5.01	20	
Chrysene	2.00	2.18	2.30	109	115	63.0-140			5.26	20	
Dibenz(a,h)anthracene	2.00	2.23	2.34	111	117	49.0-141			4.73	20	
Fluoranthene	2.00	2.42	2.54	121	127	65.0-143			4.77	20	
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## QUALITY CONTROL SUMMARY L967603-02,04,05

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

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(LCS) R3284224-1 02/0	CS) R3284224-1 02/05/18 02:17 • (LCSD) R3284224-2 02/05/18 02:39										
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%	
Fluorene	2.00	2.11	2.22	105	111	64.0-129			5.34	20	
Indeno(1,2,3-cd)pyrene	2.00	2.23	2.34	111	117	53.0-141			4.83	20	
Naphthalene	2.00	2.15	2.24	108	112	68.0-129			3.66	20	
Phenanthrene	2.00	1.99	2.08	99.3	104	62.0-132			4.50	20	
Pyrene	2.00	1.96	2.05	98.1	102	58.0-156			4.40	20	
1-Methylnaphthalene	2.00	2.37	2.45	119	123	68.0-137			3.27	20	
2-Methylnaphthalene	2.00	2.29	2.36	114	118	68.0-134			3.26	20	
2-Chloronaphthalene	2.00	2.24	2.35	112	118	65.0-129			4.99	20	
(S) Nitrobenzene-d5				89.4	99.9	31.0-160					
(S) 2-Fluorobiphenyl				119	126	48.0-148					
(S) p-Terphenyl-d14				108	116	37.0-146					

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## GLOSSARY OF TERMS

## ¥

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Ss

Cn

Sr

*Q*c

GI

AI

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#### 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.

#### Abbreviations and Definitions

	Depute we repeated been deputed by the depute of the second of this will put the properties a depute of the state for solid
(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, 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.
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
В	The same analyte is found in the associated blank.
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.
J4	The associated batch QC was outside the established quality control range for accuracy.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.

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## ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE. \* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

#### State Accreditations

Alabama	40660
Alaska	UST-080
Arizona	AZ0612
Arkansas	88-0469
California	01157CA
Colorado	TN00003
Connecticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia <sup>1</sup>	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
lowa	364
Kansas	E-10277
Kentucky <sup>1</sup>	90010
Kentucky <sup>2</sup>	16
Louisiana	AI30792
Maine	TN0002
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05

Nevada	TN-03-2002-34
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico	TN00003
New York	11742
North Carolina	Env375
North Carolina <sup>1</sup>	DW21704
North Carolina <sup>2</sup>	41
North Dakota	R-140
Ohio-VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	221
South Carolina	84004
South Dakota	n/a
Tennessee <sup>1 4</sup>	2006
Texas	T 104704245-07-TX
Texas ⁵	LAB0152
Utah	6157585858
Vermont	VT2006
Virginia	109
Washington	C1915
West Virginia	233
Wisconsin	9980939910
Wyoming	A2LA

#### Third Party Federal Accreditations

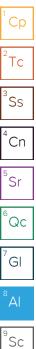
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC	100789
A2LA – ISO 17025 5	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA-Crypto	TN00003		

<sup>1</sup> Drinking Water <sup>2</sup> Underground Storage Tanks <sup>3</sup> Aquatic Toxicity <sup>4</sup> Chemical/Microbiological <sup>5</sup> Mold n/a Accreditation not applicable

#### **Our Locations**

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.





		10000	Billing Info	ormation:	1000				1	Analysis	/ Conta	iner / Preservativ	1		Chain of Cust	ody Page L of 4
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Phone: <b>503-641-3478</b> Fax:	Client Project			Lab Project # GRIBOR-576	4		16ozClr-NoPres	16ozClr-NoPres	40ml/NaHS04/Syr/MeOH	PAHs 16ozClr-NoPres	04/54				1.# 76 F16	7 607 51
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RP-102-20	G	SS	20	1/29/18	1636	5	100	1514	1585	100			1.1	1.1.1		A REPORT
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BP-104-13	G	SS	13	1/50/18	948	5			in the set		1999	11.12 S.N.1		025	100	- Caracandar
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9750 SW Nimbus Avenue Beaverton, OR 97008			and states and states and	V Nimbus A ton, OR 970			Clik	1				14.2					L'A-B	ESC
Report to: Nora Utevsky			Email To:	nutevsky@gri.	.com; m	imarshall@gr	i.com			No. 10	es	T					12065 Lebano Mount Juliet, 1	
Project Description: 5764	50	1195		City/State Collected:	(000	Bay/	OR	ES .	res	MeOH	-NoPr	/MeO			100	1	Phone: 615-75 Phone: 800-76 Fax: 615-758-5	8-5858 7-5859
Phone: 503-641-3478 Fax:	Client Project	t#		Lab Project / GRIBOR-5	#	<u>.</u>		6ozClr-NoPres	16ozClr-NoPres	t/syr/i	6ozClr	04/Syr.					1# G6	7603
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Immediately Packed on Ice N Y	Next Da Two Da Three D	γ 10 Da	(Rad Only) y (Rad Only)	Date I	Results	Needed	No. of		NWTPHDX NOSGT	NWTPHGX 40ml/NaHS04/Syr/MeOH	SV8270PAHSIMD PAHs 16o2Clr-NoPres	V8260 VOCs 40ml/NaHS04/Syr/MeOH			Cons.	12.23	Prelogin: Pr TSR: 110 - 8 PB:   -  C	rian Ford
Sample ID	Comp/Grab	Matrix *	Depth	Date		Time	Cntrs	M6010PP	NWTP	NWTP	5V827	/8260				and the second sec	Shipped Via	FedEX Ground
BP-107-12	6	SS	12	1/30/1	8	1140	5	1	-	1000		-			128 C.S.		Remarks	Sample # (lab only
BP-108-13	6	SS	13	130	18	1309	5	1.30		Slope	100				· · ·		1	Contraction of the
BP-108-17	6	SS	17	1/30/1	8	1302	_		2.55	COLOR H								
BP-109-W		(Jew)	1.1.1.1	1/30/1	8	1320	12	一長市	134					201			-	- States
POHD-110-W	12.	6633	12 . 2	NI	4	1415	12	Sec.			1	-35.5	-				1	
FO-111-8	G	SS	8	1301	2	1500	5		-		-							1 No. 2 Mars
FO-112-9	G	SS	9	1/20/14	2	1537					125	2555					50	13
FO-113-8	6	SS	8	120/12		1603	-		1	1.122.2		1		-		1		
FO-114-13	G	SS	13	Veni	8	1636									1000	-	1	
FO-116-14	G	SS	14	1/3/1	2-	nalz	5					10.0	100		-	-	1	
Matrix:	Remarks:	Section Section	1	1 / SAL	DI	ogis	1-1		12.1	223	-	and the					V	14 Start
iS - Soil AIR - Air E - Filter 5W - Groundwater B - Bioassay NW - WasteWater	*5	ee v	note	On	Pa	ge 1	-				pH .		_ Temp_		144441101	gned/Ac	Receipt ( ent/Intaci curate: e Intact:	Hecklist
DW - Drinking Water DT - Other	Samples return	ned via: dEx Couri	er	and the second	Trackin		-	100	112.201	100	Flow	1	Other_	a Cartera	Correc	t bottl	es used: lume sent:	
Relinquished by : (Signature)		Date: 2/2/	In		3.05.113	ed by: (Signati	ure)	140	133	Ti	rip Blank	Receiv			VOA Ze	ro Head	f Applicak	le
Relinquished by : (Signature)		Date:		~	Receive	ed by: (Signatu	are)		Non-		51.	112	TBR		145.02		and the second	
Relinquished by : (Signature)	22.01							1		Te	ISP	1. "(	Bottles P	245	If preser	vation re	quired by Lo	gin: Date/Time
reministed by : (Signature)	Sec. 1	Date:	n	me:	Receive	dor no by	Signatu	10	83	34 00	2.3.	18	Time;	845	Hold:			Candition: (NCF)/ OK

		200	Billing Inform	mation:				1	A	nalysis /	/ Contair	ner / Preservative		12.00	Chain of Cu	istady	Page 3 of 4
GRI - Beaverton, OR 9750 SW Nimbus Avenue Beaverton, OR 97008			Patty Nor 9750 SW		ue	Pres Chk	Z	S			5					E	
Report to: Nora Utevsky			Email To: n	utevsky@gri.com;	mmarshall@gri.u	com				TW-	KO3				12065 Lebar Mount Julie Phone: 615-	t, TN 37122	
Project		10.00		City/State	1		103	U	12 State	Pres	토				Phone: 800- Fax: 615-75		首次事
Description:		1250.0		Collected:			Ŧ	H-q	Sec.	Noi	IDPI		1		1.#	967	1 1
Phone: <b>503-641-3478</b> Fax:	Client Project			Lab Project # GRIBOR-5764	•		250mlHDPE-HNO3	ml Am	D	-dmbl	Somlh	PH			Table #	101	605
Collected by (print):	Site/Facility ID	W		P.O. #				T 100	40mlAmb HCI	Hs 40m	50102	40mlAmb-HCl			Acctnum		Carl Street and Street and
Collected by (signature): Immediately Packed on Ice N Y	Rush? (L Same D: Next Da Two Day Three D	y5 Day /10 D		Quote # Date Rest	ults Needed	No. of	ss PP metals	NWTPHDX NOSGT 100ml Amb-HCI	NWTPHGX 40mb	PAHSIMLVID PAHs 40mlAmb-NoPres-WT	PP Metals 6010 250mlHDPE-HN03	V8260 VOCs 40n	E. M. M.		Prelogin: TSR: 110 PB: /	P6357 - Brian F	780 Ford 186
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	FF Diss	TWI	TWI	AHS	Total	/826			Shipped		EX Ground
FO-111-W		GW	Later of	1/31/18	0920	472		-	-		-	-			*		oy
60-117-13	G	Trave	13	1/31/18	1021	5		1.1.0			1		-		1	-	15 BURDIN
FO-118-W		GW		1/3/18	1057	17	7	1.00	100	24	1.2		-				
FO-118-4	G	5-GW	4	1/31/18	1115	5	100				1011		2			-	1 He rate
BP-119-W		GW		1/31/18	1530	_	-	-	125	120			-	1000		92.23	05
BP-119-8	6	SGW	8	1.1.2	1555		1225	1	12123	-	1						06
BP-119-17	G	SGW	17	131/18	1545	-	-	1		-	1.00		-	1000		-	
BP-119-33	G	S-GW	33	1/21/6	1500				124	-	1500		-	12000	-		
BP-120-8	G	SGW	8	2/1/18	0940	the second division of	1200		1000	1.0	1000			Secold -		,	
BP-120-11	G	\$SGW	71	12/1/18	0945	5					1. Salar	1 233			ample Bace	int the	ASTIAF
* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater	Remarks:	*5	ee n	lote o	n po	3	2:	1		pi Fic	H	Temp Other	_	COC Sign Bottles Correct	ample Rece Present/I ed/Accurat arrive int bottles us	er act: ed:	Nep Ny Ng N
DW - Drinking Water OT - Other	Samples retu UPSF	urned via: edExCo	ourier	and the second sec	racking #					la contra		- Du		VOA Zero	If App Headspace	ollcabl	A 11
Relinquished by : (Signature)	~	Date: 2/2	/18	Time: 0800	leceived by: (Signi	ature)	New York		1	Trip B	lank Rec	4 HeL/M					
Relinquished by : (Signature)		Date:		Time: F	leceived by: (Sign	ature)		1.		Temp	H12	*C Bottles Receiv	15	If preserve	ation require	d by Logi	n: Date/Time
Relinquished by : (Signature)	1-1-1	Date:	See 1	Time:	Received for lab P	r: (Sigr	(anture)	, 83	34	Date:	3+8	Time:	5	Hold:	and a second	A REAL	Condition: NCF / OK
Document No: J1-680	-RGL-GRI-0000	01-00	1035	A March	Rev	vision:	1		14	200	21 2 2	Set States		and the second s	Reiss	ued for	Use

	Southern.		Billing Infe	ormation:	S" 2 34)		1,		1.8	Analysis	/ Conta	iner / Pre	servative	1100 A	Chain of Custo	ody Page Y of
GRI - Beaverton, OR			Patty N	orgaard		Pres	0	a	2005		108		Per TEUTE			
				V Nimbus Aver	nue	Cnk	13	V	Res	123	V	19.14			1 1	LV(
9750 SW Nimbus Avenue			The second s	on, OR 97008		-	1992	1	1		1953		1000	00.00		LOC
Beaverton, OR 97008							200	133	1200	14.1	125	100	100	1500	L.A.B.S	andustory of Rentingen
Report to:	Gellen I	1.11 351	Email To:	nutevsky@gri.com	; mmarshall@gri	i.ce n	172	125	1303	F	-	1.15				
Nora Utevsky		6.25	1158	and the second				192	133	N-9	NO	1.4		1000	12065 Lebanon I Mount Juliet, TN	37122 11 2 2 2
Description: 5764-	1195			City/State Collected: CC	DOS Bay	1/OR	250mlHDPE-HNO3	DH	No.	PAHSIMLVID PAHS 40mlAmb-NoPres-WT	Total PP Metals 6010 250mlHDPE-HNO3			dia an	Phone: 615-758 Phone: 800-767 Fax: 615-758-58	5859 112 30
Phone: 503-641-3478	Client Projec	t#		Lab Project #	1	1.5	PE-	P B	(mail)	N-Q	E	1.54	6.9	Sec.	L# 47	16=4
Fax:	5764 - \\	175		GRIBOR-576	4		9	AI	-	Am	Gm	Ū			- th	16.7
Collected by (print): N. Utensky	Site/Facility I	D#		P.O. #	-		Soml	100m	ib HCI	40ml	10 25	H-qm			Table # Acctnum: GI	DIDOD.
Collected by (signature):	Rush2	Lab MUST Be	Matified	Quote #				15	IAn	Hs	60	nta	36.5		Template:T1	
GAI. 1 Atta	Same (						metals	IOS	40mlAmb	PA	SIE	40		12.2	Prelogin: P6	
Immediately	Next D		y (Rad Only)	Date Rest	ilts Needed			XN		NID I	Met	S	14	100	TSR: 110 - Br	
Packed on Ice N Y X	Three (	and the second second	ay (Rad Only)			No.	s pp	H	HG	ML	d	2	22.15	1000	Theory and the second second second	19-186
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	FF Diss	NWTPHDX NOSGT 100ml Amb-HCl	NWTPHGX	AHSI	otal	V8260 VOCs 40mlAmb-HCl				FedEX Ground
BP-121-W	G	GW	S. Milling	2/1/18	1115	12			-	-		-	26.7	1000	*	amiliae a tran grav)
BP-121-9		55 GW	9	2/1/18	1110	5	100		1	10.0	10001				×	
B0-177-7	-	SSGW	7	2/1/18	111		1	-	-	28.0	128,000		Contraction of the		Section of the	La La State La Tri
BP-123-8	6	SGW	T B	0111	1145	5	2			-	1000		1	1000		
and the second				1110	1245	5	1936	12.4	1		1		205			
BP-125-13	G	SSGW	13	2/1/18	1445	5	E	1	1	1.23		1	18		1. 1. 1. 1. 1. 1.	
BP-126-6	G	SSEW	6	41/18	1520	5	1	1	d'and	1	. talk	112	73	100		- Alteria (M
BP-127-8	G	SSGW	8	2/1/18	1605	5	62.00		124	-16	15.30		1.5		State of the second	The second
BP-127-13	G	SGW	13	2/1/18	1610	5	112	1	- Mary	1	1221	1.5	1914 C	200	1 102	C. CHERNEY CO.
		GW	12.030				6415			1.10	161.		110 11			-
Maria Maria		GW	223.0	a sur la				1.5.7	Server and	1.00						1000
* Matrix:	Remarks:				-		12		10000		110.55	-			untile Dissection of	1990
SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay	* 5	see	NOte	2  ON	Page	1				pH		Temp		COC Seal	Present/Intact ed/Accurate:	CI _NP _Y _N
WW - WasteWater	And and a second second	and hereit of the	1		0		Tran 1			Flow		Other		Bottles a	arrive intact:	A.M.
DW - Drinking Water OT - Other	Samples return UPS Fe	rned via: adEx Cou	rier	Tra	icking #	10-10	Talle	Sector Sector	1074	TENN	a fill	61230	Standard in	Sufficien	ottles used: t volume sent;	
Relinquished by : (Signature)		Date:		And a state of the	ceived by: (Signat	urel	938 C	01231	1	Tele Dia	nk Recel		100	VOA Zero	If Applical Neadspace:	A N
Chin 1 Pm	+	1411		0800	center of a foiBing	aret				TTIP Dial	in necen		/No EL/MeoH	Freattvat	ion Correct/Ch	iecked:
Relinquished by : (Signature)	~	Date:		The second se	ceived by: (Signat	ure)	12.2	-				1 71		Unreason	ine served the se	
		1.000							34	I.S	and the second se	-	245	in preservat	ion required by Lo	gin: Date/Time
Relinquished by : (Signature)	1.2.1.1.1	Date:	T	ime: Rei	eived for lab by	(Signati	uren.	1.1	7-11	Date:	10	Time;		Hold:		1
		1	1.1		())	1	L	50	39	2.3	18	0	145	monu.		NCP / OK
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Reissued for Use

From:	Jason Romer
Sent:	Friday, February 02, 2018 2:48 PM
To:	Login; Due SVOC; Due VOC
y	Brian Ford
Subject:	Incoming RUSH - GRIBOR - arriving tomorrow, 02/03

(T131815 and T131816) - please note we are NOT logging the Metals for these even though it's in the template and we All samples on the COC are unchecked for analysis. Please log as follows as R3 due Wednesday, 02/07 may receive the containers.

Soils - log for NWTPHDXNOSGT, NWTPHGX, SV8270PAHSIMD, V8260, TERRACORE and TS BP-102-12 FO-111-8

FO-111-8 BP-119-8 Waters - log for NWTPHDXNOSGT, NWTPHGX, PAHSIMLVID and V8260 BP-102-W

FO-111-W BP-119-W All other samples will be PLACED ON HOLD pending results of the original RUSH samples above.

COC may not be marked RUSH

Thanks, # Jason Romer

Project Manager

ESC Lab Sciences-a subsidiary of Pace Analytical 12065 Lebanon Road | Mt. Juliet, TN 37122 800.767.5859 Ext. 9713 | Direct 615.773.9713 jromer@esclabsciences.com | www.esclabsciences.com

Andy Vann



Lo	Login #:9667603	Client:	Client: GRIBOR	Date:2/3	Evaluated by:Matt S
2	Non-Conformance (check applicable items)	heck and	blicable items)		
	Consistentia Internetive		Chain of Custody Clarification	rification	
	Parameter(s) past holding	ding	Login Clarification Needed	eded	If Broken Container:
	Improper	2	Chain of custody is incomplete	complete	Insufficient packing material around container
	Improper container type		Please specify Metals requested.	requested.	Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.	equested.	Improper handling by carrier (FedEx / UPS / Couri
	Incufficiant cample volume	lime	Received additional s	Received additional samples not listed on coc.	Sample was frozen
	Sample is biphasic.		Sample ids on contait coc	Sample ids on containers do not match ids on coc	Container lid not intact
	Vials received with headspace.	adspace.	Trip Blank not received.	ed.	If no Chain of Custody:
×	Broken container		Client did not "X" analysis.	Ilysis.	Received by:
	-		Chain of Custody is missing	nissing	Date/Time:
	Sufficient sample remains	ins			Temp./Cont. Rec./pH:
1					

Login Comments: 1. <u>1 of 6 vials for FO-111-W received broken</u> 2. <u>Received TB broken</u>

racking# Carrier:

Client informed by:	Call	Email	×	Voice Mail	Date:	02/05/18	Time: 0900
tials	Client Contac	t: Nora Utev	sky			6	

# Login Instructions:

Analyze from remaining containers received intact Client informed. 1)



# ANALYTICAL REPORT

February 14, 2018



## **GRI** - Beaverton, OR

Sample Delivery Group: Samples Received: Project Number: Description:

L968449 02/03/2018 5764-1195 5764-1195

Report To:

Nora Utevsky 9750 SW Nimbus Avenue Beaverton, OR 97008

Entire Report Reviewed By: Buan Ford

Brian Ford Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

Document No: J1-680-RGL-GRI-00001-00 Revision: 1 12065 Lebanon Rd Mount Juliet. TN 37122 615-758-5858 800-767-5859

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<sup>5</sup> Sr	

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	SAMPLE SU	JMMA	RY	ON	IE LAB. NATIONWID
BP-102-12 L968449-01 Solid			Collected by N. Utevsky	Collected date/time 01/29/18 16:43	Received date/time 02/03/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Total Solids by Method 2540 G-2011	WG1070464	1	02/06/18 14:30	02/06/18 14:43	JAV
Mercury by Method 7471A	WG1072718	1	02/12/18 19:37	02/13/18 08:40	ABL
Aretals (ICP) by Method 6010B	WG1073100	1	02/13/18 14:48	02/13/18 19:51	ST
3P-102-W L968449-02 GW			Collected by N. Utevsky	Collected date/time 01/30/18 10:02	Received date/time 02/03/18 08:45
/lethod	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
Iercury by Method 7470A	WG1071210	1	02/08/18 12:11	02/09/18 08:32	TRB
letals (ICP) by Method 6010B	WG1071350	1	02/08/18 12:08	02/08/18 21:58	TRB
letals (ICPMS) by Method 6020	WG1071019	1	02/07/18 19:22	02/08/18 17:43	LAT
			Collected by	Collected date/time	Received date/time
FO-111-W L968449-03 GW			N. Utevsky	01/31/18 09:20	02/03/18 08:45
Method	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
Vercury by Method 7470A	WG1071210	1	02/08/18 12:11	02/09/18 08:34	TRB
Metals (ICP) by Method 6010B	WG1071350	1	02/08/18 12:08	02/08/18 22:02	TRB
Aetals (ICPMS) by Method 6020	WG1071019	1	02/07/18 19:22	02/08/18 17:46	LAT
			Collected by	Collected date/time	Received date/time
3P-119-W L968449-04 GW			N. Utevsky	01/31/18 15:30	02/03/18 08:45
Method	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
lercury by Method 7470A	WG1071210	1	02/08/18 12:11	02/09/18 08:36	TRB
Actals (ICP) by Method 6010B	WG1071350	1	02/08/18 12:08	02/08/18 22:05	TRB
letals (ICPMS) by Method 6020	WG1071019	1	02/07/18 19:22	02/08/18 17:50	LAT
			Collected by	Collected date/time	Received date/time
3P-119-8 L968449-05 Solid			N. Utevsky	01/31/18 15:55	02/03/18 08:45
lethod	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
otal Solids by Method 2540 G-2011	WG1070464	1	02/06/18 14:30	02/06/18 14:43	JAV
lercury by Method 7471A	WG1072718	1	02/12/18 19:37	02/13/18 08:43	RDS
Ietals (ICP) by Method 6010B	WG1073100	1	02/13/18 14:48	02/13/18 20:01	ST
			Collected by	Collected date/time	Received date/time
3P-101-7 L968449-06 Solid			N. Utevsky	01/29/18 15:14	02/03/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
otal Solids by Method 2540 G-2011	WG1072596	1	02/12/18 11:04	02/12/18 11:15	KDW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 13:22	DMG
			Collected by	Collected date/time	Received date/time
BP-101-30 L968449-07 Solid			N. Utevsky	01/29/18 15:39	02/03/18 08:45
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Fotal Solids by Method 2540 G-2011	WG1072596	1	02/12/18 11:04	02/12/18 11:15	KDW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 13:43	DMG
Document No: J1-680-RGL-GRI-00001-00	Revision	n: 1		Rei	ssued for Use
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Ср

<sup>2</sup>Tc

³Ss

⁴Cn

Sr

Qc

GI

<sup>®</sup>Al

<sup>9</sup>Sc

· · · · · · · · · · · · · · · · · · ·	SAMPLE SC			014	
BP-102-20 L968449-08 Solid			Collected by N. Utevsky	Collected date/time 01/29/18 16:36	Received date/time 02/03/18 08:45
Method	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
otal Solids by Method 2540 G-2011	WG1072596	1	02/12/18 11:04	02/12/18 11:15	KDW
iemi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 14:04	DMG
			Collected by	Collected date/time	Received date/time
3P-103-13 L968449-09 Solid			N. Utevsky	01/30/18 08:58	02/03/18 08:45
/lethod	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Fotal Solids by Method 2540 G-2011	WG1072596	1	02/12/18 11:04	02/12/18 11:15	KDW
emi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 14:24	DMG
			Collected by	Collected date/time	Received date/time
3P-104-13 L968449-10 Solid			N. Utevsky	01/30/18 09:48	02/03/18 08:45
Nethod	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
Fotal Solids by Method 2540 G-2011	WG1072596	1	02/12/18 11:04	02/12/18 11:15	KDW
emi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 14:45	DMG
			Collected by	Collected date/time	Received date/time
3P-104-20 L968449-11 Solid			N. Utevsky	01/30/18 09:48	02/03/18 08:45
Aethod	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
Fotal Solids by Method 2540 G-2011	WG1072596	1	02/12/18 11:04	02/12/18 11:15	KDW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 15:06	DMG
			Collected by	Collected date/time	Received date/time
BP-106-13 L968449-12 Solid			N. Utevsky	01/30/18 11:04	02/03/18 08:45
Method	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
Fotal Solids by Method 2540 G-2011	WG1072596	1	02/12/18 11:04	02/12/18 11:15	KDW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 15:27	DMG
			Collected by	Collected date/time	Received date/time
BP-107-12 L968449-13 Solid			N. Utevsky	01/30/18 11:40	02/03/18 08:45
Nethod	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Fotal Solids by Method 2540 G-2011	WG1072596	1	02/12/18 11:04	02/12/18 11:15	KDW
			00/07/40 00 54	02/00/10 15.47	DMG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 15:47	DIVIG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	Collected by	Collected date/time	
	WG1071161	1			
BP-108-13 L968449-14 Solid	WG1071161 Batch	1 Dilution	Collected by N. Utevsky Preparation	Collected date/time 01/30/18 13:09 Analysis	Received date/time
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM BP-108-13 L968449-14 Solid Method Total Solids by Method 2540 G-2011			Collected by N. Utevsky	Collected date/time 01/30/18 13:09	Received date/time 02/03/18 08:45
BP-108-13 L968449-14 Solid Method	Batch	Dilution	Collected by N. Utevsky Preparation date/time	Collected date/time 01/30/18 13:09 Analysis date/time	Received date/time 02/03/18 08:45 Analyst

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	SAMPLE SU		ONE LAB. NATIONWIL		
BP-108-17 L968449-15 Solid			Collected by N. Utevsky	Collected date/time 01/30/18 13:02	Received date/time 02/03/18 08:45
lethod	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
otal Solids by Method 2540 G-2011	WG1072598	1	02/12/18 10:51	02/12/18 11:03	JD
emi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 16:29	DMG
			Collected by	Collected date/time	Received date/time
3P-109-W L968449-16 GW			N. Utevsky	01/30/18 13:20	02/03/18 08:45
lethod	Batch	Dilution	Preparation	Analysis	Analyst
lercury by Method 7470A	WG1071210	1	date/time 02/08/18 12:11	date/time 02/09/18 07:42	TRB
	WG1071350	1	02/08/18 12:08	02/08/18 22:15	TRB
etals (ICP) by Method 6010B					
letals (ICPMS) by Method 6020	WG1071568 WG1071702	1	02/09/18 07:49 02/08/18 23:49	02/09/18 12:17 02/08/18 23:49	JPD BMB
olatile Organic Compounds (GC/MS) by Method 8260B					
emi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071139	1	02/07/18 22:00	02/08/18 12:52	DMG
			Collected by	Collected date/time	Received date/time
-O-110-W L968449-17 GW			N. Utevsky	01/30/18 14:15	02/03/18 08:45
lethod	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
lercury by Method 7470A	WG1071210	1	02/08/18 12:11	02/09/18 08:38	TRB
letals (ICP) by Method 6010B	WG1071350	1	02/08/18 12:08	02/08/18 22:18	TRB
letals (ICPMS) by Method 6020	WG1071568	1	02/09/18 07:49	02/09/18 12:33	JPD
olatile Organic Compounds (GC/MS) by Method 8260B	WG1071702	1	02/09/18 00:08	02/09/18 00:08	BMB
emi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071139	3	02/07/18 22:02	02/08/18 13:15	DMG
			Collected by	Collected date/time	Received date/time
-0-113-8 L968449-18 Solid			N. Utevsky	01/30/18 16:03	02/03/18 08:45
lethod	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
otal Solids by Method 2540 G-2011	WG1072598	1	02/12/18 10:51	02/12/18 11:03	JD
emi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 16:50	DMG
			Collected by	Collected date/time	Received date/time
-0-114-13 L968449-19 Solid			N. Utevsky	01/30/18 16:36	02/03/18 08:45
lethod	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
otal Solids by Method 2540 G-2011	WG1072598	1	02/12/18 10:51	02/12/18 11:03	JD
olatile Organic Compounds (GC/MS) by Method 8260B	WG1071579	1	01/30/18 16:36	02/10/18 14:26	ACG
emi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 17:11	DMG
			Collected by	Collected date/time	Received date/time
-0-116-14 L968449-20 Solid			N. Utevsky	01/31/18 09:13	02/03/18 08:45
lethod	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
otal Solids by Method 2540 G-2011	WG1072601	1	02/12/18 10:00	02/12/18 10:15	KDW
olatile Organic Compounds (GC/MS) by Method 8260B	WG1071579	1	01/31/18 09:13	02/10/18 14:47	ACG
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 17:31	DMG

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PO 116-W L966449-21 GW         Cilicate by United Parts         Collected by United Parts         Collected dardim United Parts         Illicate data United Parts           Method Method Matter Opart Computers (CMR) by Method S2DD SM         POURTS         3         G2018 E02         2009 E027         2009 E027           Semi Visite Opart Computers (CMR) by Method S2DD SM         POURTS         3         G2018 E02         2009 E027         2009 E027           FO-116-W L966449-22 Solid         Ref         Data S018 PD 400         Ref         Callerd by Collected Parts         Collected Parts         Ref           FO-116-W L966449-22 Solid         Ref         Data S018 PD 400         Collected Parts         Ref           Method         Ref         Data S018 PD 400         2009 F017         Collected Parts         Adapt           Method         Ref         Data S018 PD 400         2009 F017         Collected Parts         Adapt           Method Data S016 PD 400         Colected Parts         Collected Parts         Adapt         Adapt           Method Data S016 PD 400         Colected Parts         Colected Parts         Adapt         Adapt           Method Data S016 PD 400 PD 400         Colected Parts         Colected Parts         Adapt         Adapt           Method Data S016 PD 400 PD 400         Colected Parts		SAMPLE SUI	MMAF	ONE LAB. NATIONWIDE.		
consistence         consistence         consistence         consistence           Semi Velatile Organic Compande (ICOMS by Microse 8270-SM         W607019         3         0.00709 82200         02.0989 833         DM6           FO-118.4 L1968449-22 Solid         Bala         Dittoo         Neuroid (ICOMS by Microse 8270-5M         Calence of accostme         Review directioner           FO-118.4 L1968449-22 Solid         W007019         3         0.00709 82200         Calence of accostme         Review directioner           FO-118.4 L1968449-22 Solid         W007016         0.00728 B100         Calence of accostme         Review directioner           Method         Bala         Dittoo         Neuroid (ICOMS by Microse 8270-5M         W00776         0.02728 B100         Calence of accostme         Review directioner           BP-119-17 L968449-23 Solid         W007761         1         0.02081 B251         CAMB         Calence of accostme         Review directioner           BP-119-17 L968449-23 Solid         W007761         1         0.02081 B251         CAMB         Calence of accostme         Review directioner           BP-119-17 L968449-23 Solid         W007761         1         0.02081 B251         CAMB         Calence of accostme         Review directioner           BP-119-17 L968449-24 Solid         Baden         Ditt	FO-118-W L968449-21 GW			-		-
Halle Digan: Carponen (SCM) by Method 82700-SM         WOOTNOD         1         DOWNS 2000         005858 0027         Biel           FO-118-4         L968449-22         Solid         Collected by         Collected by         Collected families         Beeded date/fine         DXG           Method         Bach         Duar         Paperater         Ambos         Amb	Method	Batch	Dilution	·	-	Analyst
Serier Valuatile Organic Companyles, 65CMR by Method 19700-55M         Weil 12783         1         0.707781 9700         0.706781 139         DMG           FO-118-41         L966849-22         Solid         No.         0.606781 0.00         0.707781 0.00	Volatile Organic Compounds (GC/MS) by Method 8260B	WG1071702	1			BMB
Collected by N. Densky         Callected calcuma US378 715         Beauted calcuma US378 715         Beauted calcuma US378 715           Method         Rulin         Rulin         Rulin         Rulin         Rulin         Aulysis         Aulysis           Taid Saliss by Menici 7540 5-2011         WK0720700         1         077278 700         077278 700         077278 700         077278 700         07728 703 <td></td> <td></td> <td></td> <td></td> <td></td> <td>L</td>						L
FO-118-4         L968449-22         Solid         M Linesky         VX20B HS         62/0316 (24 S)           Method         Batch         Diator         Method         Analysis         Analy	Schill Volutile organice compounds (Corms) by method 02700 Sim	Weller Hiss	5	02/07/10 22:00	02/00/10 13.33	Dinio
Method         Nath         Dillator         Preparation         Accepts         Analysis           Total Sales by Method 2540 C-2011         WX00272601         0.207281 80:70         0.207281 80:7	E0-118-4 1 968449-22 Solid			-		
Internal Solits by Method 250 G-2011         WG07218         1         G22121 9105         MDW           Method 250 G-2011         WG07218         1         G22121 9105         MDW           Method 250 G-2011         WG07218         1         G22121 9105         MDW           Method 250 G-2014         WG07218         1         G22121 9105         MDW           Method 250 G-2014         WG07216         1         G20141 9257         G20348 9250         S1           Smm Value Graphic Companets (GCMS) by Method 82700-SIM         WG07716         1         G20141 9257         G20348 9252         DAG           BP-119-17         L968449-23         Solid         WG07750         1         G20148 925         G20348 926         Amiyst           Mathod         Batch         Dildon         Meparinton         Amiyst         Amiyst         Monyst           Total Solids by Method 2500 G-2014         WG072501         G20248 9159         AGE         AGE         AGE           Smm Value Graphic Companets (GC Method WHTMCR05.05 CT         WG077161         G20248 6234         AGM         Amiyst         Amiyst           Smm Value Graphic Companets (GC MS) Wethod WHTMCR05.05 CT         WG077161         G20248 6234         AGM         AdE         Amiyst         AdCM			<b>D H H</b>			
Trad. Salids by Method 254 06 2011         WCM07261         1         0.22218 10:00         0.22138 19:01         6/UW           Marcury by Mathod 7540         WSD07278         1         0.22238 19:00         0.21318 98:45         0.	Method	Batch	Dilution		-	Analyst
Mecany (CP) violated APA Media (CP) violated BDBB         WEIG727B WEIG77D0         1         02278/9 3.27         02378/9 20.4         Violate CP         ALL           Mecany (CP) violated BDBB         WEIG77D0         1         02278/9 20.4         ST         ALL           Schi Voaltic Organic Compounds (SCDMS by Michole 82700 SM         WEIG77D0         1         0228/9 10.25         JODDER 30.4         ST         ALL           BP-119-17         L968/449-23         Solid         WEIG77D0         1         0228/9 10.25         JODDER 30.4         ST         ALL           Mediad         Rath         Blindion         Peparation         Analysis         Analysis         Analysis           Mediad         Rath         Blindion         Peparation         Analysis         Analysis           Mediad         Blindion         Peparation         Analysis         Analysis         Analysis           Method         Blindion         Peparati	Total Solids by Mathed 25/0 C 2011	WC1072601	1			
Multis (Dig thy Michael Section 2007)         Viet 0021100         1         022118 14.48         020138 12.00.4         51           Sem-Valatile Organic Compounds (ICOMS) by Michael 82700.5M         WG107101         1         0200718 22.51         020081 817.5         DMG         Image: Compounds (ICOMS) by Michael 82700.5M         Reserved attack to grant Compounds (ICOMS) by Michael 82700.5M         Reserved attack to grant Compounds (ICOMS) by Michael 82700.5M         Reserved attack to grant Compounds (ICOMS) by Michael 82608         WG107101         1         0200718 22.51         020081 80.54         Reserved attack to grant Compounds (ICOMS) by Michael 82608         WG107560         1         027218 10.60         0270218 10.65         RCM           Vietable Organic Compounds (ICOMS) by Michael 82608         WG107560         1         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.60         0270218 10.61         0270218 10.61         0270218 10.61         0270218 10.61         0270218 10.61         0270218 10.61         0270218 10.61         0270218 10.61         0270218 10.61         0270218 10.61         0270218 10.61         0270218 10.61         02702	-					
Semi-Volutile Organic Compounds (EC) by Method 87700-SM         WE070714         1         0.200718 0.834         0.200918 0.537         ACM           BP-119-17         L968449-23         Solid         Collected by         Collected by<						
Semi Volatile Organic Compounds (SC/MS) by Method 82700-SM         WG107181         1         0.2007/8 22.51         0.2008/8 07.52         DMG           BP-119-17         L9668449-23         Solid         N. Ulcosky         Organization         Analysis         Analysis         Analysis           Method         Batch         Didolo         Preparation         data/time         Collected data/time         0203/8 08.55           Method         Batch         Didolo         Preparation         data/time         0203/8 08.55           Method         Batch         Didolo         Preparation         data/time         Received data/time           Mothod         Botch         000000000000000000000000000000000000						L
BP-119-17         L968449-23         Solid         Collected thy N. Ulevsky         Collected theme O20339 8645         Reviewed determs O20339 8645           Method         Batch         Dilation         Poptration         Analysis         Analysis         Analysis           Method         Batch         Dilation         Poptration         Analysis         Analysis         Analysis           Total Solids by Method 2540 6-2011         WG1072501         1         002139 8150         ACC           Some Volatile Organic Compounds (ECMS) by Method 82700-5M         WG1071514         1         0202918 08:24         020918 18:10         ACC           BP-119-33         L968449-24         Solid         Butch         Dutote         Poptration         Analysis         Analysis           Some Volatile Organic Compounds (ECMS) by Method 82700-5M         WG107161         1         02078 10:0         02278 10:0         02078 18:15         MCM           Some Volatile Organic Compounds (ECMS) by Method 82700-5M         WG107161         1         02078 18:25         MCM           Some Volatile Organic Compounds (ECMS) by Method 82700-5M         WG107161         1         02078 18:25         MCM           Some Volatile Organic Compounds (ECMS) by Method 82700-5M         WG107161         1         02078 18:25         MCM						
BP-119-17         L9eS449-23         Solid         N. Uevsky         01/31/8 15:45         02/03/8 08:45           Method         Batci         Dilution         Reparation         Analysis	Senir volatile organic compounds (octais) by method 6270D-Sim	WOIO/IIOI	I	02/07/10 23.31	02/00/10 17.52	DIVIO
DP-119-17         ESOCH-13-12.5 (SUN)           Method         Batch         Dilution         Peparation date/mine         Analysis date/mine         Analysis date/mine         Analysis         Analysis           Total Solids by Method 2540 6-2011         WG1072601         1         0272/18 10.00         0272/18 10.00         X00           Sem-Volatile Organic Compounds (GCMS) by Method 82700-SIM         WG107575         1         0270/18 23.51         020018 23.51         020018 23.51         D0068           BP-119-33 L968449-24         Solid         Batch         Dilution         Proparation         Analysis         Analysis           Method         Batch         Dilution         Proparation         Analysis         Analysis           BP-119-33 L968449-24         Solid         WG107161         020078 23.51         02008 83.41         02038 08.45           Method         Batch         Dilution         Proparation         Analysis         Analysis           Sem-Volatile Organic Compounds (GCMS) by Method 82700-SIM         WG107161         02078 08.24         02078 18.15         DMG           BP-121-W         L968449-25         GW         Collected by N. Usevity         Collected date/line date/line         Analysis           Method         Batch         Diluidon         Prop				-		
date time         date time         date time           Total Solids by Method 2540 G 2011         WG1072501         1         0.212781 10:05         KOW           Semi-Volatile Organic Compounds (GCMS) by Method 82700-SM         WG107154         1         0.20878 18:35         0.20978 13:10         ACM           BP-119-33 L968449-24 Solid         Collected by         Collected by         Collected tabetime         0.20878 18:35         DMG           Method         Batch         Datum         Preparation         Acalysis         Acalysis           Method         Batch         Datum         Preparation         Acalysis         Acalysis           Semi-Volatile Organic Compounds (GCMS) by Method 82700-SM         WG107161         0.202178 10:00         0.21228 10:00         0.21228 10:00           Method         Batch         Datum         Preparation         Acalysis         Acalysis           Semi-Volatile Organic Compounds (GCMS) by Method 82700-SM         WG107161         0.202178 10:00         0.22218 10:00         0.220378 0:8:45           Data Solids by Method 2540 G 2011         WG107161         0.202178 10:01         MCI         0.20078 0:8:45         Acalysis           Semi Volatile Organic Compounds (GCMS) by Method 82700-SM         WG107161         0.202178 10:01         Acadysis         Acadysis	BP-119-17 L968449-23 Solid			N. ULEVSKY	01/31/16 15.45	02/03/16 06.45
Volatile Organic Compounds (CCMS) by Method 82700-SM         WCI071579         1         013118 15:45         021018 15:09         ACC           Semi-Volatile Organic Compounds (CCMS) by Method 82700-SM         WCI07151         1         020918 08:31         020918 18:10         ACM           BP-119-33 L968449-24 Solid         Collected 9by         Collected 4000000000000000000000000000000000000	Method	Batch	Dilution		,	Analyst
Semi-Volatile Organic Compounds (GC) by Method NUTPHDX-NO SGT Semi-Volatile Organic Compounds (CC/MS) by Method S2700-SM         WG1071154         1         0.208/18 08:24 0.207/18 23:51         0.208/18 18:30         ACM DMG           BP-119-33 L968449-24 Solid         Batch         Dilution         Preparation         Analysis date:time         Analysis d	Total Solids by Method 2540 G-2011	WG1072601	1	02/12/18 10:00	02/12/18 10:15	KDW
Semi Volatile Organic Compounds. (SCIMS) by Method 82700-SM         WG107161         1         02/07/8 2351         02/08/8 1813         DMG           BP-119-33 L968449-24 Solid         Semi Volatile Organic Compounds. (SCIMS) by Method 82700-SM         WG1072601         1         02/07/8 2051         KOW           BP-121-W L968449-25 GW         WG107161         1         02/07/8 22.50         02/08/18 19:55         DMG           BP-121-W L968449-25 GW         Collected by N Utoxiky         Collected date/time 02/07/8 10:5         Received date/time 02/07/8 10:4         Received date/time 02/07/8 10:2         DMG           BP-121-9 L968449-26 Solid         WG1072601         1         02/07/8 10:7         02/07/8 10:2	Volatile Organic Compounds (GC/MS) by Method 8260B	WG1071579	1	01/31/18 15:45	02/10/18 15:09	ACG
BP-119-33 L968449-24 Solid       Collected by N. Ulevsky       Collected by 0737/8 15:00       Received date/time 020378 08:45         Method       Batch       Dilution       Preparation date/time       Analysis date/time       Analysis date/time         Total Solids by Method 2540 G-2011       Wetf072601       02707/8 10:00       02712/8 10:15       KDW         Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       Wetf07154       1       0200878 08:44       020978 13:24       ACM         BP-121-W L968449-25 GW       Collected by N. Ulevsky       Collected by 020078 115       Collected by 020078 115       Collected date/time 020038 08:45         BP-121-9 L968449-26 Solid       Batch       Dilution       Preparation date/time       Analysis date/time       Analysis 020078 18:10       Analysis 020078 18:10       Analysis 020038 08:45         Method       Batch       Dilution       Preparation date/time       Analysis date/time       Analysis 020078 18:10       Analysis 020078 18:10       Analysis 020078 18:10         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG107151       1       027078 22:00       02008 18:40       Dilution 020038 08:45         Method       Batch       Dilution       Preparation date/time       Analysis date/time       Analysis date/time       Analysis 02008 18:40.2       Dilution 020038 08:45       D	Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1071154	1	02/08/18 08:34	02/09/18 13:10	ACM
BP-119-33       L968449-24       Solid       N. Ulevsky       01/31/8 15:00       02/3/8 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis       Analysis         Total Solids by Method 2540 G-2011       WG1072601       02/12/18 10:15       KDW         Semi-Volatile Organic Compounds (GC) by Method 8270D-SIM       WG107161       02/10/18 23:51       02/00/18 23:51       02/00/18 13:24       ACM         BP-121-W L968449-25       GW       Collected by N. Utevsky       Collected date/time       02/07/18 23:51       02/00/18 13:5       Analysis         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis       Analysis         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071139       3       02/07/18 22:00       02/08/18 14:02       DMG         BP-121-9       L968449-26       Solid       WG1071139       3       02/07/18 22:00       02/08/18 14:02       DMG         BP-121-9       L968449-26       Solid       WG1071161       02/17/18 10:17       02/17/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG107161       02/17/18 10:17       02/17/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS	Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 18:13	DMG
BP-119-33       L968449-24       Solid       N. Ulevsky       01/31/8 15:00       02/3/8 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis       Analysis         Total Solids by Method 2540 G-2011       WG1072601       02/12/18 10:15       KDW         Semi-Volatile Organic Compounds (GC) by Method 8270D-SIM       WG107161       02/10/18 23:51       02/00/18 23:51       02/00/18 13:24       ACM         BP-121-W L968449-25       GW       Collected by N. Utevsky       Collected date/time       02/07/18 23:51       02/00/18 13:5       Analysis         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis       Analysis         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071139       3       02/07/18 22:00       02/08/18 14:02       DMG         BP-121-9       L968449-26       Solid       WG1071139       3       02/07/18 22:00       02/08/18 14:02       DMG         BP-121-9       L968449-26       Solid       WG1071161       02/17/18 10:17       02/17/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG107161       02/17/18 10:17       02/17/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS						
BP-119-33       L968449-24       Solid       N. Ulevsky       01/31/8 15:00       02/3/8 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis       Analysis         Total Solids by Method 2540 G-2011       WG1072601       02/12/18 10:15       KDW         Semi-Volatile Organic Compounds (GC) by Method 8270D-SIM       WG107161       02/10/18 23:51       02/00/18 23:51       02/00/18 13:24       ACM         BP-121-W L968449-25       GW       Collected by N. Utevsky       Collected date/time       02/07/18 23:51       02/00/18 13:5       Analysis         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis       Analysis         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071139       3       02/07/18 22:00       02/08/18 14:02       DMG         BP-121-9       L968449-26       Solid       WG1071139       3       02/07/18 22:00       02/08/18 14:02       DMG         BP-121-9       L968449-26       Solid       WG1071161       02/17/18 10:17       02/17/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG107161       02/17/18 10:17       02/17/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS				Collected by	Collected date/time	Received date/time
Method         Batch         Dilution         Preparation date/time         Analysis date/time         Analysis date/time           Total Solids by Method 2540 G-2011         WG1072601         1         0.27/278 10:00         0.27/278 10:15         KDW           Semi-Volatile Organic Compounds (GC) by Method 8070D-SIM         WG107161         1         0.20/0718 23:51         0.20/0878 19:15         DMG           BP-121-W L968449-25 GW         Collected by N. Utewsky         Collected date/time date/time         Received date/time 0.20/0718 11:15         Received date/time 0.20/0718 11:15         Received date/time 0.20/0718 11:15           Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG1071139         3         0.20/0718 22:00         0.20/0878 14:02         DMG           BP-121-9 L968449-26 Solid         Batch         Dilution         Preparation date/time         Analysis         Analysis         Analysis           Method         Batch         Dilution         Preparation date/time         Analysis         Analysis         Analysis           Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG107161         0.2/12/18 10:17         0.2/12/18 10:29         KDW           Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG107161         0.2/12/18 10:17         0.2/12/18 10:29         KDW           Semi V	RP-119-33   968449-24 Solid			-	01/31/18 15:00	02/03/18 08:45
Indextination         date/time         date/time           Total Solids by Method 2540 G-2011         WG1072601         1         0272/78 10:00         0272/78 10:15         KDW           Semi-Volatile Organic Compounds (GC by Method NWTPHDX-NO SGT         WG107161         1         02/08/78 08:34         02/08/78 13:24         ACM           BP-121-W L968449-25 GW         Collected by         Collected date/time         Received date/time         02/03/78 23:51         02/03/78 08:45         02/03/78 08:45           Method         Batch         Dilution         Preparation         Analystis         Analysti         02/03/78 08:45           Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG1071139         3         02/07/78 22:00         02/08/78 14:02         DMG           BP-121-9 L968449-26 Solid         WG1071503         1         02/07/78 22:00         02/08/78 14:02         DMG           Method         Batch         Dilution         Preparation         Analysti         Analysti           Gollected date/time         Gollected date/time         Gollected date/time         02/03/78 08:45           Total Solids by Method 25:40 G-2011         WG1072603         1         02/07/78 23:51         02/03/78 08:45           BP-125-13 L968449-27 Solid         WG1072603         1         0		D. I. I.	D:1 .:	D	A 1 -	
Semi-Volatile Organic Compounds (GC) by Method NVTPHDX-NO SGT Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG1071154 WG1071161         1         02/08/18 08:34 02/08/18 19:15         02/08/18 19:24 DMG         ACM           BP-121-W L968449-25 GW         Collected by N. Ulevsky         Collected by Q2/07/18 23:51         Collected date/time 02/07/18 23:51         Received date/time 02/07/18 23:51         Received date/time 02/03/18 08:45           Method         Batch         Dilution date/time         Analysis date/time         Analysis date/time         Analysis 02/03/18 08:45           BP-121-9 L968449-26 Solid         WG1071139         3         02/07/18 22:00         02/08/18 14:02         DMG           BP-121-9 L968449-26 Solid         WG1072603         1         02/12/18 10:17         02/10/18 11:00         02/03/18 08:45           Method         Batch         Dilution         Preparation date/time         Analysis         Analysis           Method         Batch         Dilution         Preparation date/time         Analysis         Analysis           Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SiM         WG1072603         1         02/12/18 10:17         02/12/18 10:29         KDW           BP-125-13 L968449-27 Solid         WG1072603         1         02/12/18 10:17         02/12/18 10:29         KDW           Method<	Method	Batch	Dilution	•	-	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG1071161         1         02/07/18 23:51         02/08/18 19:15         DMG           BP-121-W L968449-25 GW         Collected by N. Utevsky         Collected date/time 02/07/18 11:15         Received date/time 02/07/18 11:15         Received date/time 02/07/18 11:15         Received date/time 02/07/18 11:15           Method         Batch         Dilution         Preparation date/time         Analysis date/time date/time         Analysis date/time         Analysis date/time           BP-121-9 L968449-26 Solid         WG107139         3         02/07/18 22:00         02/08/18 14:02         DMG           Method         Batch         Dilution         Preparation date/time         Analysis date/time         Received date/time 02/07/18 21:00         02/08/18 14:02         DMG           Method         Batch         Dilution         Preparation Analysis         Analysis         Analysis           Method         Batch         Dilution         Preparation Analysis         Analysis         Analysis           Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG107161         1         02/07/18 23:51         02/08/18 19:36         DMG           BP-125-13 L968449-27 Solid         WG1072603         1         02/12/18 10:17         02/12/18 10:29         KDW	Total Solids by Method 2540 G-2011	WG1072601	1	02/12/18 10:00	02/12/18 10:15	KDW
BP-121-W       L968449-25       GW       Collected by D2/07/8 11:15       Received date/time D2/07/8 11:15         Method       Batch       Dilution       Preparation date/time       Analysis date/time       Analysis       Analysis         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071139       3       02/07/18 22:00       02/08/18 14:02       DMG         BP-121-9       L968449-26       Solid       Solid       Preparation date/time       Analysis       Analysis         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG107161       1       02/07/18 23:51       02/08/18 19:36       DMG         BP-125-13       L968449-27       Solid       WG1072603       1       02/12/18 10:17       02/03/18 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysi       Analysis         Method       Batch       Dilution       P	Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT	WG1071154	1	02/08/18 08:34	02/09/18 13:24	ACM
BP-121-W L968449-25 GW       N. Utevsky       02/01/18 11:5       02/03/18 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         Semi Volatile Organic Compounds (6C/MS) by Method 8270D-SIM       WG1071139       3       02/07/18 22:00       02/08/18 14:02       DMG         BP-121-9 L968449-26 Solid       WG1071139       3       02/07/18 22:00       02/08/18 14:02       DMG         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG107161       1       02/07/18 23:51       02/08/18 19:36       DMG         BP-125-13 L968449-27 Solid       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG107161       1       02/07/18 23:51       02/08/18 19:36       DMG	Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 19:15	DMG
Diricitizities       Batch       Dilution       Preparation date/time       Analysis date/time       Analysis       Analysis         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071139       3       02/07/18 22:00       02/08/18 14:02       DMG         BP-121-9 L968449-26 Solid       Collected by N. Utevsky       Collected date/time 02/03/18 08:45       Received date/time 02/03/18 08:45       Received date/time 02/03/18 08:45         Method       Batch       Dilution date/time       Preparation date/time       Analysis       Analysis         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         BP-125-13 L968449-27 Solid       WG1071161       1       02/07/18 23:51       02/08/18 19:36       DMG         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         BP-125-13 L968449-27 Solid       WG1072603       1       02/107/18 23:51       02/08/18 19:36       DMG         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/103/18 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071154				-		
date/time       date/time       date/time         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071139       3       02/07/18 22:00       02/08/18 14:02       DMG         BP-121-9 L968449-26 Solid       Collected by N. Utevsky       Collected by 02/01/18 11:10       Collected date/time 02/03/18 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:36       DMG         BP-125-13 L968449-27 Solid       WG1072603       1       02/17/18 23:51       02/08/18 19:36       Analyst         Method       Batch       Dilution       Preparation date/time       Analysis       Analyst         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       <	BP-121-W L968449-25 GW			N. Utevsky	02/01/18 11:15	02/03/18 08:45
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071139       3       02/07/8 22:00       02/08/18 14:02       DMG         BP-121-9 L968449-26 Solid       Collected by N. Utevsky       Collected date/time 02/01/8 11:10       Received date/time 02/03/18 08:45         Method       Batch       Dilution date/time       Preparation date/time       Analysis       Analysi         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:36       DMG         BP-125-13 L968449-27 Solid       WG1072603       1       02/12/18 10:17       02/10/18 14:45       02/03/18 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis       Analysis         Method       Batch       Dilution       Preparation date/time       Collected date/time 02/07/18 14:45       02/03/18 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1072603       1       02/20/18 10:17       02/19/18 10:29       KDW         Semi-Volatile Organic Compounds (GC/MS) by	Method	Batch	Dilution	•		Analyst
BP-121-9 L968449-26 Solid       Collected by N. Utevsky       Collected date/time 02/01/18 11:10       Received date/time 02/03/18 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1072603       1       02/07/18 23:51       02/08/18 19:36       DMG         BP-125-13 L968449-27 Solid       Koll       Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1072603       1       02/07/18 23:51       Collected date/time 02/03/18 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis       Analysis         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis       Analysis         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis       Analysis         Semi-Volatile Organic Compounds (GC/MS) by Method NWTPHDX-NO SGT       WG107161       1       02/07/18 23:51       02/08/18 13:38       ACM         Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG107161       1       02/07/18 23:51       02/08/18 13:3	Sami Valatila Organic Compounds (CC/MS) by Mathed 2270D SIM	W/C1071120	2			DMC
BP-121-9 L968449-26 Solid         N. Utevsky         Q2/01/8 11:0         Q2/03/8 08:45           Method         Batch         Dilution         Preparation date/time         Analysis         Analysis         Analysis           Total Solids by Method 2540 G-2011         WG1072603         1         02/12/18 10:17         02/12/18 10:29         KDW           Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG107161         1         02/07/18 23:51         02/08/18 19:36         DMG           BP-125-13 L968449-27 Solid         Kethod         Batch         Dilution         Preparation date/time         Received date/time 02/03/18 08:45         Analysi           Method         Batch         Dilution         Preparation date/time         Analysis         Analysi           Method         Batch         Dilution         Preparation date/time         Analysis         Analysis           Method         Batch         Dilution         Preparation date/time         Analysis         Analysis           Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG1071154         1         02/03/18 08:34         02/09/18 13:38         ACM           Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG1071154         1         02/03/18 08:34         02/09/18 13:38         ACM	Senir volatile Organic Compounds (GC/MS) by Method 8270D-SiM	WG1071159	3	02/07/18 22.00	02/00/10 14.02	DIVIG
BP-121-9 L968449-26 Solid         N. Utevsky         Q2/01/8 11:0         Q2/03/8 08:45           Method         Batch         Dilution         Preparation date/time         Analysis         Analysis         Analysis           Total Solids by Method 2540 G-2011         WG1072603         1         02/12/18 10:17         02/12/18 10:29         KDW           Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG107161         1         02/07/18 23:51         02/08/18 19:36         DMG           BP-125-13 L968449-27 Solid         Kethod         Batch         Dilution         Preparation date/time         Received date/time 02/03/18 08:45         Analysi           Method         Batch         Dilution         Preparation date/time         Analysis         Analysi           Method         Batch         Dilution         Preparation date/time         Analysis         Analysis           Method         Batch         Dilution         Preparation date/time         Analysis         Analysis           Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG1071154         1         02/03/18 08:34         02/09/18 13:38         ACM           Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG1071154         1         02/03/18 08:34         02/09/18 13:38         ACM						
DF-12.1-3       L903449-20 (SORID       Preparation       Analysis       Analysis       Analysis         Method       Batch       Dilution       Preparation       date/time       date/time         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:36       DMG         Collected by N. Utevsky       Collected date/time 02/01/18 14:45       Received date/time 02/03/18 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysi         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi-Volatile Organic Compounds (GC/MS) by Method NWTPHDX-NO SGT       WG1071154       1       02/09/18 13:38       ACM         Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/09/18 13:38       ACM         Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/09/18 13:38       ACM         Semi-Volati						
date/time       date/time       date/time         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG107161       1       02/07/18 23:51       02/08/18 19:36       DMG         BP-125-13 L968449-27 Solid       Kethod       E       Collected by N. Utevsky       Collected date/time 02/01/18 14:45       Received date/time 02/03/18 08:45         Method       Batch       Dilution       Preparation date/time       Analysis       Analysis         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT       WG1071154       1       02/08/18 08:34       02/09/18 13:38       ACM         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:56       DMG         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/09/18 13:38       ACM         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:56       DMG         Method       PROJECT:       PROJECT: </td <td>BP-121-9 L968449-26 Solid</td> <td></td> <td></td> <td>N. ULEVSKY</td> <td>02/01/18 11:10</td> <td>02/03/18 08:45</td>	BP-121-9 L968449-26 Solid			N. ULEVSKY	02/01/18 11:10	02/03/18 08:45
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:36       DMG         BP-125-13 L968449-27 Solid       Collected by N. Utevsky       Collected date/time 02/01/18 14:45       Received date/time 02/03/18 08:45         Method       Batch       Dilution date/time       Preparation date/time       Analysis date/time       Analysis date/time         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071154       1       02/08/18 08:34       02/09/18 13:38       ACM         Document No: J1-680-RGL-GRI-00001-00       Revision: 1         ACCOUNT:       PROJECT:       SDG:       DATE/TIME:       PAGE:	Method	Batch	Dilution		-	Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:36       DMG         BP-125-13 L968449-27 Solid       Collected by N. Utevsky       Collected date/time 02/01/18 14:45       Received date/time 02/03/18 08:45         Method       Batch       Dilution date/time       Preparation date/time       Analysis date/time       Analysis date/time         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071154       1       02/08/18 08:34       02/09/18 13:38       ACM         Document No: J1-680-RGL-GRI-00001-00       Revision: 1         ACCOUNT:       PROJECT:       SDG:       DATE/TIME:       PAGE:	Total Solids by Method 2540 G-2011	WG1072603	1	02/12/18 10:17	02/12/18 10:29	KDW
BP-125-13 L968449-27 Solid       N. Utevsky       02/01/18 14:45       02/03/18 08:45         Method       Batch       Dilution       Preparation       Analysis       Analysis         Method       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT       WG1071154       1       02/07/18 23:51       02/09/18 13:38       ACM         Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:56       DMG         Document No: J1-680-RGL-GRI-00001-00       Revision: 1       Revision: 1       Revision: 1       Revision: 1       Revision: 1         ACCOUNT:       PROJECT:       SDG:       DATE/TIME:       PAGE:	Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 19:36	DMG
BP-125-13 L968449-27 Solid       N. Utevsky       02/01/18 14:45       02/03/18 08:45         Method       Batch       Dilution       Preparation       Analysis       Analysis         Method       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT       WG1071154       1       02/08/18 08:34       02/09/18 13:38       ACM         Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:56       DMG         Document No:       J1-680-RGL-GRI-00001-00       Revision: 1       Revision: 1       Revision: 1       Revision: 1       Revision: 1       Revision: 1       PAGE:						
BP-125-13 L968449-27 Solid       N. Utevsky       02/01/18 14:45       02/03/18 08:45         Method       Batch       Dilution       Preparation       Analysis       Analysis         Method       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT       WG1071154       1       02/08/18 08:34       02/09/18 13:38       ACM         Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:56       DMG         Document No:       J1-680-RGL-GRI-00001-00       Revision: 1       Revision: 1       Revision: 1       Revision: 1       Revision: 1       Revision: 1       PAGE:				Collected by	Collected date/time	Received date/time
Indext State       District       Preparation       Analysis       Analysis       Analysis         Method       Batch       Dilution       Preparation       Analysis       Analysis       Analysis         Total Solids by Method 2540 G-2011       WG1072603       1       02/12/18 10:17       02/12/18 10:29       KDW         Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT       WG1071154       1       02/08/18 08:34       02/09/18 13:38       ACM         Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:56       DMG         Document No: J1-680-RGL-GRI-00001-00       Revision: 1       Revision: 1       Revision: 1       Revision: 1       Revision: 1       PAGE:	DD 12E 12 LOCO 1 10 27 Calid					
date/time         date/time           Total Solids by Method 2540 G-2011         WG1072603         1         02/12/18 10:17         02/12/18 10:29         KDW           Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-NO SGT         WG1071154         1         02/08/18 08:34         02/09/18 13:38         ACM           Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG1071161         1         02/07/18 23:51         02/08/18 19:56         DMG           Document No: J1-680-RGL-GRI-00001-00         Revision: 1         Revision: 1         Reissued for Use           ACCOUNT:         PROJECT:         SDG:         DATE/TIME:         PAGE:				,		
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-N0 SGT       WG1071154       1       02/08/18 08:34       02/09/18 13:38       ACM         Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:56       DMG         Document No: J1-680-RGL-GRI-00001-00       Revision: 1       Revision: 1       Revision: 1       Revision: 1       PROJECT:       PROJECT:       DATE/TIME:       PAGE:	Method	Batch	Dilution		-	Analyst
Semi-Volatile Organic Compounds (GC) by Method NWTPHDX-N0 SGT       WG1071154       1       02/08/18 08:34       02/09/18 13:38       ACM         Semi-Volatile Organic Compounds (GC/MS) by Method 8270D-SIM       WG1071161       1       02/07/18 23:51       02/08/18 19:56       DMG         Document No: J1-680-RGL-GRI-00001-00       Revision: 1       Revision: 1       Revision: 1       Revision: 1       PROJECT:       PROJECT:       DATE/TIME:       PAGE:	Total Solids by Method 2540 G-2011	WG1072603	1			KDW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM         WG1071161         1         02/07/18 23:51         02/08/18 19:56         DMG           Document No: J1-680-RGL-GRI-00001-00         Revision: 1         Revision: 1         Reissued for Use           ACCOUNT:         PROJECT:         SDG:         DATE/TIME:         PAGE:						
Document No: J1-680-RGL-GRI-00001-00     Revision: 1     Reissued for Use       ACCOUNT:     PROJECT:     SDG:     DATE/TIME:     PAGE:						
		Revision:	1			ssued for Use
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<sup>2</sup>Tc

Ss

<sup>4</sup>Cn

Sr

<sup>6</sup>Qc

GI

<sup>°</sup>Al

⁰Sc

ONE LAB. NATIONWIDE.

BP-126-6 L968449-28 Solid			Collected by N. Utevsky	Collected date/time 02/01/18 15:20	Received date/time 02/03/18 08:45
Method	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
Total Solids by Method 2540 G-2011	WG1072603	1	02/12/18 10:17	02/12/18 10:29	KDW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	20	02/07/18 23:51	02/08/18 20:38	DMG
			Collected by	Collected date/time	Received date/time
BP-127-8 L968449-29 Solid			N. Utevsky	02/01/18 16:05	02/03/18 08:45
Method	Batch	Dilution	Preparation	Analysis	Analyst
			date/time	date/time	
Total Solids by Method 2540 G-2011	WG1072603	1	02/12/18 10:17	02/12/18 10:29	KDW
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1071161	1	02/07/18 23:51	02/08/18 20:17	DMG

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## CASE NARRATIVE

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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 radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

Brian Ford Technical Service Representative

<sup>1</sup> Cp
<sup>2</sup> Tc
<sup>3</sup> Ss
<sup>4</sup> Cn
⁵Sr
<sup>6</sup> Qc
<sup>7</sup> Gl
<sup>8</sup> Al
°Sc

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ACCOUNT:	
GRI - Reaverton	OR

Revision: 1

#### SAMPLE RESULTS - 01 L968449

## Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch	 Ср
Analyte	%			date / time		2
Total Solids	80.3		1	02/06/2018 14:43	WG1070464	<sup>2</sup> Tc

## Mercury by Method 7471A

Mercury by Metho	od 7471A							<sup>3</sup> Ss
	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		4
Mercury	0.0416	B	0.00349	0.0249	1	02/13/2018 08:40	WG1072718	

## Metals (ICP) by Method 6010B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Antimony	U		0.934	2.49	1	02/13/2018 19:51	WG1073100	
Arsenic	3.68		0.810	2.49	1	02/13/2018 19:51	WG1073100	
Beryllium	0.146	J	0.0872	0.249	1	02/13/2018 19:51	WG1073100	
Cadmium	U		0.0872	0.623	1	02/13/2018 19:51	WG1073100	
Chromium	11.6		0.174	1.25	1	02/13/2018 19:51	WG1073100	
Copper	10.8		0.660	2.49	1	02/13/2018 19:51	WG1073100	
ead	4.61		0.237	0.623	1	02/13/2018 19:51	WG1073100	
Nickel	9.84		0.610	2.49	1	02/13/2018 19:51	WG1073100	
Selenium	U		0.922	2.49	1	02/13/2018 19:51	WG1073100	
Silver	U		0.349	1.25	1	02/13/2018 19:51	WG1073100	
[hallium	U		0.810	2.49	1	02/13/2018 19:51	WG1073100	
Zinc	26.7		0.735	6.23	1	02/13/2018 19:51	WG1073100	

#### SAMPLE RESULTS - 02 L968449



### Mercury by Method 7470A

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	 Ср
Analyte	ug/l		ug/l	ug/l		date / time		2
Mercury	0.0545	<u>J J3</u>	0.0490	0.200	1	02/09/2018 08:32	WG1071210	Tc

# Metals (ICP) by Method 6010B

Metals (ICP) by Method 6010B											
	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch				
Analyte	ug/l		ug/l	ug/l		date / time		4 C			
Beryllium	U		0.700	2.00	1	02/08/2018 21:58	WG1071350				
Cadmium	U		0.700	2.00	1	02/08/2018 21:58	WG1071350	5			
Chromium	36.8		1.40	10.0	1	02/08/2018 21:58	WG1071350	٦S			
Copper	19.4		5.30	10.0	1	02/08/2018 21:58	WG1071350				
Nickel	19.3		4.90	10.0	1	02/08/2018 21:58	WG1071350	<sup>6</sup> Q			
Selenium	U		7.40	10.0	1	02/08/2018 21:58	WG1071350				
Silver	U		2.80	5.00	1	02/08/2018 21:58	WG1071350	7			
Zinc	62.5		5.90	50.0	1	02/08/2018 21:58	WG1071350	Í G			

# Metals (ICPMS) by Method 6020

Metals (ICPMS) by Method 6020											
	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch				
Analyte	ug/l		ug/l	ug/l		date / time			<sup>9</sup> Sc		
Antimony	U		0.754	2.00	1	02/08/2018 17:43	WG1071019		150		
Arsenic	10.5		0.250	2.00	1	02/08/2018 17:43	WG1071019				
Lead	10.3		0.240	2.00	1	02/08/2018 17:43	WG1071019				
Thallium	0.372	J	0.190	2.00	1	02/08/2018 17:43	WG1071019				

### SAMPLE RESULTS - 03 L968449



### Mercury by Method 7470A

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	 Cp
Analyte	ug/l		ug/l	ug/l		date / time		2
Mercury	0.0492	<u>J J3</u>	0.0490	0.200	1	02/09/2018 08:34	WG1071210	Tc

### Metals (ICP) by Method 6010B

Metals (ICP) by Method 6010B											
	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch				
Analyte	ug/l		ug/l	ug/l		date / time		<sup>4</sup> Cn			
Beryllium	U		0.700	2.00	1	02/08/2018 22:02	WG1071350				
Cadmium	U		0.700	2.00	1	02/08/2018 22:02	WG1071350	5			
Chromium	U		1.40	10.0	1	02/08/2018 22:02	WG1071350	Sr			
Copper	U		5.30	10.0	1	02/08/2018 22:02	WG1071350				
Nickel	U		4.90	10.0	1	02/08/2018 22:02	WG1071350	<sup>6</sup> Qc			
Selenium	U		7.40	10.0	1	02/08/2018 22:02	WG1071350	QC			
Silver	U		2.80	5.00	1	02/08/2018 22:02	WG1071350	7			
Zinc	U		5.90	50.0	1	02/08/2018 22:02	WG1071350	΄ GΙ			

# Metals (ICPMS) by Method 6020

Metals (ICPMS) by Method 6020										
	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch			
Analyte	ug/l		ug/l	ug/l		date / time		°Sc		
Antimony	U		0.754	2.00	1	02/08/2018 17:46	WG1071019			
Arsenic	1.88	J	0.250	2.00	1	02/08/2018 17:46	WG1071019			
Lead	0.827	J	0.240	2.00	1	02/08/2018 17:46	WG1071019			
Thallium	U		0.190	2.00	1	02/08/2018 17:46	WG1071019			

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### SAMPLE RESULTS - 04 Collected date/time: 01/31/18 15:30



### Mercury by Method 7470A

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	Ср
Analyte	ug/l		ug/l	ug/l		date / time		2
Mercury	0.0542	J J3	0.0490	0.200	1	02/09/2018 08:36	WG1071210	Tc

L968449

# Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
nalyte	ug/l		ug/l	ug/l		date / time	
eryllium	U		0.700	2.00	1	02/08/2018 22:05	WG1071350
admium	U		0.700	2.00	1	02/08/2018 22:05	WG1071350
hromium	3.13	J	1.40	10.0	1	02/08/2018 22:05	WG1071350
opper	U		5.30	10.0	1	02/08/2018 22:05	WG1071350
lickel	U		4.90	10.0	1	02/08/2018 22:05	WG1071350
elenium	U		7.40	10.0	1	02/08/2018 22:05	WG1071350
ilver	U		2.80	5.00	1	02/08/2018 22:05	WG1071350
nc	U		5.90	50.0	1	02/08/2018 22:05	WG1071350

# Metals (ICPMS) by Method 6020

Metals (ICPMS) by Method 6020										
	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch			
Analyte	ug/l		ug/l	ug/l		date / time		°Sc		
Antimony	U		0.754	2.00	1	02/08/2018 17:50	WG1071019	50		
Arsenic	4.74		0.250	2.00	1	02/08/2018 17:50	WG1071019			
Lead	0.716	J	0.240	2.00	1	02/08/2018 17:50	WG1071019			
Thallium	U		0.190	2.00	1	02/08/2018 17:50	WG1071019			

### SAMPLE RESULTS - 05 L968449

# Total Solids by Method 2540 G-2011

	-							<u>к</u> Г.
		Result	Qualifier	Dilution	Analysis	Batch		1
Analyte		%			date / time		2	5
Total Solids		89.6		1	02/06/2018 14:43	WG1070464	Tc	

### Mercury by Method 7471A

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		$^{4}$
Mercury	0.0119	ВJ	0.00313	0.0223	1	02/13/2018 08:43	WG1072718	1

# Metals (ICP) by Method 6010B

	Result	Quaimer	Dilution Analy	515	Daten			
Analyte	%		date /	' time				
Total Solids	89.6		1 02/06	5/2018 14:43	WG10704	464		
Mercury by Meth	od 7471A							
	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Mercury	0.0119	<u>B J</u>	0.00313	0.0223	1	02/13/2018 08:43	WG1072718	
Metals (ICP) by N	1ethod 6010B							
	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Antimony	U		0.837	2.23	1	02/13/2018 20:01	WG1073100	
Arsenic	2.86		0.726	2.23	1	02/13/2018 20:01	WG1073100	
Beryllium	0.105	J	0.0782	0.223	1	02/13/2018 20:01	WG1073100	
Cadmium	U		0.0782	0.558	1	02/13/2018 20:01	WG1073100	
Chromium	6.28		0.156	1.12	1	02/13/2018 20:01	WG1073100	
Copper	2.22	J	0.592	2.23	1	02/13/2018 20:01	WG1073100	
Lead	2.42		0.212	0.558	1	02/13/2018 20:01	WG1073100	
Nickel	6.76		0.547	2.23	1	02/13/2018 20:01	WG1073100	
Selenium	U		0.826	2.23	1	02/13/2018 20:01	WG1073100	
Silver	U		0.313	1.12	1	02/13/2018 20:01	WG1073100	
Thallium	U		0.726	2.23	1	02/13/2018 20:01	WG1073100	
Zinc	11.4		0.659	5.58	1	02/13/2018 20:01	WG1073100	

# Collected date/time: 01/29/18 15:14

### SAMPLE RESULTS - 06 L968449



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# Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	56.6	<u>13</u>	1	02/12/2018 11:15	WG1072596

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	0.00130	J	0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Acenaphthene	0.00496	J	0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Acenaphthylene	0.00951	J	0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Benzo(a)anthracene	0.00116	J	0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Benzo(a)pyrene	U		0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Benzo(b)fluoranthene	U		0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Benzo(g,h,i)perylene	U		0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Benzo(k)fluoranthene	U		0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Chrysene	U		0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Dibenz(a,h)anthracene	U		0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Fluoranthene	0.00216	J	0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Fluorene	0.00120	J	0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Indeno(1,2,3-cd)pyrene	U		0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Naphthalene	0.0785		0.00354	0.0354	1	02/08/2018 13:22	WG1071161	
Phenanthrene	0.00455	J	0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
Pyrene	0.00179	J	0.00106	0.0106	1	02/08/2018 13:22	WG1071161	
1-Methylnaphthalene	0.0160	J	0.00354	0.0354	1	02/08/2018 13:22	WG1071161	
2-Methylnaphthalene	0.0128	J	0.00354	0.0354	1	02/08/2018 13:22	WG1071161	
2-Chloronaphthalene	U		0.00354	0.0354	1	02/08/2018 13:22	WG1071161	
(S) Nitrobenzene-d5	72.4			14.0-149		02/08/2018 13:22	WG1071161	
(S) 2-Fluorobiphenyl	75.3			34.0-125		02/08/2018 13:22	WG1071161	
(S) p-Terphenyl-d14	56.9			23.0-120		02/08/2018 13:22	WG1071161	

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### SAMPLE RESULTS - 07 L968449

Тс

# Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	84.2		1	02/12/2018 11:15	WG1072596

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Acenaphthene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Acenaphthylene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Benzo(a)anthracene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Benzo(a)pyrene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Benzo(b)fluoranthene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Benzo(g,h,i)perylene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Benzo(k)fluoranthene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Chrysene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Dibenz(a,h)anthracene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Fluoranthene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Fluorene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Indeno(1,2,3-cd)pyrene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Naphthalene	U		0.00237	0.0237	1	02/08/2018 13:43	WG1071161	
Phenanthrene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
Pyrene	U		0.000712	0.00712	1	02/08/2018 13:43	WG1071161	
1-Methylnaphthalene	U		0.00237	0.0237	1	02/08/2018 13:43	WG1071161	
2-Methylnaphthalene	U		0.00237	0.0237	1	02/08/2018 13:43	WG1071161	
2-Chloronaphthalene	U		0.00237	0.0237	1	02/08/2018 13:43	WG1071161	
(S) Nitrobenzene-d5	125			14.0-149		02/08/2018 13:43	WG1071161	
(S) 2-Fluorobiphenyl	95.6			34.0-125		02/08/2018 13:43	WG1071161	
(S) p-Terphenyl-d14	86.5			23.0-120		02/08/2018 13:43	WG1071161	

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### SAMPLE RESULTS - 08 L968449

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# Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	82.3		1	02/12/2018 11:15	WG1072596

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Acenaphthene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Acenaphthylene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Benzo(a)anthracene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Benzo(a)pyrene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Benzo(b)fluoranthene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Benzo(g,h,i)perylene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Benzo(k)fluoranthene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Chrysene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Dibenz(a,h)anthracene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Fluoranthene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Fluorene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
ndeno(1,2,3-cd)pyrene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Naphthalene	U		0.00243	0.0243	1	02/08/2018 14:04	WG1071161	
Phenanthrene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
Pyrene	U		0.000729	0.00729	1	02/08/2018 14:04	WG1071161	
I-Methylnaphthalene	U		0.00243	0.0243	1	02/08/2018 14:04	WG1071161	
2-Methylnaphthalene	U		0.00243	0.0243	1	02/08/2018 14:04	WG1071161	
2-Chloronaphthalene	U		0.00243	0.0243	1	02/08/2018 14:04	WG1071161	
(S) Nitrobenzene-d5	119			14.0-149		02/08/2018 14:04	WG1071161	
(S) 2-Fluorobiphenyl	93.3			34.0-125		02/08/2018 14:04	WG1071161	
(S) p-Terphenyl-d14	86.1			23.0-120		02/08/2018 14:04	WG1071161	

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# Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	74.8		1	02/12/2018 11:15	WG1072596

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	0.00149	J	0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Acenaphthene	0.00829		0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Acenaphthylene	0.0135		0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Benzo(a)anthracene	U		0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Benzo(a)pyrene	U		0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Benzo(b)fluoranthene	U		0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Benzo(g,h,i)perylene	0.00127	J	0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Benzo(k)fluoranthene	U		0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Chrysene	U		0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Dibenz(a,h)anthracene	U		0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Fluoranthene	0.00277	J	0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Fluorene	0.00258	J	0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Indeno(1,2,3-cd)pyrene	U		0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Naphthalene	0.106		0.00267	0.0267	1	02/08/2018 14:24	WG1071161	
Phenanthrene	0.00819		0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
Pyrene	0.00266	J	0.000802	0.00802	1	02/08/2018 14:24	WG1071161	
1-Methylnaphthalene	0.00950	J	0.00267	0.0267	1	02/08/2018 14:24	WG1071161	
2-Methylnaphthalene	0.0121	J	0.00267	0.0267	1	02/08/2018 14:24	WG1071161	
2-Chloronaphthalene	U		0.00267	0.0267	1	02/08/2018 14:24	WG1071161	
(S) Nitrobenzene-d5	81.7			14.0-149		02/08/2018 14:24	WG1071161	
(S) 2-Fluorobiphenyl	65.5			34.0-125		02/08/2018 14:24	WG1071161	
(S) p-Terphenyl-d14	50.6			23.0-120		02/08/2018 14:24	WG1071161	

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### Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	23.3		1	02/12/2018 11:15	WG1072596

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	U		0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Acenaphthene	0.00542	J	0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Acenaphthylene	0.0206	J	0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Benzo(a)anthracene	U		0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Benzo(a)pyrene	U		0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Benzo(b)fluoranthene	U		0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Benzo(g,h,i)perylene	U		0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Benzo(k)fluoranthene	U		0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Chrysene	U		0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Dibenz(a,h)anthracene	U		0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Fluoranthene	0.00442	J	0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Fluorene	U		0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Indeno(1,2,3-cd)pyrene	U		0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Naphthalene	0.199		0.00859	0.0859	1	02/08/2018 14:45	WG1071161	
Phenanthrene	0.00907	J	0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
Pyrene	0.00374	J	0.00258	0.0258	1	02/08/2018 14:45	WG1071161	
1-Methylnaphthalene	U		0.00859	0.0859	1	02/08/2018 14:45	WG1071161	
2-Methylnaphthalene	U		0.00859	0.0859	1	02/08/2018 14:45	WG1071161	
2-Chloronaphthalene	U		0.00859	0.0859	1	02/08/2018 14:45	WG1071161	
(S) Nitrobenzene-d5	85.4			14.0-149		02/08/2018 14:45	WG1071161	
(S) 2-Fluorobiphenyl	61.8			34.0-125		02/08/2018 14:45	WG1071161	
(S) p-Terphenyl-d14	48.9			23.0-120		02/08/2018 14:45	WG1071161	

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# Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	82.3		1	02/12/2018 11:15	WG1072596

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
Acenaphthene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
Acenaphthylene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
Benzo(a)anthracene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
Benzo(a)pyrene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
Benzo(b)fluoranthene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
Benzo(g,h,i)perylene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
Benzo(k)fluoranthene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
Chrysene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
Dibenz(a,h)anthracene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
luoranthene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
luorene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
ndeno(1,2,3-cd)pyrene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
Naphthalene	U		0.00243	0.0243	1	02/08/2018 15:06	WG1071161	
Phenanthrene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
Pyrene	U		0.000729	0.00729	1	02/08/2018 15:06	WG1071161	
-Methylnaphthalene	U		0.00243	0.0243	1	02/08/2018 15:06	WG1071161	
2-Methylnaphthalene	U		0.00243	0.0243	1	02/08/2018 15:06	WG1071161	
2-Chloronaphthalene	U		0.00243	0.0243	1	02/08/2018 15:06	WG1071161	
(S) Nitrobenzene-d5	119			14.0-149		02/08/2018 15:06	WG1071161	
(S) 2-Fluorobiphenyl	89.4			34.0-125		02/08/2018 15:06	WG1071161	
(S) p-Terphenyl-d14	81.3			23.0-120		02/08/2018 15:06	WG1071161	

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### Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	80.5		1	02/12/2018 11:15	WG1072596

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Acenaphthene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Acenaphthylene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Benzo(a)anthracene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Benzo(a)pyrene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Benzo(b)fluoranthene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Benzo(g,h,i)perylene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Benzo(k)fluoranthene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Chrysene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Dibenz(a,h)anthracene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Fluoranthene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Fluorene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Indeno(1,2,3-cd)pyrene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Naphthalene	U		0.00248	0.0248	1	02/08/2018 15:27	WG1071161	
Phenanthrene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
Pyrene	U		0.000745	0.00745	1	02/08/2018 15:27	WG1071161	
1-Methylnaphthalene	U		0.00248	0.0248	1	02/08/2018 15:27	WG1071161	
2-Methylnaphthalene	U		0.00248	0.0248	1	02/08/2018 15:27	WG1071161	
2-Chloronaphthalene	U		0.00248	0.0248	1	02/08/2018 15:27	WG1071161	
(S) Nitrobenzene-d5	121			14.0-149		02/08/2018 15:27	WG1071161	
(S) 2-Fluorobiphenyl	89.6			34.0-125		02/08/2018 15:27	WG1071161	
(S) p-Terphenyl-d14	63.2			23.0-120		02/08/2018 15:27	WG1071161	

### SAMPLE RESULTS - 13 L968449

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# Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	83.4		1	02/12/2018 11:15	WG1072596

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
Acenaphthene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
Acenaphthylene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
Benzo(a)anthracene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
Benzo(a)pyrene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
Benzo(b)fluoranthene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
Benzo(g,h,i)perylene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
Benzo(k)fluoranthene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
Chrysene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
Dibenz(a,h)anthracene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
luoranthene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
luorene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
ndeno(1,2,3-cd)pyrene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
Naphthalene	U		0.00240	0.0240	1	02/08/2018 15:47	WG1071161	
Phenanthrene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
Pyrene	U		0.000720	0.00720	1	02/08/2018 15:47	WG1071161	
-Methylnaphthalene	U		0.00240	0.0240	1	02/08/2018 15:47	WG1071161	
2-Methylnaphthalene	U		0.00240	0.0240	1	02/08/2018 15:47	WG1071161	
2-Chloronaphthalene	U		0.00240	0.0240	1	02/08/2018 15:47	WG1071161	
(S) Nitrobenzene-d5	123			14.0-149		02/08/2018 15:47	WG1071161	
(S) 2-Fluorobiphenyl	94.7			34.0-125		02/08/2018 15:47	WG1071161	
(S) p-Terphenyl-d14	89.9			23.0-120		02/08/2018 15:47	WG1071161	

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#### SAMPLE RESULTS - 14 L968449

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### Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	26.6		1	02/12/2018 11:03	WG1072598

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	85.1		9.93	30.1	2	02/09/2018 14:05	WG1071154
Residual Range Organics (RRO)	389		24.8	75.3	2	02/09/2018 14:05	WG1071154
(S) o-Terphenyl	51.8			18.0-148		02/09/2018 14:05	WG1071154

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	0.00391	J	0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Acenaphthene	0.00718	J	0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Acenaphthylene	0.0134	J	0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Benzo(a)anthracene	0.00254	J	0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Benzo(a)pyrene	U		0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Benzo(b)fluoranthene	U		0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Benzo(g,h,i)perylene	U		0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Benzo(k)fluoranthene	U		0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Chrysene	U		0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Dibenz(a,h)anthracene	U		0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Fluoranthene	0.00467	J	0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Fluorene	0.00271	J	0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Indeno(1,2,3-cd)pyrene	U		0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Naphthalene	0.106		0.00753	0.0753	1	02/08/2018 16:08	WG1071161	
Phenanthrene	0.0120	J	0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
Pyrene	0.00442	J	0.00226	0.0226	1	02/08/2018 16:08	WG1071161	
1-Methylnaphthalene	U		0.00753	0.0753	1	02/08/2018 16:08	WG1071161	
2-Methylnaphthalene	0.00785	J	0.00753	0.0753	1	02/08/2018 16:08	WG1071161	
2-Chloronaphthalene	U		0.00753	0.0753	1	02/08/2018 16:08	WG1071161	
(S) Nitrobenzene-d5	70.2			14.0-149		02/08/2018 16:08	WG1071161	
(S) 2-Fluorobiphenyl	52.5			34.0-125		02/08/2018 16:08	WG1071161	
(S) p-Terphenyl-d14	49.4			23.0-120		02/08/2018 16:08	WG1071161	

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### Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	83.7		1	02/12/2018 11:03	WG1072598

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Acenaphthene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Acenaphthylene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Benzo(a)anthracene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Benzo(a)pyrene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Benzo(b)fluoranthene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Benzo(g,h,i)perylene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Benzo(k)fluoranthene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Chrysene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Dibenz(a,h)anthracene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Fluoranthene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Fluorene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Indeno(1,2,3-cd)pyrene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Naphthalene	U		0.00239	0.0239	1	02/08/2018 16:29	WG1071161	
Phenanthrene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
Pyrene	U		0.000716	0.00716	1	02/08/2018 16:29	WG1071161	
1-Methylnaphthalene	U		0.00239	0.0239	1	02/08/2018 16:29	WG1071161	
2-Methylnaphthalene	U		0.00239	0.0239	1	02/08/2018 16:29	WG1071161	
2-Chloronaphthalene	U		0.00239	0.0239	1	02/08/2018 16:29	WG1071161	
(S) Nitrobenzene-d5	119			14.0-149		02/08/2018 16:29	WG1071161	
(S) 2-Fluorobiphenyl	94.9			34.0-125		02/08/2018 16:29	WG1071161	
(S) p-Terphenyl-d14	87.3			23.0-120		02/08/2018 16:29	WG1071161	

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### Mercury by Method 7470A

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	Ср
Analyte	ug/l		ug/l	ug/l		date / time		2
Mercury	U	<u>J3</u>	0.0490	0.200	1	02/09/2018 07:42	WG1071210	¯Тс

### Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Beryllium	U		0.700	2.00	1	02/08/2018 22:15	WG1071350	
Cadmium	U		0.700	2.00	1	02/08/2018 22:15	WG1071350	
Chromium	5.00	J	1.40	10.0	1	02/08/2018 22:15	WG1071350	
Copper	U		5.30	10.0	1	02/08/2018 22:15	WG1071350	
Nickel	U		4.90	10.0	1	02/08/2018 22:15	WG1071350	
Selenium	U		7.40	10.0	1	02/08/2018 22:15	WG1071350	
Silver	U		2.80	5.00	1	02/08/2018 22:15	WG1071350	
Zinc	7.90	Ţ	5.90	50.0	1	02/08/2018 22:15	WG1071350	

### Metals (ICPMS) by Method 6020

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Metals (ICPM	S) by Method 6	5020						
	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Antimony	0.828	J	0.754	2.00	1	02/09/2018 12:17	WG1071568	
Arsenic	3.01		0.250	2.00	1	02/09/2018 12:17	WG1071568	
Lead	1.84	<u>B J</u>	0.240	2.00	1	02/09/2018 12:17	WG1071568	
Thallium	0.280	<u>B J</u>	0.190	2.00	1	02/09/2018 12:17	WG1071568	

# Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Acetone	U		10.0	50.0	1	02/08/2018 23:49	WG1071702	
Acrolein	U	<u>J4</u>	8.87	50.0	1	02/08/2018 23:49	WG1071702	
Acrylonitrile	U		1.87	10.0	1	02/08/2018 23:49	WG1071702	
Benzene	U		0.331	1.00	1	02/08/2018 23:49	WG1071702	
Bromobenzene	U		0.352	1.00	1	02/08/2018 23:49	WG1071702	
Bromodichloromethane	U		0.380	1.00	1	02/08/2018 23:49	WG1071702	
Bromoform	U		0.469	1.00	1	02/08/2018 23:49	WG1071702	
Bromomethane	U		0.866	5.00	1	02/08/2018 23:49	WG1071702	
n-Butylbenzene	U		0.361	1.00	1	02/08/2018 23:49	WG1071702	
sec-Butylbenzene	U		0.365	1.00	1	02/08/2018 23:49	WG1071702	
tert-Butylbenzene	U		0.399	1.00	1	02/08/2018 23:49	WG1071702	
Carbon tetrachloride	U		0.379	1.00	1	02/08/2018 23:49	WG1071702	
Chlorobenzene	U		0.348	1.00	1	02/08/2018 23:49	WG1071702	
Chlorodibromomethane	U		0.327	1.00	1	02/08/2018 23:49	WG1071702	
Chloroethane	U		0.453	5.00	1	02/08/2018 23:49	WG1071702	
Chloroform	U		0.324	5.00	1	02/08/2018 23:49	WG1071702	
Chloromethane	U		0.276	2.50	1	02/08/2018 23:49	WG1071702	
2-Chlorotoluene	U		0.375	1.00	1	02/08/2018 23:49	WG1071702	
4-Chlorotoluene	U		0.351	1.00	1	02/08/2018 23:49	WG1071702	
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	02/08/2018 23:49	WG1071702	
1,2-Dibromoethane	U		0.381	1.00	1	02/08/2018 23:49	WG1071702	
Dibromomethane	U		0.346	1.00	1	02/08/2018 23:49	WG1071702	
1,2-Dichlorobenzene	U		0.349	1.00	1	02/08/2018 23:49	WG1071702	
1,3-Dichlorobenzene	U		0.220	1.00	1	02/08/2018 23:49	WG1071702	
1,4-Dichlorobenzene	U		0.274	1.00	1	02/08/2018 23:49	WG1071702	
Dichlorodifluoromethane	U		0.551	5.00	1	02/08/2018 23:49	WG1071702	
1,1-Dichloroethane	U		0.259	1.00	1	02/08/2018 23:49	WG1071702	
1,2-Dichloroethane	U		0.361	1.00	1	02/08/2018 23:49	WG1071702	
1,1-Dichloroethene	U		0.398	1.00	1	02/08/2018 23:49	WG1071702	
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# Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	(
Analyte	ug/l		ug/l	ug/l		date / time		
cis-1,2-Dichloroethene	U		0.260	1.00	1	02/08/2018 23:49	WG1071702	2
trans-1,2-Dichloroethene	U		0.396	1.00	1	02/08/2018 23:49	WG1071702	
1,2-Dichloropropane	U		0.306	1.00	1	02/08/2018 23:49	WG1071702	3
1,1-Dichloropropene	U		0.352	1.00	1	02/08/2018 23:49	WG1071702	
1,3-Dichloropropane	U		0.366	1.00	1	02/08/2018 23:49	WG1071702	L
cis-1,3-Dichloropropene	U		0.418	1.00	1	02/08/2018 23:49	WG1071702	4
trans-1,3-Dichloropropene	U		0.419	1.00	1	02/08/2018 23:49	WG1071702	
2,2-Dichloropropane	U		0.321	1.00	1	02/08/2018 23:49	WG1071702	5
Di-isopropyl ether	U		0.320	1.00	1	02/08/2018 23:49	WG1071702	
Ethylbenzene	U		0.384	1.00	1	02/08/2018 23:49	WG1071702	
Hexachloro-1,3-butadiene	U		0.256	1.00	1	02/08/2018 23:49	WG1071702	6
lsopropylbenzene	U		0.326	1.00	1	02/08/2018 23:49	WG1071702	
p-Isopropyltoluene	U		0.350	1.00	1	02/08/2018 23:49	WG1071702	7
2-Butanone (MEK)	U		3.93	10.0	1	02/08/2018 23:49	WG1071702	ľ (
Methylene Chloride	U		1.00	5.00	1	02/08/2018 23:49	WG1071702	
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	02/08/2018 23:49	WG1071702	8
Methyl tert-butyl ether	U		0.367	1.00	1	02/08/2018 23:49	WG1071702	, í
Naphthalene	U		1.00	5.00	1	02/08/2018 23:49	WG1071702	9
n-Propylbenzene	U		0.349	1.00	1	02/08/2018 23:49	WG1071702	
Styrene	U		0.307	1.00	1	02/08/2018 23:49	WG1071702	L
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	02/08/2018 23:49	WG1071702	
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	02/08/2018 23:49	WG1071702	
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	02/08/2018 23:49	WG1071702	
Tetrachloroethene	U		0.372	1.00	1	02/08/2018 23:49	WG1071702	
Toluene	U		0.412	1.00	1	02/08/2018 23:49	WG1071702	
1,2,3-Trichlorobenzene	U		0.230	1.00	1	02/08/2018 23:49	WG1071702	
1,2,4-Trichlorobenzene	U		0.355	1.00	1	02/08/2018 23:49	WG1071702	
I,1,1-Trichloroethane	U		0.319	1.00	1	02/08/2018 23:49	WG1071702	
1,1,2-Trichloroethane	U		0.383	1.00	1	02/08/2018 23:49	WG1071702	
Trichloroethene	U		0.398	1.00	1	02/08/2018 23:49	WG1071702	
Trichlorofluoromethane	U		1.20	5.00	1	02/08/2018 23:49	WG1071702	
1,2,3-Trichloropropane	U		0.807	2.50	1	02/08/2018 23:49	WG1071702	
1,2,4-Trimethylbenzene	U		0.373	1.00	1	02/08/2018 23:49	WG1071702	
1,2,3-Trimethylbenzene	U		0.321	1.00	1	02/08/2018 23:49	WG1071702	
1,3,5-Trimethylbenzene	U		0.387	1.00	1	02/08/2018 23:49	WG1071702	
Vinyl chloride	U		0.259	1.00	1	02/08/2018 23:49	WG1071702	
Xylenes, Total	U		1.06	3.00	1	02/08/2018 23:49	WG1071702	
(S) Toluene-d8	106			80.0-120		02/08/2018 23:49	WG1071702	
(S) Dibromofluoromethane	84.3			76.0-123		02/08/2018 23:49	WG1071702	
(S) 4-Bromofluorobenzene	94.0			80.0-120		02/08/2018 23:49	WG1071702	

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Anthracene	U	<u>T8</u>	0.0140	0.0500	1	02/08/2018 12:52	WG1071139	
Acenaphthene	U	<u>T8</u>	0.0100	0.0500	1	02/08/2018 12:52	WG1071139	
Acenaphthylene	U	<u>T8</u>	0.0120	0.0500	1	02/08/2018 12:52	WG1071139	
Benzo(a)anthracene	U	<u>T8</u>	0.00410	0.0500	1	02/08/2018 12:52	WG1071139	
Benzo(a)pyrene	U	<u>T8</u>	0.0116	0.0500	1	02/08/2018 12:52	WG1071139	
Benzo(b)fluoranthene	0.00535	<u>J T8</u>	0.00212	0.0500	1	02/08/2018 12:52	WG1071139	
Benzo(g,h,i)perylene	0.00313	<u>J T8</u>	0.00227	0.0500	1	02/08/2018 12:52	WG1071139	
Benzo(k)fluoranthene	U	<u>T8</u>	0.0136	0.0500	1	02/08/2018 12:52	WG1071139	
Chrysene	U	<u>T8</u>	0.0108	0.0500	1	02/08/2018 12:52	WG1071139	
Dibenz(a,h)anthracene	U	<u>T8</u>	0.00396	0.0500	1	02/08/2018 12:52	WG1071139	
Fluoranthene	U	<u>T8</u>	0.0157	0.0500	1	02/08/2018 12:52	WG1071139	
Fluorene	U	<u>T8</u>	0.00850	0.0500	1	02/08/2018 12:52	WG1071139	
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	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Indeno(1,2,3-cd)pyrene	U	<u>T8</u>	0.0148	0.0500	1	02/08/2018 12:52	WG1071139	
Naphthalene	U	<u>T8</u>	0.0198	0.250	1	02/08/2018 12:52	<u>WG1071139</u>	
Phenanthrene	U	<u>T8</u>	0.00820	0.0500	1	02/08/2018 12:52	WG1071139	
Pyrene	U	<u>T8</u>	0.0117	0.0500	1	02/08/2018 12:52	WG1071139	
1-Methylnaphthalene	U	<u>T8</u>	0.00821	0.250	1	02/08/2018 12:52	WG1071139	
2-Methylnaphthalene	U	<u>T8</u>	0.00902	0.250	1	02/08/2018 12:52	WG1071139	
2-Chloronaphthalene	U	<u>T8</u>	0.00647	0.250	1	02/08/2018 12:52	WG1071139	
(S) Nitrobenzene-d5	138			31.0-160		02/08/2018 12:52	WG1071139	
(S) 2-Fluorobiphenyl	129			48.0-148		02/08/2018 12:52	WG1071139	
(S) p-Terphenyl-d14	117			37.0-146		02/08/2018 12:52	WG1071139	

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### Mercury by Method 7470A

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		2
Mercury	0.0553	<u>J J3</u>	0.0490	0.200	1	02/09/2018 08:38	WG1071210	Tc

### Metals (ICP) by Method 6010B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Beryllium	1.35	J	0.700	2.00	1	02/08/2018 22:18	<u>WG1071350</u>	
Cadmium	1.08	J	0.700	2.00	1	02/08/2018 22:18	<u>WG1071350</u>	
Chromium	119		1.40	10.0	1	02/08/2018 22:18	WG1071350	
Copper	92.5		5.30	10.0	1	02/08/2018 22:18	WG1071350	
Nickel	82.3		4.90	10.0	1	02/08/2018 22:18	WG1071350	
Selenium	U		7.40	10.0	1	02/08/2018 22:18	WG1071350	
Silver	U		2.80	5.00	1	02/08/2018 22:18	WG1071350	
Zinc	1050		5.90	50.0	1	02/08/2018 22:18	WG1071350	

### Metals (ICPMS) by Method 6020

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Metals (ICPM	IS) by Method 6	6020						1	<sup>8</sup> A
	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch		
Analyte	ug/l		ug/l	ug/l		date / time		1	°S
Antimony	U		0.754	2.00	1	02/09/2018 12:33	WG1071568		
Arsenic	12.4		0.250	2.00	1	02/09/2018 12:33	WG1071568		
Lead	19.3		0.240	2.00	1	02/09/2018 12:33	WG1071568		
Thallium	0.342	BJ	0.190	2.00	1	02/09/2018 12:33	WG1071568		

# Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	<u>Batch</u>	
Analyte	ug/l		ug/l	ug/l		date / time		
Acetone	U		10.0	50.0	1	02/09/2018 00:08	WG1071702	
Acrolein	U	<u>J4</u>	8.87	50.0	1	02/09/2018 00:08	WG1071702	
Acrylonitrile	U		1.87	10.0	1	02/09/2018 00:08	WG1071702	
Benzene	U		0.331	1.00	1	02/09/2018 00:08	WG1071702	
Bromobenzene	U		0.352	1.00	1	02/09/2018 00:08	WG1071702	
Bromodichloromethane	U		0.380	1.00	1	02/09/2018 00:08	WG1071702	
Bromoform	U		0.469	1.00	1	02/09/2018 00:08	WG1071702	
Bromomethane	U		0.866	5.00	1	02/09/2018 00:08	WG1071702	
n-Butylbenzene	U		0.361	1.00	1	02/09/2018 00:08	WG1071702	
sec-Butylbenzene	U		0.365	1.00	1	02/09/2018 00:08	WG1071702	
tert-Butylbenzene	U		0.399	1.00	1	02/09/2018 00:08	WG1071702	
Carbon tetrachloride	U		0.379	1.00	1	02/09/2018 00:08	WG1071702	
Chlorobenzene	U		0.348	1.00	1	02/09/2018 00:08	WG1071702	
Chlorodibromomethane	U		0.327	1.00	1	02/09/2018 00:08	WG1071702	
Chloroethane	U		0.453	5.00	1	02/09/2018 00:08	WG1071702	
Chloroform	U		0.324	5.00	1	02/09/2018 00:08	WG1071702	
Chloromethane	U		0.276	2.50	1	02/09/2018 00:08	WG1071702	
2-Chlorotoluene	U		0.375	1.00	1	02/09/2018 00:08	WG1071702	
4-Chlorotoluene	U		0.351	1.00	1	02/09/2018 00:08	WG1071702	
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	02/09/2018 00:08	WG1071702	
1,2-Dibromoethane	U		0.381	1.00	1	02/09/2018 00:08	WG1071702	
Dibromomethane	U		0.346	1.00	1	02/09/2018 00:08	WG1071702	
1,2-Dichlorobenzene	U		0.349	1.00	1	02/09/2018 00:08	WG1071702	
1,3-Dichlorobenzene	U		0.220	1.00	1	02/09/2018 00:08	WG1071702	
1,4-Dichlorobenzene	U		0.274	1.00	1	02/09/2018 00:08	WG1071702	
Dichlorodifluoromethane	U		0.551	5.00	1	02/09/2018 00:08	WG1071702	
1,1-Dichloroethane	U		0.259	1.00	1	02/09/2018 00:08	WG1071702	
1,2-Dichloroethane	U		0.361	1.00	1	02/09/2018 00:08	WG1071702	
1,1-Dichloroethene	U		0.398	1.00	1	02/09/2018 00:08	WG1071702	
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# SAMPLE RESULTS - 17 L968449

# Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
is-1,2-Dichloroethene	U		0.260	1.00	1	02/09/2018 00:08	<u>WG1071702</u>	
ans-1,2-Dichloroethene	U		0.396	1.00	1	02/09/2018 00:08	WG1071702	
,2-Dichloropropane	U		0.306	1.00	1	02/09/2018 00:08	WG1071702	
1-Dichloropropene	U		0.352	1.00	1	02/09/2018 00:08	WG1071702	
3-Dichloropropane	U		0.366	1.00	1	02/09/2018 00:08	WG1071702	
is-1,3-Dichloropropene	U		0.418	1.00	1	02/09/2018 00:08	WG1071702	
rans-1,3-Dichloropropene	U		0.419	1.00	1	02/09/2018 00:08	WG1071702	
,2-Dichloropropane	U		0.321	1.00	1	02/09/2018 00:08	WG1071702	
vi-isopropyl ether	U		0.320	1.00	1	02/09/2018 00:08	WG1071702	
thylbenzene	U		0.384	1.00	1	02/09/2018 00:08	WG1071702	
lexachloro-1,3-butadiene	U		0.256	1.00	1	02/09/2018 00:08	WG1071702	
sopropylbenzene	U		0.326	1.00	1	02/09/2018 00:08	WG1071702	-
-Isopropyltoluene	U		0.350	1.00	1	02/09/2018 00:08	WG1071702	
-Butanone (MEK)	U		3.93	10.0	1	02/09/2018 00:08	WG1071702	-
lethylene Chloride	U		1.00	5.00	1	02/09/2018 00:08	WG1071702	
-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	02/09/2018 00:08	WG1071702	
lethyl tert-butyl ether	U		0.367	1.00	1	02/09/2018 00:08	WG1071702	
aphthalene	U		1.00	5.00	1	02/09/2018 00:08	WG1071702	
-Propylbenzene	U		0.349	1.00	1	02/09/2018 00:08	WG1071702	
tyrene	U		0.307	1.00	1	02/09/2018 00:08	WG1071702	
1,1,2-Tetrachloroethane	U		0.385	1.00	1	02/09/2018 00:08	WG1071702	
1,2,2-Tetrachloroethane	U		0.130	1.00	1	02/09/2018 00:08	WG1071702	
1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	02/09/2018 00:08	WG1071702	
etrachloroethene	U		0.372	1.00	1	02/09/2018 00:08	WG1071702	
oluene	U		0.412	1.00	1	02/09/2018 00:08	WG1071702	
2,3-Trichlorobenzene	U		0.230	1.00	1	02/09/2018 00:08	WG1071702	
2,4-Trichlorobenzene	U		0.355	1.00	1	02/09/2018 00:08	WG1071702	
1,1-Trichloroethane	U		0.319	1.00	1	02/09/2018 00:08	WG1071702	
1,2-Trichloroethane	U		0.383	1.00	1	02/09/2018 00:08	WG1071702	
richloroethene	U		0.398	1.00	1	02/09/2018 00:08	WG1071702	
richlorofluoromethane	U		1.20	5.00	1	02/09/2018 00:08	WG1071702	
2,3-Trichloropropane	U		0.807	2.50	1	02/09/2018 00:08	WG1071702	
2,4-Trimethylbenzene	U		0.373	1.00	1	02/09/2018 00:08	WG1071702	
2,3-Trimethylbenzene	U		0.321	1.00	1	02/09/2018 00:08	WG1071702	
3,5-Trimethylbenzene	U		0.387	1.00	1	02/09/2018 00:08	WG1071702	
inyl chloride	U		0.259	1.00	1	02/09/2018 00:08	WG1071702	
ylenes, Total	U		1.06	3.00	1	02/09/2018 00:08	WG1071702	
(S) Toluene-d8	104			80.0-120		02/09/2018 00:08	WG1071702	
(S) Dibromofluoromethane	83.3			76.0-123		02/09/2018 00:08	WG1071702	
(S) 4-Bromofluorobenzene	97.4			80.0-120		02/09/2018 00:08	WG1071702	

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Anthracene	U	<u>T8</u>	0.0420	0.150	3	02/08/2018 13:15	WG1071139	
Acenaphthene	U	<u>T8</u>	0.0300	0.150	3	02/08/2018 13:15	<u>WG1071139</u>	
Acenaphthylene	U	<u>T8</u>	0.0360	0.150	3	02/08/2018 13:15	WG1071139	
Benzo(a)anthracene	U	<u>T8</u>	0.0123	0.150	3	02/08/2018 13:15	<u>WG1071139</u>	
Benzo(a)pyrene	U	<u>T8</u>	0.0348	0.150	3	02/08/2018 13:15	WG1071139	
Benzo(b)fluoranthene	0.0255	<u>J T8</u>	0.00636	0.150	3	02/08/2018 13:15	<u>WG1071139</u>	
Benzo(g,h,i)perylene	0.0986	<u>J T8</u>	0.00681	0.150	3	02/08/2018 13:15	WG1071139	
Benzo(k)fluoranthene	U	<u>T8</u>	0.0408	0.150	3	02/08/2018 13:15	<u>WG1071139</u>	
Chrysene	0.0355	<u>J T8</u>	0.0324	0.150	3	02/08/2018 13:15	WG1071139	
Dibenz(a,h)anthracene	U	<u>T8</u>	0.0119	0.150	3	02/08/2018 13:15	<u>WG1071139</u>	
Fluoranthene	U	<u>T8</u>	0.0471	0.150	3	02/08/2018 13:15	WG1071139	
Fluorene	U	<u>T8</u>	0.0255	0.150	3	02/08/2018 13:15	<u>WG1071139</u>	
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# Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	C
Analyte	ug/l		ug/l	ug/l		date / time		
Indeno(1,2,3-cd)pyrene	U	<u>T8</u>	0.0444	0.150	3	02/08/2018 13:15	WG1071139	<sup>2</sup>
Naphthalene	U	<u>T8</u>	0.0594	0.750	3	02/08/2018 13:15	WG1071139	
Phenanthrene	U	<u>T8</u>	0.0246	0.150	3	02/08/2018 13:15	WG1071139	3
Pyrene	0.0512	<u>J T8</u>	0.0351	0.150	3	02/08/2018 13:15	WG1071139	ٌS
1-Methylnaphthalene	U	<u>T8</u>	0.0246	0.750	3	02/08/2018 13:15	WG1071139	
2-Methylnaphthalene	U	<u>T8</u>	0.0271	0.750	3	02/08/2018 13:15	WG1071139	<sup>4</sup> C
2-Chloronaphthalene	U	<u>T8</u>	0.0194	0.750	3	02/08/2018 13:15	WG1071139	Ŭ
(S) Nitrobenzene-d5	110			31.0-160		02/08/2018 13:15	WG1071139	5
(S) 2-Fluorobiphenyl	96.6			48.0-148		02/08/2018 13:15	WG1071139	<sup>5</sup> S
(S) p-Terphenyl-d14	75.3			37.0-146		02/08/2018 13:15	WG1071139	

#### Sample Narrative:

L968449-17 WG1071139: Cannot be analyzed at a lower dilution due to extract emulsion.

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# Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	83.0		1	02/12/2018 11:03	WG1072598

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Acenaphthene	0.00185	J	0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Acenaphthylene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Benzo(a)anthracene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Benzo(a)pyrene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Benzo(b)fluoranthene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Benzo(g,h,i)perylene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Benzo(k)fluoranthene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Chrysene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Dibenz(a,h)anthracene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Fluoranthene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Fluorene	0.00104	J	0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Indeno(1,2,3-cd)pyrene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Naphthalene	U		0.00241	0.0241	1	02/08/2018 16:50	WG1071161	
Phenanthrene	U		0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
Pyrene	0.000835	J	0.000723	0.00723	1	02/08/2018 16:50	WG1071161	
1-Methylnaphthalene	U		0.00241	0.0241	1	02/08/2018 16:50	WG1071161	
2-Methylnaphthalene	U		0.00241	0.0241	1	02/08/2018 16:50	WG1071161	
2-Chloronaphthalene	U		0.00241	0.0241	1	02/08/2018 16:50	WG1071161	
(S) Nitrobenzene-d5	119			14.0-149		02/08/2018 16:50	WG1071161	
(S) 2-Fluorobiphenyl	89.0			34.0-125		02/08/2018 16:50	WG1071161	
(S) p-Terphenyl-d14	64.9			23.0-120		02/08/2018 16:50	WG1071161	

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# Total Solids by Method 2540 G-2011

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GRI - Beaverton, OR

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	Result	Qualifier	Dilution	Analysis	Batch	 Ср	
Analyte	%			date / time		2	İ
Total Solids	75.7		1	02/12/2018 11:03	WG1072598	Tc	
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# Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
nalyte	mg/kg		mg/kg	mg/kg		date / time	
cetone	0.0186	J	0.0132	0.0660	1	02/10/2018 14:26	WG1071579
crylonitrile	U		0.00236	0.0132	1	02/10/2018 14:26	WG1071579
lenzene	U		0.000357	0.00132	1	02/10/2018 14:26	WG1071579
Iromobenzene	U		0.000375	0.00132	1	02/10/2018 14:26	<u>WG1071579</u>
romodichloromethane	U		0.000335	0.00132	1	02/10/2018 14:26	WG1071579
Bromoform	U		0.000560	0.00132	1	02/10/2018 14:26	WG1071579
Bromomethane	U		0.00177	0.00660	1	02/10/2018 14:26	WG1071579
-Butylbenzene	U		0.000341	0.00132	1	02/10/2018 14:26	WG1071579
ec-Butylbenzene	U		0.000265	0.00132	1	02/10/2018 14:26	WG1071579
ert-Butylbenzene	U		0.000272	0.00132	1	02/10/2018 14:26	WG1071579
Carbon tetrachloride	U		0.000433	0.00132	1	02/10/2018 14:26	WG1071579
Chlorobenzene	U		0.000280	0.00132	1	02/10/2018 14:26	WG1071579
Chlorodibromomethane	U		0.000493	0.00132	1	02/10/2018 14:26	WG1071579
Chloroethane	U		0.00125	0.00660	1	02/10/2018 14:26	WG1071579
Chloroform	U		0.000302	0.00660	1	02/10/2018 14:26	WG1071579
Chloromethane	U		0.000495	0.00330	1	02/10/2018 14:26	WG1071579
-Chlorotoluene	U		0.000398	0.00132	1	02/10/2018 14:26	WG1071579
-Chlorotoluene	U		0.000317	0.00132	1	02/10/2018 14:26	WG1071579
,2-Dibromo-3-Chloropropane	U		0.00139	0.00660	1	02/10/2018 14:26	WG1071579
2-Dibromoethane	U		0.000453	0.00132	1	02/10/2018 14:26	WG1071579
Dibromomethane	U		0.000505	0.00132	1	02/10/2018 14:26	WG1071579
,2-Dichlorobenzene	U		0.000403	0.00132	1	02/10/2018 14:26	WG1071579
.3-Dichlorobenzene	U		0.000316	0.00132	1	02/10/2018 14:26	WG1071579
4-Dichlorobenzene	U		0.000299	0.00132	1	02/10/2018 14:26	WG1071579
Dichlorodifluoromethane	U		0.000942	0.00660	1	02/10/2018 14:26	WG1071579
1-Dichloroethane	U		0.000942	0.00132	1	02/10/2018 14:26	WG1071579
,2-Dichloroethane	U		0.000263	0.00132	1	02/10/2018 14:26	WG1071579
,2-Dichloroethene	U		0.000350	0.00132	1	02/10/2018 14:26	WG1071579
is-1,2-Dichloroethene	U		0.000400	0.00132	1	02/10/2018 14:26	
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rans-1,2-Dichloroethene	U		0.000349	0.00132	1	02/10/2018 14:26	WG1071579
2-Dichloropropane	U		0.000473	0.00132	1	02/10/2018 14:26	WG1071579
1-Dichloropropene	U		0.000419	0.00132	1	02/10/2018 14:26	WG1071579
3-Dichloropropane	U		0.000273	0.00132	1	02/10/2018 14:26	WG1071579
is-1,3-Dichloropropene	U		0.000346	0.00132	1	02/10/2018 14:26	WG1071579
rans-1,3-Dichloropropene	U		0.000353	0.00132	1	02/10/2018 14:26	WG1071579
,2-Dichloropropane	U		0.000369	0.00132	1	02/10/2018 14:26	WG1071579
Di-isopropyl ether	U		0.000328	0.00132	1	02/10/2018 14:26	WG1071579
thylbenzene	U		0.000392	0.00132	1	02/10/2018 14:26	WG1071579
lexachloro-1,3-butadiene	U		0.000452	0.00132	1	02/10/2018 14:26	WG1071579
sopropylbenzene	U		0.000321	0.00132	1	02/10/2018 14:26	WG1071579
Isopropyltoluene	U		0.000269	0.00132	1	02/10/2018 14:26	WG1071579
-Butanone (MEK)	U		0.00618	0.0132	1	02/10/2018 14:26	WG1071579
lethylene Chloride	U		0.00132	0.00660	1	02/10/2018 14:26	WG1071579
-Methyl-2-pentanone (MIBK)	U		0.00248	0.0132	1	02/10/2018 14:26	WG1071579
lethyl tert-butyl ether	U		0.000280	0.00132	1	02/10/2018 14:26	WG1071579
laphthalene	U		0.00132	0.00660	1	02/10/2018 14:26	WG1071579
-Propylbenzene	U		0.000272	0.00132	1	02/10/2018 14:26	WG1071579
tyrene	U		0.000309	0.00132	1	02/10/2018 14:26	WG1071579
,1,1,2-Tetrachloroethane	U		0.000349	0.00132	1	02/10/2018 14:26	WG1071579
.,,,	U		0.000482	0.00132		02/10/2018 14:26	

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### Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
1,1,2-Trichlorotrifluoroethane	U		0.000482	0.00132	1	02/10/2018 14:26	WG1071579	
Tetrachloroethene	U		0.000365	0.00132	1	02/10/2018 14:26	WG1071579	
Toluene	U		0.000573	0.00660	1	02/10/2018 14:26	WG1071579	
1,2,3-Trichlorobenzene	U		0.000404	0.00132	1	02/10/2018 14:26	WG1071579	
1,2,4-Trichlorobenzene	U		0.000512	0.00132	1	02/10/2018 14:26	WG1071579	
1,1,1-Trichloroethane	U		0.000378	0.00132	1	02/10/2018 14:26	WG1071579	
1,1,2-Trichloroethane	U		0.000366	0.00132	1	02/10/2018 14:26	WG1071579	
Trichloroethene	U		0.000369	0.00132	1	02/10/2018 14:26	WG1071579	
Trichlorofluoromethane	U		0.000505	0.00660	1	02/10/2018 14:26	WG1071579	
1,2,3-Trichloropropane	U		0.000979	0.00330	1	02/10/2018 14:26	WG1071579	
1,2,4-Trimethylbenzene	U		0.000279	0.00132	1	02/10/2018 14:26	WG1071579	
1,2,3-Trimethylbenzene	U		0.000379	0.00132	1	02/10/2018 14:26	WG1071579	
1,3,5-Trimethylbenzene	U		0.000351	0.00132	1	02/10/2018 14:26	WG1071579	
Vinyl chloride	U		0.000384	0.00132	1	02/10/2018 14:26	WG1071579	
Xylenes, Total	U		0.000922	0.00396	1	02/10/2018 14:26	WG1071579	
(S) Toluene-d8	93.4			80.0-120		02/10/2018 14:26	WG1071579	
(S) Dibromofluoromethane	113			74.0-131		02/10/2018 14:26	WG1071579	
(S) 4-Bromofluorobenzene	106			64.0-132		02/10/2018 14:26	WG1071579	

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Acenaphthene	0.0180		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Acenaphthylene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Benzo(a)anthracene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Benzo(a)pyrene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Benzo(b)fluoranthene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Benzo(g,h,i)perylene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Benzo(k)fluoranthene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Chrysene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Dibenz(a,h)anthracene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Fluoranthene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Fluorene	0.00122	J	0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Indeno(1,2,3-cd)pyrene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Naphthalene	0.0107	J	0.00264	0.0264	1	02/08/2018 17:11	WG1071161
Phenanthrene	0.000870	J	0.000792	0.00792	1	02/08/2018 17:11	WG1071161
Pyrene	U		0.000792	0.00792	1	02/08/2018 17:11	WG1071161
1-Methylnaphthalene	U		0.00264	0.0264	1	02/08/2018 17:11	WG1071161
2-Methylnaphthalene	U		0.00264	0.0264	1	02/08/2018 17:11	WG1071161
2-Chloronaphthalene	U		0.00264	0.0264	1	02/08/2018 17:11	WG1071161
(S) Nitrobenzene-d5	80.1			14.0-149		02/08/2018 17:11	WG1071161
(S) 2-Fluorobiphenyl	70.2			34.0-125		02/08/2018 17:11	WG1071161
(S) p-Terphenyl-d14	51.4			23.0-120		02/08/2018 17:11	WG1071161

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### SAMPLE RESULTS - 20 L968449

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# Total Solids by Method 2540 G-2011

GRI - Beaverton, OR

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	Result	Qualifier	Dilution	Analysis	Batch	Cp	L
Analyte	%			date / time		2	i.
Total Solids	83.4		1	02/12/2018 10:15	WG1072601	Tc	
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# Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
nalyte	mg/kg		mg/kg	mg/kg		date / time		
cetone	0.0133	J V3	0.0120	0.0599	1	02/10/2018 14:47	WG1071579	
crylonitrile	U		0.00215	0.0120	1	02/10/2018 14:47	WG1071579	
enzene	U		0.000324	0.00120	1	02/10/2018 14:47	WG1071579	
romobenzene	U		0.000340	0.00120	1	02/10/2018 14:47	WG1071579	
romodichloromethane	U		0.000305	0.00120	1	02/10/2018 14:47	WG1071579	
romoform	U		0.000508	0.00120	1	02/10/2018 14:47	WG1071579	
romomethane	U		0.00161	0.00599	1	02/10/2018 14:47	WG1071579	
-Butylbenzene	U		0.000309	0.00120	1	02/10/2018 14:47	WG1071579	
ec-Butylbenzene	U		0.000241	0.00120	1	02/10/2018 14:47	WG1071579	
ert-Butylbenzene	U		0.000247	0.00120	1	02/10/2018 14:47	WG1071579	
arbon tetrachloride	U		0.000393	0.00120	1	02/10/2018 14:47	WG1071579	
hlorobenzene	U		0.000254	0.00120	1	02/10/2018 14:47	WG1071579	
hlorodibromomethane	U		0.000447	0.00120	1	02/10/2018 14:47	WG1071579	
hloroethane	U		0.00113	0.00599	1	02/10/2018 14:47	WG1071579	
hloroform	U		0.000275	0.00599	1	02/10/2018 14:47	WG1071579	
hloromethane	U		0.000450	0.00300	1	02/10/2018 14:47	WG1071579	
-Chlorotoluene	U		0.000361	0.00120	1	02/10/2018 14:47	WG1071579	
-Chlorotoluene	U		0.000288	0.00120	1	02/10/2018 14:47	WG1071579	
2-Dibromo-3-Chloropropane	U		0.00126	0.00599	1	02/10/2018 14:47	WG1071579	
2-Dibromoethane	U		0.000411	0.00120	1	02/10/2018 14:47	WG1071579	
ibromomethane	U		0.000458	0.00120	1	02/10/2018 14:47	WG1071579	
2-Dichlorobenzene	U		0.000366	0.00120	1	02/10/2018 14:47	WG1071579	
3-Dichlorobenzene	U		0.000287	0.00120	1	02/10/2018 14:47	WG1071579	
4-Dichlorobenzene	U		0.000271	0.00120	1	02/10/2018 14:47	WG1071579	
ichlorodifluoromethane	U		0.000855	0.00599	1	02/10/2018 14:47	WG1071579	
1-Dichloroethane	U		0.000239	0.00120	1	02/10/2018 14:47	WG1071579	
2-Dichloroethane	U		0.000233	0.00120	1	02/10/2018 14:47	WG1071579	
1-Dichloroethene	U		0.000363	0.00120	1	02/10/2018 14:47	WG1071579	
is-1,2-Dichloroethene	U		0.000303	0.00120	1	02/10/2018 14:47	WG1071579	
ans-1,2-Dichloroethene	U		0.000317	0.00120	1	02/10/2018 14:47	WG1071579	
2-Dichloropropane	U		0.000317	0.00120	1	02/10/2018 14:47	WG1071579	
1-Dichloropropene	U		0.000429	0.00120	1	02/10/2018 14:47	WG1071579	
3-Dichloropropane	U		0.000380	0.00120	1	02/10/2018 14:47	WG1071579	
s-Dichloropropene	U		0.000248	0.00120	1	02/10/2018 14:47	WG1071579	
ans-1,3-Dichloropropene	U		0.000314	0.00120	1	02/10/2018 14:47	WG1071579	
,2-Dichloropropane	U		0.000320	0.00120	1	02/10/2018 14:47	WG1071579	
i-isopropyl ether	U		0.000334	0.00120	1	02/10/2018 14:47	WG1071579	
hylbenzene	U		0.000297	0.00120	1	02/10/2018 14:47	WG1071579	
exachloro-1,3-butadiene	U		0.000356	0.00120	1	02/10/2018 14:47	WG1071579	
opropylbenzene	U		0.000410	0.00120	1	02/10/2018 14:47		
	U		0.000291	0.00120		02/10/2018 14:47	WG1071579 WG1071579	
-Isopropyltoluene	U		0.000245	0.00120	1	02/10/2018 14:47		
-Butanone (MEK)							WG1071579	
ethylene Chloride	U		0.00120	0.00599	1	02/10/2018 14:47	WG1071579	
-Methyl-2-pentanone (MIBK)	U		0.00225	0.0120	1	02/10/2018 14:47	WG1071579	
ethyl tert-butyl ether	U		0.000254	0.00120	1	02/10/2018 14:47	WG1071579	
aphthalene	U		0.00120	0.00599	1	02/10/2018 14:47	WG1071579	
-Propylbenzene	U		0.000247	0.00120	1	02/10/2018 14:47	WG1071579	
tyrene	U		0.000281	0.00120	1	02/10/2018 14:47	WG1071579	
1,1,2-Tetrachloroethane	U		0.000317	0.00120	1	02/10/2018 14:47	WG1071579	
1,2,2-Tetrachloroethane	U		0.000438	0.00120	1	02/10/2018 14:47	WG1071579	
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### Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
1,1,2-Trichlorotrifluoroethane	U		0.000438	0.00120	1	02/10/2018 14:47	WG1071579	
Tetrachloroethene	U		0.000331	0.00120	1	02/10/2018 14:47	WG1071579	
Toluene	0.000567	<u>JV3</u>	0.000520	0.00599	1	02/10/2018 14:47	WG1071579	
1,2,3-Trichlorobenzene	U		0.000367	0.00120	1	02/10/2018 14:47	WG1071579	
1,2,4-Trichlorobenzene	U		0.000465	0.00120	1	02/10/2018 14:47	WG1071579	
1,1,1-Trichloroethane	U		0.000343	0.00120	1	02/10/2018 14:47	WG1071579	
1,1,2-Trichloroethane	U		0.000332	0.00120	1	02/10/2018 14:47	WG1071579	
Trichloroethene	U		0.000334	0.00120	1	02/10/2018 14:47	WG1071579	
Trichlorofluoromethane	U		0.000458	0.00599	1	02/10/2018 14:47	WG1071579	
1,2,3-Trichloropropane	U		0.000888	0.00300	1	02/10/2018 14:47	WG1071579	
1,2,4-Trimethylbenzene	0.000361	<u>JV3</u>	0.000253	0.00120	1	02/10/2018 14:47	WG1071579	
1,2,3-Trimethylbenzene	U		0.000344	0.00120	1	02/10/2018 14:47	WG1071579	
1,3,5-Trimethylbenzene	U		0.000319	0.00120	1	02/10/2018 14:47	WG1071579	
Vinyl chloride	U		0.000349	0.00120	1	02/10/2018 14:47	WG1071579	
Xylenes, Total	U		0.000837	0.00360	1	02/10/2018 14:47	WG1071579	
(S) Toluene-d8	92.2			80.0-120		02/10/2018 14:47	WG1071579	
(S) Dibromofluoromethane	107			74.0-131		02/10/2018 14:47	WG1071579	
(S) 4-Bromofluorobenzene	114			64.0-132		02/10/2018 14:47	WG1071579	

#### Sample Narrative:

L968449-20 WG1071579: Previous run also had low IS/SURR recovery. Matrix effect.

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

	Result (dry) Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg	mg/kg	mg/kg		date / time	
Anthracene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Acenaphthene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Acenaphthylene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Benzo(a)anthracene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Benzo(a)pyrene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Benzo(b)fluoranthene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Benzo(g,h,i)perylene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Benzo(k)fluoranthene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Chrysene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Dibenz(a,h)anthracene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Fluoranthene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Fluorene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Indeno(1,2,3-cd)pyrene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Naphthalene	U	0.00240	0.0240	1	02/08/2018 17:31	<u>WG1071161</u>
Phenanthrene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
Pyrene	U	0.000719	0.00719	1	02/08/2018 17:31	<u>WG1071161</u>
1-Methylnaphthalene	U	0.00240	0.0240	1	02/08/2018 17:31	<u>WG1071161</u>
2-Methylnaphthalene	U	0.00240	0.0240	1	02/08/2018 17:31	<u>WG1071161</u>
2-Chloronaphthalene	U	0.00240	0.0240	1	02/08/2018 17:31	<u>WG1071161</u>
(S) Nitrobenzene-d5	116		14.0-149		02/08/2018 17:31	WG1071161
(S) 2-Fluorobiphenyl	90.0		34.0-125		02/08/2018 17:31	WG1071161
(S) p-Terphenyl-d14	93.8		23.0-120		02/08/2018 17:31	WG1071161

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# Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch		
nalyte	ug/l		ug/l	ug/l		date / time			
cetone	U		10.0	50.0	1	02/09/2018 00:27	WG1071702		
crolein	U	<u>J4</u>	8.87	50.0	1	02/09/2018 00:27	WG1071702		
crylonitrile	U		1.87	10.0	1	02/09/2018 00:27	WG1071702		
Benzene	U		0.331	1.00	1	02/09/2018 00:27	WG1071702		
Bromobenzene	U		0.352	1.00	1	02/09/2018 00:27	WG1071702		
romodichloromethane	U		0.380	1.00	1	02/09/2018 00:27	WG1071702		
romoform	U		0.469	1.00	1	02/09/2018 00:27	WG1071702		
romomethane	U		0.866	5.00	1	02/09/2018 00:27	WG1071702		
-Butylbenzene	U		0.361	1.00	1	02/09/2018 00:27	WG1071702		
ec-Butylbenzene	U		0.365	1.00	1	02/09/2018 00:27	WG1071702		
ert-Butylbenzene	U		0.399	1.00	1	02/09/2018 00:27	WG1071702		
arbon tetrachloride	U		0.379	1.00	1	02/09/2018 00:27	WG1071702		
hlorobenzene	U		0.348	1.00	1	02/09/2018 00:27	WG1071702		
hlorodibromomethane	U		0.327	1.00	1	02/09/2018 00:27	WG1071702		
nloroethane	U		0.453	5.00	1	02/09/2018 00:27	WG1071702		
hloroform	U		0.324	5.00	1	02/09/2018 00:27	WG1071702		
nloromethane	U		0.276	2.50	1	02/09/2018 00:27	WG1071702		
-Chlorotoluene	U		0.375	1.00	1	02/09/2018 00:27	WG1071702		
Chlorotoluene	U		0.351	1.00	1	02/09/2018 00:27	WG1071702		
2-Dibromo-3-Chloropropane	U		1.33	5.00	1	02/09/2018 00:27	WG1071702		
2-Dibromoethane	U		0.381	1.00	1	02/09/2018 00:27	WG1071702		
bromomethane	U		0.346	1.00	1	02/09/2018 00:27	WG1071702		
2-Dichlorobenzene	U		0.349	1.00	1	02/09/2018 00:27	WG1071702		
B-Dichlorobenzene	U		0.220	1.00	1	02/09/2018 00:27	WG1071702		
I-Dichlorobenzene	U		0.274	1.00	1	02/09/2018 00:27	WG1071702		
chlorodifluoromethane	U		0.551	5.00	1	02/09/2018 00:27	WG1071702		
-Dichloroethane	U		0.259	1.00	1	02/09/2018 00:27	WG1071702		
2-Dichloroethane	U		0.361	1.00	1	02/09/2018 00:27	WG1071702		
-Dichloroethene	U		0.398	1.00	1	02/09/2018 00:27	WG1071702		
s-1,2-Dichloroethene	U		0.260	1.00	1	02/09/2018 00:27	WG1071702		
ans-1,2-Dichloroethene	U		0.396	1.00	1	02/09/2018 00:27	WG1071702		
2-Dichloropropane	U		0.306	1.00	1	02/09/2018 00:27	WG1071702		
-Dichloropropene	U		0.352	1.00	1	02/09/2018 00:27			
	U		0.366	1.00	1		WG1071702		
B-Dichloropropane						02/09/2018 00:27	WG1071702		
s-1,3-Dichloropropene	U		0.418	1.00	1	02/09/2018 00:27	WG1071702		
ans-1,3-Dichloropropene	U		0.419	1.00	1	02/09/2018 00:27	WG1071702		
2-Dichloropropane	U		0.321	1.00	1	02/09/2018 00:27	WG1071702		
-isopropyl ether	U		0.320	1.00	1	02/09/2018 00:27	WG1071702		
hylbenzene	U		0.384	1.00	1	02/09/2018 00:27	WG1071702		
exachloro-1,3-butadiene	U		0.256	1.00	1	02/09/2018 00:27	WG1071702		
opropylbenzene	U		0.326	1.00	1	02/09/2018 00:27	WG1071702		
Isopropyltoluene	U		0.350	1.00	1	02/09/2018 00:27	WG1071702		
Butanone (MEK)	U		3.93	10.0	1	02/09/2018 00:27	WG1071702		
ethylene Chloride	U		1.00	5.00	1	02/09/2018 00:27	WG1071702		
Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	02/09/2018 00:27	WG1071702		
ethyl tert-butyl ether	U		0.367	1.00	1	02/09/2018 00:27	WG1071702		
phthalene	U		1.00	5.00	1	02/09/2018 00:27	WG1071702		
Propylbenzene	U		0.349	1.00	1	02/09/2018 00:27	WG1071702		
rene	U		0.307	1.00	1	02/09/2018 00:27	WG1071702		
1,2-Tetrachloroethane	U		0.385	1.00	1	02/09/2018 00:27	WG1071702		
2,2-Tetrachloroethane	U		0.130	1.00	1	02/09/2018 00:27	WG1071702		
,2-Trichlorotrifluoroethane	U		0.303	1.00	1	02/09/2018 00:27	WG1071702		
trachloroethene	U		0.372	1.00	1	02/09/2018 00:27	WG1071702		
oluene	U		0.412	1.00	1	02/09/2018 00:27	WG1071702		
2,3-Trichlorobenzene	U		0.230	1.00	1	02/09/2018 00:27	WG1071702		
2,4-Trichlorobenzene	U		0.355	1.00	1	02/09/2018 00:27	WG1071702		
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### Volatile Organic Compounds (GC/MS) by Method 8260B

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	C
Analyte	ug/l		ug/l	ug/l		date / time		
1,1,1-Trichloroethane	U		0.319	1.00	1	02/09/2018 00:27	WG1071702	<sup>2</sup> T
1,1,2-Trichloroethane	U		0.383	1.00	1	02/09/2018 00:27	<u>WG1071702</u>	
Trichloroethene	U		0.398	1.00	1	02/09/2018 00:27	WG1071702	3
Trichlorofluoromethane	U		1.20	5.00	1	02/09/2018 00:27	<u>WG1071702</u>	ິS:
1,2,3-Trichloropropane	U		0.807	2.50	1	02/09/2018 00:27	WG1071702	
1,2,4-Trimethylbenzene	U		0.373	1.00	1	02/09/2018 00:27	<u>WG1071702</u>	<sup>4</sup> C
1,2,3-Trimethylbenzene	U		0.321	1.00	1	02/09/2018 00:27	WG1071702	Ŭ
1,3,5-Trimethylbenzene	U		0.387	1.00	1	02/09/2018 00:27	<u>WG1071702</u>	5
Vinyl chloride	U		0.259	1.00	1	02/09/2018 00:27	WG1071702	<sup>5</sup> Si
Xylenes, Total	U		1.06	3.00	1	02/09/2018 00:27	WG1071702	
(S) Toluene-d8	107			80.0-120		02/09/2018 00:27	WG1071702	<sup>6</sup> Q
(S) Dibromofluoromethane	85.6			76.0-123		02/09/2018 00:27	<u>WG1071702</u>	
(S) 4-Bromofluorobenzene	95.0			80.0-120		02/09/2018 00:27	WG1071702	<sup>7</sup> G

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		
Anthracene	U		0.0420	0.150	3	02/08/2018 13:39	WG1071139	
Acenaphthene	U		0.0300	0.150	3	02/08/2018 13:39	WG1071139	
Acenaphthylene	U		0.0360	0.150	3	02/08/2018 13:39	WG1071139	
Benzo(a)anthracene	U		0.0123	0.150	3	02/08/2018 13:39	WG1071139	
Benzo(a)pyrene	U		0.0348	0.150	3	02/08/2018 13:39	WG1071139	
Benzo(b)fluoranthene	U		0.00636	0.150	3	02/08/2018 13:39	WG1071139	
Benzo(g,h,i)perylene	U		0.00681	0.150	3	02/08/2018 13:39	WG1071139	
Benzo(k)fluoranthene	U		0.0408	0.150	3	02/08/2018 13:39	WG1071139	
Chrysene	U		0.0324	0.150	3	02/08/2018 13:39	WG1071139	
Dibenz(a,h)anthracene	U		0.0119	0.150	3	02/08/2018 13:39	WG1071139	
Fluoranthene	U		0.0471	0.150	3	02/08/2018 13:39	WG1071139	
Fluorene	U		0.0255	0.150	3	02/08/2018 13:39	WG1071139	
Indeno(1,2,3-cd)pyrene	U		0.0444	0.150	3	02/08/2018 13:39	WG1071139	
Naphthalene	0.0599	J	0.0594	0.750	3	02/08/2018 13:39	WG1071139	
Phenanthrene	U		0.0246	0.150	3	02/08/2018 13:39	WG1071139	
Pyrene	U		0.0351	0.150	3	02/08/2018 13:39	WG1071139	
1-Methylnaphthalene	U		0.0246	0.750	3	02/08/2018 13:39	WG1071139	
2-Methylnaphthalene	U		0.0271	0.750	3	02/08/2018 13:39	WG1071139	
2-Chloronaphthalene	U		0.0194	0.750	3	02/08/2018 13:39	WG1071139	
(S) Nitrobenzene-d5	116			31.0-160		02/08/2018 13:39	WG1071139	
(S) 2-Fluorobiphenyl	108			48.0-148		02/08/2018 13:39	WG1071139	
(S) p-Terphenyl-d14	91.8			37.0-146		02/08/2018 13:39	WG1071139	

#### Sample Narrative:

L968449-21 WG1071139: Cannot be analyzed at a lower dilution due to extract emulsion.

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SDG: L968449 Reissued for Use DATE/TIME: 02/14/18 09:57

# Collected date/time: 01/31/18 11:15

### SAMPLE RESULTS - 22 L968449

ONE LAB. NATIONWIDE.

### Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch	
Analyte	%			date / time		2
Total Solids	82.6		1	02/12/2018 10:15	WG1072601	Tc

### Mercury by Method 7471A

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		4
Mercury	0.00807	ВJ	0.00339	0.0242	1	02/13/2018 08:30	WG1072718	

# Metals (ICP) by Method 6010B

	Result	Qualifier	Dilution Analy	/sis	Batch			
Analyte	%			/ time				
Total Solids	82.6		1 02/12	2/2018 10:15	WG1072	601		
Mercury by Met	hod 7471A							
	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Mercury	0.00807	<u>B J</u>	0.00339	0.0242	1	02/13/2018 08:30	WG1072718	
Metals (ICP) by N	Vethod 6010B							
	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Antimony	U		0.908	2.42	1	02/13/2018 20:04	WG1073100	
Arsenic	3.12		0.787	2.42	1	02/13/2018 20:04	WG1073100	
Beryllium	0.106	J	0.0848	0.242	1	02/13/2018 20:04	WG1073100	
Cadmium	U		0.0848	0.606	1	02/13/2018 20:04	WG1073100	
Chromium	7.50		0.170	1.21	1	02/13/2018 20:04	WG1073100	
Copper	2.84		0.642	2.42	1	02/13/2018 20:04	WG1073100	
Lead	6.54		0.230	0.606	1	02/13/2018 20:04	WG1073100	
Nickel	5.30		0.593	2.42	1	02/13/2018 20:04	WG1073100	
Selenium	U		0.896	2.42	1	02/13/2018 20:04	WG1073100	
Silver	U		0.339	1.21	1	02/13/2018 20:04	WG1073100	
Thallium	U		0.787	2.42	1	02/13/2018 20:04	WG1073100	
Zinc	28.1		0.715	6.06	1	02/13/2018 20:04	WG1073100	

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	3.45	J	1.60	4.84	1	02/09/2018 12:57	WG1071154
Residual Range Organics (RRO)	U		4.00	12.1	1	02/09/2018 12:57	WG1071154
(S) o-Terphenyl	65.5			18.0-148		02/09/2018 12:57	WG1071154

	Result (dry) Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg	mg/kg	mg/kg		date / time		
Anthracene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Acenaphthene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Acenaphthylene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Benzo(a)anthracene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Benzo(a)pyrene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Benzo(b)fluoranthene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Benzo(g,h,i)perylene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Benzo(k)fluoranthene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Chrysene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Dibenz(a,h)anthracene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Fluoranthene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Fluorene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Indeno(1,2,3-cd)pyrene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Naphthalene	U	0.00242	0.0242	1	02/08/2018 17:52	WG1071161	
Phenanthrene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
Pyrene	U	0.000727	0.00727	1	02/08/2018 17:52	WG1071161	
1-Methylnaphthalene	U	0.00242	0.0242	1	02/08/2018 17:52	WG1071161	
2-Methylnaphthalene	U	0.00242	0.0242	1	02/08/2018 17:52	WG1071161	
2-Chloronaphthalene	U	0.00242	0.0242	1	02/08/2018 17:52	WG1071161	
(S) Nitrobenzene-d5	108		14.0-149		02/08/2018 17:52	WG1071161	
(S) 2-Fluorobiphenyl	79.3		34.0-125		02/08/2018 17:52	WG1071161	
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	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	Ċ
Analyte	mg/kg		mg/kg	mg/kg		date / time		
(S) p-Terphenyl-d14	62.6			23.0-120		02/08/2018 17:52	WG1071161	$^{2}$ T

<sup>2</sup> Tc
<sup>3</sup> Ss
<sup>4</sup> Cn
⁵Sr
<sup>6</sup> Qc
<sup>7</sup> Gl
<sup>8</sup> AI
°Sc

# Collected date/time: 01/31/18 15:45

### SAMPLE RESULTS - 23 L968449

### Total Solids by Method 2540 G-2011

GRI - Beaverton, OR

	-	Result	Qualifier	Dilution	Analysis	Batch	Ср	
Analyte		%			date / time	—	2	
Total Solids		83.3		1	02/12/2018 10:15	WG1072601	Tc	

### Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
nalyte	mg/kg		mg/kg	mg/kg		date / time		
cetone	0.0188	J	0.0120	0.0600	1	02/10/2018 15:09	WG1071579	
crylonitrile	U	-	0.00215	0.0120	1	02/10/2018 15:09	WG1071579	
lenzene	U		0.000324	0.00120	1	02/10/2018 15:09	WG1071579	
romobenzene	U		0.000341	0.00120	1	02/10/2018 15:09	WG1071579	
romodichloromethane	U		0.000305	0.00120	1	02/10/2018 15:09	WG1071579	
Bromoform	U		0.000509	0.00120	1	02/10/2018 15:09	WG1071579	
romomethane	U		0.00161	0.00600	1	02/10/2018 15:09	WG1071579	
-Butylbenzene	U		0.000310	0.00120	1	02/10/2018 15:09	WG1071579	
ec-Butylbenzene	U		0.000241	0.00120	1	02/10/2018 15:09	WG1071579	
ert-Butylbenzene	U		0.000247	0.00120	1	02/10/2018 15:09	WG1071579	
Carbon tetrachloride	U		0.000394	0.00120	1	02/10/2018 15:09	WG1071579	
Chlorobenzene	U		0.000255	0.00120	1	02/10/2018 15:09	WG1071579	
Chlorodibromomethane	U		0.000255	0.00120	1	02/10/2018 15:09	WG1071579	
Chloroethane	U		0.000448	0.00120	1	02/10/2018 15:09		
							WG1071579	
Chloroform	U		0.000275	0.00600	1	02/10/2018 15:09	WG1071579	
Chloromethane	U		0.000450	0.00300	1	02/10/2018 15:09	WG1071579	
-Chlorotoluene	U		0.000361	0.00120	1	02/10/2018 15:09	WG1071579	
-Chlorotoluene	U		0.000288	0.00120	1	02/10/2018 15:09	WG1071579	
2-Dibromo-3-Chloropropane	U		0.00126	0.00600	1	02/10/2018 15:09	WG1071579	
,2-Dibromoethane	U		0.000412	0.00120	1	02/10/2018 15:09	WG1071579	
Dibromomethane	U		0.000459	0.00120	1	02/10/2018 15:09	WG1071579	
,2-Dichlorobenzene	U		0.000366	0.00120	1	02/10/2018 15:09	WG1071579	
,3-Dichlorobenzene	U		0.000287	0.00120	1	02/10/2018 15:09	WG1071579	
4-Dichlorobenzene	U		0.000271	0.00120	1	02/10/2018 15:09	WG1071579	
Dichlorodifluoromethane	U		0.000856	0.00600	1	02/10/2018 15:09	WG1071579	
,1-Dichloroethane	U		0.000239	0.00120	1	02/10/2018 15:09	WG1071579	
,2-Dichloroethane	U		0.000318	0.00120	1	02/10/2018 15:09	WG1071579	
,1-Dichloroethene	U		0.000364	0.00120	1	02/10/2018 15:09	WG1071579	
is-1,2-Dichloroethene	U		0.000282	0.00120	1	02/10/2018 15:09	WG1071579	
rans-1,2-Dichloroethene	U		0.000317	0.00120	1	02/10/2018 15:09	WG1071579	
,2-Dichloropropane	U		0.000430	0.00120	1	02/10/2018 15:09	WG1071579	
,1-Dichloropropene	U		0.000381	0.00120	1	02/10/2018 15:09	WG1071579	
,3-Dichloropropane	U		0.000249	0.00120	1	02/10/2018 15:09	WG1071579	
is-1,3-Dichloropropene	U		0.000315	0.00120	1	02/10/2018 15:09	WG1071579	
rans-1,3-Dichloropropene	U		0.000321	0.00120	1	02/10/2018 15:09	WG1071579	
,2-Dichloropropane	U		0.000335	0.00120	1	02/10/2018 15:09	WG1071579	
)i-isopropyl ether	U		0.000298	0.00120	1	02/10/2018 15:09	WG1071579	
thylbenzene	U		0.000357	0.00120	1	02/10/2018 15:09	WG1071579	
lexachloro-1,3-butadiene	U		0.000411	0.00120	1	02/10/2018 15:09	WG1071579	
sopropylbenzene	U		0.000292	0.00120	1	02/10/2018 15:09	WG1071579	
Isopropyltoluene	U		0.000232	0.00120	1	02/10/2018 15:09	WG1071579	
-Butanone (MEK)	U		0.00562	0.0120	1	02/10/2018 15:09	WG1071579	
lethylene Chloride	U		0.00120	0.00600	1	02/10/2018 15:09	WG1071579	
-Methyl-2-pentanone (MIBK)	U		0.00120	0.0120	1	02/10/2018 15:09	WG1071579	
lethyl tert-butyl ether	U		0.00226	0.0120	1	02/10/2018 15:09	WG1071579	
	U		0.000255	0.00120	1	02/10/2018 15:09		
laphthalene Propulsonzono							WG1071579	
-Propylbenzene	U		0.000247	0.00120	1	02/10/2018 15:09	WG1071579	
tyrene	U		0.000281	0.00120	1	02/10/2018 15:09	WG1071579	
1,1,2-Tetrachloroethane	U		0.000317	0.00120	1	02/10/2018 15:09	WG1071579	
1,2,2-Tetrachloroethane	U		0.000438	0.00120	1	02/10/2018 15:09	WG1071579	
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### Volatile Organic Compounds (GC/MS) by Method 8260B

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
1,1,2-Trichlorotrifluoroethane	U		0.000438	0.00120	1	02/10/2018 15:09	WG1071579	
Tetrachloroethene	U		0.000331	0.00120	1	02/10/2018 15:09	WG1071579	
Toluene	U		0.000521	0.00600	1	02/10/2018 15:09	WG1071579	
1,2,3-Trichlorobenzene	U		0.000367	0.00120	1	02/10/2018 15:09	WG1071579	
1,2,4-Trichlorobenzene	U		0.000466	0.00120	1	02/10/2018 15:09	WG1071579	
1,1,1-Trichloroethane	U		0.000343	0.00120	1	02/10/2018 15:09	WG1071579	
1,1,2-Trichloroethane	U		0.000333	0.00120	1	02/10/2018 15:09	WG1071579	
Trichloroethene	U		0.000335	0.00120	1	02/10/2018 15:09	WG1071579	
Trichlorofluoromethane	U		0.000459	0.00600	1	02/10/2018 15:09	WG1071579	
1,2,3-Trichloropropane	U		0.000890	0.00300	1	02/10/2018 15:09	WG1071579	
1,2,4-Trimethylbenzene	U		0.000253	0.00120	1	02/10/2018 15:09	WG1071579	
1,2,3-Trimethylbenzene	U		0.000345	0.00120	1	02/10/2018 15:09	WG1071579	
1,3,5-Trimethylbenzene	U		0.000319	0.00120	1	02/10/2018 15:09	WG1071579	
Vinyl chloride	U		0.000349	0.00120	1	02/10/2018 15:09	WG1071579	
Xylenes, Total	U		0.000838	0.00360	1	02/10/2018 15:09	WG1071579	
(S) Toluene-d8	90.7			80.0-120		02/10/2018 15:09	WG1071579	
(S) Dibromofluoromethane	112			74.0-131		02/10/2018 15:09	WG1071579	
(S) 4-Bromofluorobenzene	112			64.0-132		02/10/2018 15:09	WG1071579	

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.58	4.80	1	02/09/2018 13:10	WG1071154
Residual Range Organics (RRO)	5.79	J	3.96	12.0	1	02/09/2018 13:10	WG1071154
(S) o-Terphenyl	63.6			18.0-148		02/09/2018 13:10	WG1071154

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	0.00241	J	0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Acenaphthene	0.00376	J	0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Acenaphthylene	0.000818	J	0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Benzo(a)anthracene	0.00109	J	0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Benzo(a)pyrene	U		0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Benzo(b)fluoranthene	U		0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Benzo(g,h,i)perylene	U		0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Benzo(k)fluoranthene	U		0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Chrysene	0.000728	J	0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Dibenz(a,h)anthracene	U		0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Fluoranthene	U		0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Fluorene	0.00339	J	0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Indeno(1,2,3-cd)pyrene	U		0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Naphthalene	0.0129	J	0.00240	0.0240	1	02/08/2018 18:13	<u>WG1071161</u>
Phenanthrene	0.00928		0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
Pyrene	0.00229	J	0.000720	0.00720	1	02/08/2018 18:13	<u>WG1071161</u>
1-Methylnaphthalene	0.0451		0.00240	0.0240	1	02/08/2018 18:13	<u>WG1071161</u>
2-Methylnaphthalene	0.0520		0.00240	0.0240	1	02/08/2018 18:13	<u>WG1071161</u>
2-Chloronaphthalene	U		0.00240	0.0240	1	02/08/2018 18:13	WG1071161
(S) Nitrobenzene-d5	117			14.0-149		02/08/2018 18:13	<u>WG1071161</u>
(S) 2-Fluorobiphenyl	85.7			34.0-125		02/08/2018 18:13	WG1071161
(S) p-Terphenyl-d14	81.4			23.0-120		02/08/2018 18:13	WG1071161

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### SAMPLE RESULTS - 24 L968449

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### Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	84.8		1	02/12/2018 10:15	WG1072601

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.56	4.71	1	02/09/2018 13:24	WG1071154
Residual Range Organics (RRO)	U		3.89	11.8	1	02/09/2018 13:24	WG1071154
(S) o-Terphenyl	97.9			18.0-148		02/09/2018 13:24	WG1071154

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	0.000724	J	0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Acenaphthene	0.00140	J	0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Acenaphthylene	U		0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Benzo(a)anthracene	U		0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Benzo(a)pyrene	U		0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Benzo(b)fluoranthene	U		0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Benzo(g,h,i)perylene	U		0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Benzo(k)fluoranthene	U		0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Chrysene	U		0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Dibenz(a,h)anthracene	U		0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Fluoranthene	U		0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Fluorene	0.00128	J	0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Indeno(1,2,3-cd)pyrene	U		0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Naphthalene	U		0.00236	0.0236	1	02/08/2018 19:15	WG1071161	
Phenanthrene	0.00314	J	0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
Pyrene	U		0.000707	0.00707	1	02/08/2018 19:15	WG1071161	
1-Methylnaphthalene	0.00855	J	0.00236	0.0236	1	02/08/2018 19:15	WG1071161	
2-Methylnaphthalene	0.00959	J	0.00236	0.0236	1	02/08/2018 19:15	WG1071161	
2-Chloronaphthalene	U		0.00236	0.0236	1	02/08/2018 19:15	WG1071161	
(S) Nitrobenzene-d5	115			14.0-149		02/08/2018 19:15	WG1071161	
(S) 2-Fluorobiphenyl	90.5			34.0-125		02/08/2018 19:15	WG1071161	
(S) p-Terphenyl-d14	90.1			23.0-120		02/08/2018 19:15	WG1071161	



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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch	
Analyte	ug/l		ug/l	ug/l		date / time		, in the second s
Anthracene	U		0.0420	0.150	3	02/08/2018 14:02	WG1071139	
Acenaphthene	U		0.0300	0.150	3	02/08/2018 14:02	WG1071139	L
Acenaphthylene	U		0.0360	0.150	3	02/08/2018 14:02	WG1071139	-
Benzo(a)anthracene	U		0.0123	0.150	3	02/08/2018 14:02	WG1071139	
Benzo(a)pyrene	U		0.0348	0.150	3	02/08/2018 14:02	WG1071139	1
Benzo(b)fluoranthene	U		0.00636	0.150	3	02/08/2018 14:02	<u>WG1071139</u>	
Benzo(g,h,i)perylene	U		0.00681	0.150	3	02/08/2018 14:02	WG1071139	L
Benzo(k)fluoranthene	U		0.0408	0.150	3	02/08/2018 14:02	<u>WG1071139</u>	
Chrysene	U		0.0324	0.150	3	02/08/2018 14:02	WG1071139	
Dibenz(a,h)anthracene	U		0.0119	0.150	3	02/08/2018 14:02	WG1071139	i i i
Fluoranthene	U		0.0471	0.150	3	02/08/2018 14:02	WG1071139	
Fluorene	U		0.0255	0.150	3	02/08/2018 14:02	WG1071139	l
Indeno(1,2,3-cd)pyrene	U		0.0444	0.150	3	02/08/2018 14:02	WG1071139	
Naphthalene	0.0872	J	0.0594	0.750	3	02/08/2018 14:02	WG1071139	
Phenanthrene	U		0.0246	0.150	3	02/08/2018 14:02	WG1071139	[
Pyrene	U		0.0351	0.150	3	02/08/2018 14:02	WG1071139	
1-Methylnaphthalene	0.0370	J	0.0246	0.750	3	02/08/2018 14:02	WG1071139	
2-Methylnaphthalene	0.0355	J	0.0271	0.750	3	02/08/2018 14:02	WG1071139	
2-Chloronaphthalene	U		0.0194	0.750	3	02/08/2018 14:02	WG1071139	
(S) Nitrobenzene-d5	118			31.0-160		02/08/2018 14:02	WG1071139	
(S) 2-Fluorobiphenyl	109			48.0-148		02/08/2018 14:02	WG1071139	
(S) p-Terphenyl-d14	92.7			37.0-146		02/08/2018 14:02	WG1071139	

#### Sample Narrative:

L968449-25 WG1071139: Cannot be analyzed at a lower dilution due to extract emulsion.

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### SAMPLE RESULTS - 26 L968449



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### Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	83.8		1	02/12/2018 10:29	WG1072603

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Acenaphthene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Acenaphthylene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Benzo(a)anthracene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Benzo(a)pyrene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Benzo(b)fluoranthene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Benzo(g,h,i)perylene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Benzo(k)fluoranthene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Chrysene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Dibenz(a,h)anthracene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Fluoranthene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Fluorene	0.000754	J	0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Indeno(1,2,3-cd)pyrene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Naphthalene	U		0.00239	0.0239	1	02/08/2018 19:36	WG1071161	
Phenanthrene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
Pyrene	U		0.000716	0.00716	1	02/08/2018 19:36	WG1071161	
1-Methylnaphthalene	U		0.00239	0.0239	1	02/08/2018 19:36	WG1071161	
2-Methylnaphthalene	U		0.00239	0.0239	1	02/08/2018 19:36	WG1071161	
2-Chloronaphthalene	U		0.00239	0.0239	1	02/08/2018 19:36	WG1071161	
(S) Nitrobenzene-d5	123			14.0-149		02/08/2018 19:36	WG1071161	
(S) 2-Fluorobiphenyl	92.8			34.0-125		02/08/2018 19:36	WG1071161	
(S) p-Terphenyl-d14	86.6			23.0-120		02/08/2018 19:36	WG1071161	

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### SAMPLE RESULTS - 27 L968449

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# Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	82.9		1	02/12/2018 10:29	WG1072603

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
Analyte	mg/kg		mg/kg	mg/kg		date / time	
Diesel Range Organics (DRO)	U		1.59	4.83	1	02/09/2018 13:38	WG1071154
Residual Range Organics (RRO)	U		3.98	12.1	1	02/09/2018 13:38	WG1071154
(S) o-Terphenyl	82.9			18.0-148		02/09/2018 13:38	WG1071154

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	0.00170	J	0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
Acenaphthene	0.0327		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
Acenaphthylene	U		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
Benzo(a)anthracene	U		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
Benzo(a)pyrene	U		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
Benzo(b)fluoranthene	U		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
Benzo(g,h,i)perylene	U		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
Benzo(k)fluoranthene	U		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
Chrysene	U		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
Dibenz(a,h)anthracene	U		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
luoranthene	0.00377	J	0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
luorene	0.0109		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
ndeno(1,2,3-cd)pyrene	U		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
Naphthalene	0.0200	J	0.00241	0.0241	1	02/08/2018 19:56	WG1071161	
Phenanthrene	U		0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
Pyrene	0.00255	J	0.000724	0.00724	1	02/08/2018 19:56	WG1071161	
-Methylnaphthalene	0.00320	J	0.00241	0.0241	1	02/08/2018 19:56	WG1071161	
2-Methylnaphthalene	0.00403	J	0.00241	0.0241	1	02/08/2018 19:56	WG1071161	
2-Chloronaphthalene	U		0.00241	0.0241	1	02/08/2018 19:56	WG1071161	
(S) Nitrobenzene-d5	122			14.0-149		02/08/2018 19:56	WG1071161	
(S) 2-Fluorobiphenyl	86.5			34.0-125		02/08/2018 19:56	WG1071161	
(S) p-Terphenyl-d14	74.5			23.0-120		02/08/2018 19:56	WG1071161	

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### SAMPLE RESULTS - 28 L968449



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# Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	86.1		1	02/12/2018 10:29	WG1072603

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	0.0147	J	0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Acenaphthene	U		0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Acenaphthylene	0.0205	J	0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Benzo(a)anthracene	0.0257	J	0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Benzo(a)pyrene	0.0163	J	0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Benzo(b)fluoranthene	0.0432	J	0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Benzo(g,h,i)perylene	0.449		0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Benzo(k)fluoranthene	0.0201	J	0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Chrysene	U		0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Dibenz(a,h)anthracene	U		0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Fluoranthene	0.0152	J	0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Fluorene	U		0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Indeno(1,2,3-cd)pyrene	0.0224	J	0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Naphthalene	U		0.0465	0.465	20	02/08/2018 20:38	WG1071161	
Phenanthrene	0.0150	J	0.0139	0.139	20	02/08/2018 20:38	WG1071161	
Pyrene	0.0199	J	0.0139	0.139	20	02/08/2018 20:38	WG1071161	
1-Methylnaphthalene	U		0.0465	0.465	20	02/08/2018 20:38	WG1071161	
2-Methylnaphthalene	U		0.0465	0.465	20	02/08/2018 20:38	WG1071161	
2-Chloronaphthalene	U		0.0465	0.465	20	02/08/2018 20:38	WG1071161	
(S) Nitrobenzene-d5	95.0	<u>J7</u>		14.0-149		02/08/2018 20:38	WG1071161	
(S) 2-Fluorobiphenyl	82.0	<u>J7</u>		34.0-125		02/08/2018 20:38	WG1071161	
(S) p-Terphenyl-d14	79.2	<u>J7</u>		23.0-120		02/08/2018 20:38	WG1071161	

#### Sample Narrative:

L968449-28 WG1071161: Cannot be analyzed at a lower dilution due to non-target matrix interference.

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#### SAMPLE RESULTS - 29 L968449



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#### Total Solids by Method 2540 G-2011

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	%			date / time	
Total Solids	82.0		1	02/12/2018 10:29	<u>WG1072603</u>

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

	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch	
Analyte	mg/kg		mg/kg	mg/kg		date / time		
Anthracene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
Acenaphthene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
Acenaphthylene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
Benzo(a)anthracene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
Benzo(a)pyrene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
Benzo(b)fluoranthene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
Benzo(g,h,i)perylene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
Benzo(k)fluoranthene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
Chrysene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
Dibenz(a,h)anthracene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
luoranthene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
luorene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
ndeno(1,2,3-cd)pyrene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
Naphthalene	U		0.00244	0.0244	1	02/08/2018 20:17	WG1071161	
Phenanthrene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
Pyrene	U		0.000732	0.00732	1	02/08/2018 20:17	WG1071161	
-Methylnaphthalene	U		0.00244	0.0244	1	02/08/2018 20:17	WG1071161	
2-Methylnaphthalene	U		0.00244	0.0244	1	02/08/2018 20:17	WG1071161	
2-Chloronaphthalene	U		0.00244	0.0244	1	02/08/2018 20:17	WG1071161	
(S) Nitrobenzene-d5	124			14.0-149		02/08/2018 20:17	WG1071161	
(S) 2-Fluorobiphenyl	91.7			34.0-125		02/08/2018 20:17	WG1071161	
(S) p-Terphenyl-d14	82.7			23.0-120		02/08/2018 20:17	WG1071161	

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# QUALITY CONTROL SUMMARY

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#### Method Blank (MB)

(MB) R3284523-1 02/06/18 14:43				
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.001			

#### L967090-02 Original Sample (OS) • Duplicate (DUP)

(OS) L967090-02 02/0	)6/18 14:43 • (D	UP) R3284523-3	3 02/06/18	3 14:43		
	Original Re	sult DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	68.1	68.3	1	0		5

#### Laboratory Control Sample (LCS)

(LCS) R3284523-2 02/0	06/18 14:43				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85-115	

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Total Solids by Method 2540 G-2011

#### QUALITY CONTROL SUMMARY L968449-06,07,08,09,10,11,12,13

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#### Method Blank (MB)

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#### L968449-06 Original Sample (OS) • Duplicate (DUP)

(OS) L968449-06 02/12/1	8 11:15 • (DUP) R	3285819-3 02	2/12/18 11:1	5		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	56.6	60.3	1	6	J3	5

#### Laboratory Control Sample (LCS)

(LCS) R3285819-2 0	2/12/18 11:15				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85-115	

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GRI - Beaverton, OR	5764-1195	L968449	02/14/18 09:57	49

Total Solids by Method 2540 G-2011

### QUALITY CONTROL SUMMARY

#### Method Blank (MB)

(MB) R3285867-1 02	2/12/18 11:03			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.001			

#### L968449-15 Original Sample (OS) • Duplicate (DUP)

(OS) L968449-15 02/12/	'18 11:03 • (DUP) F	3285867-3 (	02/12/18 11:	03		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	83.7	84.4	1	1		5

#### Laboratory Control Sample (LCS)

(LCS) R3285867-2 02/12	2/18 11:03				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85-115	

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Total Solids by Method 2540 G-2011

#### QUALITY CONTROL SUMMARY L968449-20,22,23,24

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R3285816-1 02/1	2/18 10:15					
	MB Result	MB Qualifier	MB MDL	MB RDL		- -
te	%		%	%		
Solids	0.003					

#### L968449-20 Original Sample (OS) • Duplicate (DUP)

(OS) L968449-20 02/12/1	18 10:15 • (DUP) F	R3285816-3 (	)2/12/18 10	<i>i</i> :15		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	83.4	83.4	1	0		5

#### Laboratory Control Sample (LCS)

(LCS) R3285816-2 02/12	/18 10:15				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85-115	

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Total Solids by Method 2540 G-2011

### QUALITY CONTROL SUMMARY

#### Method Blank (MB)

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(MB) R3285818-1 02/12	2/18 10:29			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.002			

#### L968449-26 Original Sample (OS) • Duplicate (DUP)

(OS) L968449-26 02/12/	18 10:29 • (DUP	) R3285818-3	02/12/18 10	):29		
	Original Resul	t DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	83.8	84.9	1	1		5

#### Laboratory Control Sample (LCS)

(LCS) R3285818-2 02/12	2/18 10:29				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85-115	

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Mercury by Method 7470A

### QUALITY CONTROL SUMMARY

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#### Method Blank (MB)

(MB) R3285187-1 02/	09/18 07:35			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l		ug/l	ug/l
Mercury	U		0.0490	0.200

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

	(LCS) R3285187-2 02/09/18 07:38 • (LCSD) R3285187-5 02/09/18 09:53											
Spike Amount LCS Result LCSD Result LCS Rec. LCSD Rec. Rec. Limits LCS Qualifier LCSD G											RPD Limits	
	Analyte	ug/l	ug/l	ug/l	%	%	%			%	%	
	Mercury	3.00	2.44	3.01	81.2	100	80-120		<u>J3</u>	21.2	20	

#### L968449-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L968449-16 02/09	(OS) L968449-16 02/09/18 07:42 • (MS) R3285187-3 02/09/18 07:45 • (MSD) R3285187-4 02/09/18 07:47											
Spike Amount Original Result MS Result MSD Result MS Rec. MSD Rec. Dilution Rec. Limits <u>MS Qualifier</u> MSD Qualifier RPD RPD L										RPD Limits		
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Mercury	3.00	U	2.46	2.28	82.1	76.1	1	75-125			7.63	20

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Mercury by Method 7471A

# QUALITY CONTROL SUMMARY

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#### Method Blank (MB)

(MB) R3285854-1 02/13/18 08:22								
	MB Result	MB Qualifier	MB MDL	MB RDL				
Analyte	mg/kg		mg/kg	mg/kg				
Mercury	0.00343	J	0.0028	0.0200				

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

(LCS) R3285854-2 02/13/18 08:25 • (LCSD) R3285854-3 02/13/18 08:27											
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
Mercury	0.300	0.264	0.252	87.9	84.1	80-120			4.46	20	

#### L968449-22 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L968449-22 02/13/18 08:30 • (MS) R3285854-4 02/13/18 08:32 • (MSD) R3285854-5 02/13/18 08:35												
	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Mercury	0.363	0.00807	0.325	0.323	87.2	86.7	1	75-125			0.531	20

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Metals (ICP) by Method 6010B

#### QUALITY CONTROL SUMMARY L968449-02,03,04,16,17

#### Method Blank (MB)

(MB) R3285110-1	02/08/18 21:36
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	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l		ug/l	ug/l
Beryllium	U		0.700	2.00
Cadmium	U		0.700	2.00
Chromium	U		1.40	10.0
Copper	U		5.30	10.0
Nickel	U		4.90	10.0
Selenium	U		7.40	10.0
Silver	U		2.80	5.00
Zinc	U		5.90	50.0

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

(LCS) R3285110-2 02/08/18	8 21:39 • (LCSE	) R3285110-3	02/08/18 21:42							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%
Beryllium	1000	994	994	99.4	99.4	80-120			0.0055	20
Cadmium	1000	1030	1020	103	102	80-120			0.367	20
Chromium	1000	983	972	98.3	97.2	80-120			1.11	20
Copper	1000	980	970	98	97	80-120			1.05	20
Nickel	1000	979	981	97.9	98.1	80-120			0.253	20
Selenium	1000	1000	1010	100	101	80-120			0.842	20
Silver	200	183	182	91.6	91	80-120			0.653	20
Zinc	1000	1050	1040	105	104	80-120			0.526	20

#### L968592-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L968592-01 02/08/18	8 21:46 • (MS) R	3285110-5 02	/08/18 21:52 • (	MSD) R3285110	0-6 02/08/18 2	21:55						
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Beryllium	1000	ND	1020	1010	102	101	1	75-125			0.632	20
Cadmium	1000	ND	1060	1050	106	105	1	75-125			0.269	20
Chromium	1000	ND	1010	988	101	98.8	1	75-125			2.01	20
Copper	1000	17.2	1030	1010	101	99	1	75-125			1.79	20
Nickel	1000	ND	998	989	99.8	98.9	1	75-125			0.812	20
Selenium	1000	ND	1050	1030	105	103	1	75-125			1.04	20
Silver	200	ND	187	183	93.4	91.6	1	75-125			1.97	20
Zinc	1000	ND	1080	1080	105	106	1	75-125			0.158	20

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Metals (ICP) by Method 6010B

# QUALITY CONTROL SUMMARY

(MB) R3286110-1 02	2/13/18 19:22			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Antimony	U		0.75	2.00
Arsenic	U		0.65	2.00
Beryllium	U		0.07	0.200
Cadmium	U		0.07	0.500
Chromium	U		0.14	1.00
Copper	U		0.53	2.00
Lead	U		0.19	0.500
Nickel	U		0.49	2.00
Selenium	U		0.74	2.00
Silver	U		0.28	1.00
Thallium	U		0.65	2.00
Zinc	U		0.59	5.00

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

(LCS) R3286110-2 02/13/	LCS) R3286110-2 02/13/18 19:25 • (LCSD) R3286110-3 02/13/18 19:28													
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits				
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%				
Antimony	100	98.8	101	98.8	101	80-120			2.33	20				
Arsenic	100	95.2	96.8	95.2	96.8	80-120			1.73	20				
Beryllium	100	99.8	102	99.8	102	80-120			2.19	20				
Cadmium	100	97.8	99.6	97.8	99.6	80-120			1.75	20				
Chromium	100	100	103	100	103	80-120			2.47	20				
Copper	100	99.5	101	99.5	101	80-120			1.56	20				
Lead	100	100	102	100	102	80-120			1.93	20				
Nickel	100	100	102	100	102	80-120			1.68	20				
Selenium	100	95.8	97.3	95.8	97.3	80-120			1.57	20				
Silver	20.0	19.5	19.9	97.5	99.4	80-120			1.98	20				
Thallium	100	97.8	99.8	97.8	99.8	80-120			2.05	20				
Zinc	100	98.7	101	98.7	101	80-120			1.88	20				

#### L968899-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L968899-01 C	DS) L968899-01 02/13/18 19:31 • (MS) R3286110-6 02/13/18 19:41 • (MSD) R3286110-7 02/13/18 19:44												
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	
Antimony	100	0.828	59.3	63.7	58.5	62.9	1	75-125	<u>J6</u>	<u>J6</u>	7.21	20	
Arsenic	100	0.698	94.6	101	93.9	99.9	1	75-125			6.09	20	
Beryllium	100	0.325	94.1	99.3	93.8	99	1	75-125			5.41	20	
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#### Metals (ICP) by Method 6010B

#### QUALITY CONTROL SUMMARY L968449-01,05,22

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#### L968899-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L968899-01 02/13/18	DS) L968899-01 02/13/18 19:31 • (MS) R3286110-6 02/13/18 19:41 • (MSD) R3286110-7 02/13/18 19:44												
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	
Cadmium	100	0.0972	97.8	103	97.7	103	1	75-125			5.28	20	
Chromium	100	45.3	145	144	99.8	98.3	1	75-125			1.03	20	
Copper	100	20.8	120	120	98.7	99.4	1	75-125			0.541	20	
Lead	100	2.96	103	107	99.8	104	1	75-125			4.07	20	
Nickel	100	49.5	156	149	107	99.2	1	75-125			4.82	20	
Selenium	100	U	95.1	102	95.1	102	1	75-125			6.96	20	
Silver	20.0	U	20.3	21.3	101	106	1	75-125			4.63	20	
Thallium	100	U	90.4	94.8	90.4	94.8	1	75-125			4.75	20	
Zinc	100	35.4	126	126	90.6	90.5	1	75-125			0.0581	20	

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Metals (ICPMS) by Method 6020

#### QUALITY CONTROL SUMMARY L968449-02,03,04

#### Method Blank (MB)

(MB) R3285060-1 02/08/18 15:54

	MB Result	MB Qualifier	MB MDL	MB RDL		
Analyte	ug/l		ug/l	ug/l		
Antimony	U		0.754	2.00		
Arsenic	U		0.250	2.00		
Lead	U		0.240	2.00		
Thallium	U		0.190	2.00		

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

(LCS) R3285060-2 02/08/18 15:57 • (LCSD) R3285060-3 02/08/18 16:01													
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits			
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%			
Antimony	50.0	46.4	44.2	92.8	88.4	80-120			4.92	20			
Arsenic	50.0	47.6	47.4	95.3	94.8	80-120			0.482	20			
Lead	50.0	48.7	48.5	97.4	97	80-120			0.41	20			
Thallium	50.0	48.7	47.9	97.4	95.7	80-120			1.7	20			

#### L968393-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L968393-14 02/08/18 16:05 • (MS) R3285060-5 02/08/18 16:13 • (MSD) R3285060-6 02/08/18 16:16													
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%	
Antimony	50.0	ND	45.4	47.3	90.8	94.6	1	75-125			4.13	20	
Arsenic	50.0	ND	48.2	47.9	94.9	94.3	1	75-125			0.598	20	
Lead	50.0	ND	48.4	48.8	96.9	97.5	1	75-125			0.707	20	
Thallium	50.0	ND	48.3	48.3	96.6	96.7	1	75-125			0.025	20	

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Metals (ICPMS) by Method 6020

### QUALITY CONTROL SUMMARY

#### Method Blank (MB)

(MB) R3285313-1 02/09/18 12:06

(1010) 1(3203313-1	MB Result	MB Qualifier	MB MDL	MB RDL	
					2
Analyte	ug/l		ug/l	ug/l	
Antimony	U		0.754	2.00	
Arsenic	U		0.250	2.00	1
Lead	0.699	J	0.240	2.00	
Thallium	0.290	J	0.190	2.00	Ē

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

(LCS) R3285313-2 02/09/18 12:10 • (LCSD) R3285313-3 02/09/18 12:14													
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits			
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%			
Antimony	50.0	53.9	53.1	108	106	80-120			1.57	20			
Arsenic	50.0	53.0	53.0	106	106	80-120			0.0793	20			
Lead	50.0	54.2	52.1	108	104	80-120			3.87	20			
Thallium	50.0	52.6	52.4	105	105	80-120			0.375	20			

#### L968449-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L968449-16 02/09/18 12:17 • (MS) R3285313-5 02/09/18 12:25 • (MSD) R3285313-6 02/09/18 12:29													
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%	
Antimony	50.0	0.828	52.7	53.4	104	105	1	75-125			1.41	20	
Arsenic	50.0	3.01	54.7	55.9	103	106	1	75-125			2.04	20	
Lead	50.0	1.84	52.5	52.8	101	102	1	75-125			0.602	20	
Thallium	50.0	0.280	50.9	52.3	101	104	1	75-125			2.69	20	

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

# QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

#### Method Blank (MB)

(MB) R3285308-3 02/08/	18 21:12								Cp
	MB Result	MB Qualifier	MB MDL	MB RDL					2
Analyte	mg/kg		mg/kg	mg/kg					Tc
Acetone	U		0.0100	0.0500					
Acrylonitrile	U		0.00179	0.0100					<sup>3</sup> Ss
Benzene	U		0.000270	0.00100					53
Bromobenzene	U		0.000284	0.00100					4
Bromodichloromethane	U		0.000254	0.00100					Cr
Bromoform	U		0.000424	0.00100					
Bromomethane	U		0.00134	0.00500					⁵Sr
n-Butylbenzene	U		0.000258	0.00100					
sec-Butylbenzene	U		0.000201	0.00100					6
tert-Butylbenzene	U		0.000206	0.00100					ČQC
Carbon tetrachloride	U		0.000328	0.00100					
Chlorobenzene	U		0.000212	0.00100					<sup>7</sup> Gl
Chlorodibromomethane	U		0.000373	0.00100					01
Chloroethane	U		0.000946	0.00500					8
Chloroform	U		0.000229	0.00500					AI
Chloromethane	U		0.000375	0.00250					
2-Chlorotoluene	U		0.000301	0.00100					<sup>9</sup> Sc
4-Chlorotoluene	U		0.000240	0.00100					00
1,2-Dibromo-3-Chloropropane	U		0.00105	0.00500					
1,2-Dibromoethane	U		0.000343	0.00100					
Dibromomethane	U		0.000382	0.00100					
1,2-Dichlorobenzene	U		0.000305	0.00100					
1,3-Dichlorobenzene	U		0.000239	0.00100					
1,4-Dichlorobenzene	U		0.000226	0.00100					
Dichlorodifluoromethane	U		0.000713	0.00500					
1,1-Dichloroethane	U		0.000199	0.00100					
1,2-Dichloroethane	U		0.000265	0.00100					
1,1-Dichloroethene	U		0.000303	0.00100					
cis-1,2-Dichloroethene	U		0.000235	0.00100					
trans-1,2-Dichloroethene	U		0.000264	0.00100					
1,2-Dichloropropane	U		0.000358	0.00100					
1,1-Dichloropropene	U		0.000317	0.00100					
1,3-Dichloropropane	U		0.000207	0.00100					
cis-1,3-Dichloropropene	U		0.000262	0.00100					
trans-1,3-Dichloropropene	U		0.000267	0.00100					
2,2-Dichloropropane	U		0.000279	0.00100					
Di-isopropyl ether	U		0.000248	0.00100					
Ethylbenzene	U		0.000297	0.00100					
Hexachloro-1,3-butadiene	U		0.000342	0.00100					
Isopropylbenzene	U		0.000243	0.00100					
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Volatile Organic Compounds (GC/MS) by Method 8260B

# QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

#### Method Blank (MB)

(MB) R3285308-3 02/08/	18 21:12				
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	mg/kg		mg/kg	mg/kg	T(
p-Isopropyltoluene	U		0.000204	0.00100	
2-Butanone (MEK)	U		0.00468	0.0100	<sup>3</sup> Ss
Methylene Chloride	U		0.00100	0.00500	
4-Methyl-2-pentanone (MIBK)	U		0.00188	0.0100	4
Methyl tert-butyl ether	U		0.000212	0.00100	C
Naphthalene	U		0.00100	0.00500	
n-Propylbenzene	U		0.000206	0.00100	⁵S
Styrene	U		0.000234	0.00100	
1,1,1,2-Tetrachloroethane	U		0.000264	0.00100	6
1,1,2,2-Tetrachloroethane	U		0.000365	0.00100	ິດ
Tetrachloroethene	U		0.000276	0.00100	
Toluene	U		0.000434	0.00500	<sup>7</sup> G
1,1,2-Trichlorotrifluoroethane	U		0.000365	0.00100	Ľ
1,2,3-Trichlorobenzene	U		0.000306	0.00100	8
1,2,4-Trichlorobenzene	U		0.000388	0.00100	Α
1,1,1-Trichloroethane	U		0.000286	0.00100	
1,1,2-Trichloroethane	U		0.000277	0.00100	°S
Trichloroethene	U		0.000279	0.00100	Ľ
Trichlorofluoromethane	U		0.000382	0.00500	
1,2,3-Trichloropropane	U		0.000741	0.00250	
1,2,3-Trimethylbenzene	U		0.000287	0.00100	
1,2,4-Trimethylbenzene	U		0.000211	0.00100	
1,3,5-Trimethylbenzene	U		0.000266	0.00100	
Vinyl chloride	U		0.000291	0.00100	
Xylenes, Total	U		0.000698	0.00300	
(S) Toluene-d8	103			80.0-120	
(S) Dibromofluoromethane	99.6			74.0-131	
(S) 4-Bromofluorobenzene	102			64.0-132	

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

(LCS) R3285308-1 02/0	)8/18 20:12 • (LCS	D) R3285308	-2 02/08/18 20	):32							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
Acetone	0.125	0.114	0.107	91.5	85.7	11.0-160			6.54	23	
Acrylonitrile	0.125	0.142	0.132	113	106	61.0-143			6.78	20	
Benzene	0.0250	0.0256	0.0251	102	100	71.0-124			1.85	20	
Bromobenzene	0.0250	0.0245	0.0249	98.1	99.6	78.0-120			1.53	20	
Bromodichloromethane	0.0250	0.0251	0.0254	100	102	75.0-120			1.33	20	
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#### Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3285308-1 02/08/			-2 02/08/18 20							
	Spike Amount		LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Bromoform	0.0250	0.0268	0.0271	107	109	65.0-133			1.40	20
Bromomethane	0.0250	0.0243	0.0238	97.1	95.3	26.0-160			1.89	20
n-Butylbenzene	0.0250	0.0261	0.0255	104	102	73.0-126			2.37	20
sec-Butylbenzene	0.0250	0.0272	0.0265	109	106	75.0-121			2.67	20
tert-Butylbenzene	0.0250	0.0263	0.0262	105	105	74.0-122			0.355	20
Carbon tetrachloride	0.0250	0.0265	0.0231	106	92.4	66.0-123			13.5	20
Chlorobenzene	0.0250	0.0258	0.0265	103	106	79.0-121			2.59	20
Chlorodibromomethane	0.0250	0.0262	0.0268	105	107	74.0-128			2.53	20
Chloroethane	0.0250	0.0242	0.0234	96.7	93.6	51.0-147			3.20	20
Chloroform	0.0250	0.0256	0.0253	102	101	73.0-123			1.12	20
Chloromethane	0.0250	0.0262	0.0254	105	102	51.0-138			2.91	20
2-Chlorotoluene	0.0250	0.0248	0.0250	99.3	100	72.0-124			0.911	20
4-Chlorotoluene	0.0250	0.0250	0.0252	100	101	78.0-120			0.781	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0283	0.0268	113	107	65.0-126			5.40	20
1,2-Dibromoethane	0.0250	0.0279	0.0280	112	112	78.0-122			0.520	20
Dibromomethane	0.0250	0.0270	0.0267	108	107	79.0-120			0.864	20
1,2-Dichlorobenzene	0.0250	0.0256	0.0259	102	104	80.0-120			1.04	20
1,3-Dichlorobenzene	0.0250	0.0244	0.0249	97.8	99.5	72.0-123			1.80	20
1,4-Dichlorobenzene	0.0250	0.0236	0.0241	94.4	96.4	77.0-120			2.13	20
Dichlorodifluoromethane	0.0250	0.0272	0.0250	109	99.9	49.0-155			8.42	20
1,1-Dichloroethane	0.0250	0.0258	0.0255	103	102	70.0-128			1.13	20
1,2-Dichloroethane	0.0250	0.0246	0.0244	98.3	97.8	69.0-128			0.562	20
1,1-Dichloroethene	0.0250	0.0240	0.0228	95.8	91.1	63.0-131			5.02	20
cis-1,2-Dichloroethene	0.0250	0.0266	0.0265	106	106	74.0-123			0.235	20
trans-1,2-Dichloroethene	0.0250	0.0253	0.0248	101	99.1	72.0-122			1.98	20
1,2-Dichloropropane	0.0250	0.0261	0.0261	104	104	75.0-126			0.0162	20
1,1-Dichloropropene	0.0250	0.0261	0.0251	104	100	72.0-130			3.81	20
1,3-Dichloropropane	0.0250	0.0271	0.0275	108	110	80.0-121			1.48	20
cis-1,3-Dichloropropene	0.0250	0.0265	0.0274	106	110	80.0-125			3.21	20
trans-1,3-Dichloropropene	0.0250	0.0274	0.0281	110	113	75.0-129			2.51	20
2,2-Dichloropropane	0.0250	0.0240	0.0233	96.0	93.1	60.0-129			3.10	20
Di-isopropyl ether	0.0250	0.0269	0.0270	108	108	62.0-133			0.404	20
Ethylbenzene	0.0250	0.0256	0.0260	103	104	77.0-120			1.23	20
Hexachloro-1,3-butadiene	0.0250	0.0278	0.0272	111	109	68.0-128			2.24	20
Isopropylbenzene	0.0250	0.0270	0.0267	108	107	75.0-120			1.12	20
p-Isopropyltoluene	0.0250	0.0269	0.0266	108	106	74.0-125			0.980	20
2-Butanone (MEK)	0.125	0.134	0.124	107	99.6	37.0-159			7.49	20
Methylene Chloride	0.0250	0.0238	0.0235	95.1	94.1	67.0-123			1.09	20
4-Methyl-2-pentanone (MIBK)	0.125	0.149	0.144	120	115	60.0-144			3.57	20
Methyl tert-butyl ether	0.0250	0.0266	0.0260	106	104	66.0-125			2.21	20
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#### Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3285308-1 02/08/	′18 20:12 • (LCS	D) R3285308-3	2 02/08/18 20	:32						
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Naphthalene	0.0250	0.0297	0.0294	119	118	64.0-125			0.918	20
n-Propylbenzene	0.0250	0.0252	0.0250	101	100	78.0-120			0.644	20
Styrene	0.0250	0.0257	0.0261	103	104	78.0-124			1.52	20
1,1,1,2-Tetrachloroethane	0.0250	0.0257	0.0266	103	107	74.0-124			3.61	20
1,1,2,2-Tetrachloroethane	0.0250	0.0272	0.0268	109	107	73.0-120			1.41	20
Tetrachloroethene	0.0250	0.0253	0.0252	101	101	70.0-127			0.360	20
Toluene	0.0250	0.0244	0.0247	97.8	98.8	77.0-120			1.04	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0239	0.0228	95.5	91.1	64.0-135			4.67	20
1,2,3-Trichlorobenzene	0.0250	0.0271	0.0278	108	111	68.0-126			2.42	20
1,2,4-Trichlorobenzene	0.0250	0.0268	0.0270	107	108	70.0-127			0.889	20
1,1,1-Trichloroethane	0.0250	0.0252	0.0243	101	97.1	69.0-125			3.56	20
1,1,2-Trichloroethane	0.0250	0.0268	0.0276	107	110	78.0-120			2.86	20
Trichloroethene	0.0250	0.0267	0.0257	107	103	79.0-120			3.63	20
Trichlorofluoromethane	0.0250	0.0229	0.0215	91.5	86.2	59.0-136			6.04	20
1,2,3-Trichloropropane	0.0250	0.0272	0.0263	109	105	73.0-124			3.48	20
1,2,3-Trimethylbenzene	0.0250	0.0260	0.0262	104	105	76.0-120			0.715	20
1,2,4-Trimethylbenzene	0.0250	0.0268	0.0270	107	108	75.0-120			0.592	20
1,3,5-Trimethylbenzene	0.0250	0.0262	0.0262	105	105	75.0-120			0.115	20
Vinyl chloride	0.0250	0.0252	0.0239	101	95.6	63.0-134			5.43	20
Xylenes, Total	0.0750	0.0778	0.0791	104	105	77.0-120			1.66	20
(S) Toluene-d8				102	105	80.0-120				
(S) Dibromofluoromethane				99.3	98.4	74.0-131				
(S) 4-Bromofluorobenzene				99.8	100	64.0-132				

#### L968674-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L968674-03 02/09	9/18 03:24 • (MS)	R3285308-4 (	02/09/18 06:04	• (MSD) R328	5308-5 02/09	/18 06:24							
	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	
Acetone	0.144	U	5.28	6.14	71.1	82.7	51.5	10.0-160			15.1	36	
Acrylonitrile	0.144	U	7.55	7.70	102	104	51.5	14.0-160			2.04	33	
Benzene	0.0288	U	1.35	1.38	91.0	92.6	51.5	13.0-146			1.83	27	
Bromobenzene	0.0288	U	1.36	1.39	91.8	93.8	51.5	10.0-149			2.21	33	
Bromodichloromethane	0.0288	U	1.37	1.36	92.0	91.7	51.5	15.0-142			0.377	28	
Bromoform	0.0288	U	1.40	1.40	94.5	94.0	51.5	10.0-147			0.592	31	
Bromomethane	0.0288	U	0.929	0.958	62.6	64.5	51.5	10.0-160			3.05	32	
n-Butylbenzene	0.0288	U	1.34	1.35	90.1	91.2	51.5	10.0-154			1.15	37	
sec-Butylbenzene	0.0288	U	1.41	1.43	95.0	96.4	51.5	10.0-151			1.43	36	
tert-Butylbenzene	0.0288	U	1.41	1.44	95.2	97.1	51.5	10.0-152			1.99	35	
Docume	nt No: J1-680-RC	GL-GRI-00001-	00			Revision:	1					Reissued for L	Jse
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#### L968674-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

#### (OS) L968674-03 02/09/18 03:24 • (MS) R3285308-4 02/09/18 06:04 • (MSD) R3285308-5 02/09/18 06:24

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	
Carbon tetrachloride	0.0288	U	1.28	1.30	86.2	87.6	51.5	13.0-140			1.63	30	
Chlorobenzene	0.0288	U	1.40	1.45	94.4	97.4	51.5	10.0-149			3.12	31	
Chlorodibromomethane	0.0288	U	1.41	1.47	95.1	98.6	51.5	12.0-147			3.65	29	
Chloroethane	0.0288	U	0.420	0.408	28.3	27.4	51.5	10.0-159			2.90	33	
Chloroform	0.0288	U	1.38	1.40	92.7	94.0	51.5	18.0-148			1.37	28	
Chloromethane	0.0288	0.0531	1.24	1.29	79.7	83.4	51.5	10.0-146			4.29	29	
2-Chlorotoluene	0.0288	U	1.35	1.38	91.0	93.2	51.5	10.0-151			2.37	35	
4-Chlorotoluene	0.0288	U	1.37	1.39	92.5	93.6	51.5	10.0-150			1.15	35	
1,2-Dibromo-3-Chloropropane	0.0288	U	1.41	1.39	94.8	93.7	51.5	10.0-149			1.11	34	
1,2-Dibromoethane	0.0288	U	1.52	1.59	102	107	51.5	14.0-145			4.13	28	
Dibromomethane	0.0288	U	1.48	1.49	99.6	100	51.5	18.0-144			0.595	27	
1,2-Dichlorobenzene	0.0288	U	1.43	1.45	96.4	97.4	51.5	10.0-153			1.04	34	
1,3-Dichlorobenzene	0.0288	U	1.32	1.35	88.9	90.7	51.5	10.0-150			2.04	35	
1,4-Dichlorobenzene	0.0288	U	1.28	1.31	86.4	88.3	51.5	10.0-148			2.15	34	
Dichlorodifluoromethane	0.0288	U	1.30	1.30	87.4	87.5	51.5	10.0-160			0.0740	30	
1,1-Dichloroethane	0.0288	U	1.36	1.38	91.6	93.0	51.5	19.0-148			1.53	28	
1,2-Dichloroethane	0.0288	U	1.39	1.39	93.5	93.4	51.5	17.0-147			0.101	27	
1,1-Dichloroethene	0.0288	U	1.07	1.08	72.0	72.7	51.5	10.0-150			1.05	31	
cis-1,2-Dichloroethene	0.0288	U	1.44	1.45	97.2	97.9	51.5	16.0-145			0.669	28	
trans-1,2-Dichloroethene	0.0288	U	1.29	1.31	86.6	88.4	51.5	11.0-142			1.97	29	
1,2-Dichloropropane	0.0288	U	1.41	1.43	95.3	96.4	51.5	17.0-148			1.22	28	
1,1-Dichloropropene	0.0288	U	1.36	1.36	91.7	91.8	51.5	10.0-150			0.0841	30	
1,3-Dichloropropane	0.0288	U	1.53	1.57	103	106	51.5	16.0-148			2.79	27	
cis-1,3-Dichloropropene	0.0288	U	1.48	1.52	99.3	103	51.5	13.0-150			3.27	28	
trans-1,3-Dichloropropene	0.0288	U	1.47	1.53	99.0	103	51.5	10.0-152			3.94	29	
2,2-Dichloropropane	0.0288	U	1.11	1.10	74.6	74.0	51.5	16.0-143			0.864	30	
Di-isopropyl ether	0.0288	U	1.51	1.53	102	103	51.5	16.0-149			1.47	28	
Ethylbenzene	0.0288	U	1.35	1.42	90.9	95.5	51.5	10.0-147			4.99	31	
Hexachloro-1,3-butadiene	0.0288	U	1.53	1.54	103	103	51.5	10.0-154			0.420	40	
Isopropylbenzene	0.0288	U	1.40	1.43	94.5	96.1	51.5	10.0-147			1.67	33	
p-lsopropyltoluene	0.0288	U	1.41	1.43	95.1	96.0	51.5	10.0-156			0.993	37	
2-Butanone (MEK)	0.144	U	6.55	7.08	88.1	95.4	51.5	10.0-160			7.87	33	
Methylene Chloride	0.0288	U	1.26	1.28	85.1	85.9	51.5	16.0-139			0.937	29	
4-Methyl-2-pentanone (MIBK)	0.144	U	7.78	8.01	105	108	51.5	12.0-160			2.92	32	
Methyl tert-butyl ether	0.0288	U	1.52	1.53	102	103	51.5	21.0-145			1.08	29	
Naphthalene	0.0288	U	1.49	1.61	101	109	51.5	10.0-153			7.70	36	
n-Propylbenzene	0.0288	U	1.31	1.32	88.2	88.9	51.5	10.0-151			0.837	34	
Styrene	0.0288	U	1.44	1.46	97.2	98.2	51.5	10.0-155			1.02	34	
1,1,1,2-Tetrachloroethane	0.0288	U	1.41	1.47	94.9	98.8	51.5	10.0-147			4.03	30	
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#### L968674-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

#### (OS) L968674-03 02/09/18 03:24 • (MS) R3285308-4 02/09/18 06:04 • (MSD) R3285308-5 02/09/18 06:24

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	<sup>2</sup> Tc
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	
1,1,2,2-Tetrachloroethane	0.0288	U	1.39	1.37	93.4	92.5	51.5	10.0-155			0.975	31	<sup>3</sup> Ss
Tetrachloroethene	0.0288	U	1.25	1.29	84.5	86.6	51.5	10.0-144			2.53	32	Ss
Toluene	0.0288	U	1.30	1.36	87.6	91.3	51.5	10.0-144			4.12	28	
1,1,2-Trichlorotrifluoroethane	0.0288	U	1.12	1.21	75.2	81.5	51.5	10.0-153			8.08	33	<sup>4</sup> Cr
1,2,3-Trichlorobenzene	0.0288	U	1.47	1.56	98.9	105	51.5	10.0-153			5.78	40	
1,2,4-Trichlorobenzene	0.0288	U	1.43	1.51	96.2	101	51.5	10.0-156			5.29	40	5
1,1,1-Trichloroethane	0.0288	U	1.26	1.29	85.0	86.8	51.5	18.0-145			2.03	29	٢Sr
1,1,2-Trichloroethane	0.0288	U	1.50	1.53	101	103	51.5	12.0-151			2.26	28	
Trichloroethene	0.0288	U	1.37	1.42	92.2	95.6	51.5	11.0-148			3.63	29	<sup>6</sup> Qc
Trichlorofluoromethane	0.0288	U	0.964	0.955	64.9	64.3	51.5	10.0-157			0.984	34	
1,2,3-Trichloropropane	0.0288	U	1.43	1.44	96.4	97.1	51.5	10.0-154			0.721	32	7
1,2,3-Trimethylbenzene	0.0288	U	1.54	1.57	104	106	51.5	10.0-150			1.92	33	Í GI
1,2,4-Trimethylbenzene	0.0288	U	1.45	1.49	97.9	100	51.5	10.0-151			2.47	34	
1,3,5-Trimethylbenzene	0.0288	U	1.39	1.42	93.4	95.5	51.5	10.0-150			2.15	33	<sup>8</sup> Al
Vinyl chloride	0.0288	U	1.15	1.18	77.4	79.1	51.5	10.0-150			2.19	29	
Xylenes, Total	0.0865	U	4.12	4.28	92.4	96.1	51.5	10.0-150			3.85	31	9
(S) Toluene-d8					104	106		80.0-120					ຶSc
(S) Dibromofluoromethane					98.7	97.8		74.0-131					
(S) 4-Bromofluorobenzene					98.8	98.4		64.0-132					

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

# QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

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#### Method Blank (MB)

Method Blank (MB)							Ср
(MB) R3285497-3 02/08/							
Analuto	MB Result	MB Qualifier	MB MDL ug/l	MB RDL ug/l			<sup>2</sup> Tc
Analyte Acetone	ug/l U		10.0	50.0			
Acrolein	U		8.87	50.0			3
Acrylonitrile	U		1.87	10.0			ິSs
Benzene	U		0.331	1.00			
Bromobenzene	U		0.352	1.00			<sup>4</sup> Cn
Bromodichloromethane	U		0.380	1.00			
Bromoform	U		0.469	1.00			5
Bromomethane	U		0.866	5.00			Šr
n-Butylbenzene	U		0.361	1.00			
sec-Butylbenzene	U		0.365	1.00			်ီဝင
tert-Butylbenzene	U		0.399	1.00			
Carbon tetrachloride	U		0.379	1.00			<sup>7</sup> Gl
Chlorobenzene	U		0.348	1.00			G
Chlorodibromomethane	U		0.327	1.00			•
Chloroethane	U		0.453	5.00			Å
Chloroform	U		0.324	5.00			
Chloromethane	U		0.276	2.50			<sup>9</sup> Sc
2-Chlorotoluene	U		0.375	1.00			50
4-Chlorotoluene	U		0.351	1.00			
1,2-Dibromo-3-Chloropropane	U		1.33	5.00			
1,2-Dibromoethane	U		0.381	1.00			
Dibromomethane	U		0.346	1.00			
1,2-Dichlorobenzene	U		0.349	1.00			
1,3-Dichlorobenzene	U		0.220	1.00			
1,4-Dichlorobenzene	U		0.274	1.00			
Dichlorodifluoromethane	U		0.551	5.00			
1,1-Dichloroethane	U		0.259	1.00			
1,2-Dichloroethane	U		0.361	1.00			
1,1-Dichloroethene	U		0.398	1.00			
cis-1,2-Dichloroethene	U		0.260	1.00			
trans-1,2-Dichloroethene	U		0.396	1.00			
1,2-Dichloropropane	U		0.306	1.00			
1,1-Dichloropropene	U		0.352	1.00			
1,3-Dichloropropane	U		0.366	1.00			
cis-1,3-Dichloropropene	U		0.418	1.00			
trans-1,3-Dichloropropene	U		0.419	1.00			
2,2-Dichloropropane	U		0.321	1.00			
Di-isopropyl ether	U		0.320	1.00			
Ethylbenzene	U		0.384	1.00			
Hexachloro-1,3-butadiene	U No: 11 680 I	RGL-GRI-00001	0.256	1.00	Revision: 1	Reissued for Us	0
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Volatile Organic Compounds (GC/MS) by Method 8260B

# QUALITY CONTROL SUMMARY

ONE LAB. NATIONWIDE.

#### Method Blank (MB)

(MB) R3285497-3 02/08/1	18 21:32				Ср
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	ug/l		ug/l	ug/l	T
Isopropylbenzene	U		0.326	1.00	
p-Isopropyltoluene	U		0.350	1.00	<sup>3</sup> Ss
2-Butanone (MEK)	U		3.93	10.0	
Methylene Chloride	U		1.00	5.00	4
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	C
Methyl tert-butyl ether	U		0.367	1.00	
Naphthalene	U		1.00	5.00	⁵Sr
n-Propylbenzene	U		0.349	1.00	
Styrene	U		0.307	1.00	6_
1,1,1,2-Tetrachloroethane	U		0.385	1.00	<sup>6</sup> Qo
1,1,2,2-Tetrachloroethane	U		0.130	1.00	
Tetrachloroethene	U		0.372	1.00	<sup>7</sup> Gl
Toluene	U		0.412	1.00	
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	8
1,2,3-Trichlorobenzene	U		0.230	1.00	A
1,2,4-Trichlorobenzene	U		0.355	1.00	
1,1,1-Trichloroethane	U		0.319	1.00	°Sc
1,1,2-Trichloroethane	U		0.383	1.00	
Trichloroethene	U		0.398	1.00	
Trichlorofluoromethane	U		1.20	5.00	
1,2,3-Trichloropropane	U		0.807	2.50	
1,2,3-Trimethylbenzene	U		0.321	1.00	
1,2,4-Trimethylbenzene	U		0.373	1.00	
1,3,5-Trimethylbenzene	U		0.387	1.00	
Vinyl chloride	U		0.259	1.00	
Xylenes, Total	U		1.06	3.00	
(S) Toluene-d8	108			80.0-120	
(S) Dibromofluoromethane	82.5			76.0-123	
(S) 4-Bromofluorobenzene	94.7			80.0-120	

#### Laboratory Control Sample (LCS)

(LCS) R3285497-1 (	02/08/18 20:36							
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier			
Analyte	ug/l	ug/l	%	%				
Acetone	125	107	85.4	10.0-160				
Acrolein	125	480	384	10.0-160	<u>J4</u>			
Acrylonitrile	125	91.3	73.0	60.0-142				
Benzene	25.0	20.7	82.7	69.0-123				
Doc	ument No: J1-680-R0	GL-GRI-0000	-00			Revision: 1		Reissued for Use
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	GRI - Beaverton, OR			5764-	1195	L968449	02/14/18 09:57	67 of 81

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

### QUALITY CONTROL SUMMARY

L968449-16,17,21

#### Laboratory Control Sample (LCS)

(LCS) R3285497-1 02/08/1	18 20:36				
(,	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
Bromobenzene	25.0	20.2	80.9	79.0-120	
Bromodichloromethane	25.0	20.7	82.8	76.0-120	
Bromoform	25.0	21.3	85.3	67.0-132	
Bromomethane	25.0	9.63	38.5	18.0-160	
n-Butylbenzene	25.0	22.5	89.9	72.0-126	
sec-Butylbenzene	25.0	22.7	90.7	74.0-121	
tert-Butylbenzene	25.0	23.0	91.9	75.0-122	
Carbon tetrachloride	25.0	21.5	85.9	63.0-122	
Chlorobenzene	25.0	24.7	99.0	79.0-121	
Chlorodibromomethane	25.0	23.4	93.5	75.0-125	
Chloroethane	25.0	19.8	79.3	47.0-152	
Chloroform	25.0	20.2	80.9	72.0-121	
Chloromethane	25.0	13.8	55.1	48.0-139	
2-Chlorotoluene	25.0	21.8	87.1	74.0-122	
4-Chlorotoluene	25.0	21.5	86.2	79.0-120	
1,2-Dibromo-3-Chloropropane	25.0	19.5	77.8	64.0-127	
1,2-Dibromoethane	25.0	23.9	95.5	77.0-123	
Dibromomethane	25.0	22.3	89.1	78.0-120	
1,2-Dichlorobenzene	25.0	22.3	89.1	80.0-120	
1,3-Dichlorobenzene	25.0	22.3	89.0	72.0-123	
1,4-Dichlorobenzene	25.0	21.3	85.3	77.0-120	
Dichlorodifluoromethane	25.0	22.3	89.3	49.0-155	
1,1-Dichloroethane	25.0	20.5	81.8	70.0-126	
1,2-Dichloroethane	25.0	18.4	73.7	67.0-126	
1,1-Dichloroethene	25.0	21.4	85.7	64.0-129	
cis-1,2-Dichloroethene	25.0	20.0	79.9	73.0-120	
trans-1,2-Dichloroethene	25.0	21.6	86.3	71.0-121	
1,2-Dichloropropane	25.0	21.8	87.3	75.0-125	
1,1-Dichloropropene	25.0	21.1	84.5	71.0-129	
1,3-Dichloropropane	25.0	22.7	90.8	80.0-121	
cis-1,3-Dichloropropene	25.0	23.4	93.4	79.0-123	
trans-1,3-Dichloropropene	25.0	24.6	98.2	74.0-127	
2,2-Dichloropropane	25.0	20.6	82.4	60.0-125	
Di-isopropyl ether	25.0	19.3	77.2	59.0-133	
Ethylbenzene	25.0	25.8	103	77.0-120	
Hexachloro-1,3-butadiene	25.0	24.7	98.7	64.0-131	
Isopropylbenzene	25.0	23.1	92.5	75.0-120	
p-lsopropyltoluene	25.0	22.8	91.2	74.0-126	
	105	110	00 F	27.0.45.0	

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PROJECT:

5764-1195

ACCOUNT: GRI - Beaverton, OR

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2-Butanone (MEK)

Methylene Chloride

Revision: 1

SDG: L968449

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#### QUALITY CONTROL SUMMARY L968449-16,17,21

#### Laboratory Control Sample (LCS)

(LCS) R3285497-1 02/08/	18 20:36				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
4-Methyl-2-pentanone (MIBK)	125	111	88.8	59.0-143	
Methyl tert-butyl ether	25.0	18.8	75.2	64.0-123	
Naphthalene	25.0	20.0	80.2	62.0-128	
n-Propylbenzene	25.0	23.1	92.4	79.0-120	
Styrene	25.0	22.6	90.6	78.0-124	
1,1,1,2-Tetrachloroethane	25.0	24.7	98.7	75.0-122	
1,1,2,2-Tetrachloroethane	25.0	19.9	79.4	71.0-122	
Tetrachloroethene	25.0	27.1	108	70.0-127	
Toluene	25.0	25.0	99.9	77.0-120	
1,1,2-Trichlorotrifluoroethane	25.0	22.7	90.6	61.0-136	
1,2,3-Trichlorobenzene	25.0	22.8	91.2	61.0-133	
1,2,4-Trichlorobenzene	25.0	22.9	91.5	69.0-129	
1,1,1-Trichloroethane	25.0	21.4	85.8	68.0-122	
1,1,2-Trichloroethane	25.0	23.6	94.4	78.0-120	
Trichloroethene	25.0	24.3	97.4	78.0-120	
Trichlorofluoromethane	25.0	22.2	88.8	56.0-137	
1,2,3-Trichloropropane	25.0	20.5	82.2	72.0-124	
1,2,3-Trimethylbenzene	25.0	21.9	87.5	75.0-120	
1,2,4-Trimethylbenzene	25.0	21.9	87.6	75.0-120	
1,3,5-Trimethylbenzene	25.0	22.0	87.9	75.0-120	
Vinyl chloride	25.0	20.1	80.4	64.0-133	
Xylenes, Total	75.0	75.9	101	77.0-120	
(S) Toluene-d8			108	80.0-120	
(S) Dibromofluoromethane			82.4	76.0-123	
(S) 4-Bromofluorobenzene			96.4	80.0-120	

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

#### QUALITY CONTROL SUMMARY L9<u>68449-14,22,23,24,27</u>

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#### Method Blank (MB)

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(MB) R3285195-1 02/09	9/18 07:58				
	MB Result	MB Qualifier	MB MDL	MB RDL	ſ
Analyte	mg/kg		mg/kg	mg/kg	
Diesel Range Organics (DRO	)) U		1.33	4.00	
Residual Range Organics (RF	RO) U		3.33	10.0	
(S) o-Terphenyl	92.2			18.0-148	
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#### Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3285195-2 02/09/1	18 08:12 • (LCS	D) R3285195-3	3 02/09/18 08:	26						
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%
Diesel Range Organics (DRO)	25.0	23.1	22.9	92.2	91.6	50.0-150			0.633	20
Residual Range Organics (RRO)	25.0	25.1	26.7	101	107	50.0-150			5.99	20
(S) o-Terphenyl				87.2	83.6	18.0-148				

#### L968472-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L968472-03 02/09/18	8 08:39 • (MS)	R3285195-4 0	2/09/18 08:53	• (MSD) R3285	195-5 02/09/1	8 09:07							9
	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	Sc
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	
Diesel Range Organics (DRO)	26.8	ND	27.1	29.8	87.6	97.6	1	50.0-150			9.45	20	
Residual Range Organics (RRO)	26.8	ND	36.8	39.0	107	115	1	50.0-150			5.90	20	
(S) o-Terphenyl					74.5	80.1		18.0-148					

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

### QUALITY CONTROL SUMMARY

L968449-16,17,21,25

#### Method Blank (MB)

MB) R3284911-3 02/08	3/18 09:41				
	MB Result	MB Qualifier	MB MDL	MB RDL	
Analyte	ug/l		ug/l	ug/l	
Anthracene	U		0.0140	0.0500	
Acenaphthene	U		0.0100	0.0500	
Acenaphthylene	U		0.0120	0.0500	
Benzo(a)anthracene	U		0.00410	0.0500	
Benzo(a)pyrene	U		0.0116	0.0500	
Benzo(b)fluoranthene	U		0.00212	0.0500	
Benzo(g,h,i)perylene	U		0.00227	0.0500	
Benzo(k)fluoranthene	U		0.0136	0.0500	
Chrysene	U		0.0108	0.0500	
Dibenz(a,h)anthracene	U		0.00396	0.0500	
Fluoranthene	U		0.0157	0.0500	
Fluorene	U		0.00850	0.0500	
Indeno(1,2,3-cd)pyrene	U		0.0148	0.0500	
Naphthalene	U		0.0198	0.250	
Phenanthrene	U		0.00820	0.0500	
Pyrene	U		0.0117	0.0500	
1-Methylnaphthalene	U		0.00821	0.250	
2-Methylnaphthalene	U		0.00902	0.250	
2-Chloronaphthalene	U		0.00647	0.250	
(S) Nitrobenzene-d5	132			31.0-160	
(S) 2-Fluorobiphenyl	119			48.0-148	
(S) p-Terphenyl-d14	116			37.0-146	

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

GRI - Beaverton, OR

(LCS) R3284911-1 02/08	/18 08:52 • (LCSI	D) R3284911-2	02/08/18 09:17	7							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%	
Anthracene	2.00	2.17	2.33	109	117	64.0-142			7.06	20	
Acenaphthene	2.00	2.04	2.16	102	108	66.0-132			5.87	20	
Acenaphthylene	2.00	2.06	2.19	103	110	65.0-132			6.33	20	
Benzo(a)anthracene	2.00	2.04	2.11	102	105	59.0-134			3.44	20	
Benzo(a)pyrene	2.00	2.12	2.23	106	111	61.0-145			4.91	20	
Benzo(b)fluoranthene	2.00	1.97	2.04	98.7	102	57.0-136			3.14	20	
Benzo(g,h,i)perylene	2.00	2.38	2.53	119	126	54.0-140			6.03	20	
Benzo(k)fluoranthene	2.00	2.10	2.25	105	112	57.0-141			6.73	20	
Chrysene	2.00	2.09	2.29	105	114	63.0-140			8.90	20	
Dibenz(a,h)anthracene	2.00	2.33	2.39	117	120	49.0-141			2.53	20	
Fluoranthene	2.00	2.42	2.56	121	128	65.0-143			5.46	20	
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#### Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3284911-1	02/08/18 08:52 •	(LCSD) R3284911-2	02/08/18 09:17

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%	
Fluorene	2.00	1.82	1.96	90.9	98.1	64.0-129			7.56	20	
Indeno(1,2,3-cd)pyrene	2.00	2.38	2.48	119	124	53.0-141			4.21	20	
Naphthalene	2.00	1.92	2.05	96.2	102	68.0-129			6.30	20	
Phenanthrene	2.00	1.88	2.01	94.1	101	62.0-132			6.67	20	
Pyrene	2.00	1.91	2.02	95.4	101	58.0-156			5.43	20	
1-Methylnaphthalene	2.00	2.05	2.17	102	109	68.0-137			5.94	20	
2-Methylnaphthalene	2.00	1.96	2.09	98.0	105	68.0-134			6.55	20	
2-Chloronaphthalene	2.00	1.98	2.23	99.2	112	65.0-129			11.8	20	
(S) Nitrobenzene-d5				123	129	31.0-160					
(S) 2-Fluorobiphenyl				109	115	48.0-148					
(S) p-Terphenyl-d14				107	114	37.0-146					

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Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SEM/8449-06,07,08,09,10,11,12,13,14,15,18,19,20,22,23,24,26,27,28,29

#### Method Blank (MB)

(MB) R3285294-3 02/0	08/18 13:02				Cp
	MB Result	MB Qualifier	MB MDL	MB RDL	2
Analyte	mg/kg		mg/kg	mg/kg	Tc
Anthracene	U		0.000600	0.00600	
Acenaphthene	U		0.000600	0.00600	<sup>3</sup> Ss
Acenaphthylene	U		0.000600	0.00600	
Benzo(a)anthracene	U		0.000600	0.00600	4
Benzo(a)pyrene	U		0.000600	0.00600	Cn
Benzo(b)fluoranthene	U		0.000600	0.00600	
Benzo(g,h,i)perylene	U		0.000600	0.00600	⁵Sr
Benzo(k)fluoranthene	U		0.000600	0.00600	
Chrysene	U		0.000600	0.00600	6
Dibenz(a,h)anthracene	U		0.000600	0.00600	<sup>6</sup> Qc
Fluoranthene	U		0.000600	0.00600	_
Fluorene	U		0.000600	0.00600	<sup>7</sup> Gl
Indeno(1,2,3-cd)pyrene	U		0.000600	0.00600	
Naphthalene	U		0.00200	0.0200	8
Phenanthrene	U		0.000600	0.00600	A
Pyrene	U		0.000600	0.00600	
1-Methylnaphthalene	U		0.00200	0.0200	Sc
2-Methylnaphthalene	U		0.00200	0.0200	
2-Chloronaphthalene	U		0.00200	0.0200	
(S) Nitrobenzene-d5	114			14.0-149	
(S) 2-Fluorobiphenyl	88.7			34.0-125	
(S) p-Terphenyl-d14	87.6			23.0-120	

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

(LCS) R3285294-1 02/08/18 12:20 • (LCSD) R3285294-2 02/08/18 12:41											
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
Anthracene	0.0800	0.0763	0.0791	95.3	98.9	50.0-125			3.70	20	
Acenaphthene	0.0800	0.0732	0.0759	91.4	94.8	52.0-120			3.63	20	
Acenaphthylene	0.0800	0.0799	0.0827	99.9	103	51.0-120			3.46	20	
Benzo(a)anthracene	0.0800	0.0891	0.0926	111	116	46.0-121			3.81	20	
Benzo(a)pyrene	0.0800	0.0793	0.0829	99.1	104	42.0-121			4.45	20	
Benzo(b)fluoranthene	0.0800	0.0907	0.0869	113	109	42.0-123			4.23	20	
Benzo(g,h,i)perylene	0.0800	0.0816	0.0788	102	98.5	43.0-128			3.49	20	
Benzo(k)fluoranthene	0.0800	0.0715	0.0696	89.3	87.1	45.0-128			2.57	20	
Chrysene	0.0800	0.0703	0.0729	87.9	91.1	48.0-127			3.61	20	
Dibenz(a,h)anthracene	0.0800	0.0835	0.0864	104	108	43.0-132			3.42	20	
Fluoranthene	0.0800	0.0783	0.0778	97.9	97.2	49.0-129			0.671	20	
Documen	it No: J1-680-R0	GL-GRI-00001	-00			Revision:	1				Reissued for Use

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Semi Volatile Organic Compounds (GC/MS) by Method 8270D-\$10/104449-06,07,08,09,10,11,12,13,14,15,18,19,20,22,23,24,26,27,28,29

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

(LCS) R3285294-1 02/0	08/18 12:20 • (LCS	D) R3285294	-2 02/08/18 12	:41							
	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	%	%	%			%	%	
Fluorene	0.0800	0.0759	0.0790	94.9	98.7	50.0-120			3.96	20	
Indeno(1,2,3-cd)pyrene	0.0800	0.0820	0.0854	102	107	44.0-131			4.08	20	
Naphthalene	0.0800	0.0751	0.0771	93.9	96.4	50.0-120			2.65	20	
Phenanthrene	0.0800	0.0762	0.0784	95.3	98.0	48.0-120			2.89	20	
Pyrene	0.0800	0.0748	0.0742	93.5	92.7	48.0-135			0.849	20	
1-Methylnaphthalene	0.0800	0.0805	0.0814	101	102	52.0-122			1.15	20	
2-Methylnaphthalene	0.0800	0.0759	0.0777	94.9	97.2	52.0-120			2.35	20	
2-Chloronaphthalene	0.0800	0.0740	0.0760	92.5	95.0	50.0-120			2.65	20	
(S) Nitrobenzene-d5				122	122	14.0-149					
(S) 2-Fluorobiphenyl				93.9	98.6	34.0-125					
(S) p-Terphenyl-d14				94.7	97.9	23.0-120					

#### L968449-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

#### (OS) L968449-23 02/08/18 18:13 • (MS) R3285294-4 02/08/18 18:33 • (MSD) R3285294-5 02/08/18 18:54

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%	
Anthracene	0.0960	0.00241	0.0593	0.0621	59.2	62.1	1	20.0-136			4.60	24	
Acenaphthene	0.0960	0.00376	0.0690	0.0701	67.9	69.1	1	29.0-124			1.58	20	
Acenaphthylene	0.0960	0.000818	0.0757	0.0768	78.0	79.1	1	35.0-120			1.40	20	
Benzo(a)anthracene	0.0960	0.00109	0.0566	0.0608	57.8	62.2	1	13.0-132			7.20	27	
Benzo(a)pyrene	0.0960	U	0.0497	0.0530	51.8	55.2	1	14.0-138			6.32	27	
Benzo(b)fluoranthene	0.0960	U	0.0500	0.0550	52.0	57.2	1	10.0-129			9.55	31	
Benzo(g,h,i)perylene	0.0960	U	0.0436	0.0493	45.4	51.3	1	10.0-133			12.3	30	
Benzo(k)fluoranthene	0.0960	U	0.0435	0.0462	45.3	48.1	1	15.0-131			6.06	27	
Chrysene	0.0960	0.000728	0.0480	0.0514	49.2	52.8	1	15.0-137			6.94	25	
Dibenz(a,h)anthracene	0.0960	U	0.0495	0.0531	51.5	55.3	1	15.0-132			7.15	27	
Fluoranthene	0.0960	U	0.0546	0.0585	56.8	60.9	1	13.0-139			7.01	28	
Fluorene	0.0960	0.00339	0.0674	0.0687	66.7	68.0	1	27.0-122			1.87	22	
Indeno(1,2,3-cd)pyrene	0.0960	U	0.0453	0.0499	47.2	51.9	1	11.0-133			9.52	29	
Naphthalene	0.0960	0.0129	0.0891	0.0879	79.4	78.1	1	18.0-136			1.39	21	
Phenanthrene	0.0960	0.00928	0.0708	0.0702	64.1	63.5	1	15.0-133			0.802	25	
Pyrene	0.0960	0.00229	0.0529	0.0560	52.7	55.9	1	11.0-146			5.63	29	
1-Methylnaphthalene	0.0960	0.0451	0.116	0.112	73.8	69.6	1	24.0-137			3.54	22	
2-Methylnaphthalene	0.0960	0.0520	0.117	0.113	67.5	63.7	1	23.0-136			3.18	22	
2-Chloronaphthalene	0.0960	U	0.0689	0.0703	71.7	73.2	1	36.0-120			2.08	20	
(S) Nitrobenzene-d5					117	116		14.0-149					
(S) 2-Fluorobiphenyl					81.1	84.3		34.0-125					
(S) p-Terphenyl-d14					61.2	73.4		23.0-120					
Document No: J1-680-RGL-GRI-00001-00					Revision:						Reissued for Us	;e	
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