DRAFT REMEDIAL INVESTIGATION/ FEASIBILITY STUDY
FORMER TEMPLE DISTRIBUTING SITE
808 South Columbus Ave.
Goldendale, Washington

April 12, 2019

Prepared for:
Washington State Department of Ecology
1250 West Alder Street
Union Gap, Washington 98903

Prepared by:
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On Behalf of:
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1 INTRODUCTION AND OBJECTIVES

Leidos Inc. (Leidos), prepared this Remedial Investigation/Feasibility Study (RI/FS) on behalf of Chevron Environmental Management Company (CEMC), Carson Oil Company Inc., Temple Distributing, Temple Family Credit Shelter Trust, and Temple Family Survivor Trust, collectively referred to as PLPs. The RI/FS was completed for the former Temple Distributing Bulk Fuel Facility located at 808 South Columbus Avenue in Goldendale, Washington (Figure 1). The PLPs are recipients of an Enforcement Order No. DE 14134, effective April 28, 2017, issued by the Washington State Department of Ecology (Ecology). The Enforcement Order requires the PLPs to complete a remedial investigation and feasibility study for the Site.

The purpose and objectives of the RI/FS is to collect sufficient information to evaluate the impact on human health and the environment to enable development and evaluation of technically feasible cleanup alternatives in accordance with WAC 173-340-360 through 173-340-390. The RI provides sufficient data to refine the conceptual site model for use in evaluating technically feasible cleanup alternatives for selection of a final cleanup action applicable to the Site.

2 SITE DESCRIPTION AND BACKGROUND

2.1 SITE DESCRIPTION

The Site currently consists of Klickitat County Tax Parcel 04162132000100, which is a relatively flat lot approximately 0.85 acres in size. The Site is a vacant parcel containing a warehouse and office building, concrete pads, and underground piping infrastructure. Above-ground pumps and above-ground storage tanks (ASTs) have been removed (Figure 2-1).

2.2 SITE HISTORY

Chevron U.S.A. Inc.'s (CUSA) predecessor, Standard Oil Company, acquired the property in 1916. A bulk petroleum fuel distributor (leaded gasoline, diesel, unleaded gasoline) operated on the property from the late 1920s until 1980. In 1980 CUSA sold the property to Edward W. Temple and Joyce I. Temple. In 1994, Edward W. Temple and Joyce I. Temple granted the deed to the property to the Temple Family Trust. The Temple Family Credit Shelter Trust acquired the property in 1997 and operated the bulk facility until 2011. In June 2011 Carson Oil Company, Inc. acquired all above-ground equipment at the property from Temple Distributing, Inc., including tanks, a card reader system, high speed satellite dispensers, transfer pumps, meters, and dispensers.

On February 29, 2012, Carson Oil Company delivered fuel to the facility, and approximately 970 gallons of gasoline was released from an overfilled AST into the bermed unlined containment area. A site investigation conducted in 2012 confirmed that Site soils and groundwater contained gasoline, diesel, lube oil, benzene, toluene, ethylbenzene, total xylenes, naphthalene and other petroleum constituents in concentrations exceeding Model Toxics Control Act (MTCA) cleanup levels. Carson Oil conducted a limited excavation as an interim action in 2012. This action is detailed in Section 2.5.

2.3 ADJACENT PROPERTIES

The property is currently bounded by South Columbus Avenue to the west, a gravel City of Goldendale right of way (ROW) to the north, the Department of Social and Health Services to the south, and farm or range land to the east (Figure 2-2)

Perez Collision Repair/Powers Motors is located to the west across South Columbus Avenue from the former Temple Distributing bulk facility. There is a maintenance/storage building behind the Department of Social and Health Services to the south. There is currently a mobile home court to the north of the Site directly across the ROW.

2.4 LAND USE AND ENVIRONMENTAL SETTING

The Site is located in the south central area of Goldendale in Klickitat County, Washington. The vicinity is characterized by mixed use residential and commercial parcels. The Site is zoned C-2 (general commercial), which allows for commercial businesses. South Columbus Avenue was a former State Highway (SR 8) until the 1970s, when the highway was rerouted. Many of the service stations that were reportedly in this area were closed after the highway was rerouted.

2.4.1 Topography

The city of Goldendale is located approximately 1,635 feet above mean sea level and is situated in the southern portion of a broad river basin formed by the Little Klickitat River. Goldendale is situated on the flattest portion of the Little Klickitat drainage with a gradient of approximately 22 feet per mile. The basin floor, upon which Goldendale is situated, is relatively flat with slopes < 12%. The basin is bordered to the north by the Simcoe Mountains (slope >25%) and to the south by the Columbia Hills.

The ground surface at the Site vicinity is flat and slopes gently toward the north and northwest. Ground surface elevations at the Site are approximately 1,642 feet.

2.4.2 Surface Water

Surface water within the vicinity of the Site drains to the west toward Columbus Ave. or infiltrates into unpaved soils. The nearest surface water is the Little Klickitat River. The river is approximately 0.65 mile north northwest of the Site.

2.4.3 Climate

Goldendale has a borderline Mediterranean/Continental Mediterranean climate (Köppen Csb/Dsb). The rain shadow of the Cascades creates a distinct and visible difference between the arid and dry areas south of the city and the more lush treed areas to the north. This produces a landscape of open bunch-grass prairies dotted with sagebrush containing the occasional juniper tree, while the more sheltered areas consist of ponderosa pine and oak savannahs.

During the warmest summer months afternoon temperatures range from the upper 80s into the 90s and may at times exceed the 100 degree mark at the peak of the summer season. In the winter months, average maximum temperatures are in the lower 30s and 40s while minimum temperatures will range in the 10s to 20s. The average annual air temperature ranges from 47 to 50 degrees Fahrenheit.

There are approximately 135 frost free days annually. The last freezing temperatures are in mid-April and the first freezing temperatures begin in late October. Precipitation in the Goldendale region averages 16-19 inches annually. Summer precipitation is light and characterized by thunderstorms.

2.5 PREVIOUS INVESTIGATIONS

Previous investigations on the property were conducted following the 2012 fuel release. Investigation and excavation activities were limited to the eastern portion of the property near the site of the 2012 release (Figure 2-3). Limited subsequent sampling was completed in the right of way to the north and near the former fueling areas in the central site area. The report completed on behalf of Carson Oil by Tim O'Gara. This report is included as Appendix C.

Following the 2012 release, fourteen soil borings (B-1 through B-14) and four monitoring wells (MW-1 through MW-4) were completed on the property. Soil and groundwater samples were collected at each of these locations. Results of soil sample analyses indicated that TPH-G and benzene are present at the Site at multiple locations that exceed MTCA Method A cleanup levels. These samples were not analyzed for diesel-range hydrocarbons (TPH-D).

In April 2012 soil was excavated at the spill site to the top of the bedrock. Nineteen conformational soil samples collected from the excavation base and sidewalls were analyzed for gasoline-range hydrocarbons (TPH-G) and benzene, toluene, ethylbenzene and xylenes (BTEX). All of the samples had TPH-G at concentrations that exceed the MTCA Method A cleanup level of 30 mg/kg. BTEX constituents were also detected in all of the samples.

In 2015 Ecology completed a supplemental assessment of the Columbus Square property located to the north of the Site. As a component of this assessment, soil borings BH-32 through BH-34 (Figure 2) were completed in the right-of-way adjacent to the north property boundary of the Site. Soil samples collected from borings BH-32 and BH-33 exceeded MTCA Method A cleanup levels for TPH-G, and BH-33 exceeded MTCA Method A cleanup levels for naphthalene.

The boring locations for these investigations are presented on Figure 2-3 and the data are included in Table 5-2.

3 REMEDIAL INVESTIGATION ACTIVITIES

In accordance with the Enforcement Order No. DE 14131 effective April 28th, 2017, a Remedial Investigation Work Plan was submitted by Leidos in October 2017. The RI work plan was reviewed and approved by Ecology and RI activities were initiated in April 2018. Based on the initial sampling results, additional borings were completed in order to fully delineate the soil impacts to the south and west. This investigative work was completed in December 2018.

3.1 SOIL BORINGS AND SAMPLING

A total of 51 soil borings (SB-1 through SB-51) and five monitoring wells MW-5 through MW-9) were completed on the Site as part of this remedial investigation.

In order to comply with current CEMC requirements for subsurface asset avoidance, each boring was completed using a stainless steel hand auger to avoid damage to buried utilities or other subsurface infrastructure. All soil samples were collected by a split spoon stainless steel hand-

auger. The split spoon auger minimizes the loss of volatiles by allowing the sample to be relatively undisturbed prior to sample collection. Each of the borings were advanced until refusal. The depth to refusal and basalt is shown on Figure 3-1.

At a minimum, two soil samples were collected from each boring and submitted for laboratory analysis.

Soil sampling procedures are detailed in the RI SAP (Leidos 2017). The boring logs are presented as Appendix A.

3.1.1 Soil Sample Analysis

Selected soil samples collected in soil borings and monitoring well borings were submitted to Eurofins Lancaster Laboratories for the following analyses:

- TPH-G by ECY 97-602 NWTPH-Gx;
- TPH-D and heavy oil-range hydrocarbons (TPH-HO) by ECY 97-602 NWTPH-Dx,;
- Methyl tertiary butyl ether (MTBE), Ethylene Dibromide (EDB), Ethylene Dichloride (EDC), and BTEX by USEPA 8260B;
- Total lead by USEPA 6010B.
- Naphthalene by USEPA 8270; and
- Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) by USEPA 8270 SIM.

Duplicate soil samples were collected at a rate of one per each 20 soil samples and submitted for the above-referenced analyses to ensure quality assurance and quality control (QA/QC). Additional QA/QC samples included one trip blank accompanying each sample cooler and equipment rinse samples to verify equipment decontamination procedures. Equipment rinse sampling was performed by collecting laboratory-supplied distilled water that had been used as the final rinse following equipment decontamination procedures. Equipment rinse samples were collected at a rate of one per sample collection method. Trip blank and equipment rinse QA/QC samples were submitted for the following analyses:

- TPH-G by ECY 97-602 NWTPH-Gx; and
- BTEX by USEPA 8260B.

3.2 GROUNDWATER MONITORING WELLS

3.2.1 Monitoring Well Installation and Sampling

As detailed in the work plan, five groundwater monitoring wells were installed during the remedial investigation. Due to the shallow basalt layer beneath the Site the wells were installed using a stainless steel hand auger and prepacked well screens. Monitoring wells MW-5 and MW-6 were screened from 4 to 6.5 feet, MW-7 and MW-8 were screened from 2.5 to 5 feet and MW-9 was screened from 2 to 7 feet below ground surface. Each well was developed per the work plan following installation.

Monitoring well construction details are presented in Appendix A.

3.2.2 Groundwater Monitoring

Following completion of the monitoring well installation activities, each of the new and existing wells were monitored and sampled.

Groundwater monitoring consisted of water level measurements, and subsequently groundwater samples were collected for laboratory analysis. Samples were submitted to Eurofins Lancaster Laboratories for the following analyses:

- TPH-G by ECY 97-602 NWTPH-Gx;
- TPH-D and TPH-HO by ECY 97-602 NWTPH-Dx;
- BTEX, MTBE, and EDC by USEPA 8260B;
- EDB by USEPA 504.1;
- Naphthalene by USEPA 8270;
- PAHs by USEPA 8270 SIM; and
- Dissolved lead by USEPA 6010B.

Soil sampling procedures are detailed in the RI SAP (Leidos 2017). Laboratory analytical reporting limits for groundwater sample analyses are presented in the RI QAPP (Leidos 2017).

4 GEOLOGY AND HYDROGEOLOGY

4.1 STRATIGRAPHY

The dominate geologic feature of the Goldendale region is the Columbia River Basalt formation. This geological strata is composed of several layers of under formed, solidified lava. The Columbia River Basalt formation was created through volcanic processes, and comprises the parent material from which Goldendale area soils were formed. The basalts typically have blocky columns or vertical platy joints.

The general stratigraphy of the Site, from the surface down, consists of 1 to 1.5 feet of fill underlain by 1 to 7 feet of silt/clays underlain by a silty sand/weathered basalt underlain by basalt bedrock.

As depicted on Figure 3-1, as well as Figures 4-2 and 4-3, the depth to basalt on the Site ranged from 3.0 feet in the northeast corner to approximately 9.0 feet in the center of the property.

4.2 GROUNDWATER OCCURRENCE AND FLOW

Shallow groundwater beneath the Site is perched on the top of the basalt layer. The depths to the perched groundwater range from 2.23 to 7.70 feet bgs during the spring. Field measurements indicate that there may be multiple perched groundwater zones within relatively small areas and that the wells are dry during the late summer and fall seasons. During the wetter season (spring) when the wells have water, the groundwater flow gradient appears to be generally toward the north (Figure 4-4).

Because the monitoring wells could not yield 0.5 gallons per minute on a sustained basis under WAC 173-340-720(2)(i) the seasonal perched groundwater is not potable.

According to Washington State Department of Ecology well log database, there are a number of domestic or commercial water wells within a half mile radius of the site ranging in depth between 100 and 200 feet bgs. The nearest well is located approximately 0.4 miles away. The

City of Goldendale Public Works Department provides domestic water service within the city limits. Goldendale's municipal water supply is provided by a gravity fed, mountain springs diversion system and wells.

5 NATURE AND EXTENT OF IMAPCTS

5.1 SOIL IMPACTS

As part of this RI effort, a total of 51 borings were completed on the Site to delineate the lateral and vertical extent of soil impacted by the former bulk plant operations. Soil sample analytical results from the RI are summarized in Tables 5-1 through 5-3. Laboratory reports are presented in Appendix B.

Based on the results of the soil sampling, gasoline- and diesel-range hydrocarbons along with BETX were identified as the contaminants of concern in Site soils. No other contaminants were detected at concentrations exceeding the cleanup levels. Gasoline-range hydrocarbons are the most widespread contaminant at the Site, occurring throughout the foot print of the former bulk plant facilities including the AST area, the loading racks, warehouse, card lock and associated product transfer lines (Figure 5-1).

Diesel-range impacts above MTCA Method A cleanup levels are limited (as shown on Figure 5-1) and are encompassed by the area of gasoline-range impacts.

As depicted on Figure 5-1, soil impacts exceeding MTCA Method A Cleanup levels are limited in extent to the Temple Distributing property and extending into the City of Goldendale right of way to the north. The impacts also extend slightly into the City ROW to the west of the warehouse. This area is a utility corridor containing power and fiber optic cable (as shown on Figure 5-1).

The vertical extent of soil impacts is shown on cross section Figures 4-2 and 4-3. As depicted on the cross sections and in the previous reports, the vertical extent of soil impacts is vertically bounded by the layer of basalt beneath the Site.

5.2 GROUNDWATER IMPACTS

Groundwater samples collected during the initial 2012 investigation (O'Gara, 2012) exceeded MTCA Methods A Cleanup Levels in the following locations:

MW-1: Benzene (5.38 µg/l)

MW-2: TPH-G (8,910 µg/l), benzene (1,250 µg/l) and toluene (1,800 µg/l)

MW-3: TPH-G (5,080 µg/l)

MW-4: TPH-G (6,000) µg/l

During the RI field efforts, these wells along with the newly installed wells were sampled in April 2018. During this sampling event only monitoring well MW-3 exceeded cleanup levels for TPH=-G (3,500 µg/l). All other contaminants were either not detected above the lab detection limits or were detected at concentrations less that the MTCA Method A cleanup levels.

The monitoring wells were dry during the summer and fall indicating that the groundwater is perched and seasonal. Groundwater analytical data are presented in Figure 5-2, Tables 5-4 and 5-5.

5.3 POTENTIAL VAPOR IMPACTS

As discussed the Remedial Investigation Work Plan, a vapor intrusion investigation conducted during the RI phase would not be indicative of future risks. A vapor intrusion investigation will be completed following the completion of the site remediation activities. The details of the vapor intrusion study will included as part of the Site Cleanup Action Plan.

6 CONCEPTUAL SITE MODEL

6.1 CONTAMINANTS OF CONCERN

MTCA defines a contaminant as "any hazardous substance that does not occur naturally or occurs at greater than natural background levels." Contaminants of concern (COCs) include those hazardous substances that are known to be present at a site, or which are suspected to be present based on information regarding the nature of a known release or past operations at a site.

Sampling data from the RI field work, environmental investigations and cleanup actions have confirmed the presence of the following COCs for each of the impacted media at the site:

COCs	Groundwater	Soil	Soil Gas (potential)
Benzene	•	•	•
Toluene	•	•	•
Ethylbenzene	•	•	•
Total Xylenes	•	•	•
Naphthalene			•
Gasoline-range Hydrocarbons	•	•	•
Diesel-range Hydrocarbons	•	•	
Heavy Oil-range Hydrocarbons	•	•	

6.2 EXPOSURE PATHWAYS AND POTENTIAL RECEPTORS

Contaminated media at the Site includes soil and groundwater. MTCA [WAC 173-340-200] defines an exposure pathway as: "the path a hazardous substance takes or could take from a source to an exposed organism. An exposure pathway describes the mechanism by which an individual or population is exposed or has the potential to be exposed to hazardous substances at or originating from a site." Primary exposure pathways are those routes that are known to be currently transporting contaminants to or within a certain medium (such as soil contamination to groundwater). Secondary exposure pathways are those routes that: (a) have transported contaminants in the past, but may not be currently (such as releases from ASTs); or (b) may transport contaminants in the future, but do not currently. Precluded exposure pathways are

those that are not possible at any time, based on physical evidence, and are therefore considered closed pathways.

Petroleum constituents have been detected in soil and groundwater samples collected at the Site. Therefore, soil and groundwater, are impacted media but may also be considered secondary contaminant sources. The potential exposure pathways associated with each medium/source are discussed below, along with the rationale for excluding or including that pathway.

Previous activities have released petroleum hydrocarbons to the soil and groundwater at the Site. Contaminants may then move through the unsaturated zone, either by lateral and downward transport to the water table or by lateral transport within the water table.

6.2.1 Potential Soil Exposure Pathways

Soil impacts range from as shallow as 1 foot bgs to as deep as 9 feet bgs. Soil and soil vapor could become an exposure pathway to future workers or residents if construction and/or development activities expose impacted soil. The impacted soil is also considered to be a potential direct-contact exposure pathway. A summary of the potential soil exposure pathways at the Site is presented in the table below:

Potential Soil Exposure Pathways	Applicability
Ingestion of, or dermal contact with, contaminated soil	Secondary: The area of soil impacted by COCs at the Site is currently from 1 to 9 ft bgs. The current potential for ingestion or dermal contact is limited. However, potential ingestion or direct contact exposure are possible for future workers performing excavation, site assessment, or subsurface utility work at the Site.
Inhalation of hazardous vapors and/or airborne particulates (i.e., dust) in outdoor air	Secondary: Volatilization of hazardous substances or dust from contaminated soil may create an inhalation exposure pathway for future workers performing excavation, site assessment, or subsurface utility work at the Site.
Contamination of groundwater by hazardous substances leaching from soil	Primary: Soil contamination in contact with groundwater has resulted in concentrations of dissolved-phase petroleum contamination in groundwater.
Inhalation of hazardous substances that have volatilized from contaminated soil and migrated to indoor air	Potential for future exposure: As Detailed in the RI Work Plan, this pathway will be investigated during the remedial action phase of the project.

6.2.2 Potential Groundwater Exposure Pathways

A summary of the potential groundwater exposure pathways at the Site is presented in the table below:

Potential Groundwater Exposure Pathways	Applicability
Ingestion/Household Contact	Precluded: The perched groundwater is seasonal and has a sustained yield of less than 0.5 gal/min. per WAC 173-340-720 (2)(i) the water is non-potable.
Incidental Exposure Resulting from Site Development or Utility Construction	Secondary: Groundwater is typically located at a depth of approximately 3 to 10 feet bgs. Dermal contact exposures are possible for workers during future site redevelopment or during utility work.
Groundwater to Surface Water	Precluded: The shallow perched seasonal aquifer does not leave the Site and does not discharge to surface water.
Inhalation of hazardous vapors in outdoor air	Secondary: Volatilization of hazard substances from contaminated groundwater may create an inhalation exposure pathway for future workers performing excavation, site assessment, or subsurface utility work at the Site.

The groundwater ingestion pathway is precluded in the vicinity of the Site because the aquifer is not potable due to being shallow, perched and seasonal with a sustained yield below 0.5 gal/min. The primary pathway of concern is the groundwater to incidental exposure (dermal).

6.2.3 Potential Soil Vapor Exposure Pathways

Currently the majority of the Site is undeveloped and contains one small office and a warehouse. Based on the soil samples collected during the RI, the soil vapor to indoor air pathway may represent a potential exposure pathway. The potential for vapor intrusion will be evaluated following the remediation of the Site and will be detailed in the CAP. This will allow the investigation results to represent the actual risks to future Site use.

6.3 PRELIMINARY CLEANUP LEVELS

6.3.1 Groundwater

Under MTCA [WAC 173-340-200], a cleanup level means: "the concentration of a hazardous substance in soil, water, air, or sediment that is determined to be protective of human health and the environment under specified exposure conditions." Cleanup levels, in combination with points of compliance, typically define the area or volume of soil, water, air, or sediment at a site that must be cleaned up. MTCA further specifies that the first step in determining cleanup levels is to identify the potentially contaminated media, the current and potential pathways of exposure, the current and potential receptors, and the current and potential land and resource uses.

6.3.2 Terrestrial Ecological Evaluation

In addition to evaluation of human health risk, MTCA (WAC 173-340-7490) requires that one of the following actions be taken following the release of hazardous substances to the soil at a site to determine the potential impacts to terrestrial organisms at the site:

- Documentation of an exclusion from any further terrestrial ecological evaluation using the criteria in WAC 173-340-7491.

- Completion of a simplified terrestrial ecological evaluation as specified in WAC 173-340-7492.
- Completion of a site-specific terrestrial ecological evaluation as specified in WAC 173-340-7493.

A site may be excluded from the requirement for a terrestrial ecological evaluation if any of the following criteria are met at the site:

- All soil contaminated with hazardous substances is, or will be located below the point of compliance established under WAC 173-340-7490(4).
- All soil contaminated with hazardous substances is, or will be, covered by buildings, paved roads, pavement, or other physical barriers that will prevent plants or wildlife from being exposed to the soil contamination.
- There is less than 0.25 acres of contiguous undeveloped land on or within 500 feet of any area of the site contaminated with chlorinated dioxins or furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, heptachlor epoxide, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene.
- There is less than 1.5 acres of contiguous undeveloped land on the site or within 500 feet of any area of the site and the contamination at the site does not include any of the contaminants listed in the preceding bullet.

The Site does not meet the above-listed requirements for TEE exclusion. Therefore, a simplified TEE was completed for the Site using WAC 173-340-7492, Table 749-1 and is included in the table below:

Table 749-1 Simplified Terrestrial Ecological Evaluation-Exposure Analysis Procedure	
Estimate the area of contiguous (connected) undeveloped land on the site or within 500 feet of any area of the site to the nearest ½ acre (1/4 acre if the area is less than 0.5 acre).	
1) From the table below, find the number of points corresponding to the area and enter this number in the field to the right.	
Area (acres) / Points 0.25 or less / 4 0.5 / 5 1.0 / 6 1.5 / 7 2.0 / 8 2.5 / 9 3.0 / 10 3.5 / 11 4.0 or more / 12	9
2) Is this an industrial or commercial property? If yes, enter a score of 3. If no, enter a score of 1	3
3)[a] Enter a score in the box to the right for the habitat quality of the site, using the following rating system[b]. High=1, Intermediate=2, Low=3	2
4) Is the undeveloped land likely to attract wildlife? If yes, enter a score of 1 in the box to the right. If no, enter a score of 2.[c]	1
5) Are there any of the following soil contaminants present: Chlorinated dioxins/furans, PCB mixtures, DDT, DDE, DDD, aldrin, chlordane, dieldrin, endosulfan, endrin, heptachlor, benzene hexachloride, toxaphene, hexachlorobenzene, pentachlorophenol, pentachlorobenzene? If yes, enter a score of 1 in the box to the right. If no, enter a score of 4.	4
6) Add the numbers in the boxes on lines 2-5 and enter this number in the box to the right. If this number is larger than the number in the box on line 1, the simplified evaluation may be ended.	10

Based on the results of Table 749-1 the TEE is ended at this point; the Site does not pose a threat of adverse effects to terrestrial ecological receptors.

6.4 SOIL CLEANUP LEVELS AND POINTS OF COMPLIANCE

MTCA provides three approaches for establishing soil cleanup levels: Method A, Method B, and Method C.

Method A may be used on sites involving relatively few hazardous substances or where cleanup action may be routine. Under Method A, cleanup levels are determined by the most stringent criteria specified under state and federal laws and Tables 720-1, 740-1, and 745-1 of MTCA.

Method B is the universal method for determining cleanup levels at all sites. For sites contaminated with TPH, Method B cleanup levels are determined by using the fractionated analytical approach for petroleum. This approach involves testing of the samples to determine the LNAPL composition. Cleanup levels must consider the measured or predicted ability of the fractions to migrate from one medium to other media. When multiple exposure pathways are identified for a single media, the most stringent cleanup level is selected.

Method C is used in situations such as industrial sites. Site cleanups under Method C will require restrictions placed on the property to ensure future protection of human health and the environment.

MTCA states that cleanup levels shall be based on the reasonable maximum exposure expected to occur during both current and future land use. By default, MTCA further states that residential land use represents the reasonable maximum exposure. Therefore, cleanup levels must be protective of residential or unrestricted land use. On sites where the cleanup action is routine or may involve relatively few hazardous substances, MTCA allows the use of Method A cleanup levels.

The Method A cleanup levels for soil presented in Table 740-1 (Soil Cleanup Levels for Unrestricted Land Use) are applicable to this Site.

The soil cleanup levels combined with the point of compliance determines the cleanup standard for the site. Under MTCA, the point of compliance is pathway dependent. Potential pathways for exposure to contaminants in the soil are discussed below.

Protection of Human Exposure via Direct Contact/Incidental Ingestion: The point of compliance is in the soils throughout the site to a reasonable estimate of the depth of soil that could be excavated and distributed at the soil surface during site development activities (i.e., ground surface to 15 feet bgs).

Protection of Ecological Receptors: The standard point of compliance is in the soils throughout the site from ground surface to 15 feet bgs (the reasonable depth of soil that could be excavated during site development and could result in exposure to ecological organisms). For sites with institutional controls preventing excavation of deeper soil, MTCA allows the use of a conditional point of compliance set in the soils throughout the site at a depth of 6 feet bgs.

Protection of Groundwater: The point of compliance is throughout the site.

6.5 GROUNDWATER CLEANUP LEVELS AND POINTS OF COMPLIANCE

MTCA requires that groundwater cleanup levels be based on the highest beneficial use and reasonable maximum exposure under both current and future land use at the site. For groundwater, MTCA specifies that drinking water is the highest beneficial use and that ingestion of drinking water represents the reasonable maximum exposure [WAC 173-340-720]. The Method A cleanup levels for groundwater presented in MTCA Table 720-1 (Method A Cleanup Levels for Groundwater) are applicable to this Site.

MTCA states that groundwater cleanup levels shall be attained in all groundwater from the point of compliance to the outer boundary of the hazardous substance plume. The standard point of

compliance as defined by MTCA is throughout the site from the uppermost level of the saturated zone extending vertically to the lowest depth that could potentially be affected by the site.

6.6 SUMMARY OF PROPOSED CLEANUP STANDARDS

Per MTCA, cleanup standards establish the concentrations of hazardous substances that are protective of human health and the environment (cleanup levels), and the location on the site where those cleanup levels must be attained (points of compliance).

The following table presents the proposed cleanup standards that have been developed for the Site:

Media	Point of Compliance	GRO	DRO	HRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Lead	Benzo(a) pyrene (cPAHs)
Soil (mg/kg) (0 – 15 ft bgs)	Entire Site	30	2,000	2,000	0.03	7	6	9	250	0.1
Groundwater (micrograms per liter)	Entire Site	800	500	500	5	1,000	700	1,000	15	0.1

These cleanup levels presented above are derived from:

- MTCA Table 740-1, Method A soil cleanup levels for unrestricted land uses; and
- MTCA Table 720-1, Method A cleanup levels for ground water.

7 REMEDIAL ALTERNATIVE COMPONENTS

A cleanup action alternative is defined as one or more treatment technology, containment action, removal action, engineered control, institutional control, or other type of remedial action ("cleanup action components") that individually, or in combination, achieves a cleanup action at a site [WAC 173-340-200]. For purposes of this FS, it is convenient to think of a "cleanup action component" as dealing with a specific media/exposure pathway. The media/exposure pathway cleanup action components are then assembled into cleanup action alternatives, which address the site-wide cleanup requirements.

In accordance with MTCA, potential cleanup action components have been screened prior to assembling the components into cleanup action alternatives to reduce the number of alternatives for the final detailed evaluation in this FS. According to WAC 173-340-350(8), an alternative component may be screened from further consideration if either of the following conditions applies:

- The component does not meet the minimum requirements in WAC 173-340-360, including components in which costs are clearly disproportionate. More specifically:

- The component is not protective of human health and the environment, or
- The component does not comply with the cleanup standards, or
- The component does not comply with applicable state or federal laws, or
- The component does not provide for compliance monitoring.

- The component is not technically feasible.

The initial screenings for soil and groundwater cleanup alternative components are presented in Tables 6-1 and 6-2, respectively.

As detailed below, in situ remedial systems (air sparging and multi-phase extraction, chemical oxidation) were not carried past the initial screening.

In-Situ Chemical Oxidation (ISCO)

ISCO is a remediation technology that uses a chemical oxidant (e.g., hydrogen peroxide or sodium persulfate) to transform soil or groundwater contaminants into less harmful chemical species. Application of the chemical oxidants is typically performed by injection into a series of single-use borings or dedicated injection points that can be used for multiple ISCO applications.

Success of ISCO based cleanup actions is primarily dependent on the ability to effectively distribute the selected oxidant throughout the zone of contamination. Therefore, due to the inherent unknowns associated with in-situ subsurface remediation, the success of ISCO based strategies can be difficult to predict. There are also significant health and safety concerns associated with ISCO based remediation, due to the potentially violent chemical reactions that can occur in the presence of oxidizers. Chevron EMC does not consider ISCO to be a viable cleanup alternative because of the health and safety concerns associated with this technology. Therefore, this technology was not retained as a cleanup action alternative component.

Soil Vapor Extraction (SVE)

SVE is a remedial technology in which air movement is induced in vadose-zone soils by applying vacuum to a series of horizontal or vertical extraction wells. The result is that air moving through pore spaces in the vadose zone causes volatile contaminants to transfer to the vapor phase, which allows the contaminants to be drawn from the subsurface with the extracted vapor stream. Typically, the contaminated vapor stream is then treated before being discharged to the atmosphere.

SVE would be an effective treatment on a site that has seasonal groundwater since it is not effective in reducing contamination in capillary fringe or saturated zone soils, however the shallow nature of the contamination would create short circuiting to the service therefore, it would not be well suited as a technology to address the contaminant conditions at this Site. This technology was not retained as a cleanup action.

Air Sparge

Air sparge is an in-situ remediation technology that uses air injected into the subsurface to strip volatile constituents from groundwater. Implementation typically consists of injecting low pressure air into the saturated zone, through a grid of vertical injection wells.

Due to the seasonal and discontinuous groundwater and the shallow nature of the contamination, air sparge is not considered appropriate as a cleanup alternative for this Site and was not retained.

Institutional controls (e.g. deed restrictions), natural attenuation, capping, placement of a subsurface vapor barrier, soil treatment and soil removal processes are retained components for developing cleanup alternatives.

8 DEVELOPMENT OF ALTERNATIVES

The following sections discuss each alternative with a focus on the rationale for the actions and components that have been selected. The proposed alternatives are analyzed in detail in Section 9.0 in accordance with evaluation criteria mandated under MTCA.

Each alternative includes components that are expected to be capable of accomplishing the cleanup levels established for a particular exposure pathway and contaminants as identified in Section 6.0. The alternatives have been developed by assembling various cleanup alternative components in appropriate combinations from among those selected in Section 7.0. Selection of a specific cleanup action component for detailed evaluation in the FS does not preclude later consideration of similar components that are represented by the selected component. Similar cleanup action components that can achieve the same cleanup levels could be re-evaluated for cost effectiveness during the final design phase.

The alternatives developed for the site provide a range of cleanup action components within the confines of protecting the environment and human health as required by MTCA. MTCA [WAC 173-340-360] specifies that each alternative meet the following threshold requirements:

- Protect human health and the environment;
- Comply with cleanup standards;
- Comply with applicable state and federal laws; and
- Provide for compliance monitoring.

A range of cleanup action alternatives was developed by assembling appropriate cleanup action components from those identified and selected in Section 7.0 (Remedial Alternative Components). For media with contaminants exceeding cleanup levels, identifying the exposure route rather than just the acceptable contaminant levels is important because protectiveness can be achieved by preventing exposures (e.g., by containment or institutional controls) as well as by cleanup. Although MTCA strongly reflects a preference for permanent remedial actions to the maximum extent practicable, less permanent solutions may be accepted if controls are put into place to ensure that the solution is protective of human and ecological receptors if demonstrated to be appropriate through the FS evaluation and disproportionate cost analysis.

MTCA requires that a FS include at least one “permanent cleanup action alternative” to serve as the baseline against which all other alternatives are evaluated for the purpose of determining whether the cleanup action selected is permanent to the maximum extent practicable (WAC 173-340-350). MTCA defines a permanent cleanup action to be one in which the cleanup standards

of WAC 173-340-700 through 173-340-760 can be met without any further action, with the exception of the disposal of any treatment residue.

8.1 ALTERNATIVE 1 – CONTAINMENT AND NATURAL ATTENUATION

This alternative would reduce and control exposures to subsurface contaminants using the following cleanup alternative components:

- Meet soil and groundwater preliminary cleanup levels for on-property and off-property impacts through natural attenuation;
- Mitigate potential human and ecological exposures to impacted soil by doing the following:
  - Containment to prevent direct contact by human and ecological receptors;
  - Deed restrictions including implementation of a soil management plan; and/or
  - Installation of a vapor barrier if required to prevent adverse indoor air inhalation risk in potential future buildings.
- Implement environmental monitoring.

8.1.1 Natural Attenuation

Relying on natural processes to achieve the proposed preliminary cleanup levels for soil and the MTCA Method A cleanup levels for groundwater exceedances is appropriate because the contaminants are posing a low level of risk to human health. In addition, hydrocarbon compounds are readily biodegradable into less harmful constituents (typically carbon dioxide and water).

According to the Guidance on Remediation of Petroleum-Contaminated Ground Water By Natural Attenuation (Ecology, 2005), "For sites where the ground water is contaminated with petroleum hydrocarbons, one of the alternatives that could be considered during the RI/FS is an alternative that uses natural attenuation, either alone or in conjunction with other cleanup action components, to clean up the petroleum-contaminated groundwater." The guidance further states that selection of natural attenuation as a remedial option must meet the minimum requirements specified in WAC 173-340-360(2). These requirements are discussed below.

- Compliance with Cleanup Standards – MTCA specifies that "where an alternative involves containment of soils with hazardous substance concentrations exceeding cleanup levels at the point of compliance, the alternative may be determined to comply with cleanup standards provided it meets several specific requirements, including that the alternative is protective of human health and the environment." This alternative includes containment and is protective of human health and the environment.
- Compliance with Applicable State and Federal Laws – This alternative is compliant with applicable state and federal laws.
- Protecting Human Health and the Environment – According to Ecology guidance "The cleanup action selected must either reduce or remove (or destroy) the contamination, restoring the site to cleanup levels, or contain the contamination in such a way that will

minimize future exposure of humans and ecological receptors." This alternative uses containment and institutional controls to achieve protectiveness of human health and ecological receptors.

- Providing for Compliance Monitoring – This alternative will provide for compliance monitoring to verify that the cleanup action remains effective over time. A compliance monitoring program consistent with recommendations presented in "Guidance on Remediation of Petroleum-Contaminated Ground Water by Natural Attenuation" would be an integral component of this alternative.
- Using Permanent Solutions to the Maximum Extent Practicable – Ecology guidance defines permanent solutions as "actions in which cleanup standards can be met without further action being required, such as monitoring or institutional controls." MTCA further allows selection of the most practicable solution from among alternatives protective of human health and the environment through a disproportionate cost analysis. Although this alternative likely involves a long restoration time frame (discussed below), the solution will be permanent once cleanup levels are met.
- Providing for a Reasonable Restoration Time Frame – The time frame for attainment of cleanup levels through monitored natural attenuation alone is impossible to predict. The degree to which this timeframe is considered "reasonable" under WAC 173-340-360(2) will be evaluated, in conjunction with Ecology, during the remedy selection and preparation of the draft Cleanup Action Plan (CAP).
- Considering Public Concerns – Public concerns will be addressed after the public comment period.

WAC 173-340-370(7) also states that cleanup actions that use natural attenuation to clean up petroleum-impacted groundwater must use source control to the maximum extent practicable. Given that this alternative is protective of human health and the environment, the degree to which this alternative meets the intent of this regulation will be evaluated, in conjunction with Ecology, during the remedy selection and preparation of the Draft CAP.

8.1.2 Mitigate Exposures to Impacted Soil

Containment

The property will be paved with asphalt to prevent direct contact exposures by humans and terrestrial organisms. Regular maintenance will be conducted to ensure the selected containment does not degrade resulting in unacceptable exposures to receptors.

Impacted off-property soil extending beneath South Columbus Avenue is currently contained by the pavement comprising the roadway. Direct contact with impacted soil in this area is currently mitigated and likely to remain so in the future.

Deed Restrictions/Soil Management Plan

Deed restrictions and a soil management plan will be developed, which will require notification and approval from Ecology and the named Potentially Liable Parties (PLPs) prior to performing any intrusive subsurface activities on the property and at the Site. The notification requirement will ensure controls to reduce potential exposures to workers are in place and proper disposal of impacted soil.

Deed restrictions will be placed on the property to ensure continued use for industrial or commercial purposes as required by MTCA. The Soil Management Plan will identify the limits of on- and off-property soil impacts remaining on the Site and provide guidance on exposure controls and disposal practices.

Vapor Barrier

Although current plans do not include placement of a building on the property, soil on the property does not currently meet the proposed preliminary cleanup levels. To ensure that future development is not limited by the presence of subsurface contaminants, Alternative 1 includes the use of vapor barriers on potential future construction. This will eliminate the possibility of vapor intrusion into occupied areas, with no restrictions on building placement on the property. In the future, when new construction plans are finalized, it may be possible to determine that a vapor barrier is not necessary, based on detailed data related to building specifications.

8.1.3 Mitigate Potential Exposures to Impacted Groundwater

Potential exposure to impacted groundwater is limited to utility and construction workers. The Soil Management Plan will address controls to reduce potential exposures to these workers.

8.1.4 Implement Environmental Monitoring

Under MTCA, compliance monitoring is required for all cleanup actions (WAC 173-340-410). Three categories of compliance monitoring are defined under MTCA:

- Protection monitoring to confirm that human health and the environment are protected during construction and operation of the cleanup action.
- Performance monitoring to confirm that the cleanup action has attained cleanup standards or remedial action objectives. Groundwater collected from currently existing on-property wells will be used for performance monitoring. In addition, a limited number of soil samples will be collected from the areas exceeding cleanup levels identified during the RI to ensure that the proposed preliminary cleanup levels for soil have been attained following sufficient time for natural attenuation to occur. The natural attenuation monitoring of the groundwater will serve as performance monitoring.
- Confirmation monitoring to confirm the long-term effectiveness of the cleanup action after remedial action objectives have been attained.

8.2 ALTERNATIVE 2 – SOURCE REMOVAL, OFF-SITE DISPOSAL AND NATURAL ATTENUATION

This alternative would reduce and control exposures to contaminants by the following cleanup alternative components:

- Meet proposed soil cleanup levels on-property by source removal through:
  - Excavation of on-property soil exceeding cleanup levels.
  - Off-site transport and disposal of excavated soil at an approved landfill.
- Deed restrictions (if needed).

- Meet soil cleanup levels off-property through natural attenuation or excavation if practical.
- Mitigate exposures to off-property soil through:
  - Containment of off-property soil beneath S. Columbus.
  - Soil Management Plan.
- Meet groundwater cleanup levels through natural attenuation
- Implement environmental monitoring.

8.2.1 Source Removal

Excavation of Soil Exceedances

Alternative 2 would reduce the cleanup timeframe and reduce the potential for direct contact by human and ecological receptors by excavating and disposal of soil exceeding the proposed cleanup levels.

8.2.2 Off-Site Transport and Disposal of Excavated Soil

Approximately 6,000 cubic yards of excavated soil exceeding the cleanup level will be transported to a Chevron-approved disposal facility. A corresponding volume of clean overburden will be transported to the property for use as backfill.

8.2.3 Vapor Monitoring

Following the removal of impacted soils, vapor points will be installed to evaluate the potential vapor intrusion risk from any impacts left in place during the excavation activities. The details of this investigation will be included in the Draft CAP.

8.2.4 Deed Restrictions

Deed restrictions will be placed on the property to ensure continued use for industrial or commercial purposes as required by MTCA.

8.2.5 Natural Attenuation of Off-Property Impacted Soil

Cleanup levels for impacted off-property soil (i.e., soil extending beneath South Columbus Avenue and past the western edge of the property) will be attained by natural attenuation as described in Section 8.1.1.

8.2.6 Mitigate Exposures to Off-Property Soil

Potential exposures to off-property soil extending beneath S. Columbus will be mitigated by containment and a Soil Management Plan. The roadway currently acts as a barrier to prevent direct contact exposures by humans and terrestrial organisms.

As described in Section 8.1.2, a soil management plan will be developed to mitigate potential exposures that may occur during any future subsurface work in this area.

8.2.7 Meet Groundwater Cleanup Levels through Natural Attenuation

Attainment of groundwater cleanup levels will be achieved through natural attenuation as described in Section 8.1.1.

8.2.8 Implement Environmental Monitoring

As required by MTCA, environmental monitoring as described in Section 8.1.4 will be implemented. Breathing zone vapor monitoring will be conducted during soil excavation activities.

9 ANALYSIS AND COMPARISON OF ALTERNATIVES

MTCA requires the use of permanent solutions in which cleanup levels will be attained at the site without additional remedial actions; however, MTCA also recognizes that costs of the permanent solution may be disproportionate to the benefits it provides. Disproportionate costs are defined in MTCA as cases where the incremental costs of an alternative over that of a lower cost alternative exceed the incremental degree of benefits provided by the higher cost alternative. In the case of disproportionate costs, MTCA allows selection of a lower cost alternative that "uses permanent solutions to the maximum extent practicable" (WAC 173-340-360). This lower cost alternative is selected by conducting a disproportionate cost analysis comparing the costs and benefits of all of the remedial alternatives in the feasibility study.

The disproportionate cost analysis requires that the alternatives be ranked from most to least permanent and that the permanent solution alternative serve as the baseline against which all other alternatives are evaluated. When the benefits of two or more alternatives are equal, the lower cost alternative shall be selected as the preferred alternative.

9.1 PERMANACE OF ALTERNATIVES

Both Alternatives 1 and 2 would result in permanent solutions at the Site. Alternative 2 is a permanent remedial alternative that eliminates risk to human health and the environment. Alternative 2 eliminates these risks through excavation of accessible impacted soil and enhanced degradation of petroleum constituents in groundwater through source removal. Alternative 1 is ranked as the least permanent solution. Other than cost, the primary distinguishing feature of the alternatives is the time required to reach cleanup levels.

9.2 EVALUATION OF ALTERNATIVES

MTCA specifies the various criteria for evaluation and comparison of alternatives when conducting a disproportionate cost analysis to determine whether a remedial action is "permanent to the maximum extent practicable" [WAC 173-340-360(e)]. The alternative analysis presented in Table 6-1 presents an evaluation of each alternative relative to the specified criteria listed below.

Protectiveness. Overall protectiveness of human health and the environment, including the following considerations:

- Degree to which existing risks are reduced,
- Time required to reduce risks and attain cleanup standards,
- Onsite and offsite risks resulting from implementation of the alternative,

- Improvement in the overall environmental quality.

Permanence. The degree to which the alternative permanently reduces the toxicity, mobility, or volume of hazardous substances, including the following considerations:

- Adequacy of the alternative in destroying hazardous substances,
- Reduction or elimination of hazardous substance releases or sources of releases,
- Degree of irreversibility of the waste treatment process,
- Characteristics and quantity of treatment residuals generated.

Cost. The cost to implement the alternative, including the followings costs:

- Cost of construction (cost estimates for treatment technologies include pretreatment, analytical, labor, and waste management costs; the cost of replacement and repair of major elements for the estimated design life of the project is included.),
- Net present value of any long-term costs (includes O&M costs, monitoring costs, equipment replacement costs, and the cost of maintaining institutional controls),
- Agency oversight costs that are cost-recoverable.

Long-term effectiveness. Long-term effectiveness includes the following considerations:

- Degree of certainty that the alternative will be successful,
- Reliability of the alternative during the period of time that hazardous substances are expected to remain on site at concentrations exceeding cleanup levels,
- Magnitude of the residual risk with the alternative in place,
- Effectiveness of controls required to manage the treatment residues or remaining wastes.

Management of short-term risks. Short-term risk includes the risk to human health and the environment associated with the alternative during construction and the implementation and effectiveness of mitigation measures.

Ability to implement technically and administratively. The ability of the alternative to be implemented includes the following considerations:

- Technical possibility of alternative,
- Availability of necessary offsite facilities, services, and materials,
- Administrative and regulatory requirements,
- Scheduling, size, and complexity,
- Monitoring requirements,
- Access for construction operations and monitoring,
- Integration with existing facility operations and other current or potential remedial actions.

Consideration of public concerns. Consideration of public concerns includes whether the community has concerns regarding the alternative and, if so, the extent to which the alternative addresses those concerns. This criterion includes concerns from individuals, community groups, local governments, tribes, federal and state agencies, or any other organization that may have an interest in or knowledge of the site.

It is anticipated that the Draft FS will be released for public comment, prior to being finalized by Ecology; therefore, if necessary, the Final FS will be revised to address any public comments that are received at that time.

9.3 COMPARATIVE EVALUATION OF ALTERNATIVES

The remedial action alternatives are evaluated relative to the most permanent solution to illustrate the relative pros and cons between the alternatives and to assist in identification of the most permanent alternative to the extent practicable. The scoring table is presented as Table 8-1. Alternatives 2 is the permanent solution. Alternative 2 is preferable to Alternative 1 in that it is more protective of the general public.

An evaluation of the alternative versus the cost criterion was accomplished by preparation of estimates of probable capital cost and monitoring expenses.

Costs for treatment were obtained from local solid waste disposal facilities. Capital costs were developed using the factored-estimate method, in which the overall costs are derived from knowledge of the costs of major equipment or process items.

MTCA allows identification of a preferred alternative in the feasibility study [WAC 173-340-350(8) (c)]. Alternative 2 is has been identified as the preferred alternative based on the following considerations:

- Alternative 2 is protective of human health and the environment.
- Alternative 2 meets MTCA's preferences for a permanent solution, active remediation, and reasonable restoration time frame.
- Alternative 2 is highly implementable.
- Alternative 2 is cost-effective having a moderate projected life-cycle cost.

10 CONCLUSIONS

This FS was prepared in accordance with the MTCA Cleanup Regulations (WAC 173-340) for the purpose of developing and evaluating cleanup action alternatives to enable a cleanup action to be selected for this Site. As part of this effort, Site conditions and contaminant exposure pathways were evaluated, and cleanup action alternatives were developed and compared in order to identify the most appropriate action for cleanup of this Site. The conclusions drawn by this FS are based on current Chevron EMC best practices for petroleum remediation, and the professional experience and judgment of the Chevron EMC/Leidos project team.

Due to the nature of the site (shallow basalt, seasonal perched groundwater) all potential remedial alternatives with the exception of excavation were eliminated early in the evaluation

process. The evaluation was then conducted considering the excavation alternative versus the manage in place (containment)/MNA alternative.

Approximately 6,000 cubic yards of soil exceeding the proposed cleanup levels are present on the Site. A limited volume of impacted soil is present off the western end of the warehouse building and along the northern property line in city right of way.

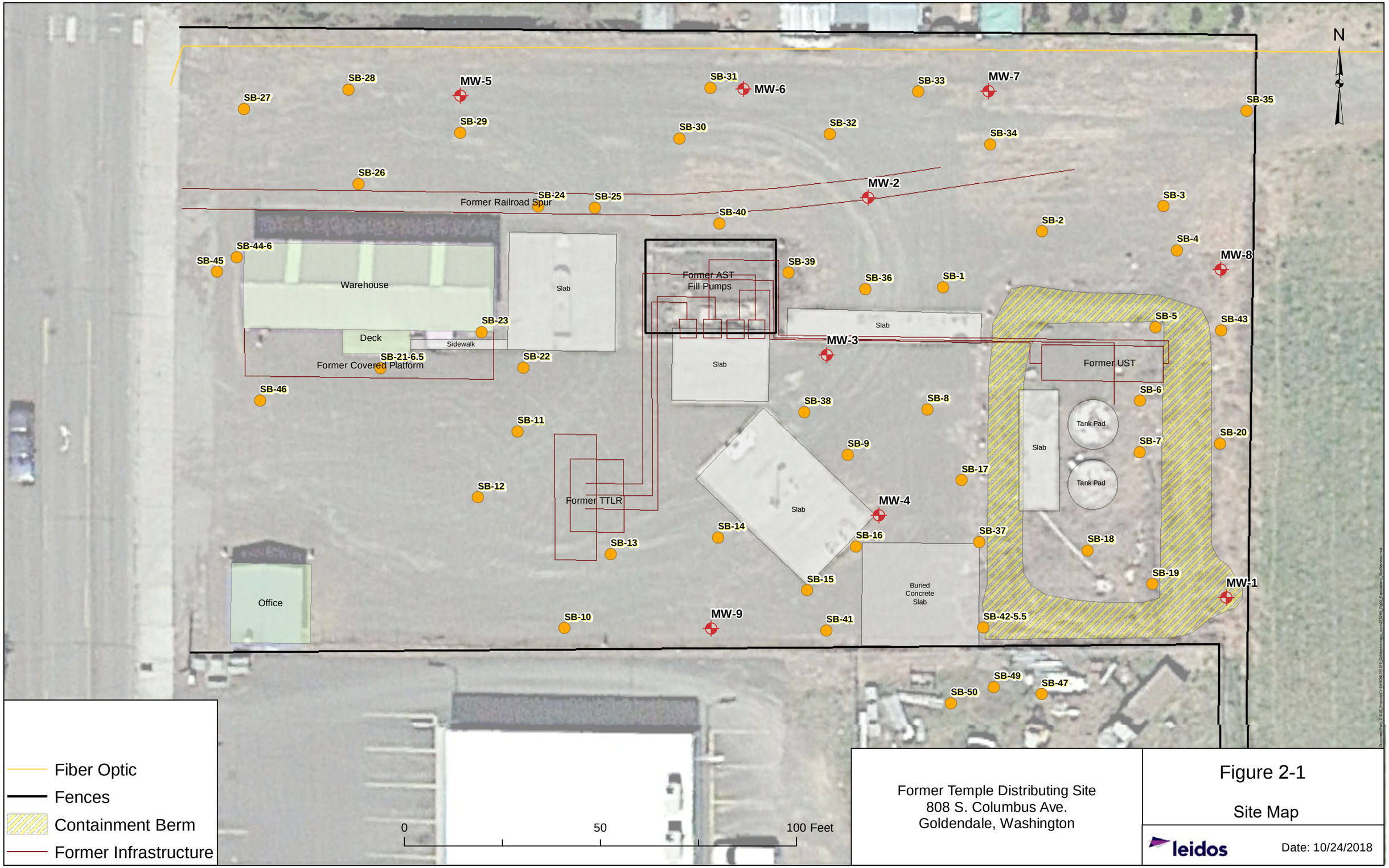
The dissolved-phase groundwater plume has been determined to be perched and seasonal. The impacts are limited to an area near the center of the former facility and does extend off the property.

Preliminary cleanup levels are based on future unrestricted site use (MTCA Method A Cleanup Levels). Final cleanup levels will be set as part of the Site CAP. Excavation of the soils exceeding the proposed preliminary cleanup levels and off-site disposal is proposed as the preferred alternative based on the results of the completed FS.

11 REFERENCES

Leidos, 2017. "Remedial Investigation Work Plan, Former Temple Distributing Site" (7/26/17)

O'Gara, 2012. Report – "Goldendale Fuel Spill" (5/4/12)



Former Temple Distributing Site
808 S. Columbus Ave.
Goldendale, Washington

Figure 2-1

Site Map

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Date: 10/24/2018

HITES RESIDENCE

COLUMBUS SQUARE

WEST BROOKS ST

EAST BROOKS ST

HARDIE'S CAR WASH AND DETAIL
703 S. COLUMBUS AVE

SOUTH COLUMBUS AVENUE

FORMER JACK'S GROCERY
706 S. COLUMBUS AVE

Site

WEST RAILROAD ST

TEMPLE
DISTRIBUTING

N

SCALE

0 100'

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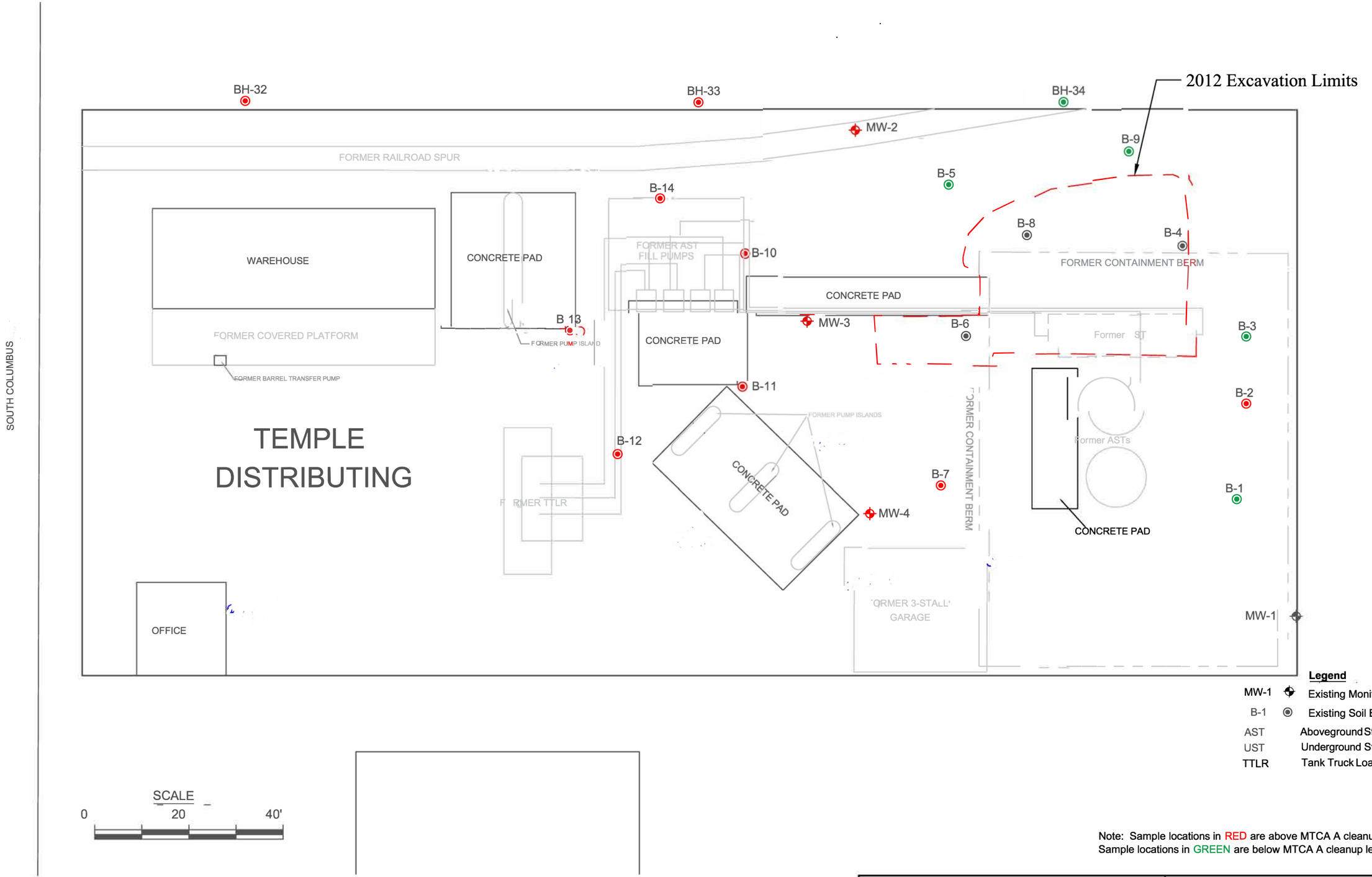
Former Temple Distributing Site
808 S. Columbus Ave.
Goldendale, Washington

FIGURE 2-2
Site Vicinity Map

DATE: 7/17/2017 | DRAWING: 375289_SiteMap.dwg



Note: Sample locations in RED are above MTCA A cleanup levels.
Sample locations in GREEN are below MTCA A cleanup levels.

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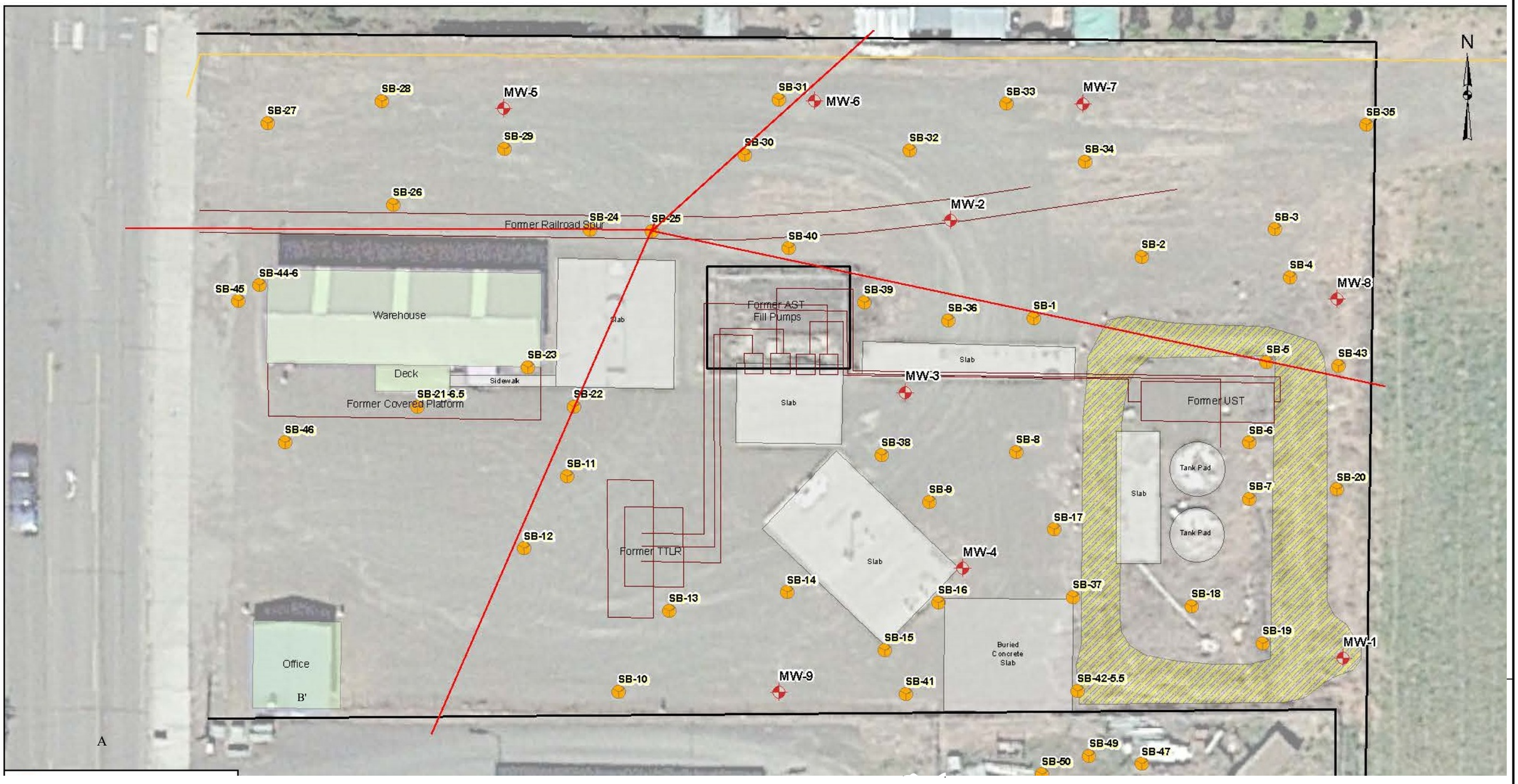
Chevron Facility #375289
808 S. Columbus Ave.
Goldendale, Washington

FIGURE 2-3
Pre-Remedial Investigation Sample Locations

DATE: 7/13/2017 DRAWING: 375289_SiteMap.dwg



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808 S. Columbus Ave.
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DATE: 10/25/2018

DRAWING: 375289_CrossSections.dwg

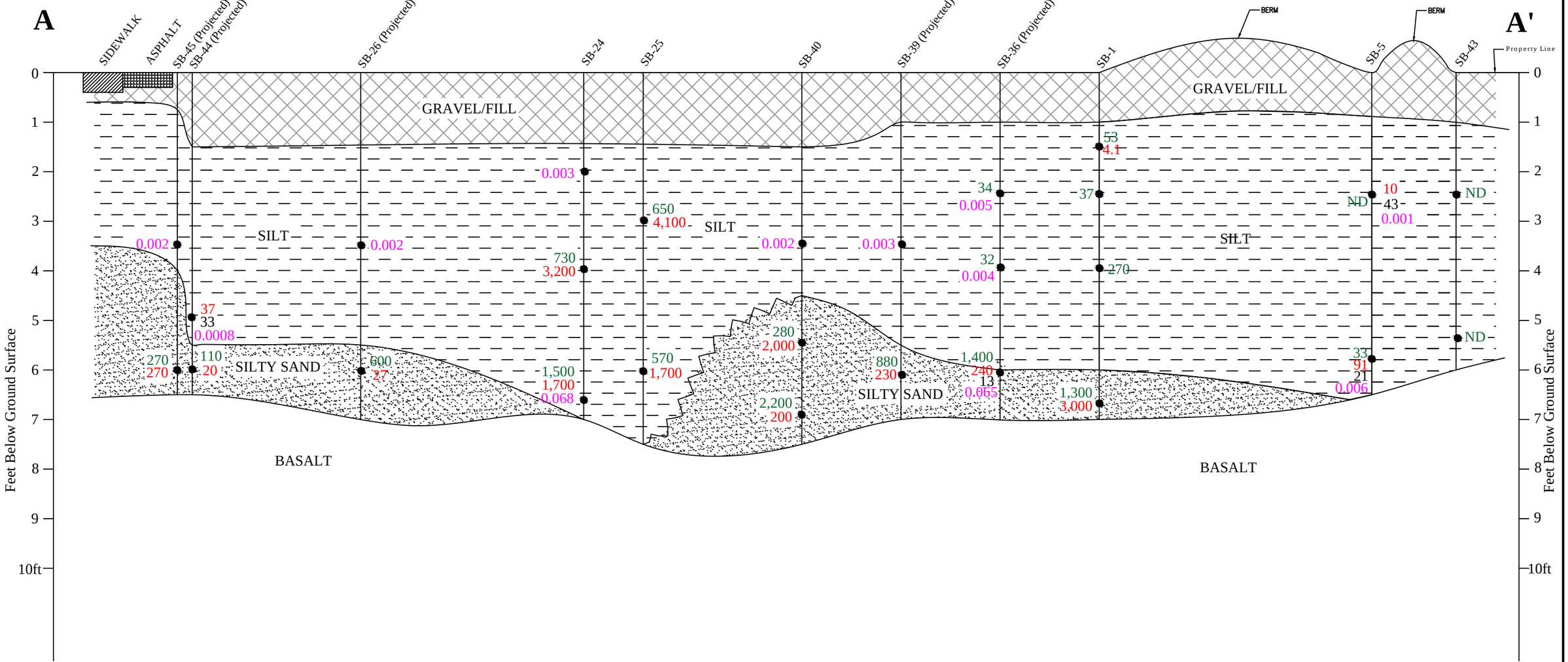
WEST

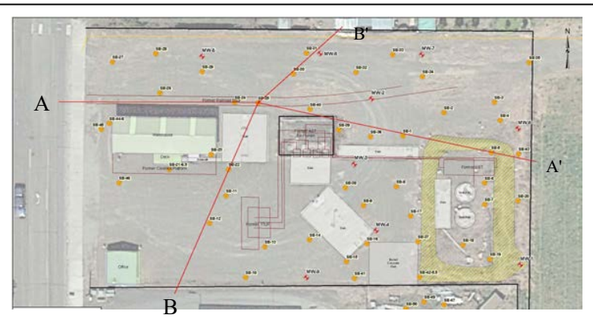
A

A'

EAST

SIDEWALK | ASPHALT | SB-45 (Projected) | SB-44 (Projected) | SB-26 (Projected) | SB-24 | SB-25 | SB-40 | SB-39 (Projected) | SB-36 (Projected) | SB-1 | BERM | SB-5 | BERM | SB-43 | Property Line





LEGEND:

0.002	Benzene concentration in milligrams per kilogram (mg/kg)
63	Gasoline-range hydrocarbon concentration in mg/kg
20	Diesel-range hydrocarbon concentration in mg/kg
83	Heavy Oil-range hydrocarbon concentration in mg/kg
ND	No analytes detected above MTCA Method A Cleanup levels

Excavation backfill

Basalt

SILT

Silty SAND

0 10 20
Feet

leidos

Former Temple Distributing Site
808 S. Columbus Ave.
Goldendale, Washington

FIGURE 4-2
Geologic Cross-Section A-A'

DATE: 10/25/2018

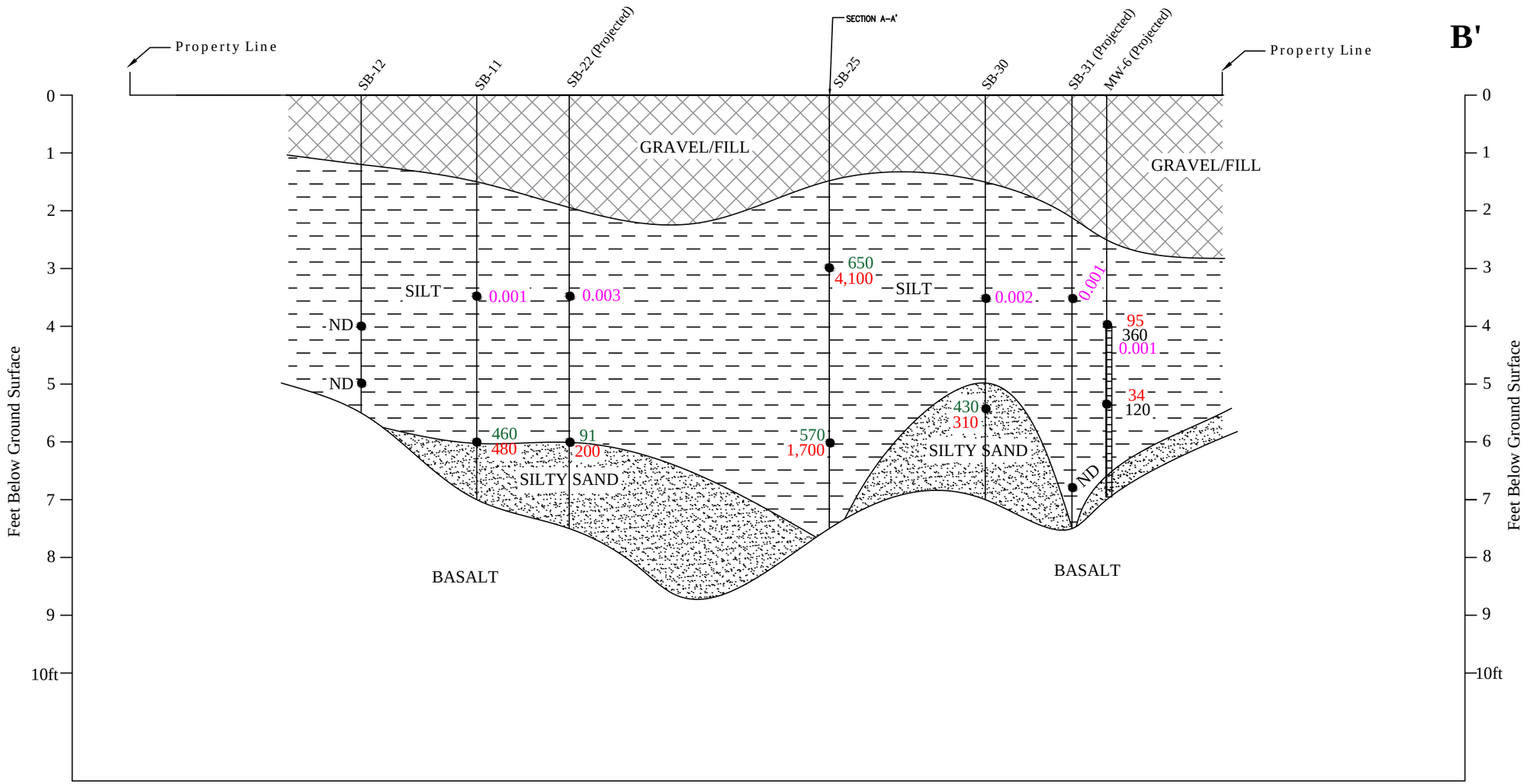
DRAWING: 375289_CrossSections.dwg

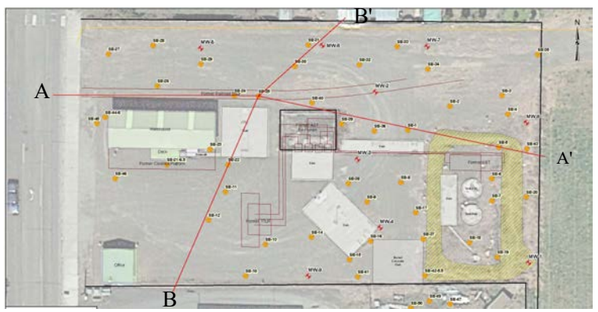
SOUTHWEST

B

SOUTHEAST

B'





LEGEND:

0.002	Benzene concentration in milligrams per kilogram (mg/kg)
63	Gasoline-range hydrocarbon concentration in mg/kg
20	Diesel-range hydrocarbon concentration in mg/kg
83	Heavy Oil-range hydrocarbon concentration in mg/kg
ND	No analytes detected above MTCA Method A Cleanup levels

Excavation backfill

Basalt

SILT

Silty SAND

0 10 20

Feet

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808 S. Columbus Ave.
Goldendale, Washington

FIGURE 4-3
Geologic Cross-Section B-B'

DATE: 10/25/2018

DRAWING: 375289_CrossSections.dwg

N

SB-27-7.25 *
SB-28-7.0
MW-5-6.5
SB-29-7.0
SB-26-7.0
SB-44-6.5
SB-24-7.0
SB-25-7.5
SB-40-7.5
SB-31-7.5
MW-6-6.75
SB-30-7.0
SB-32-6.5
SB-33-5.5
MW-7-5.0
SB-34-5.5
SB-35-3.0
MW-2
SB-3-4.5
SB-2-5.5
SB-4-4.5
MW-8-5.0
SB-39-7.0
SB-36-7.0
SB-1-7.0
SB-43-6.0
SB-5-6.5
SB-23-9.0
SB-21-7.0
SB-22-7.5
MW-3-8.5
SB-38
SB-8-7.0
SB-6-6.0
SB-11-7.0
SB-9-6.75 *
SB-20-6.0
SB-7-6.0
SB-17-6.5
SB-12-5.5
MW-4-8.0
SB-14-7.5
SB-13-6.0
SB-16-6.5
SB-37-7.0
SB-18-6.0
SB-15-6.5
SB-19-5.0
MW-1-9.0 *
SB-10-5.5
MW-9-7.0
SB-41-6.0
SB-42-6.0

7.0
6.5
8.0
7.5
8.5
9.0
6.5
6.0
5.5
3.0
3.5
4.0
4.5
5.0
5.5
6.5
6.0
5.5
5.0

Warehouse
Slab
Deck
Sidewalk
Slab
Slab
Tank Pad
Slab
Tank Pad
Slab
Office
Buried Concrete Slab

Proposed Boring
Boring
Monitoring Well
Former Infrastructure
Fiber Optic
Fences
Containment Berm
Depth To Basalt
6.0 Bottom of Borehole
* Borehole depth not used in contour map

0 50 100 Feet

Former Temple Distributing Site
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Goldendale, Washington

Figure 3-1

Depth to Basalt

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Date: 8/15/2018

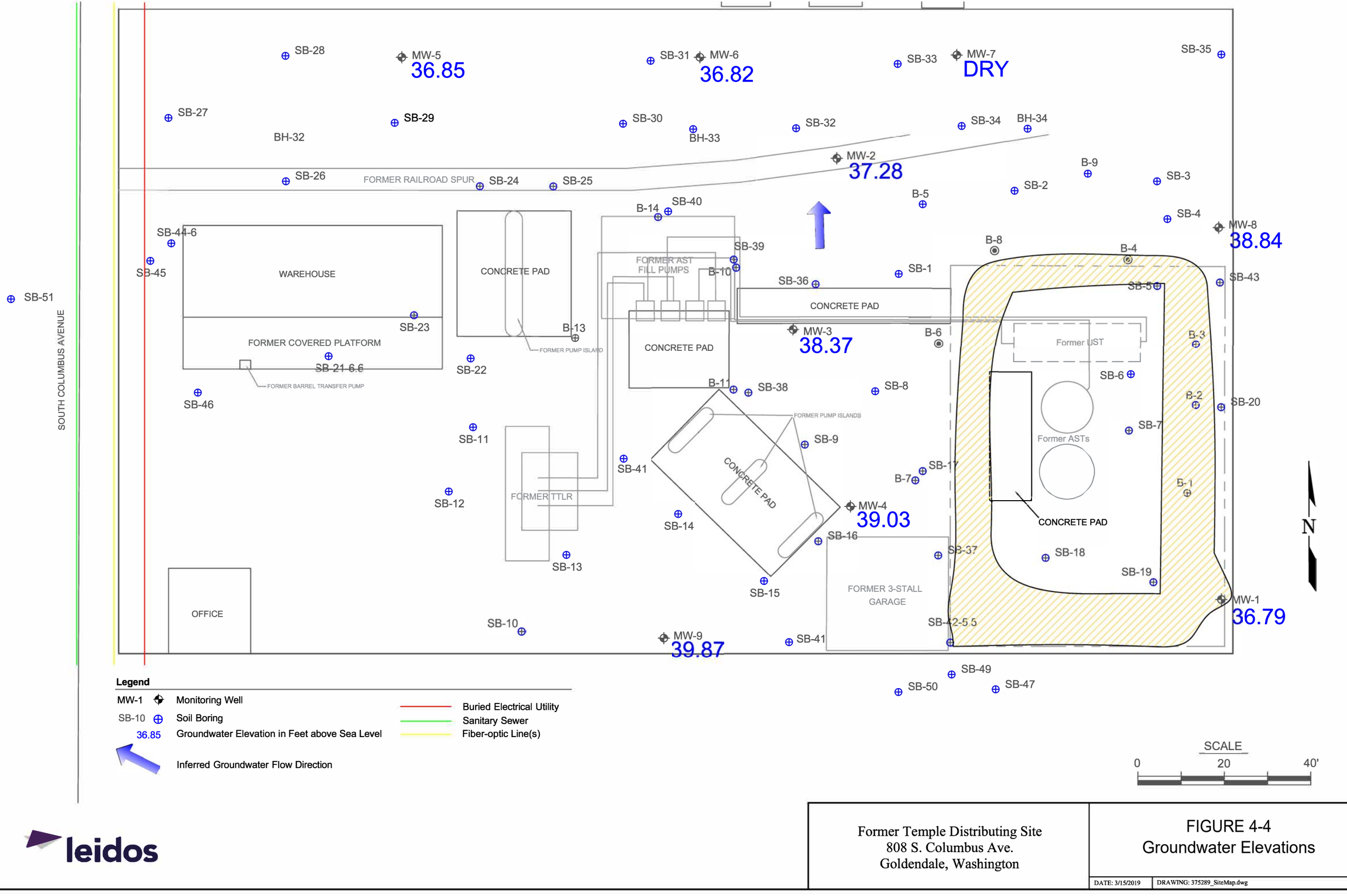

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FIGURE 4-4
Groundwater Elevations

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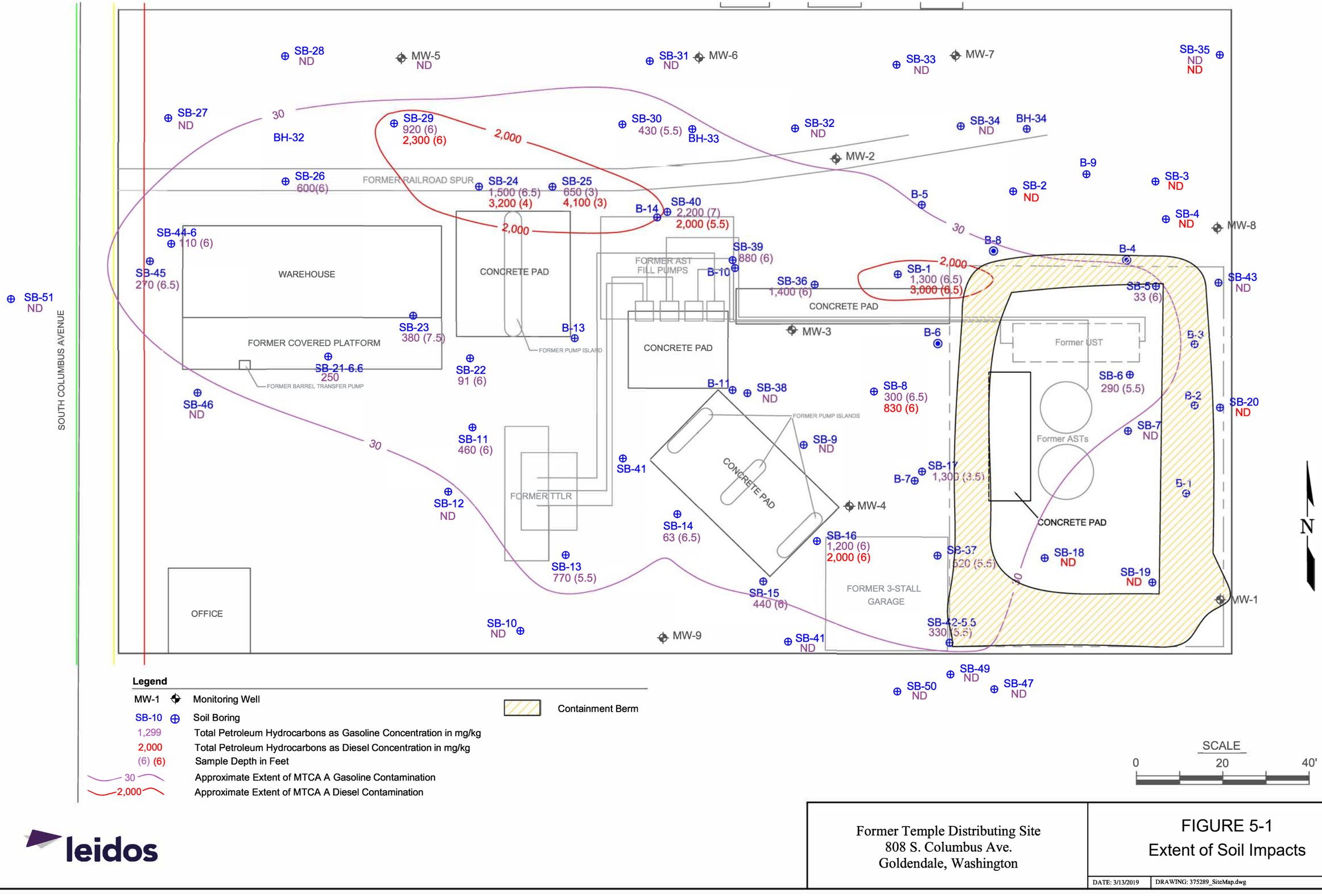

Legend

MW-1	Monitoring Well	
SB-10	Soil Boring	
1,299	Total Petroleum Hydrocarbons as Gasoline Concentration in mg/kg	
2,000	Total Petroleum Hydrocarbons as Diesel Concentration in mg/kg	
(6) (6)	Sample Depth in Feet	
30	Approximate Extent of MTCA A Gasoline Contamination	
2,000	Approximate Extent of MTCA A Diesel Contamination	
		Containment Berm

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Former Temple Distributing Site
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FIGURE 5-1
Extent of Soil Impacts

DATE: 3/13/2019 | DRAWING: 375289_SiteMap.dwg

N

MW-5

DRO	HRO	GRO	B
250	<100	490	<0.5

MW-6

DRO	HRO	GRO	B
<49	<100	<50	<0.5

MW-7

Dry

MW-2

DRO	HRO	GRO	B
--	--	51	<0.5

MW-8

DRO	HRO	GRO	B
<49	<110	<50	<0.5

MW-3

DRO	HRO	GRO	B
250	<110	3,500	<0.5

MW-4

DRO	HRO	GRO	B
470	160	120	<0.5

MW-1

DRO	HRO	GRO	B
<47	<100	<50	<0.05

MW-9

DRO	HRO	GRO	B
<47	<100	<50	<0.5

Warehouse
Deck
Sidewalk
Slab
Slab
Slab
Slab
Tank Pad
Tank Pad
Buried Concrete Slab
Office

0 50 100 Feet

Monitoring Well
Former Infrastructure
Fiber Optic
Fences
Containment Berm
GRO Gasoline-Range Organics
HRO Heavy Oil-Range Organics
DRO Diesel-Range Organics
B Benzene
Above MTCA Method A Cleanup Levels

Former Temple Distributing Site
808 S. Columbus Ave.
Goldendale, Washington

Figure 5-2
Groundwater Analytical Data 4/18-19, 2018

leidos

Date: 8/15/2018

TABLE 5-1
SUMMARY OF SOIL ANALYTICAL RESULTS
Former Temple Distributing Bulk Plant No. 375289
808 S Columbus Ave
Goldendale, Washington

Boring ID	Depth (ft)	Sample ID	Sample Date	TPH-GRO	TPH-DRO	TPH-HRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB	Naphthalenes	Lead	cPAHs
SB-1	1.5	SB-1-1.5	4/10/18	53	4.1	<12	<0.029	<0.058	0.28	0.9	<0.029	<0.058	<0.058	0.47	21.4	<0.1
	2.5	SB-1-2.5	4/10/18	37	<3.6	<12	<0.030	<0.061	0.28	0.8	<0.030	<0.061	<0.061	0.49	21.9	<0.1
	4.0	SB-1-4.0	4/10/18	270	<3.8	<13	<0.033	<0.066	<0.066	0.2	<0.033	<0.066	<0.066	0.24	29.2	<0.1
	6.5	SB-1-6.5	4/10/18	**1,300**	**3,000**	<230	<0.022	<0.044	0.049	0.2	<0.022	<0.044	<0.044	<0.008	38.5	<0.1
SB-2	2.5	SB-2-2.5	4/10/18	<1.3	<3.8	<13	0.003	0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	--	25.6	--
	5.0	SB-2-5.0	4/10/18	4.8	260	22	0.002	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	<0.0009	29.2	<0.1
SB-3	2.0	SB-3-2.0	4/10/18	<1.2	<3.7	<12	0.002	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--	27.5	--
	4.0	SB-3-4.0	4/10/18	<1.4	<3.7	<12	0.002	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.042	26.9	<0.1
SB-4	2.5	SB-4-2.5	4/10/18	<1.3	<3.8	<13	0.003	<0.002	<0.002	<0.002	<0.0009	<0.002	<0.002	--	25.2	--
	4.0	SB-4-4.0	4/10/18	<1.3	<3.7	<12	0.002	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	0.002	31.7	<0.1
SB-5	2.5	SB-5-2.5	4/5/18	<1.4	10	43	0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	9.55	--
	5.5	SB-5-5.5	4/5/18	5.4	91	21	0.002	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	--	16.9	--
	6.0	SB-5-6.0	4/5/18	**33**	26	<13	0.006	0.001	0.023	0.010	<0.0006	<0.001	<0.001	<0.0009	34.4	<0.1
SB-6	2.5	SB-6-2.5	4/5/18	<1.5	<3.9	<13	0.004	0.002	<0.001	<0.001	<0.0006	<0.001	<0.001	--	13.0	--
	5.5	SB-6-5.5	4/5/18	**290**	76	37	0.043	<0.078	1.5	1.1	<0.039	<0.078	<0.078	0.039	23.8	<0.1
SB-7	2.5	SB-7-2.5	4/5/18	<1.5	<3.8	18	0.004	0.002	<0.001	<0.001	<0.0007	<0.001	<0.001	--	9.10	--
	5.5	SB-7-5.5	4/5/18	<1.4	8.5	<13	0.001	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	0.003	9.63	<0.1
SB-8	3.5	SB-8-3.5	4/5/18	<1.7	<4.0	<13	0.003	<0.001	<0.001	<0.001	<0.0007	<0.001	<0.001	--	8.09	--
	6.5	SB-8-6.5	4/5/18	**300**	770	<63	<0.034	<0.068	<0.068	<0.068	<0.034	<0.068	<0.068	<0.009	6.43	<0.1
SB-9	3.5	SB-9-3.5	4/5/18	<1.3	<3.9	<13	0.003	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	--	8.9	--
	6.0	SB-9-6.0	4/5/18	19	21	<13	0.001	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	0.007	10.7	<0.1
SB-10	3.0	SB-10-3.0	4/17/18	<1.3	<3.8	<13	0.002	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	<2.92	--
	3.0	DUP-4-041718	4/17/18	<1.4	<4.1	<14	0.0009	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	<3.34	--
	5.0	SB-10-5.0	4/17/18	<1.3	<3.9	<13	0.002	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.005	<2.91	<0.1
SB-11	3.5	SB-11-3.5	4/4/18	<1.4	<4.0	<13	0.001	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	--	10.2	--
	6.0	SB-11-6.0	4/4/18	**460**	480	<13	<0.026	<0.052	<0.052	<0.052	<0.026	<0.052	<0.052	<0.0009	12.3	<0.1
SB-12	4.0	SB-12-4.0	4/4/18	<1.3	<3.9	<13	0.0006	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	10.9	--
	5.0	SB-12-5.0	4/4/18	<1.1	<3.7	<12	<0.0004	<0.0009	<0.0009	<0.0009	<0.0004	<0.0009	<0.0009	0.006	10.6	<0.1
SB-13	3.5	SB-13-3.5	4/4/18	<1.2	<3.8	<13	0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	9.23	--
	5.5	SB-13-5.5	4/4/18	**770**	5.6	<13	<0.031	<0.061	0.10	<0.061	<0.031	<0.061	<0.061	<0.0009	12.3	<0.1
SB-14	3.5	SB-14-3.5	4/4/18	<1.4	<4.0	<13	0.003	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	10.5	--
	6.5	SB-14-6.5	4/4/18	**63**	54	<13	<0.028	<0.056	<0.056	<0.056	<0.028	<0.056	<0.056	<0.0009	10.3	<0.1
SB-15	3.5	SB-15-3.5	4/4/18	<1.6	<3.9	<13	0.002	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	10.4	--
	6.0	SB-15-6.0	4/4/18	**440**	86	<13	<0.026	<0.052	<0.052	<0.052	<0.026	<0.052	<0.052	0.043	9.01	<0.1

Boring ID	Depth (ft)	Sample ID	Sample Date	TPH-GRO	TPH-DRO	TPH-HRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB	Naphthalenes	Lead	cPAHs
SB-16	3.5	SB-16-3.5	4/4/18	<1.5	<3.9	<13	0.003	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	--	11.7	--
	6.0	SB-16-6.0	4/4/18	**1,200**	2,000	<59	<0.020	<0.039	<0.039	<0.039	<0.020	<0.039	<0.039	<0.004	5.47	<0.1
SB-17	3.5	SB-17-3.5	4/5/18	**1,300**	660	<26	<0.036	<0.073	<0.073	<0.073	<0.036	<0.073	<0.073	--	8.36	--
	6.0	SB-17-6.0	4/5/18	**1,100**	830	<65	<0.045	<0.090	<0.090	<0.090	<0.045	<0.090	<0.090	<0.0009	8.92	<0.1
SB-18	2.5	SB-18-2.5	4/6/18	<1.4	<3.9	<13	0.004	0.002	<0.001	<0.001	<0.0006	<0.001	<0.001	--	13.3	--
	5.5	SB-18-5.5	4/6/18	<1.4	<4.0	<13	0.0008	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.012	10.5	<0.1
SB-19	2.5	SB-19-2.5	4/5/18	<1.6	<3.9	<13	0.003	<0.001	<0.001	<0.001	<0.0007	<0.001	<0.001	--	9.63	--
	4.5	SB-19-4.5	4/5/18	<1.3	<3.8	<13	0.0006	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	<0.0008	7.79	<0.1
SB-20	2.5	SB-20-2.5	4/6/18	<1.4	<3.8	<13	0.004	0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	--	8.05	--
	5.5	SB-20-5.5	4/6/18	<1.3	<3.9	<13	0.001	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	<0.0009	9.38	<0.1
SB-21	3.0	SB-21-3.0	4/17/18	<1.3	<3.9	<13	0.003	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	6.72	--
	6.5	SB-21-6.5	4/17/18	**250**	110	<13	<0.033	<0.067	<0.067	<0.067	<0.033	<0.067	<0.067	<0.0009	<3.45	<0.1
SB-22	3.5	SB-22-3.5	4/4/18	<1.2	<3.8	<13	0.003	0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	7.92	--
	6.0	SB-22-6.0	4/4/18	**91**	200	<14	<0.026	<0.052	<0.052	<0.052	<0.026	<0.052	<0.052	<0.0009	11.0	<0.1
SB-23	2.5	SB-23-2.5	4/3/18	<1.1	<3.8	<13	0.003	0.002	0.003	0.023	<0.0005	<0.001	<0.001	--	17.3	--
	3.5	SB-23-3.5	4/3/18	<1.4	4.3	15	0.002	0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	19.9	--
	7.5	SB-23-7.5	4/3/18	**380**	83	<11	<0.018	<0.036	<0.036	<0.036	<0.018	<0.036	<0.036	0.027	10.6	<0.1
SB-24	2.0	SB-24-2.0	4/11/18	<1.2	<3.7	<12	0.003	0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	21.2	--
	4.0	SB-24-4.0	4/11/18	**730**	**3,200**	<260	<0.034	<0.068	<0.068	<0.068	<0.034	<0.068	<0.068	1.2	27.8	<0.1
	6.5	SB-24-6.5	4/11/18	**1,500**	1,700	<130	**0.068**	<0.059	0.12	<0.059	<0.029	<0.059	<0.059	3.2	28.2	<0.1
SB-25	3.0	SB-25-3.0	4/11/18	**650**	**4,100**	<260	<0.033	<0.066	<0.066	<0.066	<0.033	<0.066	<0.066	--	22.5	--
	6.0	SB-25-6.0	4/11/18	**570**	1,700	<140	<0.036	<0.072	0.080	<0.072	<0.036	<0.072	<0.072	3.8	28.3	<0.1
SB-26	3.5	SB-26-3.5	4/11/18	<1.3	<3.8	<13	0.002	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	--	21.6	--
	3.5	DUP-3-041118	4/11/18	**<**1.4	<3.7	<12	0.002	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	23.0	--
	6.0	SB-26-6.0	4/11/18	**600**	26	<13	<0.035	<0.070	<0.070	<0.070	<0.035	<0.070	<0.070	<0.0009	31.9	<0.1
SB-27	4.0	SB-27-4.0	4/12/18	<1.1	<3.6	<12	0.0008	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	27.5	--
	7.0	SB-27-7.0	4/12/18	<1.3	<3.7	<12	<0.0004	<0.0009	<0.0009	<0.0009	<0.0004	<0.0009	<0.0009	<0.0008	28.3	<0.1
SB-28	4.5	SB-28-4.5	4/12/18	<1.4	<3.8	<13	0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	29.6	--
	5.5	SB-28-5.5	4/12/18	<1.4	<3.9	<13	0.0007	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0009	31.2	<0.1
	6.5	SB-28-6.5	4/12/18	12	12	<13	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0008	21.6	<0.1
SB-29	4.0	SB-29-4.0	4/11/18	<1.5	<3.8	14	0.003	<0.001	<0.001	<0.001	<0.0007	<0.001	<0.001	--	27.0	--
	6.0	SB-29-6.0	4/11/18	**920**	**2,300**	<130	**0.19**	<0.058	0.10	<0.058	<0.029	<0.058	<0.058	2.9	26.1	<0.1
SB-30	3.5	SB-30-3.5	4/11/18	<1.3	<3.8	<13	0.002	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	25.7	--
	5.5	SB-30-5.5	4/11/18	**430**	310	<13	<0.039	<0.079	<0.079	<0.079	<0.039	<0.079	<0.079	<0.0009	38.5	<0.1
SB-31	3.5	SB-31-3.5	4/12/18	<1.4	<3.7	<12	0.001	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--	27.2	--
	6.5	SB-31-6.5	4/12/18	<1.1	<3.7	<12	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	<0.0008	40.3	<0.1
SB-32	3.5	SB-32-3.5	4/11/18	<1.3	<3.7	<12	0.002	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	26.3	--
	5.0	SB-32-5.0	4/11/18	9.7	<4.0	<13	<0.0006	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	0.001	25.1	<0.1

Boring ID	Depth (ft)	Sample ID	Sample Date	TPH-GRO	TPH-DRO	TPH-HRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	EDC	EDB	Naphthalenes	Lead	cPAHs
SB-33	3.0	SB-33-3.0	4/11/18	<1.2	<3.7	<12	0.002	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--	21.8	--
	5.0	SB-33-5.0	4/11/18	<1.2	<3.6	<12	0.002	<0.001	<0.001	<0.001	0.0005	<0.001	<0.001	0.002	26.7	<0.1
SB-34	3.0	SB-34-3.0	4/11/18	<1.2	<3.7	<12	0.003	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--	21.9	--
	5.0	SB-34-5.0	4/11/18	<1.2	<3.7	<12	0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.009	28.8	<0.1
SB-35	2.5	SB-35-2.5	4/11/18	<1.1	<3.4	<11	0.001	<0.0009	<0.0009	<0.0009	<0.0004	<0.0009	<0.0009	0.002	27.6	<0.1
SB-36	2.5	SB-36-2.5	4/10/18	34	<3.6	<12	0.005	0.002	0.066	0.22	<0.0005	<0.001	<0.001	0.37	23.1	<0.1
	4.0	SB-36-4.0	4/10/18	32	<3.8	<13	0.004	0.002	0.042	0.23	<0.0005	<0.001	<0.001	0.1	27.4	<0.1
	6.0	SB-36-6.0	4/10/18	**1,400**	240	13	0.065	<0.057	9.3	0.17	<0.028	<0.057	<0.057	5.9	45.4	<0.1
SB-37	3.5	SB-37-3.5	4/5/18	<1.4	26	93	0.003	0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	13.5	--
	5.5	SB-37-5.5	4/5/18	**520**	390	<13	<0.034	<0.068	<0.068	<0.068	<0.034	<0.068	<0.068	<0.0009	9.34	<0.1
	5.5	DUP-1-040518	4/5/18	**56**	550	17	<0.020	<0.039	<0.039	<0.039	<0.020	<0.039	<0.039	<0.0009	12.5	<0.1
SB-38	2.0	SB-38-2.0	4/5/18	15	9.9	<13	<0.038	<0.077	<0.077	<0.077	<0.038	<0.077	<0.077	0.032	22.8	<0.1
SB-39	3.5	SB-39-3.5	4/10/18	<1.3	<3.8	<13	0.003	0.002	<0.001	<0.001	<0.0005	<0.001	<0.001	--	19.6	--
	3.5	DUP-2-041018	4/10/18	<1.4	<3.8	<13	0.003	0.002	<0.001	<0.001	<0.0006	<0.001	<0.001	--	24.8	--
	6.0	SB-39-6.0	4/10/18	**880**	230	<13	<0.031	<0.063	<0.063	<0.063	<0.031	<0.063	<0.063	0.17	34.8	<0.1
SB-40	3.5	SB-40-3.5	4/11/18	<1.5	<3.9	<13	0.002	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	--	25.9	--
	5.5	SB-40-5.5	4/11/18	**280**	2,000	<130	<0.036	<0.072	<0.072	<0.072	<0.036	<0.072	<0.072	<0.009	30.8	<0.1
	7.0	SB-40-7.0	4/11/18	**2,200**	260	<12	<0.054	<0.11	<0.11	<0.11	<0.054	<0.11	<0.11	0.087	36.4	<0.1
SB-41	3.0	SB-41-3.0	4/17/18	<1.4	<3.9	<13	0.002	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	<3.61	--
	5.5	SB-41-5.5	4/17/18	2.5	<3.9	<13	0.0006	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.001	<2.73	<0.1
SB-42	2.0	SB-42-2.0	4/17/18	<1.5	<3.9	<13	0.003	0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	--	9.74	--
	5.5	SB-42-5.5	4/17/18	**330**	140	<13	<0.034	<0.068	<0.068	<0.068	<0.034	<0.068	<0.068	0.002	<3.58	<0.1
SB-43	2.5	SB-43-2.5	4/17/18	<1.2	<3.8	<13	0.003	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	<2.85	--
	5.5	SB-43-5.5	4/17/18	<1.2	60	<13	0.002	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.001	<2.81	<0.1
SB-44	5.0	SB-44-5.0	4/17/18	<1.4	37	33	0.0008	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	--	10.4	--
	6.0	SB-44-6.0	4/17/18	**110**	20	<13	<0.037	<0.073	<0.073	<0.073	<0.037	<0.073	<0.073	<0.0009	<3.52	<0.1
MW-5	4.5	MW-5-4.5	4/12/18	<1.6	<4.0	<13	0.002	<0.001	<0.001	<0.001	<0.0007	<0.001	<0.001	--	28.6	--
	5.5	MW-5-5.5	4/12/18	16	16	<13	0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.003	30.8	<0.1
MW-6	4.0	MW-6-4.0	4/12/18	<1.2	95	360	0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	28.6	--
	6.0	MW-6-6.0	4/12/18	<1.2	34	120	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	0.001	27.5	<0.1
MW-7	3.5	MW-7-3.5	4/12/18	<1.2	<3.7	<12	0.003	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	26.7	--
	4.0	MW-7-4.0	4/12/18	<1.3	<3.7	<12	0.002	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0008	28.8	<0.1
MW-8	3.0	MW-8-3.0	4/10/18	<1.3	<3.9	<13	0.002	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--	26.2	--
	4.5	MW-8-4.5	4/10/18	<1.2	16	<13	0.001	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0008	31.8	<0.1
MW-9	3.5	MW-9-3.5	4/4/18	<1.2	<3.9	<13	0.002	<0.001	<0.001	<0.001	<0.0006	<0.001	<0.001	--	9.68	--
	6.5	MW-9-6.5	4/4/18	<1.4	<4.0	<13	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	<0.0009	8.92	<0.1
MTCA Method A Cleanup Levels:				30	2,000	2,000	0.03	7	6	9	0.1	NA	0.005	5	250	0.1

EXPLANATIONS:

Bold results indicate compound detected above MTCA Method A Cleanup Level.
Carcinogenic polyaromatic hydrocarbons calculated using toxicity equivalency factors stated in MTCA Regulation and Statute.

BTEX = Benzene, toluene, ethylbenzene and total xylenes
cPAH=Carcinogenic Polyaromatic Hydrocarbons
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
ft = feet
mg/kg = milligrams per kilogram
MTBE = methyl tertiary butyl ether
MTCA = Model Toxics Control Act
NA= no cleanup level established
TPH-GRO = TPH as gasoline-range organics
TPH-DRO = TPH as diesel-range organics
TPH-HRO = TPH as heavy oil-range organics
USEPA = United States Environmental Protection Agency
< = Analyte not detected at or above Laboratory Detection Limit; value represents limit.
--' = Not Analyzed

ANALYTICAL METHODS:

TPH-GRO analyzed by NWTPH-Gx
TPH-DRO anayzed by NWTPH-Dx without silica gel cleanup
TPH-HRO analyzed by NWTPH-Dx without silica gel cleanup
BTEX, MTBE, EDC, and EDB analyzed by USEPA 8260B
Naphthalenes analyzed by USEPA Method 8270 SIM
Lead analyzed by USEPA Method 6010B
cPAHs analyzed by USEPA 8270 SIM

TABLE 5-2
SUMMARY OF HISTORICAL SOIL ANALYTICAL RESULTS
Former Temple Distributing Bulk Plant No. 375289
808 S Columbus Avenue
Goldendale, Washington
Concentrations reported in mg/kg

Boring ID	Depth (ft)	Sample ID	Sample Date	Reference	TPH-GRO	TPH-DRO	TPH-HRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Naphtha-lenes	MTBE
B-1	5	B-1-5	3/1/12	Tim O'Gara, R.G. (2012)	ND	--	--	ND	0.316	ND	ND	--	--
B-2	5	B-2-5	3/1/12	Tim O'Gara, R.G. (2012)	ND	--	--	ND	ND	ND	ND	--	--
	7	B-2-7	3/1/12	Tim O'Gara, R.G. (2012)	**256**	--	--	ND	0.543	1.12	2.62	--	--
B-3	5	B-3-5	3/1/12	Tim O'Gara, R.G. (2012)	ND	--	--	ND	ND	ND	ND	--	--
	7	B-3-7	3/1/12	Tim O'Gara, R.G. (2012)	ND	--	--	ND	ND	ND	ND	--	--
B-4	5	B-4-5	3/1/12	Tim O'Gara, R.G. (2012)	19.9	--	--	ND	ND	ND	ND	--	--
	7	B-4-7	3/1/12	Tim O'Gara, R.G. (2012)	ND	--	--	ND	ND	ND	ND	--	--
B-5	5	B-5-5	3/1/12	Tim O'Gara, R.G. (2012)	ND	--	--	ND	ND	ND	ND	--	--
	8	B-5-8	3/1/12	Tim O'Gara, R.G. (2012)	ND	160	--	ND	ND	ND	ND	--	--
B-6	5	B-6-5	3/1/12	Tim O'Gara, R.G. (2012)	**1330**	--	--	**29.5**	**155**	**36.3**	**176**	--	--
	8	B-6-8	3/1/12	Tim O'Gara, R.G. (2012)	**36.1**	1,050	--	ND	ND	ND	ND	--	--
B-7	5	B-7-5	3/1/12	Tim O'Gara, R.G. (2012)	**1380**	755	--	ND	ND	2.52	0.946	--	--
	8	B-7-8	3/1/12	Tim O'Gara, R.G. (2012)	**5840**	1470	--	ND	1.14	**6.76**	3.22	--	--
B-8	5	B-8-5	3/1/12	Tim O'Gara, R.G. (2012)	ND	--	--	ND	ND	ND	ND	--	--
	8	B-8-8	3/1/12	Tim O'Gara, R.G. (2012)	ND	--	--	ND	ND	ND	ND	--	--
B-9	5	B-9-5	3/1/12	Tim O'Gara, R.G. (2012)	ND	--	--	ND	ND	ND	ND	--	--
	7	B-9-7	3/1/12	Tim O'Gara, R.G. (2012)	ND	399	--	ND	ND	ND	ND	--	--
B-10	5	B-10-5	3/1/12	Tim O'Gara, R.G. (2012)	ND	ND	--	**0.311**	0.633	ND	ND	--	--
	9	B-10-9	3/1/12	Tim O'Gara, R.G. (2012)	ND	--	--	ND	ND	ND	ND	--	--
B-11	5	B-11-5	3/1/12	Tim O'Gara, R.G. (2012)	--	909	--	--	--	--	--	--	--
	7	B-11-7	3/1/12	Tim O'Gara, R.G. (2012)	**1090**	384	--	**0.414**	2.89	4.84	6.96	--	--
B-12	5	B-12-5	3/1/12	Tim O'Gara, R.G. (2012)	--	215	--	--	--	--	--	--	--
	8	B-12-8	3/1/12	Tim O'Gara, R.G. (2012)	**36.7**	99.9	--	ND	ND	0.44	ND	--	--
B-13	5	B-13-5	3/1/12	Tim O'Gara, R.G. (2012)	--	113	--	--	--	--	--	--	--
	9	B-13-9	3/1/12	Tim O'Gara, R.G. (2012)	**222**	41.3	--	**0.103**	2.36	5.35	7.75	--	--
B-14	5	B-14-5	3/1/12	Tim O'Gara, R.G. (2012)	--	121	--	--	--	--	--	--	--
	7	B-14-7	3/1/12	Tim O'Gara, R.G. (2012)	**752**	360	--	**0.202**	4.31	**9.55**	**13.1**	--	--
MTCA Method A Cleanup Levels:					30	2,000	2,000	0.03	7	6	9	5	0.1

EXPLANATIONS:

Bold results indicate compound detected above MTCA Method A Cleanup Level.

BTEX = benzene, toluene, ethylbenzene and total xylenes
ft = feet
mg/kg = milligrams per kilogram
MTBE = methyl tertiary butyl ether
MTCA = Model Toxics Control Act
TPH-GRO = TPH as gasoline-range organics
TPH-DRO = TPH as diesel-range organics
TPH-HRO = TPH as heavy oil-range organics
USEPA = United States Environmental Protection Agency
< = Analyte not detected at or above Laboratory Detection Limit; value represents limit.
--' = Not Analyzed

ANALYTICAL METHODS:

TPH-GRO analyzed by NWTPH-Gx
TPH-DRO anayzed by NWTPH-Dx without silica gel cleanup
TPH-HRO analyzed by NWTPH-Dx without silica gel cleanup
BTEX and MTBE analyzed by USEPA 8021B or 8260B
Naphthalenes analyzed by USEPA Method 8270 SIM

TABLE 5-3
SUMMARY OF SOIL ANALYTICAL RESULTS - CARCINOGENIC POLYAROMATIC HYDROCARBONS
Former Temple Distributing Bulk Plant No. 375289
808 S Columbus Ave
Goldendale, Washington

Concentrations reported in mg/kg

Boring ID	Depth (ft)	Sample ID	Sample Date	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Ideno(1,2,3-cd)pyrene
SB-1	1.5	SB-1-1.5	4/10/18	<0.0008	<0.0008	0.001	<0.0008	0.002	<0.0008	<0.0008
	2.5	SB-1-2.5	4/10/18	<0.0008	<0.0008	0.001	<0.0008	0.001	<0.0008	<0.0008
	4.0	SB-1-4.0	4/10/18	0.002	<0.0009	<0.0009	<0.0009	0.001	<0.0009	<0.0009
	6.5	SB-1-6.5	4/10/18	<0.008	<0.008	<0.008	<0.008	0.010	<0.008	<0.008
SB-2	2.5	SB-2-2.5	4/10/18	--	--	--	--	--	--	--
	5.0	SB-2-5.0	4/10/18	<0.0009	<0.0009	<0.0009	<0.0009	<0.0004	<0.0009	<0.0009
SB-3	2.0	SB-3-2.0	4/10/18	--	--	--	--	--	--	--
	4.0	SB-3-4.0	4/10/18	<0.0008	<0.0008	<0.0008	<0.0008	0.0004	<0.0008	<0.0008
SB-4	2.5	SB-4-2.5	4/10/18	--	--	--	--	--	--	--
	4.0	SB-4-4.0	4/10/18	0.001	<0.0008	0.001	<0.0008	0.001	<0.0008	<0.0008
SB-5	2.5	SB-5-2.5	4/5/18	--	--	--	--	--	--	--
	5.5	SB-5-5.5	4/5/18	--	--	--	--	--	--	--
	6.0	SB-5-6.0	4/5/18	0.003	0.002	0.003	0.001	0.002	<0.0009	0.001
SB-6	2.5	SB-6-2.5	4/5/18	--	--	--	--	--	--	--
	5.5	SB-6-5.5	4/5/18	0.001	0.001	0.001	<0.0009	0.002	<0.0009	<0.0009
SB-7	2.5	SB-7-2.5	4/5/18	--	--	--	--	--	--	--
	5.5	SB-7-5.5	4/5/18	<0.0009	<0.0009	<0.0009	<0.0009	<0.0004	0.001	0.001
SB-8	3.5	SB-8-3.5	4/5/18	--	--	--	--	--	--	--
	6.5	SB-8-6.5	4/5/18	<0.009	<0.009	<0.009	<0.009	0.004	<0.009	<0.009
SB-9	3.5	SB-9-3.5	4/5/18	--	--	--	--	--	--	--
	6.0	SB-9-6.0	4/5/18	<0.0009	<0.0009	0.001	<0.0009	0.001	<0.0009	<0.0009
SB-10	3.0	SB-10-3.0	4/17/18	--	--	--	--	--	--	--
	3.0	DUP-4-041718	4/17/18	--	--	--	--	--	--	--
	5.0	SB-10-5.0	4/17/18	<0.0009	<0.0009	<0.0009	<0.0009	<0.0004	<0.0009	<0.0009
SB-11	3.5	SB-11-3.5	4/4/18	--	--	--	--	--	--	--
	6.0	SB-11-6.0	4/4/18	0.0009	<0.0009	<0.0009	<0.0009	0.003	<0.0009	<0.0009
SB-12	4.0	SB-12-4.0	4/4/18	--	--	--	--	--	--	--
	5.0	SB-12-5.0	4/4/18	<0.0008	<0.0008	<0.0008	<0.0008	<0.0004	<0.0008	<0.0008
SB-13	3.5	SB-13-3.5	4/4/18	--	--	--	--	--	--	--
	5.5	SB-13-5.5	4/4/18	<0.0009	<0.0009	0.0009	<0.0009	0.001	<0.0009	<0.0009
SB-14	3.5	SB-14-3.5	4/4/18	--	--	--	--	--	--	--
	6.5	SB-14-6.5	4/4/18	<0.0009	<0.0009	<0.0009	<0.0009	0.001	<0.0009	<0.0009
SB-15	3.5	SB-15-3.5	4/4/18	--	--	--	--	--	--	--
	6.0	SB-15-6.0	4/4/18	0.001	<0.0008	<0.0008	<0.0008	0.001	<0.0008	<0.0008
SB-16	3.5	SB-16-3.5	4/4/18	--	--	--	--	--	--	--
	6.0	SB-16-6.0	4/4/18	<0.004	<0.004	<0.004	<0.004	0.005	<0.004	<0.004
SB-17	3.5	SB-17-3.5	4/5/18	--	--	--	--	--	--	--
	6.0	SB-17-6.0	4/5/18	<0.0009	<0.0009	<0.0009	<0.0009	0.0008	<0.0009	<0.0009

Boring ID	Depth (ft)	Sample ID	Sample Date	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Ideno(1,2,3-cd)pyrene
SB-18	2.5	SB-18-2.5	4/6/18	--	--	--	--	--	--	--
	5.5	SB-18-5.5	4/6/18	0.003	0.001	0.003	0.001	0.004	<0.0009	<0.0009
SB-19	2.5	SB-19-2.5	4/5/18	--	--	--	--	--	--	--
	4.5	SB-19-4.5	4/5/18	<0.0008	<0.0008	<0.0008	<0.0008	<0.0004	0.001	0.001
SB-20	2.5	SB-20-2.5	4/6/18	--	--	--	--	--	--	--
	5.5	SB-20-5.5	4/6/18	<0.0009	0.001	0.002	<0.0009	0.0009	<0.0009	0.001
SB-21	3.0	SB-21-3.0	4/17/18	--	--	--	--	--	--	--
	6.5	SB-21-6.5	4/17/18	0.001	<0.0009	0.002	<0.0009	0.003	<0.0009	<0.0009
SB-22	3.5	SB-22-3.5	4/4/18	--	--	--	--	--	--	--
	6.0	SB-22-6.0	4/4/18	<0.0009	<0.0009	<0.0009	<0.0009	0.001	<0.0009	<0.0009
SB-23	2.5	SB-23-2.5	4/3/18	--	--	--	--	--	--	--
	3.5	SB-23-3.5	4/3/18	--	--	--	--	--	--	--
	7.5	SB-23-7.5	4/3/18	0.005	0.006	0.006	0.002	0.008	<0.0007	0.003
SB-24	2.0	SB-24-2.0	4/11/18	--	--	--	--	--	--	--
	4.0	SB-24-4.0	4/11/18	<0.009	<0.009	<0.009	<0.009	0.024	<0.009	<0.009
	6.5	SB-24-6.5	4/11/18	<0.008	<0.008	<0.008	<0.008	0.024	<0.008	<0.008
SB-25	3.0	SB-25-3.0	4/11/18	--	--	--	--	--	--	--
	6.0	SB-25-6.0	4/11/18	0.011	<0.009	<0.009	<0.009	0.036	<0.009	<0.009
SB-26	3.5	SB-26-3.5	4/11/18	--	--	--	--	--	--	--
	3.5	DUP-3-041118	4/11/18	--	--	--	--	--	--	--
	6.0	SB-26-6.0	4/11/18	<0.0009	<0.0009	<0.0009	<0.0009	<0.0004	<0.0009	<0.0009
SB-27	4.0	SB-27-4.0	4/12/18	--	--	--	--	--	--	--
	7.0	SB-27-7.0	4/12/18	<0.0008	<0.0008	<0.0008	<0.0008	<0.0004	<0.0008	<0.0008
SB-28	4.5	SB-28-4.5	4/12/18	--	--	--	--	--	--	--
	5.5	SB-28-5.5	4/12/18	<0.0009	<0.0009	<0.0009	<0.0009	<0.0004	<0.0009	<0.0009
	6.5	SB-28-6.5	4/12/18	<0.0008	<0.0008	<0.0008	<0.0008	<0.0004	<0.0008	<0.0008
SB-29	4.0	SB-29-4.0	4/11/18	--	--	--	--	--	--	--
	6.0	SB-29-6.0	4/11/18	<0.008	<0.008	<0.008	<0.008	0.016	<0.008	<0.008
SB-30	3.5	SB-30-3.5	4/11/18	--	--	--	--	--	--	--
	5.5	SB-30-5.5	4/11/18	0.003	0.001	0.002	<0.0009	0.007	<0.0009	<0.0009
SB-31	3.5	SB-31-3.5	4/12/18	--	--	--	--	--	--	--
	6.5	SB-31-6.5	4/12/18	<0.0008	<0.0008	<0.0008	<0.0008	<0.0004	<0.0008	<0.0008
SB-32	3.5	SB-32-3.5	4/11/18	--	--	--	--	--	--	--
	5.0	SB-32-5.0	4/11/18	0.002	0.001	0.001	0.001	0.002	<0.0009	<0.0009
SB-33	3.0	SB-33-3.0	4/11/18	--	--	--	--	--	--	--
	5.0	SB-33-5.0	4/11/18	<0.0008	<0.0008	<0.0008	<0.0008	<0.0004	<0.0008	<0.0008
SB-34	3.0	SB-34-3.0	4/11/18	--	--	--	--	--	--	--
	5.0	SB-34-5.0	4/11/18	<0.0008	<0.0008	<0.0008	<0.0009	<0.0004	<0.0008	<0.0008
SB-35	2.5	SB-35-2.5	4/11/18	<0.0008	<0.0008	<0.0008	<0.0008	0.0005	<0.0008	<0.0008
SB-36	2.5	SB-36-2.5	4/10/18	<0.0008	<0.0008	0.002	<0.0008	0.002	<0.0008	0.0009
	4.0	SB-36-4.0	4/10/18	<0.0008	<0.0008	<0.0008	<0.0008	<0.0004	<0.0008	<0.0008
	6.0	SB-36-6.0	4/10/18	0.001	0.004	0.002	<0.0008	0.004	<0.0008	<0.0008
SB-37	3.5	SB-37-3.5	4/5/18	--	--	--	--	--	--	--
	5.5	SB-37-5.5	4/5/18	<0.0009	<0.0009	<0.0009	<0.0009	0.001	<0.0009	<0.0009
	5.5	DUP-1-040518	4/5/18	<0.0009	0.0009	0.001	0.0009	0.001	0.002	0.002

Boring ID	Depth (ft)	Sample ID	Sample Date	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Ideno(1,2,3-cd)pyrene
SB-38	2.0	SB-38-2.0	4/5/18	<0.0009	<0.0009	0.002	<0.0009	0.002	<0.0009	<0.0009
SB-39	3.5	SB-39-3.5	4/10/18	--	--	--	--	--	--	--
	3.5	DUP-2-041018	4/10/18	--	--	--	--	--	--	--
	6.0	SB-39-6.0	4/10/18	0.003	0.001	0.002	<0.0009	0.004	<0.0009	<0.0009
SB-40	3.5	SB-40-3.5	4/11/18	--	--	--	--	--	--	--
	5.5	SB-40-5.5	4/11/18	<0.009	<0.009	<0.009	<0.009	0.017	<0.009	<0.009
	7.0	SB-40-7.0	4/11/18	<0.0008	<0.0008	<0.0008	<0.0008	0.001	<0.0008	<0.0008
SB-41	3.0	SB-41-3.0	4/17/18	--	--	--	--	--	--	--
	5.5	SB-41-5.5	4/17/18	<0.0009	<0.0009	<0.0009	<0.0009	<0.0004	<0.0009	<0.0009
SB-42	2.0	SB-42-2.0	4/17/18	--	--	--	--	--	--	--
	5.5	SB-42-5.5	4/17/18	<0.0009	<0.0009	<0.0009	<0.0009	0.0006	<0.0009	<0.0009
SB-43	2.5	SB-43-2.5	4/17/18	--	--	--	--	--	--	--
	5.5	SB-43-5.5	4/17/18	<0.0008	<0.0008	<0.0008	<0.0008	0.0005	<0.0008	<0.0008
SB-44	5.0	SB-44-5.0	4/17/18	--	--	--	--	--	--	--
	6.0	SB-44-6.0	4/17/18	0.002	0.001	0.002	0.0009	0.002	<0.0009	<0.0009
MW-5	4.5	MW-5-4.5	4/12/18	--	--	--	--	--	--	--
	5.5	MW-5-5.5	4/12/18	<0.0009	<0.0009	<0.0009	<0.0009	0.0005	<0.0009	<0.0009
MW-6	4.0	MW-6-4.0	4/12/18	--	--	--	--	--	--	--
	6.0	MW-6-6.0	4/12/18	0.002	0.008	0.013	0.005	0.002	0.002	0.009
MW-7	3.5	MW-7-3.5	4/12/18	--	--	--	--	--	--	--
	4.0	MW-7-4.0	4/12/18	<0.0008	<0.0008	<0.0008	<0.0008	<0.0004	<0.0008	<0.0008
MW-8	3.0	MW-8-3.0	4/10/18	--	--	--	--	--	--	--
	4.5	MW-8-4.5	4/10/18	<0.0008	<0.0008	<0.0008	<0.0008	<0.0004	<0.0008	<0.0008
MW-9	3.5	MW-9-3.5	4/4/18	--	--	--	--	--	--	--
	6.5	MW-9-6.5	4/4/18	<0.0009	<0.0009	<0.0009	<0.0009	<0.0004	<0.0009	<0.0009

EXPLANATIONS:

ft = feet

mg/kg = milligrams per kilogram

-- = Not Analyzed

USEPA = United States Environmental Protection Agency

< = Analyte not detected at or above Laboratory Detection Limit; value represents limit.

ANALYTICAL METHODS:

cPAHs analyzed by USEPA 8270 SIM

TABLE 5-4
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS
Former Temple Distributing Bulk Plant No. 375289
808 S Columbus Ave
Goldendale, Washington

Well ID/ Date	Purge Method	TOC (ft)	DTW (ft)	SPHT (ft)	GWE[2] (ft)	TPH-GRO (µg/L)	TPH-DRO w/out Silica Gel (µg/L)	TPH-HRO w/out Silica Gel (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	EDC (µg/L)	EDB (µg/L)	Napthalenes (µg/L)	Lead (µg/L)	cPAHs (µg/L)
MW-1																		
04/18/18		1644.49	7.70	--	1,636.79	<50	<47	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0096	<0.03	<6.0	<0.1
MW-2																		
04/19/18		1641.38	4.10	--	1,637.28	51	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	--	--	<0.1
MW-3																		
04/18/18		1642.02	3.65	--	1,638.37	**3,500**	250	<110	<0.5	0.6	7	<0.5	<0.5	<0.5	<0.0094	5	<6.0	<0.1
MW-4																		
04/19/18		1641.93	2.90	--	1,639.03	120	470	160	<0.5	4	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.03	<6.0	<0.1
MW-5																		
04/18/17		1641.44	4.59	--	1,636.85	490	250	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.03	<6.0	<0.1
MW-6																		
04/18/18		1641.11	4.29	--	1,636.82	<50	<45	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.03	<6.0	<0.1
MW-7																		
04/18/17		--	DRY	--	#VALUE!	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8																		
04/18/18		1641.18	2.34	--	1,638.84	<50	<49	<110	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.03	<6.0	<0.1
MW-9																		
04/18/18		1642.88	3.01	--	1,639.87	<50	<47	<100	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0094	<0.04	<6.0	<0.1
ER-2																		
04/18/18		--	--	--	--	<50	<52	<120	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.0095	<0.03	<6.0	<0.1
MTCA Method A Cleanup Levels:						800/1,000	500	500	5.0	1,000	700	1,000	20	5.0	0.01	160	15	0.1

Explanations:

BTEX = Benzene, toluene, ethylbenzene, and total xylenes
cPAH=Carcinogenic Polyaromatic Hydrocarbons
(D) = Duplicate
DTW = Depth to Water
EDB = 1,2-Dibromoethane
EDC = 1,2-Dichloroethane
(ft) = Feet
GWE = Groundwater Elevation
LFP = Low Flow Purge
MTBE = Methyl Tertiary Butyl Ether
MTCA = Model Toxics Control Act
ND = Not Detected
NP = No Purge
SPHT = Separate-Phase Hydrocarbon Thickness
TOC = Top of Casing
PAHs = Polynuclear Aromatic Hydrocarbons
TPH = Total Petroleum Hydrocarbons
TPH-DRO = TPH as Diesel-Range Organics
TPH-GRO = TPH as Gasoline-Range Organics
TPH-HRO = TPH as Heavy Oil-Range Organics
USEPA = United States Environmental Protection Agency
µg/L = Micrograms per liter
-- = Not Measured/Not Analyzed

Notes:

Analytical results in bold font indicate concentrations exceed MTCA Method A cleanup levels.

Consult original laboratory analysis reports for analytical methods prior to 2009.

Silica-gel analysis suspended June 2013- February 2014.

ANALYTICAL METHODS:

TPH-GRO analyzed by NWTPH-Gx

TPH-DRO anayzed by NWTPH-Dx without silica gel cleanup

TPH-HRO analyzed by NWTPH-Dx without silica gel cleanup

BTEX, MTBE, and EDC analyzed by USEPA 8260B

EDB analyzed by USEPA 504.1

Napthalene analyzed by USEPA 8270

Dissolved lead analyzed by USEPA 6010B

cPAHs analyzed by USEPA 8270 SIM

TABLE 5-5
GROUNDWATER MONITORING ANALYTICAL RESULTS - POLYAROMATIC HYDROCARBONS
Former Temple Distributing Bulk Plant No. 375289
808 S Columbus Ave
Goldendale, Washington
Concentrations reported in µg/L

Well ID/Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Phenanthrene	Pyrene
MW-1															
04/18/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.01
MW-2															
04/19/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3															
04/18/18	0.3	0.10	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.01
MW-4															
04/19/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.01
MW-5															
04/18/17	0.09	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.3	<0.01	0.05	<0.01
MW-6															
04/18/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.01
MW-7															
04/18/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8															
04/18/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.01
MW-9															
04/18/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.04	<0.01
ER-2															
04/18/18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.01

EXPLANATIONS:
-- = Not Analyzed
USEPA = United States Environmental Protection Agency
µg/L = Micrograms per liter
< = Analyte not detected at or above Laboratory Detection Limit; value represents limit.

ANALYTICAL METHODS:
PAHs analyzed by USEPA 8270 SIM

Table 6-1
Initial Screening of Alternatives
Former Temple Distributing Bulk Plant No. 375289
Goldendale, WA

General Response Action	Technology Type	Description of Action	Technical Feasibility Screening Comment
Institutional Controls	Access Restrictions	Physical and administrative measures to limit public access or restrict future land use	Potentially applicable (retained)
Containment	Covers and Caps	Cover surface of contaminated zone to preclude direct contact exposures and prevent surface transport of contaminants by erosion mechanisms	Potentially applicable (retained)
Removal	Excavation	Use of mechanical equipment to unearth soil or waste materials	Potentially applicable (retained)
Onsite Treatment	Chemical/Physical or Biological (Insitu Chem-Ox, SVE, AS)	Reduce the toxicity and volume contaminants by the use of processes that remove or destroy the contaminants of concern	Not applicable (not-retained)
Offsite Treatment	Chemical/Physical or Biological	Reduce the toxicity and volume contaminants by the use of processes that remove or destroy the contaminants of concern	Potentially applicable (retained)

Table 6-2
Representative Process Options for Remediation
Former Temple Distributing Bulk Plant No. 375289
Goldendale, WA

Response Action	Remediation Technology Type	Process Option	Description	Retain?	Reasons	Comments
No Action	No Action	None	No institutional controls or treatment.	Yes	Required	Baseline for comparison. Not protective
Limited Actions	Institutional Controls	Property-Use Restrictions or Notifications	Limits future property use through legal means (e.g., deed restrictions).	Yes	1,2,3	Area around the site is mixed use - resdential, commercial and agricultural and likely to remain. Impacts are restricted to the property boundaries.
		Fencing	Fencing or other means of limiting site access.	No	B	Perimeter fence already partially in place; additional fencing unnecessary. Also, limited effectiveness/utility for soil contamination.
		Signs	Signs or other means of warning potential trespassers or site users of potential dangers.	No	B	Limited effectiveness
	Natural Attenuation	Natural Attenuation Monitoring	Includes monitoring for natural attenuation parameters to evaluate processes that may lead to reductions in soil and groundwater TPH concentrations.	Yes	1, 3	Petroleum constituents readily break down due to natural attenuation. The restoration timeframe may be longer than desired. Most effective if source removal actions are completed.
Containment Actions	Capping	Asphalt/Concrete	Cover source area(s) with asphalt or concrete to limit direct contact prevent surface transport of contaminants by erosion mechanisms	Yes	1,3	Property would need to continue to be used for industrial/ commercial purposes. Impacted off-property soil extending beneath the roadway is currently paved.
	Subsurface vapor barrier	Vapor barrier	Vapor barrier placed in shallow excavation extending over entire contaminated area	Yes	1, 3	Readily implemented on property, with no restrictions on building placement.
Removal/ Excavation	Physical	Mechanical removal of soil	Includes removal of all soils with contaminant concentrations exceeding regulatory limits	Yes	1,2,3	Results in permanent mass reduction of TPH and BTEX constituents.

Table 6-2
Representitive Process Option for Remediation
Former Temple Distributing Bulk Plant No. 375289
Goldendale, WA

Response Action	Remediation Technology Type	Process Option	Description	Retain?	Reasons	Comments
Removal Actions	Physical/Chemical	Thermal Treatment	Soil is excavated and treated on-site. Contaminants are removed through thermal destruction. Soils are then reused on-site for fill material.	Yes	1,2,3	Results in permanent reduction in contaminants on-site. Eliminates potential for accidents and emissions associated with trucking for off-site disposal.
	Physical	Off-site Disposal	Contaminated soil is removed from the site and transported to a licenced disposal facility	Yes	1,2,3	Results in permanent reduction in contaminants on-site.

Key to reasons for retaining or rejecting a process option:

1. Implementable/Technically Feasible
2. Effective
3. Cost Effective

A. Not Implementable
B. Not Effective
C. Too Costly

RI = Remedial Investigation
TPH = Total Petroleum Hydrocarbons

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TABLE 8-1
CLEANUP ACTION ALTERNATIVES SCORING
FORMER TEMPLE DISTRIBUTING BULK PLANT
Goldendale, Washington

Evaluation Criteria	Alternative 1 Containment and Natural Attenuation	Alternative 2 Source Removal, Off-Site Disposal, and Natural Attenuation
Protectiveness	Short term - existing risks would be reduced by preventing direct contact by human and ecological receptors, and by managing potential exposure pathways using institutional controls. Long term – existing risks would be eliminated by achieving Site cleanup levels through MNA. Improvement of overall environmental quality is likely to be the same for each of the alternatives evaluated. The Protectiveness is likely to be slightly lower than Alternative 2. Protectiveness Score = 1	Short term - existing risks would be reduced by source removal by excavation and off-property disposal, and by managing any remaining potential exposure pathways using institutional controls. Long term – any residual risks would be eliminated by achieving Site cleanup levels through MNA. Improvement of overall environmental quality is likely to be the same for each of the alternatives evaluated. The Protectiveness is likely to be slightly higher than Alternative 1. Protectiveness Score = 2
Time required to reduce risk and attain cleanup levels (Restoration Time Frame)	This alternative relies on natural attenuation for soil and groundwater, making prediction of the cleanup time frame difficult to predict. Because the site would be paved as a component of this alternative the only risk identified is during potential demolition or excavation activities, which might expose workers to the contaminated soil. There is no current risk associated with the contamination in the shallow aquifer. The estimated restoration time frame to attain cleanup levels for the Site is over 20 years. Restoration Time Frame Score: 1	This alternative reduces risk by removal of the impacted soil and relies on natural attenuation of the perched groundwater. Excavation activities would be completed within a year, groundwater which is present seasonally would be expected to clean up rapidly with the removal of source material. The estimated restoration time frame to attain cleanup levels for the Site is approximately 3-5 years. Restoration Time Frame Score : 2
Permanence	Each of the alternatives are considered equivalent with regard to the degree to which the alternative will permanently reduce the toxicity, mobility or volume of contaminants at the Site. Permanence Score = 2	Each of the alternatives are considered equivalent with regard to the degree to which the alternative will permanently reduce the toxicity, mobility or volume of contaminants at the Site. Permanence Score = 2
Long-Term Effectiveness	Each of the alternatives ultimately relies on MNA to attain the Site cleanup levels; therefore, the long-term effectiveness of each alternative is generally considered to be equal to the others. Long-Term Effectiveness Score = 2	Each of the alternatives ultimately relies on MNA to attain the Site cleanup levels; therefore, the long-term effectiveness of each alternative is generally considered to be equal to the others. Long-Term Effectiveness Score = 2

TABLE 8-1
CLEANUP ACTION ALTERNATIVES SCORING
FORMER TEMPLE DISTRIBUTING BULK PLANT
Goldendale, Washington

Evaluation Criteria	Alternative 1 Containment and Natural Attenuation	Alternative 2 Source Removal, Off-Site Disposal, and Natural Attenuation
Management of Short-Term Risks	Short-term risks associated with Alternative 1 include: • Risks to workers and the public from physical hazards during capping activities. • Risks to workers from physical hazards and/or exposure to hazardous substances during site monitoring activities. This alternative is considered to have lowest degree of short-term risk because intrusive subsurface activities will not be performed. Management of Short-Term Risks Score = 2	Short-term risks associated with Alternative 2 include: • Risks to workers and the public from physical hazards during excavation and soil transportation activities. • Risks to workers and the public from exposure to hazardous substances during excavation and soil transportation activities. This alternative is considered to have a greater degree of short-term risk than Alternative 1 because it includes off-property disposal of soil, which introduces the potential for trucking accidents and emissions. Management of Short-Term Risks Score = 1
Technical and Administrative Implementability	**This alternative is likely to be technically and administratively implementable.** Implementation of this alternative is likely to be technically and administratively equivalent to Alternative 2. Technical and Administrative Implementability Score = 2	**This alternative is considered to be technically and administratively implementable**. Implementation of this alternative is likely to be more technically challenging than Alternative 1. This alternative is administratively equivalent to Alternative 1. Technical and Administrative Implementability Score = 2
Consideration of Public Concerns	Currently, there are no known public concerns regarding the completion of cleanup actions at this Site, however it is anticipated there are potential public concerns about leaving soils in place on the property. Consideration of Public Concerns Score = 1	Currently, there are no known public concerns regarding the completion of cleanup actions at this Site. There are likely not be any substantial public concerns. Consideration of Public Concerns Score = 2
Cumulative Scoring[1]	**11**	**13**

Notes:

1. The alternative with the highest cumulative score is considered to provide the greatest degree of benefit, relative to the other alternatives. The alternatives were assigned ranks on the relative degree of benefit they would provide for the evaluation criteria established by WAC 173-340-360(3)(F). Due to the nature of the evaluation criteria, these ranks are based primarily on qualitative comparison, using best professional judgment. Therefore, the ranks assigned are not intended to quantify the degree of potential benefit provided by one alternative relative to another, but only to indicate the standing, relative to the other alternatives, on a scale of least to most beneficial.

   For this evaluation, the alternative considered to have the least benefit was assigned a rank of "1" and the most beneficial with a rank of "2." If both of the alternatives were considered to be equal in benefit, then the maximum possible rank would be 2.

Appendix A:
Boring Logs

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18939 120th Ave NE, Suite 112
Bothell, WA, 98011

Soil Boring: SB-1

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/10/2018
Date Completed: 4/10/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	65.1				ML		1	(ML) Dark brown to black, loose SILT, strong odor, no sheen
Damp	65.1		SB-1-1.5	G = 53 D = 4.1 HO <12 B <0.029				(ML) Dark brown to black, loose SILT, strong odor, no sheen
Damp	43.1		SB-1-2.5	G = 37 D <3.6 HO <12 B <0.030	ML		2	(ML) Dark brown to black, loose SILT, strong odor, no sheen
Wet	47.5				ML		3	(ML) Dark brown to black, loose SILT, strong odor, no sheen
Wet	76.1		SB-1-4.0	G = 270 D <3.8 HO <13 B <0.033	ML		4	(ML) Dark brown to black, loose SILT, strong odor, no sheen Groundwater encountered at 4.0' at time of drilling
Wet	76.1				ML		5	(ML) Dark brown to black, loose SILT, strong odor, no sheen
					SM/ML		6	(SM/ML) Gray, loose, silty SAND to sandy SILT, strong odor, moderate sheen
Wet	94.5		SB-1-6.5	G = 1300 D = 3000 HO <230 B <0.022	SM/ML			(SM/ML) Gray, loose, silty SAND to sandy SILT, strong odor, moderate sheen
							7	-BASALT- Bottom of borehole at 7.0 feet.
							8	
							9	
							10	

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18939 120th Ave NE, Suite 112
Bothell, WA, 98011

Soil Boring: SB-2

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/10/2018
Date Completed: 4/10/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 5.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
								Dense silty GRAVEL/Topsoil/Fill
Damp	0.1				ML		1	(ML) Brown, loose SILT with trace gravel, no odor, no sheen
Damp	0.1		SB-2-2.5	G <1.3 D <3.8 HO <13 B = 0.003	ML		2	(ML) Brown, loose SILT with trace gravel, no odor, no sheen
								Groundwater encountered at 2.5' at time of drilling
Wet	0.0				ML		3	(ML) Brown, loose SILT with trace gravel, no odor, no sheen
Wet	0.1							(ML) Brown, loose SILT with trace gravel, no odor, no sheen
					ML		4	
Wet	0.2				ML			(ML) Brown, loose SILT with trace gravel, no odor, no sheen
Wet	0.2		SB-2-5.0	G = 4.8 D = 260 HO = 22 B = 0.002	ML		5	(ML) Gray, loose to firm, sandy SILT with trace pebbles, slight odor, no sheen
								-BASALT- Bottom of borehole at 5.5 feet.
							6	
							7	
							8	
							9	
							10	

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18939 120th Ave NE, Suite 112
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Soil Boring: SB-3

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/10/2018
Date Completed: 4/10/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 4.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
								Dense silty GRAVEL/Topsoil/Fill
Damp	0.1				ML		1	(ML) Brown, loose, clayey SILT with trace sand, no odor, no sheen
Wet	0.2		SB-3-2.0	G <1.2 D <3.7 HO <12 B = 0.002	ML		2	(ML) Brown, loose, clayey SILT with trace sand, no odor, no sheen
								Groundwater encountered at 2.5' at time of drilling
Wet	0.1				ML		3	(ML) Brown, loose, clayey SILT with trace sand, no odor, no sheen
Wet	0.2		SB-3-4.0	G <1.4 D <3.7 HO <12 B = 0.002	ML		4	(ML) Brown, loose, clayey SILT with trace sand, no odor, no sheen
								-BASALT-
							5	Bottom of borehole at 4.5 feet.
							6	
							7	
							8	
							9	
							10	

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18939 120th Ave NE, Suite 112
Bothell, WA, 98011

Soil Boring: SB-4

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/10/2018
Date Completed: 4/10/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 4.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
								Dense silty GRAVEL/Topsoil/Fill
Damp	0.1				ML		1	(ML) Brown, loose, clayey SILT with trace sand, no odor, no sheen
Damp	0.2		SB-4-2.5	G <1.3 D <3.8 HO <13 B = 0.003	ML		2	(ML) Brown, loose, clayey SILT with trace sand, no odor, no sheen
								Groundwater encountered at 2.5' at time of drilling
Wet	0.2				ML		3	(ML) Brown, loose, clayey SILT with trace sand, no odor, no sheen
Wet	0.2		SB-4-4.0	G <1.3 D <3.7 HO <12 B = 0.002	ML		4	(ML) Brown, loose, clayey SILT with trace sand, no odor, no sheen
								-BASALT- Bottom of borehole at 4.5 feet.
							5	
							6	
							7	
							8	
							9	
							10	

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18939 120th Ave NE, Suite 112
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Soil Boring: SB-5

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/5/2018
Date Completed: 4/5/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
								Dense silty GRAVEL/Topsoil/Fill
	1.2				ML		1	(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
	1.1				ML			(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
	0.5				ML		2	(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
	0.2		SB-5-2.5	G <1.4 D = 10 HO = 43 B = 0.001	ML			(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
							3	Groundwater encountered at 3.0' at time of drilling
	0.5				ML			(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
	0.8				ML		4	(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
	1.0				ML			(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
	1.0				ML		5	(ML) Brown, loose, clayey SILT with trace gravel, slight odor, no sheen
	1.2		SB-5-5.5	G = 5.4 D = 91 HO = 21 B = 0.002	ML			(ML) Brown, loose, clayey SILT with trace gravel, slight odor, no sheen
	48.3		SB-5-6.0	G = 33 D = 26 HO <13 B = 0.006	ML		6	(ML) Gray, loose SILT with basalt fragments, strong odor, moderate sheen
								-BASALT- Bottom of borehole at 6.5 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-6

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/5/2018
Date Completed: 4/5/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
								Dense silty GRAVEL/Topsoil/Fill
	0.1				SC-SM		1	(SC-SM) Brown, loose, silty clayey SAND with trace roots and organics, moderate odor, no sheen
	0.2				ML		2	(ML) Brown, loose, clayey SILT, no odor, no sheen
	0.2		SB-6-2.5	G <1.5 D <3.9 HO <13 B = 0.004	ML			(ML) Brown, loose, clayey SILT, no odor, no sheen
							3	Groundwater encountered at 3.0' at time of drilling
	0.5							(ML) Brown, loose, clayey SILT, no odor, no sheen
					ML		4	
	0.2							(ML) Brown, loose, clayey SILT, slight odor, no sheen
					ML		5	
	35.4		SB-6-5.5	G = 290 D = 76 HO = 37 B = 0.043	ML			(ML) Brown, loose, clayey SILT, strong odor, moderate sheen
							6	-BASALT- Bottom of borehole at 6.0 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-7

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/5/2018
Date Completed: 4/5/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
	0.3				SC-SM		1	(SC-SM) Brown, loose, silty clayey SAND, no odor, no sheen
	0.2							
	0.1				SC-SM		2	(SC-SM) Brown, loose, silty clayey SAND, no odor, no sheen
	1.0		SB-7-2.5	G <1.5 D <3.8 HO = 18 B = 0.004	ML		3	(ML) Brown, loose, clayey SILT, no odor, no sheen Groundwater encountered at 3.0' at time of drilling
	1.0							(ML) Brown, loose, clayey SILT, no odor, no sheen
					ML		4	
	0.2							(ML) Brown, loose, clayey SILT, no odor, no sheen
					ML		5	
	1.1		SB-7-5.5	G <1.4 D = 8.5 HO <13 B = 0.001	ML		6	(ML) Brown, loose, clayey SILT, no odor, no sheen
								-BASALT- Bottom of borehole at 6.0 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-8

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/5/2018
Date Completed: 4/5/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
							1	
Damp	1.0				ML		2	(ML) Brown, loose, clayey SILT, no odor, no sheen
Damp	3.4		SB-8-3.5	G <1.7 D <4.0 HO <13 B = 0.003	ML		3	(ML) Brown, loose, clayey SILT, no odor, no sheen
Wet	8.4				ML		4	(ML) Brown, loose, clayey SILT, no odor, no sheen Groundwater encountered at 4.0' at time of drilling
Wet	9.2				ML		5	(ML) Brown, loose, clayey SILT, no odor, no sheen
					SM			(SM) Gray, loose, silty SAND, strong odor, heavy sheen
Wet	270		SB-8-6.5	G = 300 D = 770 HO <63 B <0.034	SM		6	(SM) Gray, loose, silty SAND, strong odor, heavy sheen
Wet	245.6				SM			
Wet	810				SM			(SM) Gray, loose, silty SAND, strong odor, heavy sheen
							7	-BASALT- Bottom of borehole at 7.0 feet.
							8	
							9	
							10	

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Soil Boring: SB-9

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/5/2018
Date Completed: 4/5/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6.75 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
								Dense silty GRAVEL/Topsoil/Fill
Damp	1.0				ML		1	(ML) Dark brown, clayey SILT, no odor, no sheen
Damp	1.7						2	(ML) Dark brown, clayey SILT, no odor, no sheen
					ML		3	
Wet	1.2		SB-9-3.5	G <1.3 D <3.9 HO <13 B = 0.003	ML			(ML) Dark brown, clayey SILT, no odor, no sheen
							4	Groundwater encountered at 4.0' at time of drilling
Wet	1.4							(ML) Dark brown, clayey SILT, slight odor, no sheen
					ML		5	
Wet	1.2							(ML) Dark brown, clayey SILT, slight odor, no sheen
					ML			
Wet	1.2		SB-9-6.0	G = 19 D = 21 HO <13 B = 0.001			6	(ML) Gray, loose SILT, slight odor, no sheen
					ML			
							7	-BASALT- Bottom of borehole at 6.8 feet.
							8	
							9	
							10	

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Soil Boring: SB-10

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/17/2018
Date Completed: 4/17/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 5.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.1				ML		1	(ML) Brown, low plastic SILT with occasional gravel (fill), no odor, no sheen
Damp	0.1				ML		2	(ML) Brown, low plastic SILT with occasional gravel (fill), no odor, no sheen
Damp	0.1				ML			(ML) Brown, low plastic SILT with occasional gravel (fill), no odor, no sheen
Damp	0.1		SB-10-3.0	G <1.3 D <3.8 HO <13 B = 0.002	ML		3	(ML) Brown, low plastic SILT with occasional gravel (fill), no odor, no sheen Groundwater encountered at 3.0' at time of drilling
Damp	0.1				ML			(ML) Brown, low plastic SILT with occasional gravel (fill), no odor, no sheen
Wet	0.1				ML		4	(ML) Brown, low plastic SILT with occasional gravel (fill), no odor, no sheen
Wet	0.0				SM			(SM) Brown, loose, gravelly, silty SAND with occasional basalt cobbles, no odor, no sheen
Wet	0.1		SB-10-5.0	G <1.3 D <3.9 HO <13 B = 0.002	SM		5	(SM) Brown, loose, gravelly, silty SAND with occasional basalt cobbles, no odor, no sheen
							6	-BASALT- Bottom of borehole at 5.5 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-11

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/4/2018
Date Completed: 4/4/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
							1	
Moist	1.2				ML		2	(ML) Brown to black, loose, clayey SILT with trace gravel, no odor, no sheen
Moist	0.9				ML		3	(ML) Brown to black, loose, clayey SILT with trace gravel, no odor, no sheen
Wet	1.1		SB-11-3.5	G <1.4 D <4.0 HO <13 B = 0.001	ML			(ML) Brown to black, loose, clayey SILT with trace gravel, no odor, no sheen
							4	Groundwater encountered at 4.0' at time of drilling
Wet	1.0							(ML) Brown to black, loose, clayey SILT with trace gravel, no odor, no sheen
					ML		5	
Wet	224		SB-11-6.0	G = 460 D = 480 HO <13 B <0.026	SM		6	(SM) Gray, loose, silty SAND, moderate odor, heavy sheen
							7	-BASALT- Bottom of borehole at 7.0 feet.
							8	
							9	
							10	

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Soil Boring: SB-12

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/4/2018
Date Completed: 4/4/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 5.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							1	Dense silty GRAVEL/Topsoil/Fill
Damp	1.4				ML		2	(ML) Dark brown, clayey SILT, no odor, no sheen
Damp	0.4				ML		3	(ML) Dark brown, clayey SILT, no odor, no sheen
Wet	1.1		SB-12-4.0	G <1.3 D <3.9 HO <13 B = 0.0006	ML		4	(ML) Dark brown, clayey SILT, no odor, no sheen Groundwater encountered at 4.0' at time of drilling
Wet	1.1		SB-12-5.0	G <1.1 D <3.7 HO <12 B <0.0004	ML		5	(ML) Dark brown, clayey SILT, no odor, no sheen
							6	-BASALT- Bottom of borehole at 5.5 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-13

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/4/2018
Date Completed: 4/4/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.9				ML		2	(ML) Brown, loose, clayey SILT, no odor, no sheen
			SB-13-3.5	G <1.2 D <3.8 HO <13 B = 0.001	ML		3	(ML) Brown, loose, clayey SILT, no odor, no sheen
							4	Groundwater encountered at 4.0' at time of drilling
Wet	1.1				ML		5	(ML) Brown, loose, clayey SILT, no odor, no sheen
Wet	250		SB-13-5.5	G = 770 D = 5.6 HO <13 B <0.031	ML		6	(ML) Brown, loose, clayey SILT, strong odor, moderate sheen
							6	-BASALT- Bottom of borehole at 6.0 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-14

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/4/2018
Date Completed: 4/4/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.4				ML		1	
							2	(ML) Black, soft, clayey SILT, no odor, no sheen
Damp	0.4				ML		3	(ML) Black, soft, clayey SILT, no odor, no sheen
Wet	0.4		SB-14-3.5	G <1.4 D <4.0 HO <13 B = 0.003	ML			(ML) Black, soft, clayey SILT, no odor, no sheen
							4	Groundwater encountered at 4.0' at time of drilling
Wet	0.2				ML			(ML) Black, soft, clayey SILT, no odor, no sheen
							5	
Wet	1.6				ML			(ML) Black, soft, clayey SILT, slight odor, no sheen
							6	
Wet	1.2		SB-14-6.5	G = 63 D = 54 HO <13 B <0.028	ML			(ML) Black, soft, clayey SILT, moderate odor, no sheen
Wet	244				SM/ML		7	(SM/ML) Gray, loose, silty SAND to sandy SILT, strong odor, heavy sheen
								-BASALT- Bottom of borehole at 7.5 feet.
							8	
							9	
							10	

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Soil Boring: SB-15

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/4/2018
Date Completed: 4/4/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
							1	
Damp	3.9				ML		2	(ML) Brown, loose SILT, no odor, no sheen
Damp	2.2				ML		3	(ML) Brown, loose SILT, no odor, no sheen
Wet	1.2		SB-15-3.5	G <1.6 D <3.9 HO <13 B = 0.002				(ML) Brown, loose SILT, no odor, no sheen Groundwater encountered at 3.5' at time of drilling
					ML		4	
Wet	1.0				ML		5	(ML) Brown, loose SILT, no odor, no sheen
Wet	1.4				ML			(ML) Brown, loose SILT, moderate odor, slight sheen
Wet	4.5		SB-15-6.0	G = 440 D = 86 HO <13 B <0.026	ML		6	(ML) Brown, loose SILT, moderate odor, moderate sheen
								-BASALT- Bottom of borehole at 6.5 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-16

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/4/2018
Date Completed: 4/4/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	1.1				ML		2	(ML) Black, loose SILT with trace gravel, no odor, no sheen
Damp	1.3		SB-16-3.5	G <1.5 D <3.9 HO <13 B = 0.003	ML		3	(ML) Black, loose SILT with trace gravel, no odor, no sheen
							4	Groundwater encountered at 4.0' at time of drilling
Wet	1.3				ML		5	(ML) Black, loose SILT with trace gravel, slight odor, no sheen
Wet	44.5		SB-16-6.0	G = 1200 D = 2000 HO <59 B <0.020	ML		6	(ML) Black, loose SILT with trace gravel, strong odor, heavy sheen
								-BASALT- Bottom of borehole at 6.5 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-17

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/5/2018
Date Completed: 4/5/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
							1	
Damp	1.2				ML		2	(ML) Dark brown, clayey SILT, moderate odor, no sheen
							3	
Wet	89.5		SB-17-3.5	G = 1300 D = 660 HO <26 B <0.036	ML		4	(ML) Dark brown, clayey SILT, strong odor, slight sheen Groundwater encountered at 4.0' at time of drilling
Wet	228				ML		5	(ML) Dark brown, clayey SILT, strong odor, heavy sheen
Wet	350.8		SB-17-6.0	G = 1100 D = 830 HO <65 B <0.045	SM		6	(SM) Gray to black, loose, silty SAND, strong odor, moderate sheen
								-BASALT- Bottom of borehole at 6.5 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-18

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/6/2018
Date Completed: 4/6/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	
Damp	1.0				SC		1	(SC) Dark brown, loose, clayey silty SAND with roots and bio-action, no odor, no sheen
							2	
Damp	1.1		SB-18-2.5	G <1.4 D <3.9 HO <13 B = 0.004	ML		3	(ML) Dark brown, loose, clayey SILT, no odor, no sheen Groundwater encountered at 3.0' at time of drilling
Wet	1.0							(ML) Dark brown, loose, clayey SILT, no odor, no sheen
					ML		4	
Wet	0.8							(ML) Dark brown, loose, clayey SILT, no odor, no sheen
					ML		5	
Wet	1.1		SB-18-5.5	G <1.4 D <4.0 HO <13 B = 0.0008	ML			(ML) Dark brown, loose, clayey SILT, no odor, no sheen
							6	-BASALT- Bottom of borehole at 6.0 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-19

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/5/2018
Date Completed: 4/5/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
					SM		1	(SM) Brown to black, clayey silty fine SAND with organics throughout, no odor, no sheen
Damp	0.2				ML		2	(ML) Brown, loose, clayey SILT, no odor, no sheen
Wet	1.2		SB-19-2.5	G <1.6 D <3.9 HO <13 B = 0.003	ML		3	(ML) Brown, loose, clayey SILT, no odor, no sheen Groundwater encountered at 3.0' at time of drilling
Wet	0.8				ML		4	(ML) Brown, loose, clayey SILT, no odor, no sheen
Wet	1.2		SB-19-4.5	G <1.3 D <3.8 HO <13 B = 0.0006	ML		5	(ML) Brown, loose, clayey SILT, no odor, no sheen
								-BASALT- Bottom of borehole at 5.0 feet.
							6	
							7	
							8	
							9	
							10	

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Soil Boring: SB-20

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/6/2018
Date Completed: 4/6/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
Damp					SC		1	(SC) Brown clayey silty SAND with rocks and debris
Damp							2	
Damp	2.9		SB-20-2.5	G <1.4 D <3.8 HO <13 B = 0.004	ML		3	(ML) Brown, loose, clayey SILT, no odor, no sheen Groundwater encountered at 3.0' at time of drilling
Wet	1.1				SM		4	(SM) Brown, loose, silty fine SAND with trace clay, no odor, no sheen
Wet	0.0				SM		5	(SM) Brown, loose, silty fine SAND with trace clay, no odor, no sheen
Wet	1.1		SB-20-5.5	G <1.3 D <3.9 HO <13 B = 0.001	SM		6	(SM) Brown, loose, silty fine SAND with trace clay, no odor, no sheen
							7	-BASALT- Bottom of borehole at 6.0 feet.
							8	
							9	
							10	

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Soil Boring: SB-21

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/17/2018
Date Completed: 4/17/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.1				ML		1	(ML) Dark brown, loose, clayey SILT with trace sand, no odor, no sheen
Damp	0.1				ML		2	(ML) Dark brown, loose, clayey SILT with trace sand, no odor, no sheen
Wet	0.2		SB-21-3.0	G <1.3 D <3.9 HO <13 B = 0.003	ML		3	(ML) Dark brown, loose, clayey SILT with trace sand, no odor, no sheen Groundwater encountered at 3.5' at time of drilling
Wet	0.0				ML		4	(ML) Dark brown, loose, clayey SILT with trace sand, no odor, no sheen
Wet	0.1				ML		5	(ML) Dark brown, loose, clayey SILT with trace sand, no odor, no sheen
Wet	15.1						6	
Wet	17.7		SB-21-6.5	G = 250 D = 110 HO <13 B <0.033	SM		7	(SM) Gray, loose to medium dense, silty SAND, strong odor, medium sheen -BASALT- Bottom of borehole at 7.0 feet.
							8	
							9	
							10	

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Soil Boring: SB-22

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/4/2018
Date Completed: 4/4/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.0				ML		2	(ML) Dark brown to black, clayey SILT with trace gravel, no odor, slight sheen
Damp	0.3				ML		3	(ML) Dark brown to black, clayey SILT with trace gravel, no odor, no sheen
Wet	0.5		SB-22-3.5	G <1.2 D <3.8 HO <13 B = 0.003	ML		4	(ML) Dark brown to black, clayey SILT with trace gravel, no odor, no sheen Groundwater encountered at 4.0' at time of drilling
Wet					ML		5	(ML) Light brown, soft, clayey SILT, no odor, no sheen
Wet	1.5		SB-22-6.0	G = 91 D = 200 HO <14 B <0.026	SM		6	(SM) Gray, loose, silty SAND, strong odor, heavy sheen
Wet	110.3				SM		7	(SM) Gray, loose, silty SAND, strong odor, heavy sheen
	123.3						8	-BASALT- Bottom of borehole at 7.5 feet.
							9	
							10	

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Soil Boring: SB-23

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/3/2018
Date Completed: 4/3/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 9 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Wet	1.5				SM		1	(SM) Dark brown, silty SAND with trace gravel, no odor, no sheen
Moist	1.1				ML		2	(ML) Dark brown, sandy SILT, no odor, no sheen
Wet	0.4		SB-23-2.5	G <1.1 D <3.8 HO <13 B = 0.003	ML		3	(ML) Dark brown SILT with trace gravel, no odor, no sheen
Wet	0.3		SB-23-3.5	G <1.4 D = 4.3 HO = 15 B = 0.002	ML		4	(ML) Dark brown SILT with trace gravel, no odor, no sheen Groundwater encountered at 4.0' at time of drilling
Wet	0.2				ML		5	(ML) Dark brown SILT with trace gravel, no odor, no sheen
Wet	0.2				ML		6	(ML) Dark brown SILT with trace gravel, no odor, no sheen
Wet	0.2				ML		7	(ML) Dark brown SILT with trace gravel, no odor, no sheen
Wet	11.5		SB-23-7.5	G = 380 D = 83 HO <11 B <0.018	SM		8	(SM) Brown, loose, silty SAND with gravel, strong odor, heavy sheen
Damp	695				SM		9	(SM) Brown to gray, medium dense, fine to medium, silty SAND with trace gravel and basalt at base, strong odor, moderate to heavy sheen
								--BASALT- Bottom of borehole at 9.0 feet.
							10	

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Soil Boring: SB-24

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/11/2018
Date Completed: 4/11/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
							1	
Damp	3.1		SB-24-2.0	G <1.2 D <3.7 HO <12 B = 0.003	ML		2	(ML) Brown, loose, clayey SILT, slight odor, no sheen
Damp	30.3						3	(ML) Brown, loose, clayey SILT, slight odor, no sheen
Damp	95				ML			
Damp	105.8		SB-24-4.0	G = 730 D = 3200 HO <260 B <0.034			4	(ML) Gray, loose SILT with trace sand, strong odor, slight sheen
					ML			
Wet	108.3						5	(ML) Gray, loose SILT with trace sand, strong odor, heavy sheen Groundwater encountered at 5.0' at time of drilling
					ML			
Wet	663						6	(ML) Gray, loose SILT with trace sand, strong odor, heavy sheen
					ML			
Wet	688		SB-24-6.5	G = 1500 D = 1700 HO <130 B = 0.068				(ML) Gray, loose SILT with trace sand, strong odor, heavy sheen
					ML		7	-BASALT- Bottom of borehole at 7.0 feet.
							8	
							9	
							10	

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Soil Boring: SB-25

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/11/2018
Date Completed: 4/11/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.2				ML		1	(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
Damp					ML		2	(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
Damp	1.2				ML			(ML) Gray, medium dense SILT, strong odor, no sheen
Damp	98.7		SB-25-3.0	G = 650 D = 4100 HO <260 B <0.033	ML		3	(ML) Gray, medium dense SILT, strong odor, heavy sheen
Damp	92.8				ML		4	(ML) Gray, medium dense SILT, strong odor, heavy sheen
								Groundwater encountered at 4.5' at time of drilling
Wet	112.2				ML		5	(ML) Gray, medium dense SILT, strong odor, heavy sheen
Wet	225.1				ML			(ML) Gray, medium dense SILT, strong odor, heavy sheen
Wet	1280		SB-25-6.0	G = 570 D = 1700 HO <140 B <0.036	ML		6	(ML) Gray, medium dense SILT, strong odor, heavy sheen
								(ML) Gray, medium dense SILT, strong odor, heavy sheen
Wet	788				ML		7	
							8	-BASALT- Bottom of borehole at 7.5 feet.
							9	
							10	

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Soil Boring: SB-26

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/11/2018
Date Completed: 4/11/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	2.1				ML		1	(ML) Black, loose SILT with trace gravel and woody debris, no odor, no sheen
Damp	2.8				ML		2	(ML) Black, loose SILT with trace gravel and woody debris, no odor, no sheen
Damp	3.2		SB-26-3.5	G <1.3 D <3.8 HO <13 B = 0.002	ML		3	(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
Wet	3.1				ML		4	(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen Groundwater encountered at 4.5' at time of drilling
Wet	2.8				SM		5	(SM) Brown to gray, loose, medium to coarse, silty SAND with trace gravel, strong odor, moderate sheen
Wet	3.4		SB-26-6.0	G = 600 D = 26 HO <13 B <0.035	SM		6	(SM) Gray, loose, medium to coarse, silty SAND with trace gravel, strong odor, moderate sheen
Wet	3.8				SM		7	(SM) Gray, loose, medium to coarse, silty SAND with trace gravel, strong odor, moderate sheen
							8	-BASALT- Bottom of borehole at 7.0 feet.
							9	
							10	

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Soil Boring: SB-27

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/12/2018
Date Completed: 4/12/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7.25 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
							1	
							2	
Damp	0.1				ML			(ML) Brown, loose to slightly dense SILT, no odor, no sheen (fill)
Damp	0.1				ML		3	(ML) Brown, loose to slightly dense SILT, no odor, no sheen (fill)
Damp	0.1				ML			(ML) Brown, loose to slightly dense SILT, no odor, no sheen (fill)
Damp	0.2		SB-27-4.0	G <1.1 D <3.6 HO <12 B = 0.0008	ML		4	(ML) Brown, loose to slightly dense SILT, no odor, no sheen (fill)
Damp	0.1				ML		5	(ML) Brown, loose to slightly dense SILT, no odor, no sheen (fill)
					GP			(GP) Pebbly GRAVEL, no odor, no sheen Groundwater encountered at 5.5' at time of drilling
Wet	0.2						6	(SM) Gray, loose, silty SAND, slight odor, no sheen
					SM			
Wet	0.1		SB-27-7.0	G <1.3 D <3.7 HO <12 B <0.0004	SM		7	(SM) Gray, loose, silty SAND, slight odor, no sheen
								-BASALT Bottom of borehole at 7.3 feet.
							8	
							9	
							10	

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Soil Boring: SB-28

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/12/2018
Date Completed: 4/12/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoill/Fill
							1	
							2	
Damp	0.0				ML		3	(ML) Brown, loose, clayey SILT with debris (fill), no odor, no sheen
Damp	0.0				ML		4	(ML) Brown, loose, clayey SILT with debris (fill), no odor, no sheen
Damp	0.0		SB-28-4.5	G <1.4 D <3.8 HO <13 B = 0.001	ML		5	(ML) Brown, loose, clayey SILT with debris (fill), no odor, no sheen
Wet	0.0		SB-28-5.5	G <1.4 D <3.9 HO <13 B = 0.0007	ML		6	(ML) Brown to light brown, loose, clayey SILT with orange mottling, no odor, no sheen Groundwater encountered at 6.0' at time of drilling
Wet	8.6		SB-28-6.5	G = 12 D = 12 HO <13 B <0.0005	SM		7	(SM) Gray, loose, silty SAND, strong odor, no sheen -BASALT- Bottom of borehole at 7.0 feet.
							8	
							9	
							10	

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Soil Boring: SB-29

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/11/2018
Date Completed: 4/11/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
							1	
Damp	2.1				ML		2	(ML) Dark brown, loose, clayey SILT with sand, woody debris (fill), no odor, no sheen
Damp	2.8				ML		3	(ML) Dark brown, loose, clayey SILT with sand, woody debris (fill), no odor, no sheen
Damp	2.1				ML			(ML) Dark brown, loose, clayey SILT with sand, woody debris (fill), no odor, no sheen
Damp	3.9		SB-29-4.0	G <1.5 D <3.8 HO = 14 B = 0.003	ML		4	(ML) Brown, loose to medium dense SILT, no odor, no sheen
Damp	14.3				SM		5	(SM) Gray, loose, silty SAND, strong odor, moderate sheen Groundwater encountered at 5.25' at time of drilling
Wet	243.4		SB-29-6.0	G = 920 D = 2300 HO <130 B = 0.19	SM		6	(SM) Gray, loose, silty SAND, strong odor, heavy sheen
Wet	198.3				SM		7	(SM) Gray, loose, silty SAND, strong odor, heavy sheen
								-BASALT- Bottom of borehole at 7.0 feet.
							8	
							9	
							10	

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Soil Boring: SB-30

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/10/2018
Date Completed: 4/10/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.1				ML		1.5	(ML) Dark brown, medium dense, clayey SILT with trace gravel, no odor, no sheen
Damp	0.5				ML		2.5	(ML) Dark brown, medium dense, clayey SILT with trace gravel, no odor, no sheen
Damp	0.7		SB-30-3.5	G <1.3 D <3.8 HO <13 B = 0.002	ML		3.5	(ML) Dark brown, medium dense, clayey SILT with trace gravel, slight odor, no sheen
Damp	0.4				ML		4.5	(ML) Dark brown, medium dense, clayey SILT with trace gravel, slight odor, no sheen
Wet	88.7		SB-30-5.5	G = 430 D = 310 HO <13 B <0.039	SM		5	(SM) Gray, loose, silty SAND with trace gravel, strong odor, no sheen Groundwater encountered at 5.0' at time of drilling
					SM		5.5	(SM) Gray, loose, silty SAND with trace gravel, strong odor, moderate sheen
Wet	65.7				SM		6.5	(SM) Gray, loose, silty SAND with trace gravel, strong odor, moderate sheen
							7	-BASALT- Bottom of borehole at 7.0 feet.
							8	
							9	
							10	

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Soil Boring: SB-31

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/12/2018
Date Completed: 4/12/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.0				ML		2	(ML) Light brown, medium dense SILT with trace fine gravel, no odor, no sheen
Damp	0.0				ML		3	(ML) Light brown, medium dense SILT with trace fine gravel, no odor, no sheen
Damp	0.1		SB-31-3.5	G <1.4 D <3.7 HO <12 B = 0.001	ML		4	(ML) Light brown, medium dense SILT with trace fine gravel, no odor, no sheen
Damp	0.0				ML		5	(ML) Light brown, medium dense SILT with trace fine gravel, no odor, no sheen
Damp	0.3				ML		6	(ML) Light brown, medium dense SILT with trace fine gravel, no odor, no sheen Groundwater encountered at 5.5' at time of drilling
Wet	0.2		SB-31-6.5	G <1.1 D <3.7 HO <12 B <0.0005	ML		7	(ML) Light brown, medium dense SILT with trace fine gravel, no odor, no sheen
Wet	0.2							
							8	-BASALT- Bottom of borehole at 7.5 feet.
							9	
							10	

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Soil Boring: SB-32

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/11/2018
Date Completed: 4/11/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.5						1	
					ML		2	(ML) Brown to black, loose, clayey SILT, no odor, no sheen
Damp	0.6							(ML) Brown to black, loose, clayey SILT, no odor, no sheen
					ML		3	
Damp	0.8		SB-32-3.5	G <1.3 D <3.7 HO <12 B = 0.002				(ML) Brown to black, loose, clayey SILT, no odor, no sheen
					ML		4	
								Basalt pieces, cobbles
Wet	0.9		SB-32-5.0	G = 9.7 D <4.0 HO <13 B <0.0006	SM		5	(SM) Gray, loose, silty SAND with trace gravel, strong odor, no sheen Groundwater encountered at 5.0' at time of drilling
								(SM) Gray, loose, silty SAND with trace gravel, strong odor, moderate sheen
Wet	1.1				SM		6	
								-BASALT- Bottom of borehole at 6.5 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-33

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/11/2018
Date Completed: 4/11/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 5.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
								Dense silty GRAVEL/Topsoil/Fill
Damp							1	
								(ML) Dark brown SILT with basalt cobbles (fill), no odor, no sheen
Damp					ML		2	
Damp	0.8		SB-33-3.0	G <1.2 D <3.7 HO <12 B = 0.002			3	(ML) Dark brown SILT with basalt cobbles (fill), no odor, no sheen
					ML			
Damp	0.5						4	(ML) Dark brown SILT with basalt cobbles (fill), no odor, no sheen Groundwater encountered at 4.0' at time of drilling
					ML			
Damp	0.6							(ML) Dark brown SILT with basalt cobbles (fill), no odor, no sheen
					ML			
Wet	0.8		SB-33-5.0	G <1.2 D <3.6 HO <12 B = 0.002	ML		5	(ML) Dark brown SILT with basalt cobbles (fill), no odor, no sheen
					SM			(SM) Brown to gray, loose, silty SAND, no odor, no sheen
								-BASALT- Bottom of borehole at 5.5 feet.
							6	
							7	
							8	
							9	
							10	

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Soil Boring: SB-34

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/11/2018
Date Completed: 4/11/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 5.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							1	Dense silty GRAVEL/Topsoil/Fill
Damp	0.8						2	
Damp								
Damp	1.4		SB-34-3.0	G <1.2 D <3.7 HO <12 B = 0.003	ML		3	(ML) Brown, loose SILT, no odor, no sheen
Wet	1.4						4	(ML) Brown, loose SILT, no odor, no sheen Groundwater encountered at 4.0' at time of drilling
Wet	1.4		SB-34-5.0	G <1.2 D <3.7 HO <12 B = 0.001	ML		5	(ML) Brown, loose SILT, no odor, no sheen
								-BASALT- Bottom of borehole at 5.5 feet.
							6	
							7	
							8	
							9	
							10	

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Soil Boring: SB-35

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/11/2018
Date Completed: 4/11/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 3 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	1.0				ML		2	(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
Damp	1.3		SB-35-2.5	G <1.1 D <3.4 HO <11 B = 0.001	ML		3	(ML) Brown, loose, clayey SILT with trace gravel, no odor, no sheen
								-BASALT- No groundwater encountered at time of drilling Bottom of borehole at 3.0 feet.
							4	
							5	
							6	
							7	
							8	
							9	
							10	

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Soil Boring: SB-36

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/10/2018
Date Completed: 4/10/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	103.3				ML		2	(ML) Brown, loose SILT, strong odor, no sheen
Damp	98.3		SB-36-2.5	G = 34 D <3.6 HO <12 B = 0.005	ML			(ML) Brown, loose SILT, strong odor, no sheen
Damp	86.3				ML		3	(ML) Brown, loose SILT, strong odor, no sheen
Damp	90.3				ML			(ML) Brown, loose SILT, strong odor, no sheen
Wet	76.3		SB-36-4.0	G = 32 D <3.8 HO <13 B = 0.004	ML		4	(ML) Brown, loose SILT, strong odor, no sheen
Wet	50.1				ML			Groundwater encountered at 4.25' at time of drilling (ML) Brown, loose SILT, strong odor, no sheen
Wet					ML		5	(ML) Brown, loose SILT, strong odor, no sheen
Wet					ML			(ML) Brown, loose SILT, strong odor, no sheen
Wet	1286.5		SB-36-6.0	G = 1400 D = 240 HO = 13 B = 0.065	SM		6	(SM) Gray, loose, silty SAND, strong odor, strong sheen
Wet	1308.1				SM			(SM) Gray, loose, silty SAND, strong odor, strong sheen
							7	-BASALT- Bottom of borehole at 7.0 feet.
							8	
							9	
							10	

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Soil Boring: SB-37

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/5/2018
Date Completed: 4/5/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	1.0				ML		2	(ML) Dark brown to black, loose, clayey SILT with trace gravel, no odor, slight sheen
Damp	1.0				ML		3	(ML) Dark brown to black, loose, clayey SILT with trace gravel, no odor, slight sheen
	1		SB-37-3.5	G <1.4 D = 26 HO = 93 B = 0.003	ML			(ML) Dark brown to black, loose, clayey SILT with trace gravel, no odor, slight sheen
							4	Groundwater encountered at 4.0' at time of drilling
Wet	1.8				ML		5	(ML) Dark brown to black, loose, clayey SILT with trace gravel, no odor, no sheen
Wet	1.1		SB-37-5.5	G = 520 D = 390 HO <13 B <0.034				(ML) Gray, loose, sandy SILT, strong odor, heavy sheen
Wet	3.9						6	
Wet	49.8				ML			(ML) Gray, loose, sandy SILT, strong odor, heavy sheen
					ML		7	-BASALT- Bottom of borehole at 7.0 feet.
							8	
							9	
							10	

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Soil Boring: SB-38

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/5/2018
Date Completed: 4/5/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 2.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	48		SB-38-2.0	G = 15 D = 9.9 HO <13 B <0.038	ML		1	(ML) Brown to black, loose, clayey SILT, strong odor, no sheen
							2	-REFUSAL- No groundwater encountered at time of drilling Bottom of borehole at 2.5 feet.
							3	
							4	
							5	
							6	
							7	
							8	
							9	
							10	

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Soil Boring: SB-39

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/10/2018
Date Completed: 4/10/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
								Dense silty GRAVEL/Topsoil/Fill
Damp	0.2				ML		1	(ML) Brown to black, loose to dense SILT, no odor, no sheen
Damp	0.2							(ML) Brown to black, loose to dense SILT, no odor, no sheen
					ML		2	
Damp	0.2							(ML) Brown to black, loose to dense SILT, no odor, no sheen
					ML		3	
Damp	0.1		SB-39-3.5	G <1.3 D <3.8 HO <13 B = 0.003	ML			(ML) Brown to black, loose to dense SILT, no odor, no sheen
							4	Groundwater encountered at 4.0' at time of drilling
Wet								(ML) Brown to black, loose to dense SILT, no odor, no sheen
					ML		5	
Wet	86.6				SM			(SM) Gray, loose, silty SAND with trace gravel, strong odor, moderate sheen
Wet	50.1		SB-39-6.0	G = 880 D = 230 HO <13 B <0.031	SM		6	(SM) Gray, loose, silty SAND with trace gravel, strong odor, moderate sheen
Wet	989.8				SM			(SM) Gray, loose, silty SAND with trace gravel, strong odor, moderate sheen
							7	-BASALT- Bottom of borehole at 7.0 feet.
							8	
							9	
							10	

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Soil Boring: SB-40

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/11/2018
Date Completed: 4/11/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 7.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	1.0				ML		1	(ML) Brown, loose, clayey SILT, no odor, no sheen
Damp	0.8				ML		2	(ML) Brown, loose, clayey SILT, no odor, no sheen
Damp	1.5		SB-40-3.5	G <1.5 D <3.9 HO <13 B = 0.002	ML		3	(ML) Dark brown, loose SILT, no odor, no sheen
Wet	65.3				SM		4	(SM) Dark brown to gray, mottled, loose to firm, silty SAND to SILT, strong odor, slight sheen
Wet	85.6		SB-40-5.5	G = 280 D = 2000 HO <130 B <0.036	SM		5	Groundwater encountered at 5.0' at time of drilling (SM) Gray, loose to dense, silty SAND, strong odor, heavy sheen
Wet	1387.5				SM		6	(SM) Gray, loose to dense, silty SAND, strong odor, heavy sheen
Wet	158		SB-40-7.0	G = 2200 D = 260 HO <12 B <0.054	SM		7	(SM) Gray, loose to dense, silty SAND, strong odor, heavy sheen
							8	-BASALT- Bottom of borehole at 7.5 feet.
							9	
							10	

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Soil Boring: SB-41

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/17/2018
Date Completed: 4/17/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.1				ML		1	(ML) Dark brown, loose SILT with occasional gravel and sand, no odor, no sheen
Damp	0.0						2	(ML) Dark brown, loose SILT with occasional gravel and sand, no odor, no sheen
Wet	0.0		SB-41-3.0	G <1.4 D <3.9 HO <13 B = 0.002	ML		3	(ML) Dark brown, loose SILT with occasional gravel and sand, no odor, no sheen
Wet	0.1				ML			(ML) Dark brown, loose SILT with occasional gravel and sand, no odor, no sheen
Wet	0.1						4	(ML) Dark brown, loose SILT with occasional gravel and sand, no odor, no sheen
Wet	0.2				ML		5	(SM) Light brown, loose, fine silty SAND with occasional gravel, no odor, no sheen
Wet	0.1		SB-41-5.5	G = 2.5 D <3.9 HO <13 B = 0.0006	SM			(SM) Light brown, loose, fine silty SAND with occasional gravel, no odor, no sheen
					SM		6	-BASALT- Bottom of borehole at 6.0 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-42

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/17/2018
Date Completed: 4/17/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.1				ML		1	(ML) Dark brown, low plastic SILT with occasional gravel, sand, and organics (fill), no odor, no sheen
Wet	0.0		SB-42-2.0	G <1.5 D <3.9 HO <13 B = 0.003	ML		2	(ML) Dark brown, low plastic SILT with occasional gravel, sand, and organics (fill), no odor, no sheen Groundwater encountered at 2.5' during drilling
Wet	0.0				ML		3	(ML) Dark brown, low plastic SILT with occasional gravel, sand, and organics (fill), no odor, no sheen
Wet	0.0				ML		4	(ML) Dark brown, low plastic SILT with occasional gravel, sand, and organics (fill), no odor, no sheen
Wet	4.0				ML		5	(ML) Light brown, loose, sandy SILT, slight odor, no sheen
Wet	4.4		SB-42-5.5	G = 330 D = 140 HO <13 B <0.034	ML		6	(ML) Light brown, loose, sandy SILT, moderate odor, no sheen Bottom of borehole at 6.0 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-43

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/17/2018
Date Completed: 4/17/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
Damp	0.0							Dense silty GRAVEL/Topsoil/Fill
Damp	0.1				ML		1	(ML) Brown, loose SILT with trace clay, sand, and organics, no odor, no sheen
Damp	0.0				ML			(ML) Brown, loose SILT with trace clay, sand, and organics, no odor, no sheen
Damp	0.0				ML		2	(ML) Brown, loose SILT with occasional sand, no odor, no sheen
Damp	0.2		SB-43-2.5	G <1.2 D <3.8 HO <13 B = 0.003	ML			(ML) Brown, loose SILT with occasional sand, no odor, no sheen
Wet	0.1				ML		3	(ML) Brown, loose SILT with occasional sand, no odor, no sheen Groundwater encountered at 3.0' at time of drilling
					ML			(ML) Brown, loose SILT with occasional sand, no odor, no sheen
Wet	0.1				ML		4	(ML) Brown, loose SILT with occasional sand, no odor, no sheen
Wet	0.0				ML			(ML) Brown, loose SILT with occasional sand, no odor, no sheen
Wet	0.2				ML		5	(ML) Brown, loose SILT with occasional sand, no odor, no sheen
Wet	0.2		SB-43-5.5	G <1.2 D = 60 HO <13 B = 0.002	ML			(ML) Brown, loose SILT with occasional sand, no odor, no sheen
							6	-BASALT- Bottom of borehole at 6.0 feet.
							7	
							8	
							9	
							10	

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Soil Boring: SB-44

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA

Logged By: A. Wisher
Date Started: 4/17/2018
Date Completed: 4/17/2018

Driller: Cascade Drilling
Drill Method: Hand Auger
Total Boring Depth: 6.5 ft
Elevation: ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.1				ML		1	(ML) Dark brown, medium plastic, clayey SILT with occasional sand, no odor, no sheen
Damp	0.1				ML		2	(ML) Dark brown, medium plastic, clayey SILT with occasional sand, no odor, no sheen
Damp	0.2				ML		3	(ML) Dark brown, medium plastic, clayey SILT with occasional sand, no odor, no sheen
Damp	0.0				ML		4	(ML) Dark brown, medium plastic, clayey SILT with occasional sand, no odor, no sheen
Wet	0.1		SB-44-5.0	G <1.4 D = 37 HO = 33 B = 0.0008	ML		5	(ML) Dark brown, medium plastic, clayey SILT with occasional sand, no odor, no sheen Groundwater encountered at 5.0' at time of drilling
Wet	1.2				SM			(SM) Gray, loose, silty SAND with occasional gravel, slight odor
Wet	6.0		SB-44-6.0	G = 110 D = 20 HO <13 B <0.037	SM		6	(SM) Gray, loose, silty SAND with occasional gravel, moderate odor
							7	-BASALT- Bottom of borehole at 6.5 feet.
							8	
							9	
							10	

Soil Boring: SB-45

Project: 375289 Goldendale
Client: Chevron EMC
Location: 802 S Columbus Ave, Goldendale WA

Logged By: AW
Date Started: 9/24/2018
Date Completed: 9/24/2018

Driller: Cascade
Drill Method: Hand Auger
Total Boring Depth: 6.5 ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	Analyical Results (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	FILL. gravel, silt
	0.1							
	0.0				ML		1	(ML) dark brown to black, loose to firm, fine SILT, no odor, no sheen
	0.0						2	SAA, no odor, no sheen
damp	0.2		SB-45-3.5	G <0.3 D <3.7 HO <13 B = 0.002			3	SAA, no odor, no sheen
damp	148						4	(MLS) light gray to brown, dense, sandy SILT, strong odor, slight sheen
					MLS		5	
damp	114		SB-45-6.5	G = 270 D = 270 HO <12 B <0.029			6	SAA, strong odor, slight sheen
								Bottom of borehole at 6.5 feet.
							7	
							8	

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Soil Boring: SB-46

Project: 375289 Goldendale
Client: Chevron EMC
Location: 802 S Columbus Ave, Goldendale WA

Logged By: AW
Date Started: 9/28/2018
Date Completed: 9/28/2018

Driller: Cascade
Drill Method: Hand Auger
Total Boring Depth: 4.5 ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	Analyical Results (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
								FILL. gravel, silt
	0.1				MLS		1	(MLS) dark brown to black, loose, sandy SILT with occasional fine gravel, no odor, no sheen
	0.0						2	SAA, no odor, no sheen
	0.1		SB-46-3.0	G <0.3 D <3.6 HO <12 B = 0.001			3	SAA, no odor, no sheen
damp	0.0		SB-46-4.5	G <0.3 D <3.6 HO <12 B = 0.0008			4	SAA, no odor, no sheen
damp	0.0							
								Bottom of borehole at 4.5 feet.
							5	
							6	
							7	
							8	

Soil Boring: SB-47

Project: 375289 Goldendale
Client: Chevron EMC
Location: 802 S Columbus Ave, Goldendale WA

Logged By: AW
Date Started: 9/25/2018
Date Completed: 9/25/2018

Driller: Cascade
Drill Method: Hand Auger
Total Boring Depth: 7.5 ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	Analyical Results (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	FILL. gravel, silt
					ML		1	(ML) brown, loose SILT with occasional gravel, no odor, no sheen
dry	0.0						2	
dry	0.0		SB-47-3.5	G <0.3 D <3.4 HO = 12 B = 0.003			3	SAA, no odor, no sheen
							4	SAA, no odor, no sheen
							5	SAA, no odor, no sheen
							6	SAA, no odor, no sheen
damp	0.0		SB-47-7.5	G <0.3 D <3.7 HO <12 B = 0.001			7	
								Bottom of borehole at 7.5 feet.
							8	

Soil Boring: SB-48

Project: 375289 Goldendale
Client: Chevron EMC
Location: 802 S Columbus Ave, Goldendale WA

Logged By: AW
Date Started: 9/25/2018
Date Completed: 9/25/2018

Driller: Cascade
Drill Method: Hand Auger
Total Boring Depth: 7.5 ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	Analyical Results (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
								FILL. gravel, silt
dry	0.0				MLS		1	(MLS) brown, loose, sandy SILT, no odor, no sheen
	0.1						2	
dry	0.0		SB-48-3.5	G <0.3 D <3.4 HO = 18 B = 0.003			3	SAA
	0.0						4	SAA, no odor, no sheen
	0.0						5	SAA
	0.0						6	SAA
damp	0.0		SB-48-7.5	G <0.3 D <3.7 HO <12 B <0.0005			7	SAA, no odor, no sheen basalt encountered below 7.5 feet
								Bottom of borehole at 7.5 feet.
							8	

Soil Boring: SB-49

Project: 375289 Goldendale
Client: Chevron EMC
Location: 802 S Columbus Ave, Goldendale WA

Logged By: AW
Date Started: 9/25/2018
Date Completed: 9/25/2018

Driller: Cascade
Drill Method: Hand Auger
Total Boring Depth: 7 ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	Analyical Results (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
	0.0						1	FILL. silt, gravel, debris
					ML		2	(ML) brown, loose SILT with occasional cobbles, no odor, no sheen
dry	0.0		SB-49-3.0	G <0.3 D <3.4 HO <11 B = 0.003			3	SAA, no odor, no sheen
	0.0						4	SAA, no odor, no sheen
	0.0						5	SAA, no odor, no sheen
							6	SAA, no odor, no sheen
damp	0.0		SB-49-7.0	G <0.3 D <3.7 HO <12 B <0.0004			7	SAA, no odor, no sheen
								Bottom of borehole at 7.0 feet.
							8	

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Soil Boring: SB-50

Project: 375289 Goldendale
Client: Chevron EMC
Location: 802 S Columbus Ave, Goldendale WA

Logged By: AW
Date Started: 9/25/2018
Date Completed: 9/25/2018

Driller: Cascade
Drill Method: Hand Auger
Total Boring Depth: 7 ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	Analyical Results (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
	0.0						1	FILL. silt, gravel, debris
dry	0.0				ML		2	(ML) brown SILT with occasional cobbles, no odor, no sheen
	0.0						3	SAA, no odor, no sheen
	0.0						4	SAA, no odor, no sheen
	0.0						5	SAA, no odor, no sheen
	0.0						6	SAA, no odor, no sheen
							7	Bottom of borehole at 7.0 feet.
							8	

Soil Boring: SB-51

Project: 375289 Goldendale
Client: Chevron EMC
Location: 802 S Columbus Ave, Goldendale WA

Logged By: AS
Date Started: 12/6/2018
Date Completed: 12/6/2018

Driller: Cascade
Drill Method: Air Knife/ Hand Auger
Total Boring Depth: 5.35 ft

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	Analyical Results (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
								asphalt (9 inches)
							1	FILL. base rock dark gray, silt, gravel
							2	
	0.0		SB-51-2.5	G = 0.3 D <4.6 HO = 49 B = 0.0008				(CL-ML) dark brown and gray, clayey SILT, no odor, no sheen
					CL-ML		3	
							4	brown, clayey SILT, no odor, no sheen
	0.0		SB-51-5.0	G <0.3 D <5.0 HO <12 B = 0.0008				
							5	basalt encountered at 5.4 feet
								Bottom of borehole at 5.4 feet.
							6	
							7	
							8	

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18939 120th Ave NE, Suite 112
Bothell, WA, 98011

Monitoring Well: MW-5

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA
Logged By: A. Wisher

Date Started: 4/12/2018
Date Completed: 4/12/2018
Driller: Cascade Drilling
Drill Method: Hand Auger

Total Boring Depth: 6.5 ft
Hole Diameter: 2.5 in
Well Depth: 6.5 ft
TOC Elevation: ft

Well Diameter: 2 in
Well Screen: 0.010 Slot in
Filter Pack: Pre-pack 2/12 Sand
Well Casing: Schedule 40 PVC

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION	WELL DIAGRAM
							1	Dense silty GRAVEL/Topsoil/Fill	Well Box Schedule 40 PVC Riser Concrete Seal
					ML		2	(ML) Brown, loose to firm, clayey SILT with debris (fill), no odor, no sheen	
Damp	0.0								Bentonite
					ML		3	(ML) Brown, loose to firm, clayey SILT, no odor, no sheen	
Damp	0.0								2/12 Sand Pack
					ML		4	(ML) Brown, loose to firm, clayey SILT, no odor, no sheen	
Damp	0.1		MW-5-4.5	G <1.6 D <4.0 HO <13 B = 0.002	ML			(ML) Brown, loose to firm, clayey SILT, no odor, no sheen	
							5		0.010 Pre-pack
Wet	14.3		MW-5-5.5	G = 16 D = 16 HO <13 B = 0.0005	SM			(SM) Gray, loose, silty SAND, strong odor, no sheen Groundwater encountered at 5.5' at time of drilling	
					SM		6	(SM) Gray, loose, silty SAND, strong odor, no sheen	
								-BASALT- Bottom of borehole at 6.5 feet.	
							7		
							8		
							9		
							10		

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18939 120th Ave NE, Suite 112
Bothell, WA, 98011

Monitoring Well: MW-6

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA
Logged By: A. Wisher

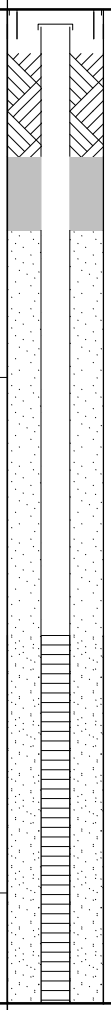
Date Started: 4/12/2018
Date Completed: 4/12/2018
Driller: Cascade Drilling
Drill Method: Hand Auger

Total Boring Depth: 6.75 ft
Hole Diameter: 2.5 in
Well Depth: 6.75 ft
TOC Elevation: ft

Well Diameter: 2 in
Well Screen: 0.010 Slot in
Filter Pack: Pre-pack 2/12 Sand
Well Casing: Schedule 40 PVC

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION
							0	Dense silty GRAVEL/Topsoil/Fill
Damp	0.2				ML		2	(ML) Brown, loose SILT with trace gravel, no odor, no sheen
Damp	0.1				ML		3	(ML) Brown, loose SILT with trace gravel, no odor, no sheen
Damp	0.1		MW-6-4.0	G <1.2 D = 95 HO = 360 B = 0.001	ML		4	(ML) Brown, loose SILT with trace gravel, no odor, no sheen
Damp	0.0				ML		5	(ML) Brown, loose SILT with trace gravel, no odor, no sheen
Wet	0.2		MW-6-5.5	G <1.2 D = 34 HO = 120 B <0.0005	SM		6	(SM) Brown, loose, silty SAND, no odor, no sheen Groundwater encountered at 6.0' at time of drilling
Wet	0.2				SM			(SM) Brown, loose, silty SAND, no odor, no sheen
							7	-BASALT- Bottom of borehole at 6.8 feet.
							8	
							9	
							10	

WELL DIAGRAM



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Monitoring Well: MW-7

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA
Logged By: A. Wisher

Date Started: 4/12/2018
Date Completed: 4/12/2018
Driller: Cascade Drilling
Drill Method: Hand Auger

Total Boring Depth: 5 ft
Hole Diameter: 2.5 in
Well Depth: 5.0 ft
TOC Elevation: ft

Well Diameter: 2 in
Well Screen: 0.010 Slot in
Filter Pack: Pre-pack 2/12 Sand
Well Casing: Schedule 40 PVC

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION	WELL DIAGRAM
							0	Dense silty GRAVEL/Topsoil/Fill	Well Box Schedule 40 PVC Riser Concrete Seal
Damp	0.1				ML		1	(ML) Brown, loose SILT with trace gravel, no odor, no sheen	Bentonite
Damp	0.0				ML		2	(ML) Brown, loose SILT with trace gravel, no odor, no sheen	
Damp	0.0				ML			(ML) Brown, loose SILT with trace gravel, no odor, no sheen	
Damp	0.2				ML		3	(ML) Brown, loose SILT with trace gravel, no odor, no sheen	2/12 Sand Pack
Damp	0.1		MW-7-4.0 MW-7-3.5	G <1.2 D <3.7 HO <12 B = 0.003	ML			(ML) Brown, loose SILT with trace gravel, no odor, no sheen	0.010 Pre-pack
Damp	0.1			G <1.3 D <3.7 HO <12 B = 0.002	ML		4	(ML) Brown, loose SILT with trace gravel, no odor, no sheen	
Wet	0.1				ML			(ML) Brown, loose SILT with trace gravel, no odor, no sheen	
							5	-BASALT- Groundwater encountered at 5.0' at time of drilling Bottom of borehole at 5.0 feet.	
							6		
							7		
							8		
							9		
							10		

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Monitoring Well: MW-8

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA
Logged By: A. Wisher

Date Started: 4/10/2018
Date Completed: 4/10/2018
Driller: Cascade Drilling
Drill Method: Hand Auger

Total Boring Depth: 5 ft
Hole Diameter: 2.5 in
Well Depth: 5.0 ft
TOC Elevation: ft

Well Diameter: 2 in
Well Screen: 0.010 Slot in
Filter Pack: Pre-pack 2/12 Sand
Well Casing: Schedule 40 PVC

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION	WELL DIAGRAM
							0	Dense silty GRAVEL/Topsoil/Fill	Well Box Schedule 40 PVC Riser Concrete Seal
Damp	1.5				ML		1	(ML) Brown to dark brown, loose SILT with trace gravel, no odor, no sheen	Bentonite
Damp	1.7				ML		2	(ML) Brown to dark brown, loose SILT with trace gravel, no odor, no sheen	
Wet	1.8		MW-8-3.0	G <1.3 D <3.9 HO <13 B = 0.002	ML		3	(ML) Brown to dark brown, loose SILT with trace gravel, no odor, no sheen Groundwater encountered at 3.0' at time of drilling	2/12 Sand Pack 0.010 Pre-pack
					ML		4	(ML) Brown to dark brown, loose SILT with trace gravel, no odor, no sheen	
Wet	1.9		MW-8-4.5	G <1.2 D <16 HO <13 B = 0.001	ML		5	(ML) Brown to dark brown, loose SILT with trace gravel, no odor, no sheen	
								-BASALT- Bottom of borehole at 5.0 feet.	
							6		
							7		
							8		
							9		
							10		

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Monitoring Well: MW-9

Project: Former Chevron Bulk Plant No. 375289
Client: Chevron CEMC
Location: 808 S Columbus Ave, Goldendale, WA
Logged By: A. Wisher

Date Started: 4/4/2018
Date Completed: 4/4/2018
Driller: Cascade Drilling
Drill Method: Hand Auger

Total Boring Depth: 7 ft
Hole Diameter: 2.5 in
Well Depth: 7.0 ft
TOC Elevation: ft

Well Diameter: 2 in
Well Screen: 0.010 Slot in
Filter Pack: Pre-pack 2/12 Sand
Well Casing: Schedule 40 PVC

MOISTURE CONTENT	ORGANIC VAPOR (ppm)	SAMP. INTERVAL	ANALYTICAL SAMPLE	ANALYTICAL RESULTS (mg/kg)	U.S.C.S. SYMBOL	GRAPHIC LOG	DEPTH (ft)	LITHOLOGY/DESCRIPTION	WELL DIAGRAM
							0	Dense silty GRAVEL/Topsoil/Fill	Well Box Sched 40 PVC Riser Concrete Seal Bentonite
Damp	0.2				ML		2	(ML) Dark brown to black, loose, clayey SILT, no odor, no sheen	
Damp	0.2				ML		3	(ML) Dark brown to black, loose, clayey SILT, no odor, no sheen	
Wet	1.0		MW-9-3.5	G <1.2 D <3.9 HO <13 B = 0.002	ML			(ML) Dark brown to black, loose, clayey SILT, no odor, no sheen	
							4	Groundwater encountered at 4.0' at time of drilling	2/12 Sand Pack 0.010 Pre-pack
Wet	1.0				ML		5	(ML) Dark brown to black, loose, clayey SILT, no odor, no sheen	
							6		
Wet	1.0		MW-9-6.5	G <1.4 D <4.0 HO <13 B <0.0005	ML			(ML) Dark brown to black, loose, clayey SILT, no odor, no sheen	
Wet	125				SM		7	(SM) Gray, loose, silty SAND with basalt cobbles, strong odor, heavy sheen	
								-BASALT- Bottom of borehole at 7.0 feet.	
							8		
							9		
							10		

Appendix B:
Laboratory Reports

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

Report Date: April 30, 2018 00:20

Project: 375289

Account #: 11255
Group Number: 1931443
SDG: UTA11
PO Number: 0015275850
Release Number: ROEHL
State of Sample Origin: WA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To Leidos

Attn: Don Wyll

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
SB-30-S-3.5-180411 Grab Soil	04/11/2018 13:05	9556566
SB-30-S-5.5-180411 Grab Soil	04/11/2018 13:20	9556567
SB-25-S-3.0-180411 Grab Soil	04/11/2018 13:35	9556568
SB-25-S-6.0-180411 Grab Soil	04/11/2018 13:50	9556569
SB-24-S-2.0-180411 Grab Soil	04/11/2018 14:10	9556570
SB-24-S-4.0-180411 Grab Soil	04/11/2018 14:15	9556571
SB-24-S-6.5-180411 Grab Soil	04/11/2018 14:25	9556572
SB-29-S-4.0-180411 Grab Soil	04/11/2018 14:35	9556573
SB-29-S-6.0-180411 Grab Soil	04/11/2018 14:45	9556574
SB-26-S-3.5-180411 Grab Soil	04/11/2018 15:00	9556575
DUP-3-SD-180411 Grab Soil	04/11/2018 15:00	9556576
SB-26-S-6.0-180411 Grab Soil	04/11/2018 15:10	9556577
TB-8-T-180411 Water	04/11/2018 16:05	9556578

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **SB-30-S-3.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556566
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 13:05
SDG#: UTA11-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0005	0.84
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.84
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.84
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.84
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.84
11995	Toluene	108-88-3	N.D.	0.001	0.84
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.84
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.3	25.91
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.8	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	25.7	3.24	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	20.9	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 14:14	Jennifer K Howe	0.84
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 13:05	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 13:05	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 13:05	Client Supplied	1

Sample Description: **SB-30-S-3.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 13:05
SDG#: UTA11-01

Chevron
ELLE Sample #: SW 9556566
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A34A	04/18/2018 01:48	Jeremy C Giffin	25.91
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 13:05	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181080046A	04/25/2018 01:00	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181080046A	04/19/2018 08:50	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 19:42	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **SB-30-S-5.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556567
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 13:20
SDG#: UTA11-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.039	59.46
11995	1,2-Dibromoethane	106-93-4	N.D.	0.079	59.46
11995	1,2-Dichloroethane	107-06-2	N.D.	0.079	59.46
11995	Ethylbenzene	100-41-4	N.D.	0.079	59.46
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.039	59.46
11995	Toluene	108-88-3	N.D.	0.079	59.46
11995	Xylene (Total)	1330-20-7	N.D.	0.079	59.46
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	0.003	0.0009	1
12969	Benzo(a)pyrene	50-32-8	0.001	0.0009	1
12969	Benzo(b)fluoranthene	205-99-2	0.002	0.0009	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0009	1
12969	Chrysene	218-01-9	0.007	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0009	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0009	1
12969	Naphthalene	91-20-3	N.D.	0.0009	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	430	54	1016.93
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	310	4.0	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	38.5	2.79	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	24.4	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-30-S-5.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 13:20
SDG#: UTA11-02

Chevron
ELLE Sample #: SW 9556567
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181143AA	04/24/2018 14:51	Stephen C Nolte	59.46
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 13:20	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 13:20	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 13:20	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLE026	04/24/2018 03:20	William H Saadeh	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLE026	04/20/2018 18:10	Sally L Appleyard	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A34A	04/18/2018 06:30	Jeremy C Giffin	1016.93
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 13:20	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181080046A	04/25/2018 02:00	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181080046A	04/19/2018 08:50	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 20:02	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **SB-25-S-3.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556568
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 13:35
SDG#: UTA11-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.033	51.47
11995	1,2-Dibromoethane	106-93-4	N.D.	0.066	51.47
11995	1,2-Dichloroethane	107-06-2	N.D.	0.066	51.47
11995	Ethylbenzene	100-41-4	N.D.	0.066	51.47
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.033	51.47
11995	Toluene	108-88-3	N.D.	0.066	51.47
11995	Xylene (Total)	1330-20-7	N.D.	0.066	51.47
	Reporting limits were raised due to interference from the sample matrix.				
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	650	34	664.54
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	4,100	77	20
08272	Heavy Range Organics C24-C40	n.a.	N.D.	260	20
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	22.5	2.72	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	22.3	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181143AA	04/24/2018 15:13	Stephen C Nolte	51.47
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 13:35	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 13:35	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 13:35	Client Supplied	1

Sample Description: **SB-25-S-3.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 13:35
SDG#: UTA11-03

Chevron
ELLE Sample #: SW 9556568
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/20/2018 03:09	Jeremy C Giffin	664.54
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 13:35	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181080046A	04/25/2018 16:44	Thomas C Wildermuth	20
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181080046A	04/19/2018 08:50	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 20:05	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **SB-25-S-6.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556569
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 13:50
SDG#: UTA11-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.036	52.29
11995	1,2-Dibromoethane	106-93-4	N.D.	0.072	52.29
11995	1,2-Dichloroethane	107-06-2	N.D.	0.072	52.29
11995	Ethylbenzene	100-41-4	0.080	0.072	52.29
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.036	52.29
11995	Toluene	108-88-3	N.D.	0.072	52.29
11995	Xylene (Total)	1330-20-7	N.D.	0.072	52.29
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	0.011	0.009	10
12969	Benzo(a)pyrene	50-32-8	N.D.	0.009	10
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.009	10
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.009	10
12969	Chrysene	218-01-9	0.036	0.005	10
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.009	10
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.009	10
12969	Naphthalene	91-20-3	3.8	0.009	10
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	570	57	1033.99
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	1,700	41	10
08272	Heavy Range Organics C24-C40	n.a.	N.D.	140	10
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	28.3	2.91	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	26.9	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-25-S-6.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 13:50
SDG#: UTA11-04

Chevron
ELLE Sample #: SW 9556569
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181143AA	04/24/2018 15:36	Stephen C Nolte	52.29
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 13:50	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 13:50	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 13:50	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLE026	04/25/2018 11:30	Catherine E Bachman	10
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLE026	04/20/2018 18:10	Sally L Appleyard	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/20/2018 04:24	Jeremy C Giffin	1033.99
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 13:50	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181080046A	04/25/2018 17:04	Thomas C Wildermuth	10
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181080046A	04/19/2018 08:50	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 20:15	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **SB-24-S-2.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556570
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 14:10
SDG#: UTA11-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.003	0.0005	0.8
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.8
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.8
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.8
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.8
11995	Toluene	108-88-3	0.001	0.001	0.8
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.8
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.2	24.81
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	21.2	3.21	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	19.4	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 14:37	Jennifer K Howe	0.8
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 14:10	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 14:10	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 14:10	Client Supplied	1

Sample Description: **SB-24-S-2.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 14:10
SDG#: UTA11-05

Chevron
ELLE Sample #: SW 9556570
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/19/2018 19:39	Jeremy C Giffin	24.81
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 14:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181080046A	04/25/2018 02:41	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181080046A	04/19/2018 08:50	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 20:18	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **SB-24-S-4.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556571
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 14:15
SDG#: UTA11-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.034	51.77
11995	1,2-Dibromoethane	106-93-4	N.D.	0.068	51.77
11995	1,2-Dichloroethane	107-06-2	N.D.	0.068	51.77
11995	Ethylbenzene	100-41-4	N.D.	0.068	51.77
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.034	51.77
11995	Toluene	108-88-3	N.D.	0.068	51.77
11995	Xylene (Total)	1330-20-7	N.D.	0.068	51.77
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.009	10
12969	Benzo(a)pyrene	50-32-8	N.D.	0.009	10
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.009	10
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.009	10
12969	Chrysene	218-01-9	0.024	0.004	10
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.009	10
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.009	10
12969	Naphthalene	91-20-3	1.2	0.009	10
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	730	56	1070.46
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	3,200	78	20
08272	Heavy Range Organics C24-C40	n.a.	N.D.	260	20
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	27.8	2.94	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	23.3	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-24-S-4.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 14:15
SDG#: UTA11-06

Chevron
ELLE Sample #: SW 9556571
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181143AA	04/24/2018 15:58	Stephen C Nolte	51.77
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 14:15	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 14:15	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 14:15	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLE026	04/25/2018 12:00	Catherine E Bachman	10
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLE026	04/20/2018 18:10	Sally L Appleyard	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/20/2018 05:02	Jeremy C Giffin	1070.46
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 14:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181080046A	04/25/2018 17:24	Thomas C Wildermuth	20
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181080046A	04/19/2018 08:50	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 20:21	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **SB-24-S-6.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556572
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 14:25
SDG#: UTA11-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.068	0.029	46.05
11995	1,2-Dibromoethane	106-93-4	N.D.	0.059	46.05
11995	1,2-Dichloroethane	107-06-2	N.D.	0.059	46.05
11995	Ethylbenzene	100-41-4	0.12	0.059	46.05
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.029	46.05
11995	Toluene	108-88-3	N.D.	0.059	46.05
11995	Xylene (Total)	1330-20-7	N.D.	0.059	46.05
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.008	10
12969	Benzo(a)pyrene	50-32-8	N.D.	0.008	10
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.008	10
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.008	10
12969	Chrysene	218-01-9	0.024	0.004	10
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.008	10
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.008	10
12969	Naphthalene	91-20-3	3.2	0.008	10
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	1,500	220	4289.35
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	1,700	38	10
08272	Heavy Range Organics C24-C40	n.a.	N.D.	130	10
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	28.2	3.00	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	21.3	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-24-S-6.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 14:25
SDG#: UTA11-07

Chevron
ELLE Sample #: SW 9556572
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181143AA	04/24/2018 17:06	Stephen C Nolte	46.05
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 14:25	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 14:25	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 14:25	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLE026	04/25/2018 12:29	Catherine E Bachman	10
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLE026	04/20/2018 18:10	Sally L Appleyard	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/20/2018 06:54	Jeremy C Giffin	4289.35
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 14:25	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181080046A	04/25/2018 17:45	Thomas C Wildermuth	10
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181080046A	04/19/2018 08:50	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 20:25	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **SB-29-S-4.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556573
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 14:35
SDG#: UTA11-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.003	0.0007	1.07
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	1.07
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	1.07
11995	Ethylbenzene	100-41-4	N.D.	0.001	1.07
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0007	1.07
11995	Toluene	108-88-3	N.D.	0.001	1.07
11995	Xylene (Total)	1330-20-7	N.D.	0.001	1.07
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.5	29.02
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.8	1
08272	Heavy Range Organics C24-C40	n.a.	14	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	27.0	3.08	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	22.1	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 15:00	Jennifer K Howe	1.07
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 14:35	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 14:35	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 14:35	Client Supplied	1

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Sample Description: **SB-29-S-4.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 14:35
SDG#: UTA11-08

Chevron
ELLE Sample #: SW 9556573
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/19/2018 20:17	Jeremy C Giffin	29.02
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 14:35	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181080046A	04/24/2018 23:39	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181080046A	04/19/2018 08:50	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 20:28	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **SB-29-S-6.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556574
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 14:45
SDG#: UTA11-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.19	0.029	45.37
11995	1,2-Dibromoethane	106-93-4	N.D.	0.058	45.37
11995	1,2-Dichloroethane	107-06-2	N.D.	0.058	45.37
11995	Ethylbenzene	100-41-4	0.10	0.058	45.37
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.029	45.37
11995	Toluene	108-88-3	N.D.	0.058	45.37
11995	Xylene (Total)	1330-20-7	N.D.	0.058	45.37
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.008	10
12969	Benzo(a)pyrene	50-32-8	N.D.	0.008	10
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.008	10
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.008	10
12969	Chrysene	218-01-9	0.016	0.004	10
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.008	10
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.008	10
12969	Naphthalene	91-20-3	2.9	0.008	10
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	920	95	1862.67
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	2,300	38	10
08272	Heavy Range Organics C24-C40	n.a.	N.D.	130	10
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	26.1	3.18	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	21.3	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-29-S-6.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 14:45
SDG#: UTA11-09

Chevron
ELLE Sample #: SW 9556574
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181143AA	04/24/2018 17:51	Stephen C Nolte	45.37
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 14:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 14:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 14:45	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLE026	04/25/2018 12:59	Catherine E Bachman	10
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLE026	04/20/2018 18:10	Sally L Appleyard	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/20/2018 05:39	Jeremy C Giffin	1862.67
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 14:45	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181080046A	04/25/2018 18:05	Thomas C Wildermuth	10
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181080046A	04/19/2018 08:50	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 20:31	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **SB-26-S-3.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556575
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 15:00
SDG#: UTA11-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0006	0.91
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.91
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.91
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.91
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.91
11995	Toluene	108-88-3	N.D.	0.001	0.91
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.91
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.3	25.88
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.8	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	21.6	2.84	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	21.3	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 15:23	Jennifer K Howe	0.91
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 15:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 15:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 15:00	Client Supplied	1

Sample Description: **SB-26-S-3.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 15:00
SDG#: UTA11-10

Chevron
ELLE Sample #: SW 9556575
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/19/2018 19:02	Jeremy C Giffin	25.88
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 15:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090027A	04/24/2018 19:36	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090027A	04/20/2018 07:00	Joshua S Ruth	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 20:35	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **DUP-3-SD-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556576
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 15:00
SDG#: UTA11-11FD

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0005	0.82
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.82
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.82
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.82
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.82
11995	Toluene	108-88-3	N.D.	0.001	0.82
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.82
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.4	27.21
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	23.0	3.12	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	21.1	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 15:46	Jennifer K Howe	0.82
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 15:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 15:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 15:00	Client Supplied	1

Sample Description: **DUP-3-SD-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 15:00
SDG#: UTA11-11FD

Chevron
ELLE Sample #: SW 9556576
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/19/2018 20:54	Jeremy C Giffin	27.21
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 15:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090027A	04/24/2018 15:55	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090027A	04/20/2018 07:00	Joshua S Ruth	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 20:38	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **SB-26-S-6.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556577
ELLE Group #: 1931443
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 15:10
SDG#: UTA11-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.035	52.23
11995	1,2-Dibromoethane	106-93-4	N.D.	0.070	52.23
11995	1,2-Dichloroethane	107-06-2	N.D.	0.070	52.23
11995	Ethylbenzene	100-41-4	N.D.	0.070	52.23
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.035	52.23
11995	Toluene	108-88-3	N.D.	0.070	52.23
11995	Xylene (Total)	1330-20-7	N.D.	0.070	52.23
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0009	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0009	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0009	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0009	1
12969	Chrysene	218-01-9	N.D.	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0009	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0009	1
12969	Naphthalene	91-20-3	N.D.	0.0009	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	600	56	1041.02
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	26	4.0	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	31.9	3.37	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	25.9	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-26-S-6.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 15:10
SDG#: UTA11-12

Chevron
ELLE Sample #: SW 9556577
ELLE Group #: 1931443
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181143AA	04/24/2018 18:36	Stephen C Nolte	52.23
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349528	04/11/2018 15:10	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349528	04/11/2018 15:10	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349528	04/11/2018 15:10	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLE026	04/25/2018 13:28	Catherine E Bachman	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLE026	04/20/2018 18:10	Sally L Appleyard	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/20/2018 06:17	Jeremy C Giffin	1041.02
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349528	04/11/2018 15:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090027A	04/24/2018 16:15	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090027A	04/20/2018 07:00	Joshua S Ruth	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404901	04/25/2018 20:41	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404901	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18106820004A	04/16/2018 22:10	Scott W Freisher	1

Sample Description: **TB-8-T-180411 Water**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: WW 9556578
ELLE Group #: 1931443
Matrix: Water

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 16:05
SDG#: UTA11-13TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
13130	Benzene	71-43-2	N.D.	0.5	1
13130	Ethylbenzene	100-41-4	N.D.	0.5	1
13130	Toluene	108-88-3	N.D.	0.5	1
13130	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX 8260C	SW-846 8260C	1	D181083AA	04/19/2018 03:08	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D181083AA	04/19/2018 03:08	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	18107A53A	04/17/2018 19:19	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030C	1	18107A53A	04/17/2018 19:19	Jeremy C Giffin	1

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931443

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	mg/kg	mg/kg
Batch number: Q181143AA	Sample number(s): 9556567-9556569,9556571-9556572,9556574,9556577	
Benzene	N.D.	0.025
1,2-Dibromoethane	N.D.	0.050
1,2-Dichloroethane	N.D.	0.050
Ethylbenzene	N.D.	0.050
Methyl Tertiary Butyl Ether	N.D.	0.025
Toluene	N.D.	0.050
Xylene (Total)	N.D.	0.050
Batch number: X181071AA	Sample number(s): 9556566,9556570,9556573,9556575-9556576	
Benzene	N.D.	0.0005
1,2-Dibromoethane	N.D.	0.001
1,2-Dichloroethane	N.D.	0.001
Ethylbenzene	N.D.	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0005
Toluene	N.D.	0.001
Xylene (Total)	N.D.	0.001
	ug/l	ug/l
Batch number: D181083AA	Sample number(s): 9556578	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Toluene	N.D.	0.5
Xylene (Total)	N.D.	0.5
	mg/kg	mg/kg
Batch number: 18110SLE026	Sample number(s): 9556567,9556569,9556571-9556572,9556574,9556577	
Benzo(a)anthracene	N.D.	0.0007
Benzo(a)pyrene	N.D.	0.0007
Benzo(b)fluoranthene	N.D.	0.0007
Benzo(k)fluoranthene	N.D.	0.0007
Chrysene	N.D.	0.0003
Dibenz(a,h)anthracene	N.D.	0.0007
Indeno(1,2,3-cd)pyrene	N.D.	0.0007
Naphthalene	0.010	0.0007
Batch number: 18107A16A	Sample number(s): 9556568-9556577	
NWTPH-GX Soil C7-C12	N.D.	1.0
Batch number: 18107A34A	Sample number(s): 9556566-9556567	
NWTPH-GX Soil C7-C12	N.D.	1.0

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931443

Method Blank (continued)

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: 18107A53A	Sample number(s): 9556578	
NWTPH-Gx water C7-C12	N.D.	50
	mg/kg	mg/kg
Batch number: 181080046A	Sample number(s): 9556566-9556574	
Diesel Range Organics C12-C24	N.D.	3.0
Heavy Range Organics C24-C40	N.D.	10
Batch number: 181090027A	Sample number(s): 9556575-9556577	
Diesel Range Organics C12-C24	N.D.	3.0
Heavy Range Organics C24-C40	N.D.	10
Batch number: 181091404901	Sample number(s): 9556566-9556577	
Lead	N.D.	0.600

LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Q181143AA	Sample number(s): 9556567-9556569,9556571-9556572,9556574,9556577								
Benzene	1.00	1.09	1.00	1.08	109	108	80-120	1	30
1,2-Dibromoethane	1.00	1.04	1.00	1.05	104	105	74-120	1	30
1,2-Dichloroethane	1.00	1.21	1.00	1.17	121	117	71-128	3	30
Ethylbenzene	1.00	1.01	1.00	1.01	101	101	74-120	0	30
Methyl Tertiary Butyl Ether	1.00	1.06	1.00	1.04	106	104	66-123	2	30
Toluene	1.00	1.01	1.00	1.03	101	103	80-120	2	30
Xylene (Total)	3.00	3.00	3.00	2.98	100	99	75-120	1	30
Batch number: X181071AA	Sample number(s): 9556566,9556570,9556573,9556575-9556576								
Benzene	0.0200	0.0212	0.0200	0.0208	106	104	80-120	2	30
1,2-Dibromoethane	0.0200	0.0195	0.0200	0.0195	97	98	74-120	0	30
1,2-Dichloroethane	0.0200	0.0193	0.0200	0.0188	96	94	71-128	2	30
Ethylbenzene	0.0200	0.0210	0.0200	0.0207	105	104	74-120	1	30
Methyl Tertiary Butyl Ether	0.0200	0.0180	0.0200	0.0179	90	89	66-123	1	30
Toluene	0.0200	0.0213	0.0200	0.0211	107	106	80-120	1	30
Xylene (Total)	0.0600	0.0612	0.0600	0.0609	102	102	75-120	1	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: D181083AA	Sample number(s): 9556578								
Benzene	20	18.11			91		80-120		
Ethylbenzene	20	19.21			96		80-120		
Toluene	20	19.6			98		80-120		

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931443

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Xylene (Total)	60	58.73			98		80-120		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18110SLE026	Sample number(s): 9556567,9556569,9556571-9556572,9556574,9556577								
Benzo(a)anthracene	0.0333	0.0302			91		76-109		
Benzo(a)pyrene	0.0333	0.0337			101		69-111		
Benzo(b)fluoranthene	0.0333	0.0338			101		69-122		
Benzo(k)fluoranthene	0.0333	0.0316			95		64-117		
Chrysene	0.0333	0.0304			91		75-106		
Dibenz(a,h)anthracene	0.0333	0.0333			100		66-119		
Indeno(1,2,3-cd)pyrene	0.0333	0.0320			96		65-114		
Naphthalene	0.0333	0.0324			97		72-103		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18107A16A	Sample number(s): 9556568-9556577								
NWTPH-GX Soil C7-C12	11	12.47	11	12.33	113	112	71-120	1	30
Batch number: 18107A34A	Sample number(s): 9556566-9556567								
NWTPH-GX Soil C7-C12	11	8.00	11	8.05	73	73	71-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18107A53A	Sample number(s): 9556578								
NWTPH-Gx water C7-C12	1100	1013.31	1100	1031.86	92	94	80-120	2	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181080046A	Sample number(s): 9556566-9556574								
Diesel Range Organics C12-C24	134	95.71			71		61-115		
Batch number: 181090027A	Sample number(s): 9556575-9556577								
Diesel Range Organics C12-C24	134	98.04			73		61-115		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181091404901	Sample number(s): 9556566-9556577								
Lead	15	16.08			107		80-120		
	%	**%**	**%**	**%**					
Batch number: 18106820004A	Sample number(s): 9556566-9556577								
Moisture	89.5	89.44			100		99-101		

*- Outside of specification
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P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931443

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: D181083AA	Sample number(s): 9556578 UNSPK: P550046									
Benzene	N.D.	20	17.41	20	19.46	87	97	80-120	11	30
Ethylbenzene	N.D.	20	18.44	20	20.49	92	102	80-120	11	30
Toluene	N.D.	20	19.18	20	20.98	96	105	80-120	9	30
Xylene (Total)	N.D.	60	56.02	60	61.97	93	103	80-120	10	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18110SLE026	Sample number(s): 9556567,9556569,9556571-9556572,9556574,9556577 UNSPK: P555366									
Benzo(a)anthracene	N.D.	0.0328	0.0250	0.0330	0.0269	76	82	76-109	7	30
Benzo(a)pyrene	N.D.	0.0328	0.0268	0.0330	0.0291	82	88	69-111	8	30
Benzo(b)fluoranthene	0.00158	0.0328	0.0276	0.0330	0.0325	79	94	69-122	16	30
Benzo(k)fluoranthene	N.D.	0.0328	0.0283	0.0330	0.0288	86	87	64-117	2	30
Chrysene	0.00135	0.0328	0.0255	0.0330	0.0273	74*	79	75-106	7	30
Dibenz(a,h)anthracene	N.D.	0.0328	0.0199	0.0330	0.0209	61*	63*	66-119	5	30
Indeno(1,2,3-cd)pyrene	0.000719	0.0328	0.0187	0.0330	0.0195	55*	57*	65-114	4	30
Naphthalene	0.300	0.0328	0.296	0.0330	0.318	-11 (2)	56 (2)	72-103	7	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181080046A	Sample number(s): 9556566-9556574 UNSPK: 9556573									
Diesel Range Organics C12-C24	N.D.	133	83.92	133	84.31	63	63	61-115	0	20
Batch number: 181090027A	Sample number(s): 9556575-9556577 UNSPK: 9556575									
Diesel Range Organics C12-C24	N.D.	133	95.63	134	99.41	72	74	61-115	4	20
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181091404901	Sample number(s): 9556566-9556577 UNSPK: 9556566									
Lead	20.32	10.49	30.59	13.51	34.77	98	107	75-125	13	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/kg	**mg/kg**		
Batch number: 181091404901	Sample number(s): 9556566-9556577 BKG: 9556566			
Lead	20.32	20.96	3 (1)	20
	%	**%**		
Batch number: 18106820004A	Sample number(s): 9556566-9556577 BKG: 9556570			
Moisture	19.37	19.31	0	5

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931443

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc %	DUP Conc %	DUP RPD	DUP RPD Max

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260C
Batch number: D181083AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9556578	90	92	103	91
Blank	101	99	103	92
LCS	97	99	104	96
MS	98	101	105	97
MSD	98	99	105	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: Q181143AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9556567	105	103	96	102
9556568	84	83	75	79
9556569	88	87	78	77
9556571	94	91	80	89
9556572	96	96	88	87
9556574	94	92	88	96
9556577	98	96	88	101
Blank	112	112	102	98
LCS	110	109	100	98
LCSD	108	106	101	99
Limits:	50-141	54-135	52-141	50-131

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: X181071AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9556566	102	105	101	92
9556570	102	107	108	77
9556573	100	105	104	90
9556575	102	104	106	83
9556576	103	106	106	85
Blank	100	100	103	93

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P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931443

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: X181071AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
LCS	99	101	104	99
LCSD	99	100	104	99
Limits:	50-141	54-135	52-141	50-131

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 18110SLE026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
9556567	90	90	94
9556569	155*	91	175*
9556571	150*	88	147*
9556572	128	91	159*
9556574	102	79	160*
9556577	87	84	103
Blank	91	90	88
LCS	95	94	92
MS	78	79	76
MSD	83	84	79
Limits:	40-133	45-136	47-123

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18107A16A

	Trifluorotoluene-F
9556568	73
9556569	100
9556570	61
9556571	83
9556572	239*
9556573	59
9556574	165*
9556575	65
9556576	64
9556577	85
Blank	92
LCS	97
LCSD	98
Limits:	50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18107A34A

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931443

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18107A34A

	Trifluorotoluene-F
9556566	62
9556567	169*
Blank	100
LCS	101
LCSD	101
Limits:	50-150

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 18107A53A

	Trifluorotoluene-F
9556578	106
Blank	108
LCS	107
LCSD	107
Limits:	50-150

Analysis Name: NWTPH-Dx soil
Batch number: 181080046A

	Orthoterphenyl
9556566	88
9556567	114
9556568	453*
9556569	278*
9556570	102
9556571	47*
9556572	281*
9556573	90
9556574	312*
Blank	99
LCS	99
MS	96
MSD	94
Limits:	50-150

Analysis Name: NWTPH-Dx soil
Batch number: 181090027A

	Orthoterphenyl
9556575	82
9556576	89

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
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P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Quality Control Summary

Client Name: Chevron
Group Number: 1931443
Reported: 04/30/2018 00:20

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 181090027A

	Orthoterphenyl
9556577	85
Blank	94
LCS	90
MS	82
MSD	89
Limits:	50-150

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only
Acct. # 11255 Group # 1931443 Sample # 9556566-78
Instructions on reverse side correspond with circled numbers.

SCR #: ______

(1) Client Information

Facility # 375289	WBS
Site Address 802 S Columbus Ave, Goldendale, WA	
Chevron PM Eric Roehl	Lead Consultant Leidos
Consultant/Office Leidos, Bothell, WA	
Consultant Project Mgr. Don Wyll	
Consultant Phone # 425-482-3315	
Sampler A. Wisher	

(4) Matrix: Sediment ☐ / Soil ☒; Ground ☐ / Potable ☐ Water; Surface ☐ / NPDES ☐; Air ☐ / Oil ☐

(5) Analyses Requested: BTEX + MTBE 8021 ☐ 8260 ☒ Naphth ☒; 8260 full scan; Oxygenates; NWTPH-Gx by ECY 97-602; NWTPH-Dx with Silica Gel Cleanup ☐; NWTPH-Dx without Silica Gel Cleanup ☒; WA VPH ☐; WA EPH ☐; Lead Total ☒ Diss. ☐ Method 6010B; cPAH USEPA 8270 SIM; Moisture; EDB (8260); 8260 EDC (8260) AC 4/17/18

- ☐ Results in Dry Weight
- ☐ J value reporting needed
- ☐ Must meet lowest detection limits possible for 8260 compounds
- ☐ 8021 MTBE Confirmation
- ☐ Confirm MTBE + Naphthalene
- ☐ Confirm highest hit by 8260
- ☐ Confirm all hits by 8260
- ☐ Run ____ oxy's on highest hit
- ☐ Run ____ oxy's on all hits

(2) Sample Identification	Collected Date	Collected Time	(3) Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH / WA EPH	Lead	cPAH	Moisture	EDB	8260 EDC	(6) Remarks
SB-30-3.5	4/11/18	1305	X		X			7	X			X		X		X		X	X		
SB-30-5.5	4/11/18	1320	X		X			7	X			X		X		X	X	X	X		
SB-25-3.0	4/11/18	1335	X		X			7	X			X		X		X		X	X		
SB-25-6.0	4/11/18	1350	X		X			7	X			X		X		X	X	X	X		
SB-24-2.0	4/11/18	1410	X		X			7	X			X		X		X		X	X		
SB-24-4.0	4/11/18	1415	X		X			7	X			X		X		X	X	X	X		
SB-24-6.5	4/11/18	1425	X		X			7	X			X		X		X	X	X	X		
SB-29-4.0	4/11/18	1435	X		X			7	X			X		X		X		X	X		
SB-29-6.0	4/11/18	1445	X		X			7	X			X		X		X	X	X	X		
SB-26-3.5	4/11/18	1500	X		X			7	X			X		X		X		X	X		
DUP-3-041118	4/11/18	1500	X		X			7	X			X		X		X		X	X		
SB-26-6.0	4/11/18	1510	X		X			7	X			X		X		X	X	X	X		
TB-8-041118	4/11/18	1605						4	X			X									

(7) Turnaround Time Requested (TAT) (please circle)

(Standard) 5 day 4 day
72 hour 48 hour 24 hour

(8) Data Package (circle if required)
(Type I - Full)
Type VI (Raw Data)

EDD (circle if required)
CVX-RTBU-FI_05 (default)
Other: ______

(9)

Relinquished by	Date	Time	Received by	Date	Time
Lauren Thompson	4/12/18	0920			
Relinquished by Commercial Carrier: UPS ✓ FedEx ____ Other ____			Felix Gonzalez	4/13/18	9:40

Temperature Upon Receipt 1.5 °C
Custody Seals Intact? (Yes) No

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7051 0913

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be given to the SeaTac Courier. The pink copy should be retained by the client.

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Sample Administration Receipt Documentation Log

Doc Log ID: 213637

Group Number(s): 1931443

Client: Chevron

A-11255

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/13/2018 9:40
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	WA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Felix Gonzalez (13783) at 10:31 on 04/13/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.5	DT	Wet	Y	Bagged	N

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

Report Date: April 30, 2018 15:16

Project: 375289

Account #: 11255
Group Number: 1931505
SDG: UTA12
PO Number: 0015275850
Release Number: ROEHL
State of Sample Origin: WA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To Leidos

Attn: Don Wyll

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
SB-35-S-2.5-180411 Grab Soil	04/11/2018 09:30	9556873
SB-34-S-3.0-180411 Grab Soil	04/11/2018 09:45	9556874
SB-34-S-5.0-180411 Grab Soil	04/11/2018 09:55	9556875
SB-33-S-3.0-180411 Grab Soil	04/11/2018 10:10	9556876
SB-33-S-5.0-180411 Grab Soil	04/11/2018 10:20	9556877
SB-32-S-3.5-180411 Grab Soil	04/11/2018 10:30	9556878
SB-32-S-5.0-180411 Grab Soil	04/11/2018 10:40	9556879
SB-40-S-3.5-180411 Grab Soil	04/11/2018 11:00	9556880
SB-40-S-5.5-180411 Grab Soil	04/11/2018 11:10	9556881
SB-40-S-7.0-180411 Grab Soil	04/11/2018 11:25	9556882
TB-9-T-180411 Water	04/11/2018 16:20	9556883

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **SB-35-S-2.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556873
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 09:30
SDG#: UTA12-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.001	0.0004	0.77
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0009	0.77
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0009	0.77
11995	Ethylbenzene	100-41-4	N.D.	0.0009	0.77
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0004	0.77
11995	Toluene	108-88-3	N.D.	0.0009	0.77
11995	Xylene (Total)	1330-20-7	N.D.	0.0009	0.77
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	0.0005	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	0.002	0.0008	1
	Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial.				
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.1	24.06
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.4	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	27.6	2.68	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	13.9	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Description: **SB-35-S-2.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 09:30
SDG#: UTA12-01

Chevron
ELLE Sample #: SW 9556873
ELLE Group #: 1931505
Matrix: Soil

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 16:09	Jennifer K Howe	0.77
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349529	04/11/2018 09:30	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349529	04/11/2018 09:30	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349529	04/11/2018 09:30	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18114SLC026	04/26/2018 00:51	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	2	18114SLC026	04/25/2018 07:45	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/19/2018 21:32	Jeremy C Giffin	24.06
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349529	04/11/2018 09:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090027A	04/24/2018 16:35	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090027A	04/20/2018 07:00	Joshua S Ruth	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404903	04/25/2018 14:49	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404903	04/19/2018 22:20	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820004A	04/17/2018 11:08	Larry E Bevins	1

Sample Description: **SB-34-S-3.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556874
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 09:45
SDG#: UTA12-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.003	0.0005	0.76
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0009	0.76
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0009	0.76
11995	Ethylbenzene	100-41-4	N.D.	0.0009	0.76
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.76
11995	Toluene	108-88-3	N.D.	0.0009	0.76
11995	Xylene (Total)	1330-20-7	N.D.	0.0009	0.76
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.2	23.85
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	21.9	3.05	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	19.5	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 16:33	Jennifer K Howe	0.76
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349529	04/11/2018 09:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349529	04/11/2018 09:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349529	04/11/2018 09:45	Client Supplied	1

Sample Description: **SB-34-S-3.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 09:45
SDG#: UTA12-02

Chevron
ELLE Sample #: SW 9556874
ELLE Group #: 1931505
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/19/2018 22:09	Jeremy C Giffin	23.85
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349529	04/11/2018 09:45	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090027A	04/24/2018 16:55	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090027A	04/20/2018 07:00	Joshua S Ruth	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404903	04/25/2018 15:08	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404903	04/19/2018 22:20	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820004A	04/17/2018 11:08	Larry E Bevins	1

Sample Description: **SB-34-S-5.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556875
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 09:55
SDG#: UTA12-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.001	0.0005	0.85
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.85
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.85
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.85
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.85
11995	Toluene	108-88-3	N.D.	0.001	0.85
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.85
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	N.D.	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	0.009	0.0008	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.2	23.8
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	28.8	3.05	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	18.6	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-34-S-5.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 09:55
SDG#: UTA12-03

Chevron
ELLE Sample #: SW 9556875
ELLE Group #: 1931505
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 16:56	Jennifer K Howe	0.85
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349529	04/11/2018 09:55	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349529	04/11/2018 09:55	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349529	04/11/2018 09:55	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/25/2018 15:56	Catherine E Bachman	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/19/2018 22:47	Jeremy C Giffin	23.8
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349529	04/11/2018 09:55	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090027A	04/24/2018 17:15	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090027A	04/20/2018 07:00	Joshua S Ruth	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404903	04/25/2018 15:11	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404903	04/19/2018 22:20	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820004A	04/17/2018 11:08	Larry E Bevins	1

Sample Description: **SB-33-S-3.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556876
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 10:10
SDG#: UTA12-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0005	0.74
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0009	0.74
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0009	0.74
11995	Ethylbenzene	100-41-4	N.D.	0.0009	0.74
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.74
11995	Toluene	108-88-3	N.D.	0.0009	0.74
11995	Xylene (Total)	1330-20-7	N.D.	0.0009	0.74
	The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial.				
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.2	24.54
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	21.8	2.54	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	19.0	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 17:19	Jennifer K Howe	0.74
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349529	04/11/2018 10:10	Client Supplied	1

Sample Description: **SB-33-S-3.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556876
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 10:10
SDG#: UTA12-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349529	04/11/2018 10:10	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349529	04/11/2018 10:10	Client Supplied	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/19/2018 23:24	Jeremy C Giffin	24.54
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349529	04/11/2018 10:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090027A	04/24/2018 18:16	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090027A	04/20/2018 07:00	Joshua S Ruth	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404903	04/25/2018 15:15	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404903	04/19/2018 22:20	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820004A	04/17/2018 11:08	Larry E Bevins	1

Sample Description: **SB-33-S-5.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556877
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 10:20
SDG#: UTA12-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0005	0.9
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.9
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.9
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.9
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.9
11995	Toluene	108-88-3	N.D.	0.001	0.9
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.9
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	N.D.	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	0.002	0.0008	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.2	25.02
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.6	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	26.7	3.50	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	17.6	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-33-S-5.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 10:20
SDG#: UTA12-05

Chevron
ELLE Sample #: SW 9556877
ELLE Group #: 1931505
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 17:42	Jennifer K Howe	0.9
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349529	04/11/2018 10:20	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349529	04/11/2018 10:20	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349529	04/11/2018 10:20	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/25/2018 16:26	Catherine E Bachman	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/20/2018 00:02	Jeremy C Giffin	25.02
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349529	04/11/2018 10:20	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090027A	04/24/2018 18:36	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090027A	04/20/2018 07:00	Joshua S Ruth	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404903	04/25/2018 15:18	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404903	04/19/2018 22:20	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820004A	04/17/2018 11:08	Larry E Bevins	1

Sample Description: **SB-32-S-3.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556878
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 10:30
SDG#: UTA12-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0005	0.86
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.86
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.86
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.86
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.86
11995	Toluene	108-88-3	N.D.	0.001	0.86
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.86
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.3	26.26
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	26.3	3.01	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	19.7	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 18:05	Jennifer K Howe	0.86
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349529	04/11/2018 10:30	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349529	04/11/2018 10:30	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349529	04/11/2018 10:30	Client Supplied	1

Sample Description: **SB-32-S-3.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 10:30
SDG#: UTA12-06

Chevron
ELLE Sample #: SW 9556878
ELLE Group #: 1931505
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/20/2018 00:39	Jeremy C Giffin	26.26
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349529	04/11/2018 10:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090027A	04/24/2018 18:56	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090027A	04/20/2018 07:00	Joshua S Ruth	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404903	04/25/2018 15:27	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404903	04/19/2018 22:20	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820004A	04/17/2018 11:08	Larry E Bevins	1

Sample Description: **SB-32-S-5.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556879
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 10:40
SDG#: UTA12-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0006	0.97
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.97
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.97
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.97
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.97
11995	Toluene	108-88-3	N.D.	0.001	0.97
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.97
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	0.002	0.0009	1
12969	Benzo(a)pyrene	50-32-8	0.001	0.0009	1
12969	Benzo(b)fluoranthene	205-99-2	0.001	0.0009	1
12969	Benzo(k)fluoranthene	207-08-9	0.001	0.0009	1
12969	Chrysene	218-01-9	0.002	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0009	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0009	1
12969	Naphthalene	91-20-3	0.001	0.0009	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	9.7	1.4	25.65
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	4.0	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	25.1	3.19	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	24.7	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-32-S-5.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556879
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 10:40
SDG#: UTA12-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 18:28	Jennifer K Howe	0.97
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349529	04/11/2018 10:40	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349529	04/11/2018 10:40	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349529	04/11/2018 10:40	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/25/2018 16:56	Catherine E Bachman	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/20/2018 01:54	Jeremy C Giffin	25.65
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349529	04/11/2018 10:40	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090027A	04/24/2018 19:16	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090027A	04/20/2018 07:00	Joshua S Ruth	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404903	04/25/2018 15:31	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404903	04/19/2018 22:20	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820004A	04/17/2018 11:08	Larry E Bevins	1

Sample Description: **SB-40-S-3.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556880
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 11:00
SDG#: UTA12-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0006	0.87
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.87
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.87
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.87
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.87
11995	Toluene	108-88-3	N.D.	0.001	0.87
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.87
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.5	28.22
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	25.9	3.21	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	23.3	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	X181071AA	04/17/2018 18:52	Jennifer K Howe	0.87
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349529	04/11/2018 11:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349529	04/11/2018 11:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349529	04/11/2018 11:00	Client Supplied	1

Sample Description: **SB-40-S-3.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556880
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 11:00
SDG#: UTA12-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/20/2018 02:32	Jeremy C Giffin	28.22
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349529	04/11/2018 11:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090037A	04/24/2018 23:39	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090037A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404903	04/25/2018 15:34	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404903	04/19/2018 22:20	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820004A	04/17/2018 11:08	Larry E Bevins	1

Sample Description: **SB-40-S-5.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556881
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 11:10
SDG#: UTA12-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.036	53.96
11995	1,2-Dibromoethane	106-93-4	N.D.	0.072	53.96
11995	1,2-Dichloroethane	107-06-2	N.D.	0.072	53.96
11995	Ethylbenzene	100-41-4	N.D.	0.072	53.96
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.036	53.96
11995	Toluene	108-88-3	N.D.	0.072	53.96
11995	Xylene (Total)	1330-20-7	N.D.	0.072	53.96
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.009	10
12969	Benzo(a)pyrene	50-32-8	N.D.	0.009	10
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.009	10
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.009	10
12969	Chrysene	218-01-9	0.017	0.004	10
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.009	10
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.009	10
12969	Naphthalene	91-20-3	N.D.	0.009	10
	Reporting limits were raised due to interference from the sample matrix.				
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	280	28	514.07
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	2,000	40	5
08272	Heavy Range Organics C24-C40	n.a.	N.D.	130	5
	The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.				
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	30.8	3.27	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	25.4	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Description: **SB-40-S-5.5-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 11:10
SDG#: UTA12-09

Chevron
ELLE Sample #: SW 9556881
ELLE Group #: 1931505
Matrix: Soil

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181153AA	04/25/2018 10:56	Stephen C Nolte	53.96
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349529	04/11/2018 11:10	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349529	04/11/2018 11:10	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349529	04/11/2018 11:10	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/26/2018 03:24	Anthony P Bauer	10
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18107A16A	04/20/2018 03:47	Jeremy C Giffin	514.07
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349529	04/11/2018 11:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090037A	04/25/2018 18:25	Thomas C Wildermuth	5
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090037A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404903	04/25/2018 15:37	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404903	04/19/2018 22:20	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820004A	04/17/2018 11:08	Larry E Bevins	1

Sample Description: **SB-40-S-7.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9556882
ELLE Group #: 1931505
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 11:25
SDG#: UTA12-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.054	88.32
11995	1,2-Dibromoethane	106-93-4	N.D.	0.11	88.32
11995	1,2-Dichloroethane	107-06-2	N.D.	0.11	88.32
11995	Ethylbenzene	100-41-4	N.D.	0.11	88.32
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.054	88.32
11995	Toluene	108-88-3	N.D.	0.11	88.32
11995	Xylene (Total)	1330-20-7	N.D.	0.11	88.32
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	0.001	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	0.087	0.0008	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	2,200	120	2475.01
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	260	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	36.4	3.03	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	18.9	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-40-S-7.0-180411 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 11:25
SDG#: UTA12-10

Chevron
ELLE Sample #: SW 9556882
ELLE Group #: 1931505
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181153AA	04/25/2018 11:18	Stephen C Nolte	88.32
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810349529	04/11/2018 11:25	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810349529	04/11/2018 11:25	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810349529	04/11/2018 11:25	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/25/2018 17:55	Catherine E Bachman	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16A	04/23/2018 19:42	Jeremy C Giffin	2475.01
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810349529	04/11/2018 11:25	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090037A	04/24/2018 22:18	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090037A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404903	04/25/2018 15:40	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404903	04/19/2018 22:20	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820004A	04/17/2018 11:08	Larry E Bevins	1

Sample Description: **TB-9-T-180411 Water**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: WW 9556883
ELLE Group #: 1931505
Matrix: Water

Project Name: **375289**

Submittal Date/Time: 04/13/2018 09:40
Collection Date/Time: 04/11/2018 16:20
SDG#: UTA12-11TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
13130	Benzene	71-43-2	N.D.	0.5	1
13130	Ethylbenzene	100-41-4	N.D.	0.5	1
13130	Toluene	108-88-3	N.D.	0.5	1
13130	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX 8260C	SW-846 8260C	1	D181083AA	04/19/2018 03:33	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D181083AA	04/19/2018 03:33	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	18107A53A	04/17/2018 19:47	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030C	1	18107A53A	04/17/2018 19:47	Jeremy C Giffin	1

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 15:16

Group Number: 1931505

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	mg/kg	mg/kg
Batch number: Q181153AA	Sample number(s): 9556881-9556882	
Benzene	N.D.	0.025
1,2-Dibromoethane	N.D.	0.050
1,2-Dichloroethane	N.D.	0.050
Ethylbenzene	N.D.	0.050
Methyl Tertiary Butyl Ether	N.D.	0.025
Toluene	N.D.	0.050
Xylene (Total)	N.D.	0.050
Batch number: X181071AA	Sample number(s): 9556873-9556880	
Benzene	N.D.	0.0005
1,2-Dibromoethane	N.D.	0.001
1,2-Dichloroethane	N.D.	0.001
Ethylbenzene	N.D.	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0005
Toluene	N.D.	0.001
Xylene (Total)	N.D.	0.001
	ug/l	ug/l
Batch number: D181083AA	Sample number(s): 9556883	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Toluene	N.D.	0.5
Xylene (Total)	N.D.	0.5
	mg/kg	mg/kg
Batch number: 18110SLH026	Sample number(s): 9556875,9556877,9556879,9556881-9556882	
Benzo(a)anthracene	N.D.	0.0007
Benzo(a)pyrene	N.D.	0.0007
Benzo(b)fluoranthene	N.D.	0.0007
Benzo(k)fluoranthene	N.D.	0.0007
Chrysene	N.D.	0.0003
Dibenz(a,h)anthracene	N.D.	0.0007
Indeno(1,2,3-cd)pyrene	N.D.	0.0007
Naphthalene	N.D.	0.0007
Batch number: 18114SLC026	Sample number(s): 9556873	
Benzo(a)anthracene	N.D.	0.0007
Benzo(a)pyrene	N.D.	0.0007
Benzo(b)fluoranthene	N.D.	0.0007
Benzo(k)fluoranthene	N.D.	0.0007

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 15:16

Group Number: 1931505

Method Blank (continued)

Analysis Name	Result	MDL
	mg/kg	mg/kg
Chrysene	N.D.	0.0003
Dibenz(a,h)anthracene	N.D.	0.0007
Indeno(1,2,3-cd)pyrene	N.D.	0.0007
Naphthalene	N.D.	0.0007
Batch number: 18107A16A	Sample number(s): 9556873-9556881	
NWTPH-GX Soil C7-C12	N.D.	1.0
Batch number: 18113A16A	Sample number(s): 9556882	
NWTPH-GX Soil C7-C12	N.D.	1.0
	ug/l	ug/l
Batch number: 18107A53A	Sample number(s): 9556883	
NWTPH-Gx water C7-C12	N.D.	50
	mg/kg	mg/kg
Batch number: 181090027A	Sample number(s): 9556873-9556879	
Diesel Range Organics C12-C24	N.D.	3.0
Heavy Range Organics C24-C40	N.D.	10
Batch number: 181090037A	Sample number(s): 9556880-9556882	
Diesel Range Organics C12-C24	N.D.	3.0
Heavy Range Organics C24-C40	N.D.	10
Batch number: 181091404903	Sample number(s): 9556873-9556882	
Lead	N.D.	0.600

LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Q181153AA	Sample number(s): 9556881-9556882								
Benzene	1.00	1.06	1.00	1.08	106	108	80-120	1	30
1,2-Dibromoethane	1.00	1.03	1.00	1.04	103	104	74-120	1	30
1,2-Dichloroethane	1.00	1.18	1.00	1.17	118	117	71-128	1	30
Ethylbenzene	1.00	0.999	1.00	0.998	100	100	74-120	0	30
Methyl Tertiary Butyl Ether	1.00	1.06	1.00	1.08	106	108	66-123	2	30
Toluene	1.00	1.01	1.00	1.01	101	101	80-120	0	30
Xylene (Total)	3.00	2.97	3.00	2.99	99	100	75-120	1	30
Batch number: X181071AA	Sample number(s): 9556873-9556880								
Benzene	0.0200	0.0212	0.0200	0.0208	106	104	80-120	2	30
1,2-Dibromoethane	0.0200	0.0195	0.0200	0.0195	97	98	74-120	0	30
1,2-Dichloroethane	0.0200	0.0193	0.0200	0.0188	96	94	71-128	2	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 15:16

Group Number: 1931505

LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/kg	mg/kg	mg/kg	mg/kg					
Ethylbenzene	0.0200	0.0210	0.0200	0.0207	105	104	74-120	1	30
Methyl Tertiary Butyl Ether	0.0200	0.0180	0.0200	0.0179	90	89	66-123	1	30
Toluene	0.0200	0.0213	0.0200	0.0211	107	106	80-120	1	30
Xylene (Total)	0.0600	0.0612	0.0600	0.0609	102	102	75-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: D181083AA	Sample number(s): 9556883								
Benzene	20	18.11			91		80-120		
Ethylbenzene	20	19.21			96		80-120		
Toluene	20	19.6			98		80-120		
Xylene (Total)	60	58.73			98		80-120		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18110SLH026	Sample number(s): 9556875,9556877,9556879,9556881-9556882								
Benzo(a)anthracene	0.0333	0.0310			93		76-109		
Benzo(a)pyrene	0.0333	0.0336			101		69-111		
Benzo(b)fluoranthene	0.0333	0.0331			99		69-122		
Benzo(k)fluoranthene	0.0333	0.0326			98		64-117		
Chrysene	0.0333	0.0311			93		75-106		
Dibenz(a,h)anthracene	0.0333	0.0337			101		66-119		
Indeno(1,2,3-cd)pyrene	0.0333	0.0322			97		65-114		
Naphthalene	0.0333	0.0308			92		72-103		
Batch number: 18114SLC026	Sample number(s): 9556873								
Benzo(a)anthracene	0.0333	0.0296			89		76-109		
Benzo(a)pyrene	0.0333	0.0323			97		69-111		
Benzo(b)fluoranthene	0.0333	0.0331			99		69-122		
Benzo(k)fluoranthene	0.0333	0.0295			89		64-117		
Chrysene	0.0333	0.0295			89		75-106		
Dibenz(a,h)anthracene	0.0333	0.0324			97		66-119		
Indeno(1,2,3-cd)pyrene	0.0333	0.0308			92		65-114		
Naphthalene	0.0333	0.0289			87		72-103		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18107A16A	Sample number(s): 9556873-9556881								
NWTPH-GX Soil C7-C12	11	12.47	11	12.33	113	112	71-120	1	30
Batch number: 18113A16A	Sample number(s): 9556882								
NWTPH-GX Soil C7-C12	11	12.67	11	12.4	115	113	71-120	2	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18107A53A	Sample number(s): 9556883								
NWTPH-Gx water C7-C12	1100	1013.31	1100	1031.86	92	94	80-120	2	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 15:16

Group Number: 1931505

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 181090027A	Sample number(s): 9556873-9556879								
Diesel Range Organics C12-C24	134	98.04			73		61-115		
Batch number: 181090037A	Sample number(s): 9556880-9556882								
Diesel Range Organics C12-C24	134	107.43			80		61-115		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181091404903	Sample number(s): 9556873-9556882								
Lead	15	14.91			99		80-120		
	%	**%**	**%**	**%**					
Batch number: 18107820004A	Sample number(s): 9556873-9556882								
Moisture	89.5	89.4			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: D181083AA	Sample number(s): 9556883 UNSPK: P550046									
Benzene	N.D.	20	17.41	20	19.46	87	97	80-120	11	30
Ethylbenzene	N.D.	20	18.44	20	20.49	92	102	80-120	11	30
Toluene	N.D.	20	19.18	20	20.98	96	105	80-120	9	30
Xylene (Total)	N.D.	60	56.02	60	61.97	93	103	80-120	10	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18110SLH026	Sample number(s): 9556875,9556877,9556879,9556881-9556882 UNSPK: P559270									
Benzo(a)anthracene	N.D.	0.0328	0.0291	0.0331	0.0294	89	89	76-109	1	30
Benzo(a)pyrene	N.D.	0.0328	0.0309	0.0331	0.0318	94	96	69-111	3	30
Benzo(b)fluoranthene	N.D.	0.0328	0.0325	0.0331	0.0332	99	100	69-122	2	30
Benzo(k)fluoranthene	N.D.	0.0328	0.0288	0.0331	0.0297	88	90	64-117	3	30
Chrysene	N.D.	0.0328	0.0291	0.0331	0.0295	89	89	75-106	2	30
Dibenz(a,h)anthracene	N.D.	0.0328	0.0297	0.0331	0.0304	90	92	66-119	2	30
Indeno(1,2,3-cd)pyrene	N.D.	0.0328	0.0277	0.0331	0.0285	84	86	65-114	3	30
Naphthalene	N.D.	0.0328	0.0391	0.0331	0.0335	119*	101	72-103	15	30
Batch number: 18114SLC026	Sample number(s): 9556873 UNSPK: P567308									
Benzo(a)anthracene	0.00148	0.0328	0.0263	0.0331	0.0272	76	78	76-109	4	30
Benzo(a)pyrene	0.000767	0.0328	0.0254	0.0331	0.0267	75	78	69-111	5	30
Benzo(b)fluoranthene	0.00119	0.0328	0.0285	0.0331	0.0289	83	84	69-122	2	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 15:16

Group Number: 1931505

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Benzo(k)fluoranthene	0.000682	0.0328	0.0281	0.0331	0.0294	84	87	64-117	5	30
Chrysene	0.00160	0.0328	0.0272	0.0331	0.0279	78	79	75-106	3	30
Dibenz(a,h)anthracene	N.D.	0.0328	0.0270	0.0331	0.0273	82	82	66-119	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.0328	0.0257	0.0331	0.0259	79	78	65-114	1	30
Naphthalene	N.D.	0.0328	0.0312	0.0331	0.0340	95	103	72-103	9	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181090027A	Sample number(s): 9556873-9556879 UNSPK: P556575									
Diesel Range Organics C12-C24	N.D.	133	95.63	134	99.41	72	74	61-115	4	20
Batch number: 181090037A	Sample number(s): 9556880-9556882 UNSPK: 9556880									
Diesel Range Organics C12-C24	N.D.	134	102.21			76		61-115		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181091404903	Sample number(s): 9556873-9556882 UNSPK: 9556873									
Lead	23.73	14.15	37.91	11.36	38.16	100	127*	75-125	1	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/kg	**mg/kg**		
Batch number: 181090037A	Sample number(s): 9556880-9556882 BKG: 9556880			
Diesel Range Organics C12-C24	N.D.	N.D.	0 (1)	20
Heavy Range Organics C24-C40	N.D.	N.D.	0 (1)	20
	mg/kg	**mg/kg**		
Batch number: 181091404903	Sample number(s): 9556873-9556882 BKG: 9556873			
Lead	23.73	23.66	0 (1)	20
	%	**%**		
Batch number: 18107820004A	Sample number(s): 9556873-9556882 BKG: 9556877			
Moisture	17.58	21.04	18*	5

Surrogate Quality Control

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 15:16

Group Number: 1931505

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260C
Batch number: D181083AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9556883	101	97	114	93
Blank	101	99	103	92
LCS	97	99	104	96
MS	98	101	105	97
MSD	98	99	105	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: Q181153AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9556881	88	88	80	85
9556882	96	97	93	94
Blank	110	114	101	97
LCS	110	107	99	98
LCSD	110	108	99	100
Limits:	50-141	54-135	52-141	50-131

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: X181071AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9556873	102	108	103	89
9556874	103	107	102	90
9556875	104	108	101	91
9556876	104	107	122	68
9556877	101	105	103	91
9556878	102	106	104	89
9556879	99	105	105	102
9556880	101	103	103	90
Blank	100	100	103	93
LCS	99	101	104	99
LCSD	99	100	104	99
Limits:	50-141	54-135	52-141	50-131

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 18110SLH026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
9556875	95	92	86
9556877	94	91	85
9556879	96	93	88
9556881	112	92	138*
9556882	95	93	90

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 15:16

Group Number: 1931505

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 18110SLH026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
Blank	98	96	90
LCS	96	95	90
MS	92	90	86
MSD	94	92	91
Limits:	40-133	45-136	47-123

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 18114SLC026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
9556873	90	88	84
Blank	93	92	85
LCS	94	93	86
MS	90	83	86
MSD	92	84	94
Limits:	40-133	45-136	47-123

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18107A16A

	Trifluorotoluene-F
9556873	64
9556874	60
9556875	61
9556876	65
9556877	62
9556878	69
9556879	63
9556880	59
9556881	70
Blank	92
LCS	97
LCSD	98
Limits:	50-150

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 18107A53A

	Trifluorotoluene-F
9556883	110
Blank	108
LCS	107

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 15:16

Group Number: 1931505

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 18107A53A

	Trifluorotoluene-F
LCSD	107
Limits:	50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18113A16A

	Trifluorotoluene-F
9556882	120
Blank	90
LCS	95
LCSD	93
Limits:	50-150

Analysis Name: NWTPH-Dx soil
Batch number: 181090027A

	Orthoterphenyl
9556873	88
9556874	83
9556875	86
9556876	91
9556877	94
9556878	83
9556879	88
Blank	94
LCS	90
MS	82
MSD	89
Limits:	50-150

Analysis Name: NWTPH-Dx soil
Batch number: 181090037A

	Orthoterphenyl
9556880	94
9556881	424*
9556882	110
Blank	97
DUP	87
LCS	95
MS	88

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 15:16

Group Number: 1931505

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 181090037A

Limits: 50-150

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Chevron Northwest Region Analysis Request/Chain of Custody

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Acct. # 11255 — For Eurofins Lancaster Laboratories Environmental use only — Group # 1931505 Sample # 9556873-83

Instructions on reverse side correspond with circled numbers.

SCR #: ______

(1) Client Information

Field	Value
Facility #	375289
WBS	
Site Address	802 S Columbus Ave Goldendale WA
Chevron PM	Eric Roehl
Lead Consultant	Leidos
Consultant/Office	Leidos, Bothell, WA
Consultant Project Mgr.	Don Wyll
Consultant Phone #	425-482-3315
Sampler	A. Wisher

(4) Matrix

Sediment ☐ Ground ☐ Surface ☐ Potable ☐ NPDES ☐ Air ☐

Soil ☒ Water Oil ☐

(5) Analyses Requested

BTEX + MTBE: 8021 ☐ 8260 ☒ Naphth ☒ 8270

8260 full scan

Oxygenates

NWTPH-Gx by ECY 97-602

NWTPH-Dx with Silica Gel Cleanup ☐

NWTPH-Dx without Silica Gel Cleanup ☒

WA VPH ☐ WA EPH ☐

Lead: Total ☒ Diss. ☐ Method 6010B

cPAH USEPA 8270 SIM

Moisture

EDB (soil) 8260, EDC (8260) AC 4/17/18

☐ Results in Dry Weight
☐ J value reporting needed
☐ Must meet lowest detection limits possible for 8260 compounds
☐ 8021 MTBE Confirmation
☐ Confirm MTBE + Naphthalene
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ______ oxy's on highest hit
☐ Run ______ oxy's on all hits

(2) Sample Identification

Sample Identification	Date	Time	(3) Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	Lead	cPAH	Moisture	EDB	
SB-35-2.5	4/11/18	0930	X		X			7	X			X		X		X	X	X	X	
SB-34-3.0	4/11/18	0945	X		X			7	X			X		X		X		X	X	
SB-34-5.0	4/11/18	0955	X		X			7	X			X		X		X	X	X	X	
SB-33-3.0	4/11/18	1010	X		X			7	X			X		X		X		X	X	
SB-33-5.0	4/11/18	1020	X		X			7	X			X		X		X	X	X	X	
SB-32-3.5	4/11/18	1030	X		X			7	X			X		X		X		X	X	
SB-32-5.0	4/11/18	1040	X		X			7	X			X		X		X	X	X	X	
SB-40-3.5	4/11/18	1100	X		X			7	X			X		X		X		X	X	
SB-40-5.5	4/11/18	1110	X		X			7	X			X		X		X	X	X	X	
SB-40-7.0	4/11/18	1125	X		X			7	X			X		X		X	X	X	X	
TB-9-041118	4/11/18	1620						4	X			X		~~X~~						

LT 4/11/18 — LT 4/11/18

(6) Remarks

(7) Turnaround Time Requested (TAT) (please circle)

(Standard) 5 day 4 day

72 hour 48 hour 24 hour

(8) Data Package (circle if required)

(Type I - Full)

Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FI_05 (default)

Other: ______

(9)

Relinquished by	Date	Time	Received by	Date	Time
Lauren Thompson	4/12/18	0930			

Relinquished by Commercial Carrier: UPS ✓ FedEx ____ Other ____

Received by	Date	Time
[signature]	4.13.18	940

Temperature Upon Receipt 4.8 °C

Custody Seals Intact? (Yes) No

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

7051 0913

The yellow copy should be given to the SeaTac Courier. The pink copy should be retained by the client.

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Sample Administration Receipt Documentation Log

Doc Log ID: 213642

Group Number(s): 1931505

Client: Chevron

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/13/2018 9:40
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Timothy Cubberley (6520) at 11:19 on 04/13/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	4.8	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

Report Date: April 30, 2018 00:20

Project: 375289

Account #: 11255
Group Number: 1931983
SDG: UTA13
PO Number: 0015275850
Release Number: ROEHL
State of Sample Origin: WA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To Leidos

Attn: Don Wyll

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
MW-5-S-4.5-180412 Grab Soil	04/12/2018 10:45	9559266
MW-5-S-5.5-180412 Grab Soil	04/12/2018 10:50	9559267
SB-28-S-4.5-180412 Grab Soil	04/12/2018 11:25	9559268
SB-28-S-5.5-180412 Grab Soil	04/12/2018 11:35	9559269
SB-28-S-6.5-180412 Grab Soil	04/12/2018 11:45	9559270
MW-6-S-4.0-180412 Grab Soil	04/12/2018 13:10	9559271
MW-6-S-6.0-180412 Grab Soil	04/12/2018 13:20	9559272
SB-27-S-4.0-180412 Grab Soil	04/12/2018 13:40	9559273
SB-27-S-7.0-180412 Grab Soil	04/12/2018 13:50	9559274
TB-10-T-180412 NA Water	04/12/2018 15:50	9559275
MW-7-S-3.5-180412 Grab Soil	04/12/2018 14:15	9559276
MW-7-S-4.0-180412 Grab Soil	04/12/2018 14:30	9559277
SB-31-S-3.5-180412 Grab Soil	04/12/2018 14:50	9559278
SB-31-S-6.5-180412 Grab Soil	04/12/2018 15:30	9559279
TB-11-T-180412 NA Water	04/12/2018 16:50	9559280
ER-1-O-180413 NA Water	04/13/2018 07:40	9559281

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **MW-5-S-4.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559266
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 10:45
SDG#: UTA13-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0007	1.06
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	1.06
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	1.06
11995	Ethylbenzene	100-41-4	N.D.	0.001	1.06
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0007	1.06
11995	Toluene	108-88-3	N.D.	0.001	1.06
11995	Xylene (Total)	1330-20-7	N.D.	0.001	1.06
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.6	29.87
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	4.0	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	28.6	3.85	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	25.7	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 13:05	Stephen C Nolte	1.06
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 10:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 10:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 10:45	Client Supplied	1

Sample Description: **MW-5-S-4.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 10:45
SDG#: UTA13-01

Chevron
ELLE Sample #: SW 9559266
ELLE Group #: 1931983
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/19/2018 19:36	Jeremy C Giffin	29.87
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 10:45	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090036A	04/25/2018 20:06	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090036A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/25/2018 23:51	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **MW-5-S-5.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559267
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 10:50
SDG#: UTA13-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.0005	0.0005	0.79
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.79
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.79
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.79
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.79
11995	Toluene	108-88-3	N.D.	0.001	0.79
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.79
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0009	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0009	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0009	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0009	1
12969	Chrysene	218-01-9	0.0005	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0009	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0009	1
12969	Naphthalene	91-20-3	0.003	0.0009	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	16	1.3	25.28
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	16	4.0	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	30.8	2.68	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	24.8	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **MW-5-S-5.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559267
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 10:50
SDG#: UTA13-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 17:14	Stephen C Nolte	0.79
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 10:50	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 10:50	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 10:50	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/25/2018 18:25	Catherine E Bachman	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/19/2018 20:11	Jeremy C Giffin	25.28
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 10:50	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090036A	04/25/2018 20:27	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090036A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:10	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **SB-28-S-4.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559268
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 11:25
SDG#: UTA13-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.001	0.0005	0.83
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.83
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.83
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.83
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.83
11995	Toluene	108-88-3	N.D.	0.001	0.83
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.83
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.4	28.1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.8	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	29.6	3.57	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	22.1	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 13:28	Stephen C Nolte	0.83
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 11:25	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 11:25	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 11:25	Client Supplied	1

Sample Description: **SB-28-S-4.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 11:25
SDG#: UTA13-03

Chevron
ELLE Sample #: SW 9559268
ELLE Group #: 1931983
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/19/2018 20:46	Jeremy C Giffin	28.1
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 11:25	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090036A	04/25/2018 20:47	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090036A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:14	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **SB-28-S-5.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559269
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 11:35
SDG#: UTA13-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.0007	0.0005	0.79
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.79
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.79
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.79
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.79
11995	Toluene	108-88-3	N.D.	0.001	0.79
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.79
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0009	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0009	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0009	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0009	1
12969	Chrysene	218-01-9	N.D.	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0009	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0009	1
12969	Naphthalene	91-20-3	N.D.	0.0009	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.4	26.06
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	31.2	3.41	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	22.9	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-28-S-5.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 11:35
SDG#: UTA13-04

Chevron
ELLE Sample #: SW 9559269
ELLE Group #: 1931983
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 13:50	Stephen C Nolte	0.79
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 11:35	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 11:35	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 11:35	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/25/2018 18:54	Catherine E Bachman	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/19/2018 21:22	Jeremy C Giffin	26.06
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 11:35	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090036A	04/25/2018 21:07	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090036A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:17	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **SB-28-S-6.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559270
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 11:45
SDG#: UTA13-05

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0005	0.8
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.8
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.8
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.8
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.8
11995	Toluene	108-88-3	N.D.	0.001	0.8
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.8
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	N.D.	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.0008	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	12	1.3	26.2
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	12	3.8	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	21.6	2.57	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	21.6	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-28-S-6.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 11:45
SDG#: UTA13-05

Chevron
ELLE Sample #: SW 9559270
ELLE Group #: 1931983
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 17:37	Stephen C Nolte	0.8
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 11:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 11:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 11:45	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/25/2018 14:28	Catherine E Bachman	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/19/2018 21:57	Jeremy C Giffin	26.2
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 11:45	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090036A	04/25/2018 21:27	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090036A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:20	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **MW-6-S-4.0-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559271
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 13:10
SDG#: UTA13-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.001	0.0005	0.79
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.79
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.79
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.79
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.79
11995	Toluene	108-88-3	N.D.	0.001	0.79
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.79
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.2	25.26
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	95	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	360	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	28.6	2.52	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	18.5	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 14:13	Stephen C Nolte	0.79
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 13:10	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 13:10	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 13:10	Client Supplied	1

Sample Description: **MW-6-S-4.0-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 13:10
SDG#: UTA13-06

Chevron
ELLE Sample #: SW 9559271
ELLE Group #: 1931983
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/19/2018 22:32	Jeremy C Giffin	25.26
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 13:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090036A	04/25/2018 22:28	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090036A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:30	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **MW-6-S-6.0-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559272
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 13:20
SDG#: UTA13-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0005	0.83
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.83
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.83
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.83
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.83
11995	Toluene	108-88-3	N.D.	0.001	0.83
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.83
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	0.002	0.0008	1
12969	Benzo(a)pyrene	50-32-8	0.008	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	0.013	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	0.005	0.0008	1
12969	Chrysene	218-01-9	0.002	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	0.002	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	0.009	0.0008	1
12969	Naphthalene	91-20-3	0.001	0.0008	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.2	24.31
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	34	3.8	1
08272	Heavy Range Organics C24-C40	n.a.	120	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	27.5	3.40	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	20.6	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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Sample Description: **MW-6-S-6.0-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559272
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 13:20
SDG#: UTA13-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 14:36	Stephen C Nolte	0.83
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 13:20	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 13:20	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 13:20	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/26/2018 01:26	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/19/2018 23:07	Jeremy C Giffin	24.31
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 13:20	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090036A	04/25/2018 22:48	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090036A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:33	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **SB-27-S-4.0-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559273
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 13:40
SDG#: UTA13-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.0008	0.0005	0.82
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.82
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.82
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.82
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.82
11995	Toluene	108-88-3	N.D.	0.001	0.82
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.82
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.1	22.74
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.6	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	27.5	2.73	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	18.0	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 14:58	Stephen C Nolte	0.82
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 13:40	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 13:40	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 13:40	Client Supplied	1

Sample Description: **SB-27-S-4.0-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 13:40
SDG#: UTA13-08

Chevron
ELLE Sample #: SW 9559273
ELLE Group #: 1931983
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/19/2018 23:42	Jeremy C Giffin	22.74
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 13:40	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090036A	04/25/2018 23:08	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090036A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:36	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **SB-27-S-7.0-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 13:50
SDG#: UTA13-09

Chevron
ELLE Sample #: SW 9559274
ELLE Group #: 1931983
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0004	0.7
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0009	0.7
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0009	0.7
11995	Ethylbenzene	100-41-4	N.D.	0.0009	0.7
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0004	0.7
11995	Toluene	108-88-3	N.D.	0.0009	0.7
11995	Xylene (Total)	1330-20-7	N.D.	0.0009	0.7
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	N.D.	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.0008	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.3	26.82
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	28.3	2.86	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	19.9	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-27-S-7.0-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 13:50
SDG#: UTA13-09

Chevron
ELLE Sample #: SW 9559274
ELLE Group #: 1931983
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 15:21	Stephen C Nolte	0.7
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 13:50	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 13:50	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 13:50	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/26/2018 01:56	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/20/2018 00:18	Jeremy C Giffin	26.82
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 13:50	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090036A	04/25/2018 23:29	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090036A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:40	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **TB-10-T-180412 NA Water**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: WW 9559275
ELLE Group #: 1931983
Matrix: Water

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:50
SDG#: UTA13-10TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
13130	Benzene	71-43-2	N.D.	0.5	1
13130	Ethylbenzene	100-41-4	N.D.	0.5	1
13130	Toluene	108-88-3	N.D.	0.5	1
13130	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX 8260C	SW-846 8260C	1	D181083AA	04/19/2018 04:21	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D181083AA	04/19/2018 04:21	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	18107A53A	04/17/2018 20:43	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	18107A53A	04/17/2018 20:43	Jeremy C Giffin	1

Sample Description: **MW-7-S-3.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559276
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:15
SDG#: UTA13-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.003	0.0005	0.79
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.79
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.79
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.79
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.79
11995	Toluene	108-88-3	N.D.	0.001	0.79
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.79
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.2	23.83
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	26.7	2.78	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	19.6	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 15:44	Stephen C Nolte	0.79
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 14:15	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 14:15	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 14:15	Client Supplied	1

Sample Description: **MW-7-S-3.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:15
SDG#: UTA13-11

Chevron
ELLE Sample #: SW 9559276
ELLE Group #: 1931983
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/20/2018 01:28	Jeremy C Giffin	23.83
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 14:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090036A	04/26/2018 00:29	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090036A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:43	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **MW-7-S-4.0-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559277
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:30
SDG#: UTA13-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0005	0.82
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.82
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.82
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.82
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.82
11995	Toluene	108-88-3	N.D.	0.001	0.82
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.82
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	N.D.	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.0008	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.3	26.73
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	28.8	2.59	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	19.7	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **MW-7-S-4.0-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559277
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:30
SDG#: UTA13-12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 16:06	Stephen C Nolte	0.82
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 14:30	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 14:30	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 14:30	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/26/2018 02:25	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/20/2018 02:03	Jeremy C Giffin	26.73
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 14:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090037A	04/24/2018 22:38	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090037A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:46	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **SB-31-S-3.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559278
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:50
SDG#: UTA13-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.001	0.0005	0.74
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0009	0.74
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0009	0.74
11995	Ethylbenzene	100-41-4	N.D.	0.0009	0.74
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.74
11995	Toluene	108-88-3	N.D.	0.0009	0.74
11995	Xylene (Total)	1330-20-7	N.D.	0.0009	0.74
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.4	27.65
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	27.2	3.08	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	19.4	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 16:29	Stephen C Nolte	0.74
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 14:50	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 14:50	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 14:50	Client Supplied	1

Sample Description: **SB-31-S-3.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 14:50
SDG#: UTA13-13

Chevron
ELLE Sample #: SW 9559278
ELLE Group #: 1931983
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/20/2018 02:39	Jeremy C Giffin	27.65
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 14:50	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090037A	04/24/2018 22:58	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090037A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:50	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **SB-31-S-6.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9559279
ELLE Group #: 1931983
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:30
SDG#: UTA13-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0005	0.75
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0009	0.75
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0009	0.75
11995	Ethylbenzene	100-41-4	N.D.	0.0009	0.75
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.75
11995	Toluene	108-88-3	N.D.	0.0009	0.75
11995	Xylene (Total)	1330-20-7	N.D.	0.0009	0.75
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	N.D.	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.0008	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.1	22.48
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	40.3	3.33	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	18.2	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-31-S-6.5-180412 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 15:30
SDG#: UTA13-14

Chevron
ELLE Sample #: SW 9559279
ELLE Group #: 1931983
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181152AA	04/25/2018 16:52	Stephen C Nolte	0.75
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810749551	04/12/2018 15:30	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810749551	04/12/2018 15:30	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810749551	04/12/2018 15:30	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/26/2018 02:54	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18109A34A	04/20/2018 03:14	Jeremy C Giffin	22.48
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810749551	04/12/2018 15:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181090037A	04/24/2018 23:19	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181090037A	04/20/2018 11:30	Olivia Arosemena	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181091404902	04/26/2018 00:53	Cindy M Gehman	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181091404902	04/19/2018 15:45	JoElla L Rice	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18107820009A	04/17/2018 21:52	Scott W Freisher	1

Sample Description: **TB-11-T-180412 NA Water**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: WW 9559280
ELLE Group #: 1931983
Matrix: Water

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/12/2018 16:50
SDG#: UTA13-15TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
13130	Benzene	71-43-2	N.D.	0.5	1
13130	Ethylbenzene	100-41-4	N.D.	0.5	1
13130	Toluene	108-88-3	N.D.	0.5	1
13130	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX 8260C	SW-846 8260C	1	D181083AA	04/19/2018 04:45	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D181083AA	04/19/2018 04:45	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	18107A53A	04/17/2018 21:12	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030C	1	18107A53A	04/17/2018 21:12	Jeremy C Giffin	1

Sample Description: **ER-1-O-180413 NA Water**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: WW 9559281
ELLE Group #: 1931983
Matrix: Water

Project Name: **375289**

Submittal Date/Time: 04/14/2018 11:50
Collection Date/Time: 04/13/2018 07:40
SDG#: UTA13-16EB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
13130	Benzene	71-43-2	N.D.	0.5	1
13130	Ethylbenzene	100-41-4	N.D.	0.5	1
13130	Toluene	108-88-3	N.D.	0.5	1
13130	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX 8260C	SW-846 8260C	1	D181083AA	04/19/2018 05:09	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D181083AA	04/19/2018 05:09	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	18107A53A	04/17/2018 21:39	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030C	1	18107A53A	04/17/2018 21:39	Jeremy C Giffin	1

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931983

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	mg/kg	mg/kg
Batch number: A181152AA	Sample number(s): 9559266-9559274,9559276-9559279	
Benzene	N.D.	0.0005
1,2-Dibromoethane	N.D.	0.001
1,2-Dichloroethane	N.D.	0.001
Ethylbenzene	N.D.	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0005
Toluene	N.D.	0.001
Xylene (Total)	N.D.	0.001
	ug/l	ug/l
Batch number: D181083AA	Sample number(s): 9559275,9559280-9559281	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Toluene	N.D.	0.5
Xylene (Total)	N.D.	0.5
	mg/kg	mg/kg
Batch number: 18110SLH026	Sample number(s): 9559267,9559269-9559270,9559272,9559274,9559277,9559279	
Benzo(a)anthracene	N.D.	0.0007
Benzo(a)pyrene	N.D.	0.0007
Benzo(b)fluoranthene	N.D.	0.0007
Benzo(k)fluoranthene	N.D.	0.0007
Chrysene	N.D.	0.0003
Dibenz(a,h)anthracene	N.D.	0.0007
Indeno(1,2,3-cd)pyrene	N.D.	0.0007
Naphthalene	N.D.	0.0007
Batch number: 18109A34A	Sample number(s): 9559266-9559274,9559276-9559279	
NWTPH-GX Soil C7-C12	N.D.	1.0
	ug/l	ug/l
Batch number: 18107A53A	Sample number(s): 9559275,9559280-9559281	
NWTPH-Gx water C7-C12	N.D.	50
	mg/kg	mg/kg
Batch number: 181090036A	Sample number(s): 9559266-9559274,9559276	
Diesel Range Organics C12-C24	N.D.	3.0
Heavy Range Organics C24-C40	N.D.	10
Batch number: 181090037A	Sample number(s): 9559277-9559279	
Diesel Range Organics C12-C24	N.D.	3.0

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931983

Method Blank (continued)

Analysis Name	Result	MDL
	mg/kg	mg/kg
Heavy Range Organics C24-C40	N.D.	10
Batch number: 181091404902	Sample number(s): 9559266-9559274,9559276-9559279	
Lead	N.D.	0.600

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: A181152AA	Sample number(s): 9559266-9559274,9559276-9559279								
Benzene	0.0200	0.0190	0.0200	0.0184	95	92	80-120	3	30
1,2-Dibromoethane	0.0200	0.0189	0.0200	0.0198	94	99	74-120	5	30
1,2-Dichloroethane	0.0200	0.0194	0.0200	0.0195	97	98	71-128	1	30
Ethylbenzene	0.0200	0.0196	0.0200	0.0188	98	94	74-120	4	30
Methyl Tertiary Butyl Ether	0.0200	0.0188	0.0200	0.0195	94	97	66-123	4	30
Toluene	0.0200	0.0195	0.0200	0.0188	97	94	80-120	3	30
Xylene (Total)	0.0600	0.0573	0.0600	0.0559	95	93	75-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: D181083AA	Sample number(s): 9559275,9559280-9559281								
Benzene	20	18.11			91		80-120		
Ethylbenzene	20	19.21			96		80-120		
Toluene	20	19.6			98		80-120		
Xylene (Total)	60	58.73			98		80-120		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 18110SLH026	Sample number(s): 9559267,9559269-9559270,9559272,9559274,9559277,9559279								
Benzo(a)anthracene	0.0333	0.0310			93		76-109		
Benzo(a)pyrene	0.0333	0.0336			101		69-111		
Benzo(b)fluoranthene	0.0333	0.0331			99		69-122		
Benzo(k)fluoranthene	0.0333	0.0326			98		64-117		
Chrysene	0.0333	0.0311			93		75-106		
Dibenz(a,h)anthracene	0.0333	0.0337			101		66-119		
Indeno(1,2,3-cd)pyrene	0.0333	0.0322			97		65-114		
Naphthalene	0.0333	0.0308			92		72-103		
	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 18109A34A	Sample number(s): 9559266-9559274,9559276-9559279								
NWTPH-GX Soil C7-C12	11	7.94	11	7.93	72	72	71-120	0	30
	ug/l	ug/l	ug/l	ug/l					

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931983

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 18107A53A	Sample number(s): 9559275,9559280-9559281								
NWTPH-Gx water C7-C12	1100	1013.31	1100	1031.86	92	94	80-120	2	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181090036A	Sample number(s): 9559266-9559274,9559276								
Diesel Range Organics C12-C24	134	104.63			78		61-115		
Batch number: 181090037A	Sample number(s): 9559277-9559279								
Diesel Range Organics C12-C24	134	107.43			80		61-115		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181091404902	Sample number(s): 9559266-9559274,9559276-9559279								
Lead	15	16.21			108		80-120		
	%	**%**	**%**	**%**					
Batch number: 18107820009A	Sample number(s): 9559266-9559274,9559276-9559279								
Moisture	89.5	89.42			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: D181083AA	Sample number(s): 9559275,9559280-9559281 UNSPK: P550046									
Benzene	N.D.	20	17.41	20	19.46	87	97	80-120	11	30
Ethylbenzene	N.D.	20	18.44	20	20.49	92	102	80-120	11	30
Toluene	N.D.	20	19.18	20	20.98	96	105	80-120	9	30
Xylene (Total)	N.D.	60	56.02	60	61.97	93	103	80-120	10	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18110SLH026	Sample number(s): 9559267,9559269-9559270,9559272,9559274,9559277,9559279 UNSPK: 9559270									
Benzo(a)anthracene	N.D.	0.0328	0.0291	0.0331	0.0294	89	89	76-109	1	30
Benzo(a)pyrene	N.D.	0.0328	0.0309	0.0331	0.0318	94	96	69-111	3	30
Benzo(b)fluoranthene	N.D.	0.0328	0.0325	0.0331	0.0332	99	100	69-122	2	30
Benzo(k)fluoranthene	N.D.	0.0328	0.0288	0.0331	0.0297	88	90	64-117	3	30
Chrysene	N.D.	0.0328	0.0291	0.0331	0.0295	89	89	75-106	2	30
Dibenz(a,h)anthracene	N.D.	0.0328	0.0297	0.0331	0.0304	90	92	66-119	2	30
Indeno(1,2,3-cd)pyrene	N.D.	0.0328	0.0277	0.0331	0.0285	84	86	65-114	3	30
Naphthalene	N.D.	0.0328	0.0391	0.0331	0.0335	119*	101	72-103	15	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931983

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 181090036A	Sample number(s): 9559266-9559274,9559276 UNSPK: 9559274									
Diesel Range Organics C12-C24	N.D.	132	89.54			68		61-115		
Batch number: 181090037A	Sample number(s): 9559277-9559279 UNSPK: P556880									
Diesel Range Organics C12-C24	N.D.	134	102.21			76		61-115		
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 181091404902	Sample number(s): 9559266-9559274,9559276-9559279 UNSPK: 9559266									
Lead	21.25	10.2	32.14	13.16	34.75	107	103	75-125	8	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/kg	mg/kg		
Batch number: 181090036A	Sample number(s): 9559266-9559274,9559276 BKG: 9559274			
Diesel Range Organics C12-C24	N.D.	N.D.	0 (1)	20
Heavy Range Organics C24-C40	N.D.	N.D.	0 (1)	20
Batch number: 181090037A	Sample number(s): 9559277-9559279 BKG: P556880			
Diesel Range Organics C12-C24	N.D.	N.D.	0 (1)	20
Heavy Range Organics C24-C40	N.D.	N.D.	0 (1)	20
	mg/kg	mg/kg		
Batch number: 181091404902	Sample number(s): 9559266-9559274,9559276-9559279 BKG: 9559266			
Lead	21.25	21.44	1 (1)	20
	%	%		
Batch number: 18107820009A	Sample number(s): 9559266-9559274,9559276-9559279 BKG: 9559272			
Moisture	20.57	23.43	13*	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: A181152AA

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931983

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: A181152AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9559266	106	106	98	91
9559267	103	106	100	110
9559268	109	108	97	90
9559269	105	105	98	96
9559270	105	108	99	103
9559271	109	111	98	87
9559272	106	109	98	92
9559273	109	108	98	90
9559274	109	106	97	97
9559276	109	110	96	91
9559277	109	110	97	90
9559278	109	113	99	93
9559279	111	111	99	93
Blank	104	104	100	94
LCS	100	101	105	104
LCSD	100	101	104	104
Limits:	50-141	54-135	52-141	50-131

Analysis Name: BTEX 8260C
Batch number: D181083AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9559275	101	99	103	91
9559280	100	99	103	91
9559281	102	101	103	91
Blank	101	99	103	92
LCS	97	99	104	96
MS	98	101	105	97
MSD	98	99	105	96
Limits:	80-120	80-120	80-120	80-120

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 18110SLH026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
9559267	95	92	92
9559269	95	92	88
9559270	93	89	87
9559272	97	90	89
9559274	97	94	88
9559277	94	93	87
9559279	93	92	88

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931983

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 18110SLH026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
Blank	98	96	90
LCS	96	95	90
MS	92	90	86
MSD	94	92	91
Limits:	40-133	45-136	47-123

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 18107A53A

	Trifluorotoluene-F
9559275	113
9559280	106
9559281	111
Blank	108
LCS	107
LCSD	107
Limits:	50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18109A34A

	Trifluorotoluene-F
9559266	76
9559267	63
9559268	66
9559269	71
9559270	68
9559271	73
9559272	72
9559273	69
9559274	69
9559276	72
9559277	72
9559278	72
9559279	75
Blank	97
LCS	100
LCSD	100
Limits:	50-150

Analysis Name: NWTPH-Dx soil
Batch number: 181090036A

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 04/30/2018 00:20

Group Number: 1931983

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 181090036A

	Orthoterphenyl
9559266	96
9559267	97
9559268	99
9559269	97
9559270	99
9559271	99
9559272	111
9559273	99
9559274	98
9559276	88
Blank	103
DUP	94
LCS	106
MS	94
Limits:	50-150

Analysis Name: NWTPH-Dx soil
Batch number: 181090037A

	Orthoterphenyl
9559277	92
9559278	82
9559279	87
Blank	97
DUP	87
LCS	95
MS	88
Limits:	50-150

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

For Eurofins Lancaster Laboratories Environmental use only
Acct. # 11255 Group # 1931983 Sample # 955926 6-81
Instructions on reverse side correspond with circled numbers.

1 Client Information

Facility # 375289 WBS
Site Address: 802 S Columbus Ave, Goldendale WA
Chevron PM: Eric Rochl
Lead Consultant: Leidos
Consultant/Office: Leidos, Bothell, WA
Consultant Project Mgr.: Don Wyll
Consultant Phone #: 425-482-3315
Sampler: A. Wisher

4 Matrix

Sediment ☐ Ground ☐ Surface ☐
Soil ☒ Potable ☐ NPDES ☐ Water ☐ Air ☐ Oil ☐

5 Analyses Requested

Total Number of Containers
BTEX + MTBE 8021 ☐ 8260 ☒ Naphth ☒ 8270
8260 full scan
Oxygenates
NWTPH-Gx by ECY 97-602
NWTPH-Dx with Silica Gel Cleanup ☐
NWTPH-Dx without Silica Gel Cleanup ☒
WA VPH ☐ WA EPH ☐
Lead Total ☒ Diss. ☐ Method 6010C
cPAH USEPA 8270 SIM
Moisture
EDB (8011) EDC (8260) 8260
Ac 4/17/18

SCR #:

- ☐ Results in Dry Weight
- ☐ J value reporting needed
- ☐ Must meet lowest detection limits possible for 8260 compounds
- ☐ 8021 MTBE Confirmation
- ☐ Confirm MTBE + Naphthalene
- ☐ Confirm highest hit by 8260
- ☐ Confirm all hits by 8260
- ☐ Run _____ oxy's on highest hit
- ☐ Run _____ oxy's on all hits

6 Remarks

2 Sample Identification	Collected Date	Collected Time	3 Grab	3 Composite	Soil	Water	Oil	Total Containers	BTEX + MTBE	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	cPAH	Moisture	EDB (8011) EDC (8260) 8260
MW-5-4.5	4/12/18	1045	X		X			7	X			X		X			X		X	X
MW-5-5.5	4/12/18	1050	X		X			7	X			X		X			X	X	X	X
SB-28-4.5	4/12/18	1125	X		X			7	X			X		X			X		X	X
SB-28-5.5	4/12/18	1135	X		X			7	X			X		X			X	X	X	X
SB-28-6.5	4/12/18	1145	X		X			7	X			X		X			X	X	X	X
~~SB-27~~ MW-6-4.0	4/12/18	1310	X		X			7	X			X		X			X		X	X
MW-6-~~5.5~~ 6.0	4/12/18	1320	X		X			7	X			X		X			X	X	X	X
SB-27-~~4.0~~ 4.0	4/12/18	1340	X		X			7	X			X		X			X		X	X
SB-27-7.0	4/12/18	1350	X		X			7	X			X		X			X	X	X	X
TB-10-041218	4/12/18	1550						4	X			X								

LT 4/13/18 LT 4/13/18

7 Turnaround Time Requested (TAT) (please circle)

Standard | 5 day | 4 day | 72 hour | 48 hour | 24 hour

8 Data Package (circle if required)

Type I - Full
Type VI (Raw Data)

EDD (circle if required)
CVX-RTBU-FI_05 (default)
Other: _____

Relinquished by	Date	Time	Received by	Date	Time
Lauren Thompson	4/13/18	0840			

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Temperature Upon Receipt 5.2 °C

Received by	Date	Time
	4/14/18	1150

Custody Seals Intact? Yes No

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 7051 0913

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 11255 For Eurofins Lancaster Laboratories Environmental use only Group # 1931983 Sample # 9559266-81

Instructions on reverse side correspond with circled numbers.

SCR #: _____

1 Client Information

Facility # 375289 WBS

Site Address: 802 S Columbus Ave Goldendale WA

Chevron PM: Eric Rochl

Lead Consultant: Leidos

Consultant/Office: Leidos, Bothell, WA

Consultant Project Mgr.: Don Wyll

Consultant Phone #: 425-482-3315

Sampler: A. Wisher

2 Sample Identification / Collected

Sample Identification	Date	Time
MW-7-3.5	4/12/18	1415
MW-7-4.0	4/12/18	1430
SB-31-3.5	4/12/18	1450
SB-31-6.5	4/12/18	1530
TB-11-041218	4/12/18	1650
ER-1-041318	4/13/18	0740

3 Grab / Composite

4 Matrix

Sample Identification	Grab	Composite	Soil	Sediment	Water	Potable	Ground	NPDES	Surface	Oil	Air
MW-7-3.5	X		X								
MW-7-4.0	X		X								
SB-31-3.5	X		X								
SB-31-6.5	X		X								
TB-11-041218											
ER-1-041318											

5 Analyses Requested

Sample Identification	Total Number of Containers	BTEX + MTBE 8021 8260 Naphth $275	8260 full scan	Oxygenates	NWTPH-Gx by ECY 97-602	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead Total Diss. Method 6010B	cPAH VSEPA 8270 SIM	Moisture	EDB (8011) EDC (8260) 8260 Ac 4/17/18
MW-7-3.5	7	X			X		X			X		X	X
MW-7-4.0	7	X			X		X			X	X	X	X
SB-31-3.5	7	X			X		X			X		X	X
SB-31-6.5	7	X			X		X			X	X	X	X
TB-11-041218	4	X			X								
ER-1-041318	14	X			X								

4/13/18 4/13/18

6 Remarks

- [ ] Results in Dry Weight
- [ ] J value reporting needed
- [ ] Must meet lowest detection limits possible for 8260 compounds
- [ ] 8021 MTBE Confirmation
- [ ] Confirm MTBE + Naphthalene
- [ ] Confirm highest hit by 8260
- [ ] Confirm all hits by 8260
- [ ] Run _____ oxy's on highest hit
- [ ] Run _____ oxy's on all hits

7 Turnaround Time Requested (TAT) (please circle)

(Standard) 5 day 4 day

72 hour 48 hour 24 hour

8 Data Package (circle if required)

(Type I - Full)

Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FI_05 (default)

Other: _____

9

Relinquished by	Date	Time	Received by	Date	Time
Lauren Thompson	4/13/18	0835			

Relinquished by Commercial Carrier: UPS X FedEx ____ Other ____

Temperature Upon Receipt 7.5 °C

Received by: _____ Date 4/14/18 Time 1150

Custody Seals Intact? (Yes) No

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Sample Administration Receipt Documentation Log

Doc Log ID: 213781

Group Number(s):

Client: Leidos

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/14/2018 11:50
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	WA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 14:19 on 04/14/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	5.2	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 213783

Group Number(s): 1931983

Client: Leidos

A-112255

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/14/2018 11:50
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	WA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 14:30 on 04/14/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	2.5	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

Report Date: May 02, 2018 16:18

Project: 375289

Account #: 11255
Group Number: 1933874
SDG: UTA14
PO Number: 0015275850
Release Number: ROEHL
State of Sample Origin: WA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To Leidos

Attn: Don Wyll

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
SB-41-S-3.0-180417 Grab Soil	04/17/2018 12:40	9567298
SB-41-S-5.5-180417 Grab Soil	04/17/2018 12:50	9567299
SB-42-S-2.0-180417 Grab Soil	04/17/2018 13:10	9567300
SB-42-S-5.5-180417 Grab Soil	04/17/2018 13:25	9567301
SB-43-S-2.5-180417 Grab Soil	04/17/2018 14:00	9567302
SB-43-S-5.5-180417 Grab Soil	04/17/2018 14:15	9567303
TB-13-180418 NA Water	04/18/2018 07:40	9567304
SB-21-S-3.0-180417 Grab Soil	04/17/2018 08:55	9567305
SB-21-S-6.5-180417 Grab Soil	04/17/2018 09:25	9567306
SB-44-S-5.0-180417 Grab Soil	04/17/2018 10:20	9567307
SB-44-S-6.0-180417 Grab Soil	04/17/2018 10:35	9567308
SB-10-S-3.0-180417 Grab Soil	04/17/2018 11:10	9567309
SB-10-S-5.0-180417 Grab Soil	04/17/2018 11:20	9567310
DUP-4-S-3.0-180417 Grab Soil	04/17/2018 11:20	9567311
TB-12-180418 NA Water	04/18/2018 07:25	9567312

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **SB-41-S-3.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 12:40
SDG#: UTA14-01

Chevron
ELLE Sample #: SW 9567298
ELLE Group #: 1933874
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0005	0.76
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.76
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.76
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.76
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.76
11995	Toluene	108-88-3	N.D.	0.001	0.76
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.76
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.4	25.98
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	N.D.	3.61	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	24.5	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181162AA	04/27/2018 02:52	Patrick T Herres	0.76
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 12:40	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 12:40	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 12:40	Client Supplied	1

Sample Description: **SB-41-S-3.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 12:40
SDG#: UTA14-01

Chevron
ELLE Sample #: SW 9567298
ELLE Group #: 1933874
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16B	04/24/2018 17:18	Jeremy C Giffin	25.98
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 12:40	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100009A	04/25/2018 17:24	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100009A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	04/30/2018 05:14	Jonathan J Allen	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **SB-41-S-5.5-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 12:50
SDG#: UTA14-02

Chevron
ELLE Sample #: SW 9567299
ELLE Group #: 1933874
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.0006	0.0005	0.77
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.77
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.77
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.77
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.77
11995	Toluene	108-88-3	N.D.	0.001	0.77
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.77
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0009	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0009	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0009	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0009	1
12969	Chrysene	218-01-9	N.D.	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0009	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0009	1
12969	Naphthalene	91-20-3	0.001	0.0009	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	2.5	1.4	26.37
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	N.D.	2.73	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	24.3	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-41-S-5.5-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567299
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 12:50
SDG#: UTA14-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181162AA	04/27/2018 03:14	Patrick T Herres	0.77
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 12:50	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 12:50	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 12:50	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/26/2018 06:19	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16A	04/23/2018 21:36	Jeremy C Giffin	26.37
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 12:50	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100009A	04/25/2018 19:46	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100009A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	04/30/2018 05:32	Jonathan J Allen	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **SB-42-S-2.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567300
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 13:10
SDG#: UTA14-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.003	0.0006	0.91
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.91
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.91
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.91
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.91
11995	Toluene	108-88-3	0.001	0.001	0.91
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.91
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.5	27.36
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	9.74	3.29	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	24.6	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181162AA	04/27/2018 03:37	Patrick T Herres	0.91
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 13:10	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 13:10	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 13:10	Client Supplied	1

Sample Description: **SB-42-S-2.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 13:10
SDG#: UTA14-03

Chevron
ELLE Sample #: SW 9567300
ELLE Group #: 1933874
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16B	04/24/2018 17:55	Jeremy C Giffin	27.36
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 13:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100009A	04/25/2018 17:45	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100009A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	05/02/2018 13:37	Suzanne M Will	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **SB-42-S-5.5-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567301
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 13:25
SDG#: UTA14-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.034	50.23
11995	1,2-Dibromoethane	106-93-4	N.D.	0.068	50.23
11995	1,2-Dichloroethane	107-06-2	N.D.	0.068	50.23
11995	Ethylbenzene	100-41-4	N.D.	0.068	50.23
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.034	50.23
11995	Toluene	108-88-3	N.D.	0.068	50.23
11995	Xylene (Total)	1330-20-7	N.D.	0.068	50.23
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0009	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0009	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0009	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0009	1
12969	Chrysene	218-01-9	0.0006	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0009	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0009	1
12969	Naphthalene	91-20-3	0.002	0.0009	1
	The surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.				
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	330	28	523.52
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	140	4.0	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	N.D.	3.58	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	25.8	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-42-S-5.5-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 13:25
SDG#: UTA14-04

Chevron
ELLE Sample #: SW 9567301
ELLE Group #: 1933874
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181155AA	04/26/2018 03:58	Patrick T Herres	50.23
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 13:25	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 13:25	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 13:25	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/26/2018 07:17	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16B	04/24/2018 21:42	Jeremy C Giffin	523.52
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 13:25	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100009A	04/25/2018 18:05	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100009A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	04/30/2018 05:36	Jonathan J Allen	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **SB-43-S-2.5-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 14:00
SDG#: UTA14-05

Chevron
ELLE Sample #: SW 9567302
ELLE Group #: 1933874
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.003	0.0005	0.76
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.76
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.76
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.76
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.76
11995	Toluene	108-88-3	N.D.	0.001	0.76
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.76
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.2	23.12
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.8	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	N.D.	2.85	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	20.8	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181162AA	04/27/2018 03:59	Patrick T Herres	0.76
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 14:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 14:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 14:00	Client Supplied	1

Sample Description: **SB-43-S-2.5-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 14:00
SDG#: UTA14-05

Chevron
ELLE Sample #: SW 9567302
ELLE Group #: 1933874
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16A	04/23/2018 22:51	Jeremy C Giffin	23.12
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 14:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100009A	04/25/2018 18:25	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100009A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	04/30/2018 05:39	Jonathan J Allen	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **SB-43-S-5.5-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567303
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 14:15
SDG#: UTA14-06

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0005	0.75
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.75
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.75
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.75
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.75
11995	Toluene	108-88-3	N.D.	0.001	0.75
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.75
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	0.0005	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	0.001	0.0008	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.2	23.19
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	60	3.8	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	N.D.	2.81	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	21.6	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-43-S-5.5-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 14:15
SDG#: UTA14-06

Chevron
ELLE Sample #: SW 9567303
ELLE Group #: 1933874
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181162AA	04/27/2018 04:22	Patrick T Herres	0.75
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 14:15	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 14:15	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 14:15	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/26/2018 07:47	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16B	04/24/2018 18:33	Jeremy C Giffin	23.19
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 14:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100009A	04/25/2018 18:45	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100009A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	04/30/2018 05:42	Jonathan J Allen	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **TB-13-180418 NA Water**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: WW 9567304
ELLE Group #: 1933874
Matrix: Water

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/18/2018 07:40
SDG#: UTA14-07TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
13130	Benzene	71-43-2	N.D.	0.5	1
13130	Ethylbenzene	100-41-4	N.D.	0.5	1
13130	Toluene	108-88-3	N.D.	0.5	1
13130	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX 8260C	SW-846 8260C	1	D181141AA	04/24/2018 20:11	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D181141AA	04/24/2018 20:11	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	18116A20A	04/26/2018 10:33	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030C	1	18116A20A	04/26/2018 10:33	Jeremy C Giffin	1

Sample Description: **SB-21-S-3.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567305
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 08:55
SDG#: UTA14-08

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.003	0.0005	0.76
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.76
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.76
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.76
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.76
11995	Toluene	108-88-3	N.D.	0.001	0.76
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.76
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.3	25.15
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	6.72	3.73	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	23.3	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181162AA	04/27/2018 04:45	Patrick T Herres	0.76
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 08:55	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 08:55	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 08:55	Client Supplied	1

Sample Description: **SB-21-S-3.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 08:55
SDG#: UTA14-08

Chevron
ELLE Sample #: SW 9567305
ELLE Group #: 1933874
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16B	04/24/2018 19:10	Jeremy C Giffin	25.15
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 08:55	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100009A	04/25/2018 20:47	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100009A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	05/02/2018 13:41	Suzanne M Will	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **SB-21-S-6.5-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567306
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 09:25
SDG#: UTA14-09

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.033	49.98
11995	1,2-Dibromoethane	106-93-4	N.D.	0.067	49.98
11995	1,2-Dichloroethane	107-06-2	N.D.	0.067	49.98
11995	Ethylbenzene	100-41-4	N.D.	0.067	49.98
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.033	49.98
11995	Toluene	108-88-3	N.D.	0.067	49.98
11995	Xylene (Total)	1330-20-7	N.D.	0.067	49.98
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	0.001	0.0009	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0009	1
12969	Benzo(b)fluoranthene	205-99-2	0.002	0.0009	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0009	1
12969	Chrysene	218-01-9	0.003	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0009	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0009	1
12969	Naphthalene	91-20-3	N.D.	0.0009	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	250	14	255.68
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	110	4.0	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	N.D.	3.45	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	25.0	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-21-S-6.5-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 09:25
SDG#: UTA14-09

Chevron
ELLE Sample #: SW 9567306
ELLE Group #: 1933874
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181155AA	04/26/2018 03:13	Patrick T Herres	49.98
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 09:25	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 09:25	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 09:25	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18110SLH026	04/26/2018 08:16	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18110SLH026	04/21/2018 13:55	Kate E Lutte	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16B	04/24/2018 22:20	Jeremy C Giffin	255.68
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 09:25	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100009A	04/25/2018 21:07	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100009A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	04/30/2018 05:51	Jonathan J Allen	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **SB-44-S-5.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567307
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 10:20
SDG#: UTA14-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.0008	0.0006	0.86
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.86
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.86
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.86
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	0.86
11995	Toluene	108-88-3	N.D.	0.001	0.86
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.86
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.4	27.05
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	37	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	33	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	10.4	3.64	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	23.0	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181202AA	04/30/2018 10:15	Stephen C Nolte	0.86
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 10:20	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 10:20	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 10:20	Client Supplied	1

Sample Description: **SB-44-S-5.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 10:20
SDG#: UTA14-10

Chevron
ELLE Sample #: SW 9567307
ELLE Group #: 1933874
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16A	04/24/2018 00:48	Jeremy C Giffin	27.05
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 10:20	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100009A	04/25/2018 21:27	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100009A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	05/02/2018 13:44	Suzanne M Will	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **SB-44-S-6.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567308
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 10:35
SDG#: UTA14-11

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.037	55.99
11995	1,2-Dibromoethane	106-93-4	N.D.	0.073	55.99
11995	1,2-Dichloroethane	107-06-2	N.D.	0.073	55.99
11995	Ethylbenzene	100-41-4	N.D.	0.073	55.99
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.037	55.99
11995	Toluene	108-88-3	N.D.	0.073	55.99
11995	Xylene (Total)	1330-20-7	N.D.	0.073	55.99
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	0.002	0.0009	1
12969	Benzo(a)pyrene	50-32-8	0.001	0.0009	1
12969	Benzo(b)fluoranthene	205-99-2	0.002	0.0009	1
12969	Benzo(k)fluoranthene	207-08-9	0.0009	0.0009	1
12969	Chrysene	218-01-9	0.002	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0009	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0009	1
12969	Naphthalene	91-20-3	N.D.	0.0009	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	110	12	220.88
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	20	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	N.D.	3.52	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	23.3	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-44-S-6.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567308
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 10:35
SDG#: UTA14-11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	Q181155AA	04/26/2018 03:36	Patrick T Herres	55.99
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 10:35	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 10:35	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 10:35	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18114SLC026	04/26/2018 03:53	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18114SLC026	04/25/2018 07:45	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16A	04/24/2018 04:33	Jeremy C Giffin	220.88
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 10:35	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100009A	04/25/2018 21:48	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100009A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	04/30/2018 05:55	Jonathan J Allen	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **SB-10-S-3.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567309
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 11:10
SDG#: UTA14-12

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0005	0.75
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.75
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.75
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.75
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.75
11995	Toluene	108-88-3	N.D.	0.001	0.75
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.75
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.3	24.55
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.8	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	N.D.	2.92	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	21.5	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181202AA	04/30/2018 10:38	Stephen C Nolte	0.75
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 11:10	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 11:10	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 11:10	Client Supplied	1

Sample Description: **SB-10-S-3.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 11:10
SDG#: UTA14-12

Chevron
ELLE Sample #: SW 9567309
ELLE Group #: 1933874
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16A	04/24/2018 01:25	Jeremy C Giffin	24.55
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 11:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100010A	04/26/2018 18:06	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100010A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	04/30/2018 05:58	Jonathan J Allen	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **SB-10-S-5.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567310
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 11:20
SDG#: UTA14-13

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0005	0.8
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.8
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.8
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.8
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.8
11995	Toluene	108-88-3	N.D.	0.001	0.8
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.8
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0009	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0009	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0009	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0009	1
12969	Chrysene	218-01-9	N.D.	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0009	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0009	1
12969	Naphthalene	91-20-3	0.005	0.0009	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.3	24.73
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	N.D.	2.91	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	23.6	0.50	1

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Sample Description: **SB-10-S-5.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567310
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 11:20
SDG#: UTA14-13

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181202AA	04/30/2018 11:00	Stephen C Nolte	0.8
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 11:20	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 11:20	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 11:20	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18114SLC026	04/26/2018 05:21	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18114SLC026	04/25/2018 07:45	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16B	04/24/2018 19:50	Jeremy C Giffin	24.73
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 11:20	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100010A	04/26/2018 18:26	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100010A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	04/30/2018 06:01	Jonathan J Allen	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **DUP-4-S-3.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9567311
ELLE Group #: 1933874
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 11:20
SDG#: UTA14-14

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.0009	0.0005	0.78
11995	1,2-Dibromoethane	106-93-4	N.D.	0.001	0.78
11995	1,2-Dichloroethane	107-06-2	N.D.	0.001	0.78
11995	Ethylbenzene	100-41-4	N.D.	0.001	0.78
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.78
11995	Toluene	108-88-3	N.D.	0.001	0.78
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.78
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.4	26.68
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	4.1	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	14	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	N.D.	3.34	5
Wet Chemistry	**SM 2540 G-1997 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	26.3	0.50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A181202AA	04/30/2018 11:23	Stephen C Nolte	0.78
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201810949589	04/17/2018 11:20	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201810949589	04/17/2018 11:20	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201810949589	04/17/2018 11:20	Client Supplied	1

Sample Description: **DUP-4-S-3.0-180417 Grab Soil**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/17/2018 11:20
SDG#: UTA14-14

Chevron
ELLE Sample #: SW 9567311
ELLE Group #: 1933874
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18113A16B	04/24/2018 20:28	Jeremy C Giffin	26.68
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201810949589	04/17/2018 11:20	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	181100010A	04/26/2018 19:07	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	181100010A	04/20/2018 17:30	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	181101404901	04/30/2018 06:04	Jonathan J Allen	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	181101404901	04/23/2018 00:15	Denise L Trimby	1
00111	Moisture	SM 2540 G-1997 %Moisture Calc	1	18110820004A	04/20/2018 09:19	William C Schwebel	1

Sample Description: **TB-12-180418 NA Water**
Facility# 375289
802 S Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: WW 9567312
ELLE Group #: 1933874
Matrix: Water

Project Name: **375289**

Submittal Date/Time: 04/19/2018 09:20
Collection Date/Time: 04/18/2018 07:25
SDG#: UTA14-15TB

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
13130	Benzene	71-43-2	N.D.	0.5	1
13130	Ethylbenzene	100-41-4	N.D.	0.5	1
13130	Toluene	108-88-3	N.D.	0.5	1
13130	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	50	1

Sample Comments

State of Washington Lab Certification No. C457

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX 8260C	SW-846 8260C	1	D181141AA	04/24/2018 20:35	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D181141AA	04/24/2018 20:35	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	18116A20A	04/26/2018 12:23	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030C	1	18116A20A	04/26/2018 12:23	Jeremy C Giffin	1

Quality Control Summary

Client Name: Chevron
Reported: 05/02/2018 16:18

Group Number: 1933874

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	mg/kg	mg/kg
Batch number: A181162AA	Sample number(s): 9567298-9567300,9567302-9567303,9567305	
Benzene	N.D.	0.0005
1,2-Dibromoethane	N.D.	0.001
1,2-Dichloroethane	N.D.	0.001
Ethylbenzene	N.D.	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0005
Toluene	N.D.	0.001
Xylene (Total)	N.D.	0.001
Batch number: A181202AA	Sample number(s): 9567307,9567309-9567311	
Benzene	N.D.	0.0005
1,2-Dibromoethane	N.D.	0.001
1,2-Dichloroethane	N.D.	0.001
Ethylbenzene	N.D.	0.001
Methyl Tertiary Butyl Ether	N.D.	0.0005
Toluene	N.D.	0.001
Xylene (Total)	N.D.	0.001
Batch number: Q181155AA	Sample number(s): 9567301,9567306,9567308	
Benzene	N.D.	0.025
1,2-Dibromoethane	N.D.	0.050
1,2-Dichloroethane	N.D.	0.050
Ethylbenzene	N.D.	0.050
Methyl Tertiary Butyl Ether	N.D.	0.025
Toluene	N.D.	0.050
Xylene (Total)	N.D.	0.050
	ug/l	ug/l
Batch number: D181141AA	Sample number(s): 9567304,9567312	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Toluene	N.D.	0.5
Xylene (Total)	N.D.	0.5
	mg/kg	mg/kg
Batch number: 18110SLH026	Sample number(s): 9567299,9567301,9567303,9567306	
Benzo(a)anthracene	N.D.	0.0007
Benzo(a)pyrene	N.D.	0.0007
Benzo(b)fluoranthene	N.D.	0.0007
Benzo(k)fluoranthene	N.D.	0.0007
Chrysene	N.D.	0.0003

*- Outside of specification
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Quality Control Summary

Client Name: Chevron
Reported: 05/02/2018 16:18

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Method Blank (continued)

Analysis Name	Result	MDL
	mg/kg	mg/kg
Dibenz(a,h)anthracene	N.D.	0.0007
Indeno(1,2,3-cd)pyrene	N.D.	0.0007
Naphthalene	N.D.	0.0007
Batch number: 18114SLC026	Sample number(s): 9567308,9567310	
Benzo(a)anthracene	N.D.	0.0007
Benzo(a)pyrene	N.D.	0.0007
Benzo(b)fluoranthene	N.D.	0.0007
Benzo(k)fluoranthene	N.D.	0.0007
Chrysene	N.D.	0.0003
Dibenz(a,h)anthracene	N.D.	0.0007
Indeno(1,2,3-cd)pyrene	N.D.	0.0007
Naphthalene	N.D.	0.0007
Batch number: 18113A16A	Sample number(s): 9567299,9567302,9567307-9567309	
NWTPH-GX Soil C7-C12	N.D.	1.0
Batch number: 18113A16B	Sample number(s): 9567298,9567300-9567301,9567303,9567305-9567306,9567310-9567311	
NWTPH-GX Soil C7-C12	N.D.	1.0
	ug/l	ug/l
Batch number: 18116A20A	Sample number(s): 9567304,9567312	
NWTPH-Gx water C7-C12	N.D.	50
	mg/kg	mg/kg
Batch number: 181100009A	Sample number(s): 9567298-9567303,9567305-9567308	
Diesel Range Organics C12-C24	N.D.	3.0
Heavy Range Organics C24-C40	N.D.	10
Batch number: 181100010A	Sample number(s): 9567309-9567311	
Diesel Range Organics C12-C24	N.D.	3.0
Heavy Range Organics C24-C40	N.D.	10
Batch number: 181101404901	Sample number(s): 9567298-9567303,9567305-9567311	
Lead	N.D.	0.600

LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: A181162AA	Sample number(s): 9567298-9567300,9567302-9567303,9567305								
Benzene	0.0200	0.0204	0.0200	0.0199	102	100	80-120	2	30
1,2-Dibromoethane	0.0200	0.0214	0.0200	0.0210	107	105	74-120	2	30
1,2-Dichloroethane	0.0200	0.0210	0.0200	0.0206	105	103	71-128	2	30

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Quality Control Summary

Client Name: Chevron
Reported: 05/02/2018 16:18

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LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Ethylbenzene	0.0200	0.0207	0.0200	0.0205	104	103	74-120	1	30
Methyl Tertiary Butyl Ether	0.0200	0.0208	0.0200	0.0206	104	103	66-123	1	30
Toluene	0.0200	0.0204	0.0200	0.0204	102	102	80-120	0	30
Xylene (Total)	0.0600	0.0607	0.0600	0.0603	101	100	75-120	1	30
Batch number: A181202AA	Sample number(s): 9567307,9567309-9567311								
Benzene	0.0200	0.0193	0.0200	0.0205	96	102	80-120	6	30
1,2-Dibromoethane	0.0200	0.0187	0.0200	0.0207	94	104	74-120	10	30
1,2-Dichloroethane	0.0200	0.0202	0.0200	0.0217	101	108	71-128	7	30
Ethylbenzene	0.0200	0.0197	0.0200	0.0206	99	103	74-120	4	30
Methyl Tertiary Butyl Ether	0.0200	0.0197	0.0200	0.0213	98	106	66-123	8	30
Toluene	0.0200	0.0193	0.0200	0.0203	97	101	80-120	5	30
Xylene (Total)	0.0600	0.0572	0.0600	0.0597	95	100	75-120	4	30
Batch number: Q181155AA	Sample number(s): 9567301,9567306,9567308								
Benzene	1.00	0.940	1.00	0.992	94	99	80-120	5	30
1,2-Dibromoethane	1.00	1.04	1.00	1.04	104	104	74-120	1	30
1,2-Dichloroethane	1.00	1.12	1.00	1.12	112	112	71-128	0	30
Ethylbenzene	1.00	0.917	1.00	0.965	92	96	74-120	5	30
Methyl Tertiary Butyl Ether	1.00	1.00	1.00	1.01	100	101	66-123	1	30
Toluene	1.00	0.926	1.00	0.957	93	96	80-120	3	30
Xylene (Total)	3.00	2.76	3.00	2.86	92	95	75-120	4	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: D181141AA	Sample number(s): 9567304,9567312								
Benzene	20	18.1			90		80-120		
Ethylbenzene	20	19.09			95		80-120		
Toluene	20	19.2			96		80-120		
Xylene (Total)	60	58.44			97		80-120		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18110SLH026	Sample number(s): 9567299,9567301,9567303,9567306								
Benzo(a)anthracene	0.0333	0.0310			93		76-109		
Benzo(a)pyrene	0.0333	0.0336			101		69-111		
Benzo(b)fluoranthene	0.0333	0.0331			99		69-122		
Benzo(k)fluoranthene	0.0333	0.0326			98		64-117		
Chrysene	0.0333	0.0311			93		75-106		
Dibenz(a,h)anthracene	0.0333	0.0337			101		66-119		
Indeno(1,2,3-cd)pyrene	0.0333	0.0322			97		65-114		
Naphthalene	0.0333	0.0308			92		72-103		
Batch number: 18114SLC026	Sample number(s): 9567308,9567310								
Benzo(a)anthracene	0.0333	0.0296			89		76-109		
Benzo(a)pyrene	0.0333	0.0323			97		69-111		
Benzo(b)fluoranthene	0.0333	0.0331			99		69-122		

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Quality Control Summary

Client Name: Chevron
Reported: 05/02/2018 16:18

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LCS/LCSD (continued)

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	mg/kg	mg/kg	mg/kg	mg/kg					
Benzo(k)fluoranthene	0.0333	0.0295			89		64-117		
Chrysene	0.0333	0.0295			89		75-106		
Dibenz(a,h)anthracene	0.0333	0.0324			97		66-119		
Indeno(1,2,3-cd)pyrene	0.0333	0.0308			92		65-114		
Naphthalene	0.0333	0.0289			87		72-103		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18113A16A	Sample number(s): 9567299,9567302,9567307-9567309								
NWTPH-GX Soil C7-C12	11	12.67	11	12.4	115	113	71-120	2	30
Batch number: 18113A16B	Sample number(s): 9567298,9567300-9567301,9567303,9567305-9567306,9567310-9567311								
NWTPH-GX Soil C7-C12	11	12.67	11	12.4	115	113	71-120	2	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18116A20A	Sample number(s): 9567304,9567312								
NWTPH-Gx water C7-C12	1100	970.36	1100	947.33	88	86	80-120	2	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181100009A	Sample number(s): 9567298-9567303,9567305-9567308								
Diesel Range Organics C12-C24	134	101.96			76		61-115		
Batch number: 181100010A	Sample number(s): 9567309-9567311								
Diesel Range Organics C12-C24	134	89.03			66		61-115		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181101404901	Sample number(s): 9567298-9567303,9567305-9567311								
Lead	15	16.2			108		80-120		
	%	**%**	**%**	**%**					
Batch number: 18110820004A	Sample number(s): 9567298-9567303,9567305-9567311								
Moisture	89.5	89.43			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: D181141AA	Sample number(s): 9567304,9567312 UNSPK: P566472									
Benzene	N.D.	20	17.23	20	19.36	86	97	80-120	12	30
Ethylbenzene	N.D.	20	18.01	20	22.43	90	112	80-120	22	30

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Quality Control Summary

Client Name: Chevron
Reported: 05/02/2018 16:18

Group Number: 1933874

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Toluene	N.D.	20	18.82	20	24.06	94	120	80-120	24	30
Xylene (Total)	N.D.	60	49.41	60	58.25	82	97	80-120	16	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18110SLH026	Sample number(s): 9567299,9567301,9567303,9567306 UNSPK: P559270									
Benzo(a)anthracene	N.D.	0.0328	0.0291	0.0331	0.0294	89	89	76-109	1	30
Benzo(a)pyrene	N.D.	0.0328	0.0309	0.0331	0.0318	94	96	69-111	3	30
Benzo(b)fluoranthene	N.D.	0.0328	0.0325	0.0331	0.0332	99	100	69-122	2	30
Benzo(k)fluoranthene	N.D.	0.0328	0.0288	0.0331	0.0297	88	90	64-117	3	30
Chrysene	N.D.	0.0328	0.0291	0.0331	0.0295	89	89	75-106	2	30
Dibenz(a,h)anthracene	N.D.	0.0328	0.0297	0.0331	0.0304	90	92	66-119	2	30
Indeno(1,2,3-cd)pyrene	N.D.	0.0328	0.0277	0.0331	0.0285	84	86	65-114	3	30
Naphthalene	N.D.	0.0328	0.0391	0.0331	0.0335	119*	101	72-103	15	30
Batch number: 18114SLC026	Sample number(s): 9567308,9567310 UNSPK: 9567308									
Benzo(a)anthracene	0.00148	0.0328	0.0263	0.0331	0.0272	76	78	76-109	4	30
Benzo(a)pyrene	0.000767	0.0328	0.0254	0.0331	0.0267	75	78	69-111	5	30
Benzo(b)fluoranthene	0.00119	0.0328	0.0285	0.0331	0.0289	83	84	69-122	2	30
Benzo(k)fluoranthene	0.000682	0.0328	0.0281	0.0331	0.0294	84	87	64-117	5	30
Chrysene	0.00160	0.0328	0.0272	0.0331	0.0279	78	79	75-106	3	30
Dibenz(a,h)anthracene	N.D.	0.0328	0.0270	0.0331	0.0273	82	82	66-119	1	30
Indeno(1,2,3-cd)pyrene	N.D.	0.0328	0.0257	0.0331	0.0259	79	78	65-114	1	30
Naphthalene	N.D.	0.0328	0.0312	0.0331	0.0340	95	103	72-103	9	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181100009A	Sample number(s): 9567298-9567303,9567305-9567308 UNSPK: 9567299									
Diesel Range Organics C12-C24	N.D.	134	96.21			72		61-115		
Batch number: 181100010A	Sample number(s): 9567309-9567311 UNSPK: 9567311									
Diesel Range Organics C12-C24	N.D.	132	94			71		61-115		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 181101404901	Sample number(s): 9567298-9567303,9567305-9567311 UNSPK: 9567298									
Lead	N.D.	13.64	15.23	13.64	14.53	112	107	75-125	5	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max

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Quality Control Summary

Client Name: Chevron
Reported: 05/02/2018 16:18

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Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/kg	mg/kg		
Batch number: 181100009A	Sample number(s): 9567298-9567303,9567305-9567308 BKG: 9567299			
Diesel Range Organics C12-C24	N.D.	N.D.	0 (1)	20
Heavy Range Organics C24-C40	N.D.	N.D.	0 (1)	20
Batch number: 181100010A	Sample number(s): 9567309-9567311 BKG: 9567311			
Diesel Range Organics C12-C24	N.D.	N.D.	0 (1)	20
Heavy Range Organics C24-C40	N.D.	N.D.	0 (1)	20
	mg/kg	mg/kg		
Batch number: 181101404901	Sample number(s): 9567298-9567303,9567305-9567311 BKG: 9567298			
Lead	N.D.	N.D.	0 (1)	20
	%	%		
Batch number: 18110820004A	Sample number(s): 9567298-9567303,9567305-9567311 BKG: 9567302			
Moisture	20.85	20.82	0	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: A181162AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9567298	105	106	102	87
9567299	104	107	98	95
9567300	104	104	104	86
9567302	106	108	101	88
9567303	104	107	99	88
9567305	105	110	99	88
Blank	104	104	100	94
LCS	102	105	104	105
LCSD	100	105	104	104
Limits:	50-141	54-135	52-141	50-131

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: A181202AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9567307	107	109	100	94
9567309	107	107	98	93
9567310	108	106	99	87

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Quality Control Summary

Client Name: Chevron
Reported: 05/02/2018 16:18

Group Number: 1933874

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: A181202AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9567311	107	106	97	94
Blank	106	108	99	97
LCS	101	100	104	104
LCSD	103	103	104	105
Limits:	50-141	54-135	52-141	50-131

Analysis Name: BTEX 8260C
Batch number: D181141AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9567304	101	101	98	82
9567312	104	100	112	95
Blank	108	100	108	100
LCS	99	101	101	98
MS	101	99	103	73*
MSD	99	100	118	88
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: Q181155AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9567301	64	63	57	64
9567306	73	77	70	76
9567308	75	75	68	74
Blank	106	108	96	96
LCS	101	102	92	96
LCSD	104	105	95	97
Limits:	50-141	54-135	52-141	50-131

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 18110SLH026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
9567299	93	90	86
9567301	92	91	130*
9567303	130	91	91
9567306	112	92	97
Blank	98	96	90
LCS	96	95	90
MS	92	90	86
MSD	94	92	91

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Quality Control Summary

Client Name: Chevron
Reported: 05/02/2018 16:18

Group Number: 1933874

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 18110SLH026

Limits:	40-133	45-136	47-123

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 18114SLC026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
9567308	81	76	90
9567310	84	83	80
Blank	93	92	85
LCS	94	93	86
MS	90	83	86
MSD	92	84	94
Limits:	40-133	45-136	47-123

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18113A16A

	Trifluorotoluene-F
9567299	50
9567302	52
9567307	52
9567308	48*
9567309	50
Blank	90
LCS	95
LCSD	93
Limits:	50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18113A16B

	Trifluorotoluene-F
9567298	68
9567300	60
9567301	61
9567303	62
9567305	57
9567306	52
9567310	61
9567311	57
Blank	88
LCS	95
LCSD	93

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 05/02/2018 16:18

Group Number: 1933874

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18113A16B

Limits: 50-150

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 18116A20A

	Trifluorotoluene-F
9567304	90
9567312	93
Blank	79
LCS	98
LCSD	96

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 181100009A

	Orthoterphenyl
9567298	91
9567299	87
9567300	88
9567301	86
9567302	93
9567303	88
9567305	90
9567306	88
9567307	87
9567308	91
Blank	92
DUP	90
LCS	89
MS	84

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 181100010A

	Orthoterphenyl
9567309	85
9567310	88
9567311	93
Blank	95
DUP	92
LCS	96
MS	96

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 05/02/2018 16:18

Group Number: 1933874

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 181100010A

Limits: 50-150

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P####### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Chevron Northwest Region Analysis Request/Chain of Custody

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Acct. # 11255 — For Eurofins Lancaster Laboratories Environmental use only: Group # 433824 Sample # 430728-12

Instructions on reverse side correspond with circled numbers.

1 Client Information

Facility # 375289 — WBS

Site Address: 802 S. Columbus Ave, Goldendale WA

Chevron PM: Eric Rohl — Lead Consultant: Leidos

Consultant/Office: Leidos / Bothell WA

Consultant Project Mgr.: Don Wyll

Consultant Phone #: 425-482-3315

Sampler: Wisher

2 Sample Identification / 3 Grab / Composite / 4 Matrix / Collected / 5 Analyses Requested

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Water: Ground	Water: Potable	Water: Surface	Water: NPDES	Oil	Air	Total Number of Containers	BTEX + MTBE 8021	8260	Naphth	8270	8260 full scan	Oxygenates	NWTPH-Gx EPA 97-602	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead Total	Lead Diss.	Lead Method 6010	Moisture	EDB EDC 8260	cPAH USEPA 8270 SIM
SB-41-3.0	4/17/18	1240	X		X								7	X						X		X			X			X	X	
SB-41-5.5	4/17/18	1250	X		X								7	X						X		X			X			X	X	X
SB-42-2.0	4/17/18	1310	X		X								7	X						X		X			X			X	X	
SB-42-5.5	4/17/18	1325	X		X								7	X						X		X			X			X	X	X
SB-43-2.5	4/17/18	1400	X		X								7	X						X		X			X			X	X	
SB-43-5.5	4/17/18	1415	X		X								7	X						X		X			X			X	X	X
TB-13-041818	4/18/18	0740											4	X						X										

4-18-18

SCR #: _____

- ☐ Results in Dry Weight
- ☐ J value reporting needed
- ☐ Must meet lowest detection limits possible for 8260 compounds
- ☐ 8021 MTBE Confirmation
- ☐ Confirm MTBE + Naphthalene
- ☐ Confirm highest hit by 8260
- ☐ Confirm all hits by 8260
- ☐ Run _____ oxy's on highest hit
- ☐ Run _____ oxy's on all hits

6 Remarks

7 Turnaround Time Requested (TAT) (please circle)

Standard | 5 day | 4 day | 72 hour | 48 hour | 24 hour

8 Data Package (circle if required)

Type I - Full | Type VI (Raw Data)

EDD (circle if required): CVX-RTBU-FI_05 (default) | Other: _____

Relinquished by	Date	Time	Received by	Date	Time
Lauren Thompson	4/18/18	0816			

Relinquished by Commercial Carrier: UPS ✓ FedEx _____ Other _____

Received by: [signature] — Date: 4/19/18 — Time: 920

Temperature Upon Receipt 1.0/1.7 °C

Custody Seals Intact? Yes / No

9

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 11255 For Eurofins Lancaster Laboratories Environmental use only Group # 1933874 Sample # 9507298-12

Instructions on reverse side correspond with circled numbers.

① Client Information

Facility # 375289 WBS

Site Address: 802 S. Columbus Ave Goldendale WA

Chevron PM: Eric Roehl Lead Consultant: Leidos

Consultant/Office: Leidos / Bothell WA

Consultant Project Mgr.: Don WYLL

Consultant Phone #: 425-482-3315

Sampler: Wisher

SCR #:

☐	Results in Dry Weight
☐	J value reporting needed
☐	Must meet lowest detection limits possible for 8260 compounds
☐	8021 MTBE Confirmation
☐	Confirm MTBE + Naphthalene
☐	Confirm highest hit by 8260
☐	Confirm all hits by 8260
☐	Run ______ oxy's on highest hit
☐	Run ______ oxy's on all hits

② ④ Matrix: ☐ Sediment ☐ Ground ☐ Surface; ☒ Soil; Water: ☐ Potable ☐ NPDES; ☐ Air; ☐ Oil

⑤ Analyses Requested: BTEX + MTBE 8021 ☐ 8260 ☒ Naphth ☒ 8270; NWTPH-Gx: ECY 97-602; NWTPH-Dx with Silica Gel Cleanup ☐; NWTPH-Dx without Silica Gel Cleanup ☒; WA VPH ☐; WA EPH ☐; Lead Total ☒ Diss. ☐ Method 6010B; CPAH USEPA 8270 SIM; Moisture; EDB EDC 8260

Sample Identification	Collected Date	Collected Time	③ Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE	8260 full scan	Oxygenates	NWTPH-Gx	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead	CPAH	Moisture	EDB EDC		⑥ Remarks
SB-21-3.0	4/17/18	0855	X		X			7	X			X		X			X		X	X		
SB-21-6.5	4/17/18	0925	X		X			7	X			X		X			X	X	X	X		
SB-44-5.0	4/17/18	1020	X		X			7	X			X		X			X		X	X		
SB-44-6.0	4/17/18	1035	X		X			7	X			X		X			X	X	X	X		
SB-10-3.0	4/17/18	1110	X		X			7	X			X		X			X		X	X		
SB-10-5.0	4/17/18	1120	X		X			7	X			X		X			X	X	X	X		
DUP-4-041718	4/17/18	1120	X		X			7	X			X	√	X			X		X	X		
TB-12-041818	4/18/18	0725						4	X			X										

4-18-18

⑦ **Turnaround Time Requested (TAT)** (please circle): (Standard) 5 day 4 day 72 hour 48 hour 24 hour

⑧ **Data Package** (circle if required): (Type I - Full) Type VI (Raw Data)

EDD (circle if required): CVX-RTBU-FI_05 (default) Other: ______

Relinquished by	Date	Time	Received by	Date	Time
Lauren Thompson	4/18/18	0816			
Relinquished by			Received by		

⑨ Relinquished by Commercial Carrier: UPS ✓ FedEx ____ Other ____ | Received by: [signature] | Date 4/19/18 | Time 920

Temperature Upon Receipt 1.0/1.7 °C Custody Seals Intact? (Yes) No

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 7051 0913

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be given to the SeaTac Courier. The pink copy should be retained by the client.

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Sample Administration Receipt Documentation Log

Doc Log ID: 214134

Group Number(s): 1933804

Client: Chevron

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	04/19/2018 9:20
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	WA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	8
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Wyatt Shiffler (12792) at 10:19 on 04/19/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-03	1.0	DT	Wet	Y	Bagged	N
2	DT42-03	1.7	DT	Wet	Y	Bagged	N

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
SB-44-6.0	4/17/2018 --	1 Vial

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

Report Date: October 17, 2018 17:09

Project: 375289

Account #: 11255
Group Number: 1992043
SDG: UTA16
PO Number: 0015275849
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To Leidos

Attn: Don Wyll

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
SB-45-S-3.5-180924 Grab Soil	09/24/2018 15:37	9824383
SB-45-S-6.5-180924 Grab Soil	09/24/2018 16:00	9824384
SB-46-S-3.0-180925 Grab Soil	09/25/2018 08:30	9824385
SB-46-S-4.5-180925 Grab Soil	09/25/2018 08:45	9824386
SB-47-S-3.5-180925 Grab Soil	09/25/2018 10:00	9824387
SB-47-S-7.5-180925 Grab Soil	09/25/2018 10:30	9824388
SB-48-S-3.5-180925 Grab Soil	09/25/2018 10:45	9824389
SB-48-S-7.5-180925 Grab Soil	09/25/2018 11:00	9824390
SB-49-S-3.0-180925 Grab Soil	09/25/2018 11:50	9824391
SB-49-S-7.0-180925 Grab Soil	09/25/2018 12:00	9824392
DUP-1-SD-180925 Grab Soil	09/25/2018 13:00	9824393
QA-1-T-180925 NA Water	09/25/2018 13:30	9824394

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **SB-45-S-3.5-180924 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824383
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/24/2018 15:37
SDG#: UTA16-01

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.002	0.0005	0.77
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.77
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.77
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.77
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.77
11995	Toluene	108-88-3	0.001	0.0006	0.77
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.77
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	0.001	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	0.0007	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.002	1
	Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.				
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.3	24.02
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	6.59	2.80	5
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	19.3	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: **SB-45-S-3.5-180924 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824383
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/24/2018 15:37
SDG#: UTA16-01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A182754AA	10/02/2018 23:37	Patrick T Herres	0.77
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201827151380	09/24/2018 15:37	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201827151380	09/24/2018 15:37	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827151380	09/24/2018 15:37	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18278SLF026	10/08/2018 01:57	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18278SLF026	10/06/2018 10:15	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18275A31A	10/02/2018 17:33	Jeremy C Giffin	24.02
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827151380	09/24/2018 15:37	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	182770030A	10/05/2018 10:23	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	182770030A	10/04/2018 22:35	Karen L Beyer	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	182711404901	10/16/2018 11:20	Lisa J Cooke	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	182711404901	10/01/2018 08:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18271820007A	09/28/2018 14:46	Larry E Bevins	1

Sample Description: **SB-45-S-6.5-180924 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824384
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/24/2018 16:00
SDG#: UTA16-02

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.029	46.35
11995	1,2-Dibromoethane	106-93-4	N.D.	0.023	46.35
11995	1,2-Dichloroethane	107-06-2	N.D.	0.035	46.35
11995	Ethylbenzene	100-41-4	N.D.	0.023	46.35
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.029	46.35
11995	Toluene	108-88-3	N.D.	0.035	46.35
11995	Xylene (Total)	1330-20-7	N.D.	0.058	46.35
	Reporting limits were raised due to interference from the sample matrix.				
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	0.001	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.002	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	270	2.7	229.7
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	270	3.8	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	9.18	2.82	5
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	20.6	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: **SB-45-S-6.5-180924 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824384
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/24/2018 16:00
SDG#: UTA16-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	R182761AA	10/03/2018 16:11	Stephen C Nolte	46.35
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201827151380	09/24/2018 16:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201827151380	09/24/2018 16:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827151380	09/24/2018 16:00	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18278SLF026	10/08/2018 02:29	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18278SLF026	10/06/2018 10:15	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18275A31A	10/02/2018 16:21	Jeremy C Giffin	229.7
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827151380	09/24/2018 16:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	182770030A	10/05/2018 11:22	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	182770030A	10/04/2018 22:35	Karen L Beyer	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	182711404901	10/16/2018 11:22	Lisa J Cooke	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	182711404901	10/01/2018 08:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18271820007A	09/28/2018 14:46	Larry E Bevins	1

Sample Description: **SB-46-S-3.0-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824385
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 08:30
SDG#: UTA16-03

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.001	0.0005	0.81
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.81
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.81
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.81
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.81
11995	Toluene	108-88-3	0.0007	0.0006	0.81
11995	Xylene (Total)	1330-20-7	N.D.	0.001	0.81
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	0.001	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	0.0009	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.002	1
	Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.				
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.3	24.02
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.6	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	8.00	2.93	5
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	17.3	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: **SB-46-S-3.0-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824385
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 08:30
SDG#: UTA16-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A182754AA	10/03/2018 00:01	Patrick T Herres	0.81
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201827151380	09/25/2018 08:30	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201827151380	09/25/2018 08:30	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827151380	09/25/2018 08:30	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18278SLF026	10/08/2018 03:00	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18278SLF026	10/06/2018 10:15	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18275A31A	10/02/2018 18:09	Jeremy C Giffin	24.02
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827151380	09/25/2018 08:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	182770030A	10/05/2018 11:42	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	182770030A	10/04/2018 22:35	Karen L Beyer	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	182711404901	10/16/2018 11:25	Lisa J Cooke	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	182711404901	10/01/2018 08:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18271820007A	09/28/2018 14:46	Larry E Bevins	1

Sample Description: **SB-46-S-4.5-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824386
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 08:45
SDG#: UTA16-04

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.0008	0.0004	0.72
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.72
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.72
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.72
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0004	0.72
11995	Toluene	108-88-3	N.D.	0.0005	0.72
11995	Xylene (Total)	1330-20-7	N.D.	0.0009	0.72
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	0.0007	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.002	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.3	23.88
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.6	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	7.27	0.701	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	18.5	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: **SB-46-S-4.5-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 08:45
SDG#: UTA16-04

Chevron
ELLE Sample #: SW 9824386
ELLE Group #: 1992043
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A182754AA	10/03/2018 00:24	Patrick T Herres	0.72
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201827151380	09/25/2018 08:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827151380	09/25/2018 08:45	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18278SLF026	10/08/2018 03:32	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18278SLF026	10/06/2018 10:15	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18275A31A	10/02/2018 18:45	Jeremy C Giffin	23.88
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827151380	09/25/2018 08:45	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	182770030A	10/05/2018 12:02	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	182770030A	10/04/2018 22:35	Karen L Beyer	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	182711404901	10/08/2018 15:26	Eric L Eby	1
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	182711404901	10/01/2018 08:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18271820007A	09/28/2018 14:46	Larry E Bevins	1

Sample Description: **SB-47-S-3.5-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 10:00
SDG#: UTA16-05

Chevron
ELLE Sample #: SW 9824387
ELLE Group #: 1992043
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.003	0.0006	1.04
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0005	1.04
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0007	1.04
11995	Ethylbenzene	100-41-4	N.D.	0.0005	1.04
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	1.04
11995	Toluene	108-88-3	0.001	0.0007	1.04
11995	Xylene (Total)	1330-20-7	N.D.	0.001	1.04
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	0.004	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	0.003	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.002	1
	Benzo(b)fluoranthene and benzo(k)fluoranthene were not resolved under the sample analysis conditions. The result reported for benzo(b)fluoranthene represents the combined total of both isomers.				
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.3	31.94
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.4	1
08272	Heavy Range Organics C24-C40	n.a.	12	11	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	6.47	0.517	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture	n.a.	12.8	0.50	1
	Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.				

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: **SB-47-S-3.5-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824387
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 10:00
SDG#: UTA16-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A182754AA	10/03/2018 00:47	Patrick T Herres	1.04
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201827151380	09/25/2018 10:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201827151380	09/25/2018 10:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827151380	09/25/2018 10:00	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18278SLF026	10/08/2018 04:03	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18278SLF026	10/06/2018 10:15	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18275A31A	10/02/2018 19:28	Jeremy C Giffin	31.94
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827151380	09/25/2018 10:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	182770030A	10/05/2018 12:22	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	182770030A	10/04/2018 22:35	Karen L Beyer	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	182711404901	10/08/2018 15:29	Eric L Eby	1
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	182711404901	10/01/2018 08:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18271820007A	09/28/2018 14:46	Larry E Bevins	1

Sample Description: **SB-47-S-7.5-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 10:30
SDG#: UTA16-06

Chevron
ELLE Sample #: SW 9824388
ELLE Group #: 1992043
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.001	0.0005	0.74
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.74
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.74
11995	Ethylbenzene	100-41-4	0.003	0.0004	0.74
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.74
11995	Toluene	108-88-3	0.001	0.0005	0.74
11995	Xylene (Total)	1330-20-7	0.027	0.0009	0.74
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	0.004	0.0008	1
12969	Benzo(a)pyrene	50-32-8	0.005	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	0.009	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	0.003	0.0008	1
12969	Chrysene	218-01-9	0.005	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	0.001	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	0.004	0.0008	1
12969	Naphthalene	91-20-3	0.002	0.002	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.3	26.61
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	10.0	2.79	5
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	19.2	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: **SB-47-S-7.5-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824388
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 10:30
SDG#: UTA16-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A182754AA	10/03/2018 01:10	Patrick T Herres	0.74
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201827151380	09/25/2018 10:30	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201827151380	09/25/2018 10:30	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827151380	09/25/2018 10:30	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18278SLF026	10/07/2018 23:18	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18278SLF026	10/06/2018 10:15	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18275A31A	10/02/2018 20:04	Jeremy C Giffin	26.61
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827151380	09/25/2018 10:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	182770030A	10/05/2018 12:42	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	182770030A	10/04/2018 22:35	Karen L Beyer	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	182711404901	10/16/2018 11:28	Lisa J Cooke	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	182711404901	10/01/2018 08:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18271820007A	09/28/2018 14:46	Larry E Bevins	1

Sample Description: **SB-48-S-3.5-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824389
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 10:45
SDG#: UTA16-07

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.003	0.0006	1.06
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0005	1.06
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0007	1.06
11995	Ethylbenzene	100-41-4	N.D.	0.0005	1.06
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	1.06
11995	Toluene	108-88-3	0.001	0.0007	1.06
11995	Xylene (Total)	1330-20-7	N.D.	0.001	1.06
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	0.0008	0.0008	1
12969	Benzo(a)pyrene	50-32-8	0.0008	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	0.006	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	0.001	0.0008	1
12969	Chrysene	218-01-9	0.005	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	0.001	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.002	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.3	29.44
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.4	1
08272	Heavy Range Organics C24-C40	n.a.	18	11	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	7.64	0.639	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	12.3	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: **SB-48-S-3.5-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824389
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 10:45
SDG#: UTA16-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A182754AA	10/03/2018 01:34	Patrick T Herres	1.06
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201827151380	09/25/2018 10:45	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201827151380	09/25/2018 10:45	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827151380	09/25/2018 10:45	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18278SLF026	10/08/2018 04:35	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18278SLF026	10/06/2018 10:15	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18275A31A	10/02/2018 20:40	Jeremy C Giffin	29.44
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827151380	09/25/2018 10:45	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	182770030A	10/05/2018 13:41	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	182770030A	10/04/2018 22:35	Karen L Beyer	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	182711404901	10/08/2018 15:35	Eric L Eby	1
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	182711404901	10/01/2018 08:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18271820007A	09/28/2018 14:46	Larry E Bevins	1

Sample Description: **SB-48-S-7.5-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 11:00
SDG#: UTA16-08

Chevron
ELLE Sample #: SW 9824390
ELLE Group #: 1992043
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0005	0.75
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.75
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.75
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.75
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.75
11995	Toluene	108-88-3	N.D.	0.0006	0.75
11995	Xylene (Total)	1330-20-7	N.D.	0.0009	0.75
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	0.0009	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	0.0007	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.002	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.3	22.87
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	8.98	3.21	5
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	20.2	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: **SB-48-S-7.5-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824390
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 11:00
SDG#: UTA16-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A182754AA	10/03/2018 01:57	Patrick T Herres	0.75
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201827151380	09/25/2018 11:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201827151380	09/25/2018 11:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827151380	09/25/2018 11:00	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18278SLF026	10/08/2018 05:06	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18278SLF026	10/06/2018 10:15	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18275A31A	10/02/2018 21:16	Jeremy C Giffin	22.87
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827151380	09/25/2018 11:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	182770030A	10/05/2018 14:01	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	182770030A	10/04/2018 22:35	Karen L Beyer	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	182711404901	10/16/2018 11:30	Lisa J Cooke	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	182711404901	10/01/2018 08:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18271820007A	09/28/2018 14:46	Larry E Bevins	1

Sample Description: **SB-49-S-3.0-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 11:50
SDG#: UTA16-09

Chevron
ELLE Sample #: SW 9824391
ELLE Group #: 1992043
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	0.003	0.0006	1.04
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0005	1.04
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0007	1.04
11995	Ethylbenzene	100-41-4	N.D.	0.0005	1.04
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0006	1.04
11995	Toluene	108-88-3	0.002	0.0007	1.04
11995	Xylene (Total)	1330-20-7	N.D.	0.001	1.04
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	0.003	0.0007	1
12969	Benzo(a)pyrene	50-32-8	0.004	0.0007	1
12969	Benzo(b)fluoranthene	205-99-2	0.008	0.0007	1
12969	Benzo(k)fluoranthene	207-08-9	0.003	0.0007	1
12969	Chrysene	218-01-9	0.005	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0007	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	0.002	0.0007	1
12969	Naphthalene	91-20-3	N.D.	0.001	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.3	29.48
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.4	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	6.08	0.583	1
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	12.0	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: **SB-49-S-3.0-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824391
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 11:50
SDG#: UTA16-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A182761AA	10/03/2018 15:18	Stephen C Nolte	1.04
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201827151380	09/25/2018 11:50	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201827151380	09/25/2018 11:50	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827151380	09/25/2018 11:50	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18278SLF026	10/08/2018 05:38	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18278SLF026	10/06/2018 10:15	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18275A31A	10/02/2018 21:53	Jeremy C Giffin	29.48
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827151380	09/25/2018 11:50	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	182770030A	10/05/2018 14:21	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	182770030A	10/04/2018 22:35	Karen L Beyer	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	182711404901	10/08/2018 15:46	Eric L Eby	1
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	182711404901	10/01/2018 08:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18271820007A	09/28/2018 14:46	Larry E Bevins	1

Sample Description: **SB-49-S-7.0-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Chevron
ELLE Sample #: SW 9824392
ELLE Group #: 1992043
Matrix: Soil

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 12:00
SDG#: UTA16-10

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0004	0.72
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.72
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0005	0.72
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.72
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0004	0.72
11995	Toluene	108-88-3	N.D.	0.0005	0.72
11995	Xylene (Total)	1330-20-7	N.D.	0.0009	0.72
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	0.002	0.0008	1
12969	Benzo(a)pyrene	50-32-8	0.002	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	0.005	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	0.002	0.0008	1
12969	Chrysene	218-01-9	0.003	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	0.001	0.0008	1
12969	Naphthalene	91-20-3	0.003	0.002	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.3	24.18
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	9.14	2.88	5
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	20.0	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: **SB-49-S-7.0-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 12:00
SDG#: UTA16-10

Chevron
ELLE Sample #: SW 9824392
ELLE Group #: 1992043
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A182761AA	10/03/2018 15:41	Stephen C Nolte	0.72
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201827151380	09/25/2018 12:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201827151380	09/25/2018 12:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827151380	09/25/2018 12:00	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18278SLF026	10/08/2018 06:09	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18278SLF026	10/06/2018 10:15	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18275A31A	10/02/2018 22:36	Jeremy C Giffin	24.18
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827151380	09/25/2018 12:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	182820019A	10/14/2018 15:22	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	182820019A	10/09/2018 18:10	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	182711404901	10/16/2018 11:33	Lisa J Cooke	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	182711404901	10/01/2018 08:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18271820007A	09/28/2018 14:46	Larry E Bevins	1

Sample Description: **DUP-1-SD-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 13:00
SDG#: UTA16-11FD

Chevron
ELLE Sample #: SW 9824393
ELLE Group #: 1992043
Matrix: Soil

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**mg/kg**	**mg/kg**	
11995	Benzene	71-43-2	N.D.	0.0005	0.76
11995	1,2-Dibromoethane	106-93-4	N.D.	0.0004	0.76
11995	1,2-Dichloroethane	107-06-2	N.D.	0.0006	0.76
11995	Ethylbenzene	100-41-4	N.D.	0.0004	0.76
11995	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.0005	0.76
11995	Toluene	108-88-3	N.D.	0.0006	0.76
11995	Xylene (Total)	1330-20-7	N.D.	0.0009	0.76
GC/MS Semivolatiles	**SW-846 8270D SIM**		**mg/kg**	**mg/kg**	
12969	Benzo(a)anthracene	56-55-3	N.D.	0.0008	1
12969	Benzo(a)pyrene	50-32-8	N.D.	0.0008	1
12969	Benzo(b)fluoranthene	205-99-2	N.D.	0.0008	1
12969	Benzo(k)fluoranthene	207-08-9	N.D.	0.0008	1
12969	Chrysene	218-01-9	0.0005	0.0004	1
12969	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0008	1
12969	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0008	1
12969	Naphthalene	91-20-3	N.D.	0.002	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02005	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.3	23.86
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
Metals	**SW-846 6010D Rev.4, July 2014**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	9.02	2.97	5
Wet Chemistry	**SM 2540 G-2011 %Moisture Calc**		**%**	**%**	
00111	Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.	n.a.	19.2	0.50	1

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

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Sample Description: **DUP-1-SD-180925 Grab Soil**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 13:00
SDG#: UTA16-11FD

Chevron
ELLE Sample #: SW 9824393
ELLE Group #: 1992043
Matrix: Soil

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11995	BTEX/MTBE/EDB/EDC 8260C	SW-846 8260C	1	A182761AA	10/03/2018 16:04	Stephen C Nolte	0.76
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	1	201827151380	09/25/2018 13:00	Client Supplied	1
02392	GC/MS - Field Preserved NaHSO4	SW-846 5035A	2	201827151380	09/25/2018 13:00	Client Supplied	1
07579	GC/MS-5g Field Preserv.MeOH-NC	SW-846 5035A	1	201827151380	09/25/2018 13:00	Client Supplied	1
12969	SIM SVOAs 8270D (microwave)	SW-846 8270D SIM	1	18278SLF026	10/08/2018 06:41	Anthony P Bauer	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	18278SLF026	10/06/2018 10:15	Michelle A Newswanger	1
02005	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	18275A31A	10/02/2018 23:12	Jeremy C Giffin	23.86
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201827151380	09/25/2018 13:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	182820019A	10/14/2018 16:21	Thomas C Wildermuth	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	182820019A	10/09/2018 18:10	Elizabeth E Donovan	1
06955	Lead	SW-846 6010D Rev.4, July 2014	1	182711404901	10/16/2018 11:36	Lisa J Cooke	5
14049	ICP/ICPMS-SW, 3050B - U5	SW-846 3050B	1	182711404901	10/01/2018 08:05	Denise L Trimby	1
00111	Moisture	SM 2540 G-2011 %Moisture Calc	1	18271820007A	09/28/2018 14:46	Larry E Bevins	1

Sample Description: **QA-1-T-180925 NA Water**
Facility# 375289
802 S. Columbus Ave - Goldendale, WA

Project Name: **375289**

Submittal Date/Time: 09/27/2018 09:45
Collection Date/Time: 09/25/2018 13:30
SDG#: UTA16-12TB

Chevron
ELLE Sample #: WW 9824394
ELLE Group #: 1992043
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	
13130	Benzene	71-43-2	N.D.	0.2	1
13130	Ethylbenzene	100-41-4	N.D.	0.4	1
13130	Toluene	108-88-3	N.D.	0.2	1
13130	Xylene (Total)	1330-20-7	N.D.	1	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**ug/l**	**ug/l**	
08273	NWTPH-Gx water C7-C12	n.a.	N.D.	19	1

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX 8260C	SW-846 8260C	1	F182762AA	10/03/2018 22:07	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	F182762AA	10/03/2018 22:07	Hu Yang	1
08273	NWTPH-Gx water C7-C12	ECY 97-602 NWTPH-Gx	1	18274B20A	10/01/2018 19:09	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030C	1	18274B20A	10/01/2018 19:09	Jeremy C Giffin	1

Quality Control Summary

Client Name: Chevron
Reported: 10/17/2018 17:09

Group Number: 1992043

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	mg/kg	mg/kg
Batch number: A182754AA	Sample number(s): 9824383,9824385-9824390	
Benzene	N.D.	0.0005
1,2-Dibromoethane	N.D.	0.0004
1,2-Dichloroethane	N.D.	0.0006
Ethylbenzene	N.D.	0.0004
Methyl Tertiary Butyl Ether	N.D.	0.0005
Toluene	N.D.	0.0006
Xylene (Total)	N.D.	0.001
Batch number: A182761AA	Sample number(s): 9824391-9824393	
Benzene	N.D.	0.0005
1,2-Dibromoethane	N.D.	0.0004
1,2-Dichloroethane	N.D.	0.0006
Ethylbenzene	N.D.	0.0004
Methyl Tertiary Butyl Ether	N.D.	0.0005
Toluene	N.D.	0.0006
Xylene (Total)	N.D.	0.001
Batch number: R182761AA	Sample number(s): 9824384	
Benzene	N.D.	0.025
1,2-Dibromoethane	N.D.	0.020
1,2-Dichloroethane	N.D.	0.030
Ethylbenzene	N.D.	0.020
Methyl Tertiary Butyl Ether	N.D.	0.025
Toluene	N.D.	0.030
Xylene (Total)	N.D.	0.050
	ug/l	ug/l
Batch number: F182762AA	Sample number(s): 9824394	
Benzene	N.D.	0.2
Ethylbenzene	N.D.	0.4
Toluene	N.D.	0.2
Xylene (Total)	N.D.	1
	mg/kg	mg/kg
Batch number: 18278SLF026	Sample number(s): 9824383-9824393	
Benzo(a)anthracene	N.D.	0.0007
Benzo(a)pyrene	N.D.	0.0007
Benzo(b)fluoranthene	N.D.	0.0007
Benzo(k)fluoranthene	N.D.	0.0007
Chrysene	N.D.	0.0003

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/17/2018 17:09

Group Number: 1992043

Method Blank (continued)

Analysis Name	Result	MDL
	mg/kg	mg/kg
Dibenz(a,h)anthracene	N.D.	0.0007
Indeno(1,2,3-cd)pyrene	N.D.	0.0007
Naphthalene	N.D.	0.001
Batch number: 18275A31A	Sample number(s): 9824383-9824393	
NWTPH-GX Soil C7-C12	N.D.	0.2
	ug/l	ug/l
Batch number: 18274B20A	Sample number(s): 9824394	
NWTPH-Gx water C7-C12	N.D.	19
	mg/kg	mg/kg
Batch number: 182770030A	Sample number(s): 9824383-9824391	
Diesel Range Organics C12-C24	N.D.	3.0
Heavy Range Organics C24-C40	N.D.	10
Batch number: 182820019A	Sample number(s): 9824392-9824393	
Diesel Range Organics C12-C24	N.D.	3.0
Heavy Range Organics C24-C40	N.D.	10
Batch number: 182711404901	Sample number(s): 9824383-9824393	
Lead	N.D.	0.600

LCS/LCSD

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: A182754AA	Sample number(s): 9824383,9824385-9824390								
Benzene	0.0200	0.0193	0.0200	0.0194	96	97	80-120	1	30
1,2-Dibromoethane	0.0200	0.0173	0.0200	0.0187	87	94	76-120	8	30
1,2-Dichloroethane	0.0200	0.0189	0.0200	0.0194	94	97	71-128	3	30
Ethylbenzene	0.0200	0.0193	0.0200	0.0194	96	97	78-120	1	30
Methyl Tertiary Butyl Ether	0.0200	0.0152	0.0200	0.0168	76	84	72-120	10	30
Toluene	0.0200	0.0194	0.0200	0.0196	97	98	80-120	1	30
Xylene (Total)	0.0600	0.0578	0.0600	0.0581	96	97	75-120	1	30
Batch number: A182761AA	Sample number(s): 9824391-9824393								
Benzene	0.0200	0.0209	0.0200	0.0207	105	104	80-120	1	30
1,2-Dibromoethane	0.0200	0.0194	0.0200	0.0195	97	97	76-120	1	30
1,2-Dichloroethane	0.0200	0.0214	0.0200	0.0212	107	106	71-128	1	30
Ethylbenzene	0.0200	0.0205	0.0200	0.0203	103	102	78-120	1	30
Methyl Tertiary Butyl Ether	0.0200	0.0174	0.0200	0.0177	87	88	72-120	1	30
Toluene	0.0200	0.0206	0.0200	0.0206	103	103	80-120	0	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/17/2018 17:09

Group Number: 1992043

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Xylene (Total)	0.0600	0.0614	0.0600	0.0607	102	101	75-120	1	30
Batch number: R182761AA	Sample number(s): 9824384								
Benzene	1.00	1.02	1.00	1.00	102	100	80-120	2	30
1,2-Dibromoethane	1.00	1.00	1.00	1.01	100	101	76-120	0	30
1,2-Dichloroethane	1.00	1.04	1.00	1.05	104	105	71-128	1	30
Ethylbenzene	1.00	1.01	1.00	1.01	101	101	78-120	0	30
Methyl Tertiary Butyl Ether	1.00	0.937	1.00	0.919	94	92	72-120	2	30
Toluene	1.00	1.05	1.00	1.03	105	103	80-120	2	30
Xylene (Total)	3.00	2.92	3.00	2.96	97	99	75-120	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: F182762AA	Sample number(s): 9824394								
Benzene	20	20.2			101		80-120		
Ethylbenzene	20	19.81			99		80-120		
Toluene	20	20.01			100		80-120		
Xylene (Total)	60	59.66			99		80-120		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18278SLF026	Sample number(s): 9824383-9824393								
Benzo(a)anthracene	0.0333	0.0305			92		76-109		
Benzo(a)pyrene	0.0333	0.0338			101		69-111		
Benzo(b)fluoranthene	0.0333	0.0350			105		69-122		
Benzo(k)fluoranthene	0.0333	0.0306			92		64-117		
Chrysene	0.0333	0.0301			90		75-106		
Dibenz(a,h)anthracene	0.0333	0.0326			98		66-119		
Indeno(1,2,3-cd)pyrene	0.0333	0.0325			97		65-114		
Naphthalene	0.0333	0.0292			88		72-103		
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 18275A31A	Sample number(s): 9824383-9824393								
NWTPH-GX Soil C7-C12	11	12.18	11	12.08	111	110	55-145	1	30
	ug/l	**ug/l**	**ug/l**	**ug/l**					
Batch number: 18274B20A	Sample number(s): 9824394								
NWTPH-Gx water C7-C12	1100	1158.47	1100	1275.78	105	116	64-131	10	30
	mg/kg	**mg/kg**	**mg/kg**	**mg/kg**					
Batch number: 182770030A	Sample number(s): 9824383-9824391								
Diesel Range Organics C12-C24	133.83	110.94			83		61-115		
Batch number: 182820019A	Sample number(s): 9824392-9824393								
Diesel Range Organics C12-C24	133.83	100.29			75		61-115		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/17/2018 17:09

Group Number: 1992043

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/kg	LCS Conc mg/kg	LCSD Spike Added mg/kg	LCSD Conc mg/kg	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182711404901	Sample number(s): 9824383-9824393								
Lead	15	15.21			101		80-120		
	%	%	%	%					
Batch number: 18271820007A	Sample number(s): 9824383-9824393								
Moisture	89.5	89.42			100		99-101		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/kg	MS Spike Added mg/kg	MS Conc mg/kg	MSD Spike Added mg/kg	MSD Conc mg/kg	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18278SLF026	Sample number(s): 9824383-9824393 UNSPK: 9824388									
Benzo(a)anthracene	0.00316	0.0330	0.0323	0.0329	0.0308	88	84	76-109	5	30
Benzo(a)pyrene	0.00435	0.0330	0.0326	0.0329	0.0306	86	80	69-111	6	30
Benzo(b)fluoranthene	0.00718	0.0330	0.0331	0.0329	0.0318	79	75	69-122	4	30
Benzo(k)fluoranthene	0.00234	0.0330	0.0297	0.0329	0.0279	83	78	64-117	6	30
Chrysene	0.00438	0.0330	0.0308	0.0329	0.0295	80	76	75-106	4	30
Dibenz(a,h)anthracene	0.00104	0.0330	0.0349	0.0329	0.0326	103	96	66-119	7	30
Indeno(1,2,3-cd)pyrene	0.00359	0.0330	0.0345	0.0329	0.0321	94	87	65-114	7	30
Naphthalene	0.00165	0.0330	0.0311	0.0329	0.0358	89	104*	72-103	14	30
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg					
Batch number: 182770030A	Sample number(s): 9824383-9824391 UNSPK: 9824383									
Diesel Range Organics C12-C24	N.D.	133.83	106.97			80		61-115		
Batch number: 182820019A	Sample number(s): 9824392-9824393 UNSPK: 9824392									
Diesel Range Organics C12-C24	N.D.	133.12	96.39			72		61-115		

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/kg	DUP Conc mg/kg	DUP RPD	DUP RPD Max
Batch number: 182770030A	Sample number(s): 9824383-9824391 BKG: 9824383			
Diesel Range Organics C12-C24	N.D.	N.D.	0 (1)	20

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/17/2018 17:09

Group Number: 1992043

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/kg	mg/kg		
Heavy Range Organics C24-C40	N.D.	N.D.	0 (1)	20
Batch number: 182820019A	Sample number(s): 9824392-9824393 BKG: 9824392			
Diesel Range Organics C12-C24	N.D.	N.D.	0 (1)	20
Heavy Range Organics C24-C40	N.D.	N.D.	0 (1)	20
	%	%		
Batch number: 18271820007A	Sample number(s): 9824383-9824393 BKG: 9824387			
Moisture	12.83	12.3	4	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: A182754AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9824383	104	99	108	76
9824385	105	100	103	81
9824386	105	100	100	83
9824387	107	102	110	75
9824388	104	98	98	86
9824389	107	102	108	75
9824390	104	100	97	90
Blank	102	94	98	90
LCS	99	94	102	100
LCSD	99	96	102	100
Limits:	50-141	54-135	52-141	50-131

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: A182761AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9824391	105	97	107	77
9824392	102	96	95	88
9824393	106	101	95	90
Blank	104	95	96	91
LCS	101	99	101	102
LCSD	100	97	101	100

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/17/2018 17:09

Group Number: 1992043

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: A182761AA

Limits:	50-141	54-135	52-141	50-131

Analysis Name: BTEX 8260C
Batch number: F182762AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9824394	100	98	99	94
Blank	103	99	101	95
LCS	102	97	101	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE/EDB/EDC 8260C
Batch number: R182761AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9824384	63	65	67	70
Blank	90	95	95	92
LCS	95	94	96	97
LCSD	93	94	96	96
Limits:	50-141	54-135	52-141	50-131

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 18278SLF026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
9824383	93	81	93
9824384	105	87	85
9824385	92	78	89
9824386	97	87	93
9824387	78	68	77
9824388	103	89	92
9824389	88	75	88
9824390	92	85	90
9824391	63	54	65
9824392	96	89	92
9824393	91	85	88
Blank	101	93	99
LCS	95	86	88
MS	96	88	94
MSD	90	82	90
Limits:	54-122	54-122	61-111

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/17/2018 17:09

Group Number: 1992043

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 18274B20A

	Trifluorotoluene-F
9824394	87
Blank	85
LCS	108
LCSD	93
Limits:	50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18275A31A

	Trifluorotoluene-F
9824383	62
9824384	81
9824385	69
9824386	66
9824387	82
9824388	75
9824389	80
9824390	63
9824391	79
9824392	65
9824393	66
Blank	105
LCS	115
LCSD	115
Limits:	50-150

Analysis Name: NWTPH-Dx soil
Batch number: 182770030A

	Orthoterphenyl
9824383	97
9824384	98
9824385	94
9824386	103
9824387	105
9824388	99
9824389	102
9824390	99
9824391	100
Blank	92
DUP	91
LCS	107

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron
Reported: 10/17/2018 17:09

Group Number: 1992043

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 182770030A

	Orthoterphenyl
MS	105
Limits:	50-150

Analysis Name: NWTPH-Dx soil
Batch number: 182820019A

	Orthoterphenyl
9824392	94
9824393	87
Blank	106
DUP	93
LCS	104
MS	96
Limits:	50-150

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 11255 — For Eurofins Lancaster Laboratories Environmental use only — Group # 1992043 — Sample # 9824383-94

Instructions on reverse side correspond with circled numbers.

SCR #: 230710

1 Client Information

- Facility # 375289 — WBS
- Site Address: 802 S. Columbus AVE, Goldendale, WA
- Chevron PM: HETTRICK — Lead Consultant
- Consultant/Office: Leidos, Bothell, WA
- Consultant Project Mgr.: D. WYLL
- Consultant Phone #: 425-482-3315
- Sampler: A. Wisher

2 Sample Identification / 3 Collected / 4 Matrix / 5 Analyses Requested

Sample Identification	Date	Time	Grab	Composite	Soil	Sediment	Water: Ground	Water: Potable	Water: Surface	Water: NPDES	Oil	Air	Total Number of Containers	BTEX + MTBE 8021	BTEX + Naphth 8260	8260 full scan	Oxygenates	NWTPH-Gx by Ecy 97-602	NWTPH-Dx with Silica Gel Cleanup	NWTPH-Dx without Silica Gel Cleanup	WA VPH	WA EPH	Lead Total	Lead Diss.	Lead Method 6010B	cPAH 8270 SIM	Moisture	EDB (8011) EDC (8260)
SB-45-3.5	9-24-18	1537	X		X								7	X				X		X			X			X	X	X
SB-45-6.5	9-24-18	1600	X		X								7	X				X		X			X			X	X	X
SB-46-3.0	9-25-18	0830	X		X								7	X				X		X			X			X	X	X
SB-46-4.5	9-25-18	0845	X		X								7	X				X		X			X			X	X	X
SB-47-3.5	9-25-18	1000	X		X								7	X				X		X			X			X	X	X
SB-47-7.5	9-25-18	1030	X		X								7	X				X		X			X			X	X	X
SB-48-3.5	9-25-18	1045	X		X								7	X				X		X			X			X	X	X
SB-48-7.5	9-25-18	1100	X		X								7	X				X		X			X			X	X	X
SB-49-3.0	9-25-18	1150	X		X								7	X				X		X			X			X	X	X
SB-49-7.0	9-25-18	1200	X		X								7	X				X		X			X			X	X	X
DUP-1-092518	9-25-18	1300	X		X								4	X				X		X			X			X	X	X
TB-1-092518	9-25-18	1330												X				X											

6 Remarks

- Results in Dry Weight
- J value reporting needed
- Must meet lowest detection limits possible for 8260 compounds
- 8021 MTBE Confirmation
- Confirm MTBE + Naphthalene
- Confirm highest hit by 8260
- Confirm all hits by 8260
- Run _____ oxy's on highest hit
- Run _____ oxy's on all hits

7 Turnaround Time Requested (TAT) (please circle)

Standard | 5 day | 4 day | 72 hour | 48 hour | 24 hour

8 Data Package (circle if required)

Type I - Full

Type VI (Raw Data)

EDD (circle if required)

CVX-RTBU-FI_05 (default)

Other: _____

9

	Relinquished by	Date	Time	Received by	Date	Time
1	Edna Hernandez	9/19/18	1635			
2		9/26/18	1325			
3	Relinquished by Commercial Carrier: UPS ✓ FedEx _____ Other _____			Received by	9/27/18	0945

Temperature Upon Receipt 3.3 °C

Custody Seals Intact? Yes (circled) No

Appendix C:
O'Gara Report

TIM O'GARA, R.G.
CONSULTING HYDROGEOLOGIST

May 4, 2012

Tim Love
Operations Manager
Carson Oil Company
P.O. Box 10948
Portland, OR 97296-0948

Re: Carson – Goldendale Fuel Spill

Tim,

The site is located at 808 South Columbus Avenue in the town of Goldendale, WA. The site has operated as a bulk fuel supplier since 1927 and is paved mostly with gravel.

Early on the morning of April 29, there was a fuel spill at the site. According to reports, up to 970 gallons of unleaded gasoline may have been spilled due to overfilling of one of the above ground tanks. An effort was made to clean up the spill immediately, but there is no record of how much of the fuel percolated into the ground. This report documents the initial response and removal of the fresh gasoline spill. At this time, there is still weathered gasoline and diesel contamination remaining at the site. Figure 1 shows the site location. Figure 2 shows the site layout.

On March 1, 2012, a series of borings were drilled around the tank area to determine how widespread the soil contamination was. A total of 14 boring locations were drilled and sampled. In addition, 12 grab samples were collected from depths ranging from 6-inches to 62 inches below grade from within the bermed area beneath the tank that was overfilled.

Volcanic bedrock was found throughout the site at depths ranging from 7-10 feet below grade also. The water was sitting on top of the bedrock in most of the borings, however no water was found in three of them. It appears that there are preferential pathways that run on top of the bedrock in areas where it is lower. The main soil type at the site is silt to clayey silt, but there were a few borings that detected a sand layer immediately above the basalt bedrock. Boring locations are found on Figure 2. Depth to bedrock in the

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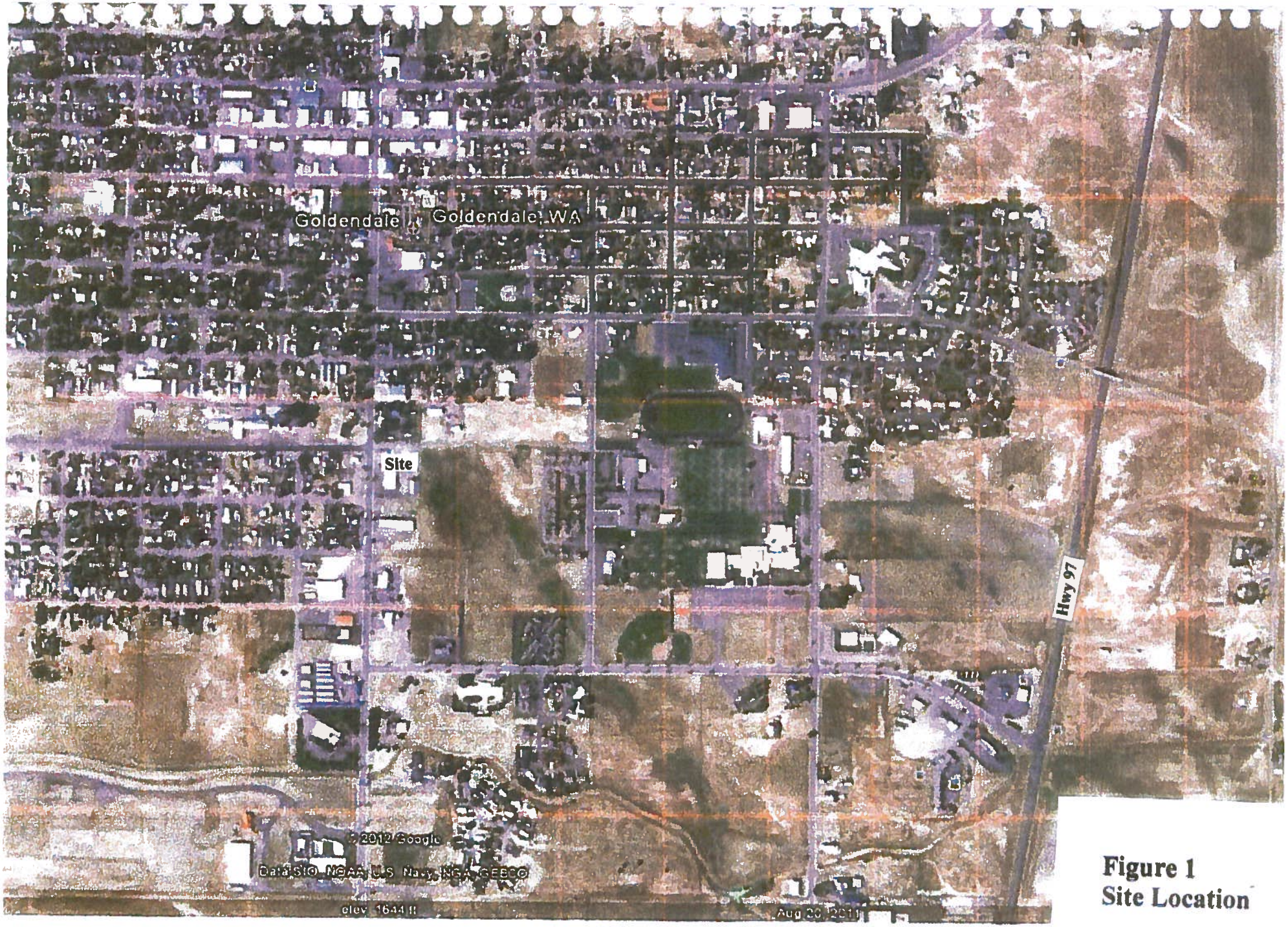


Figure 1
Site Location

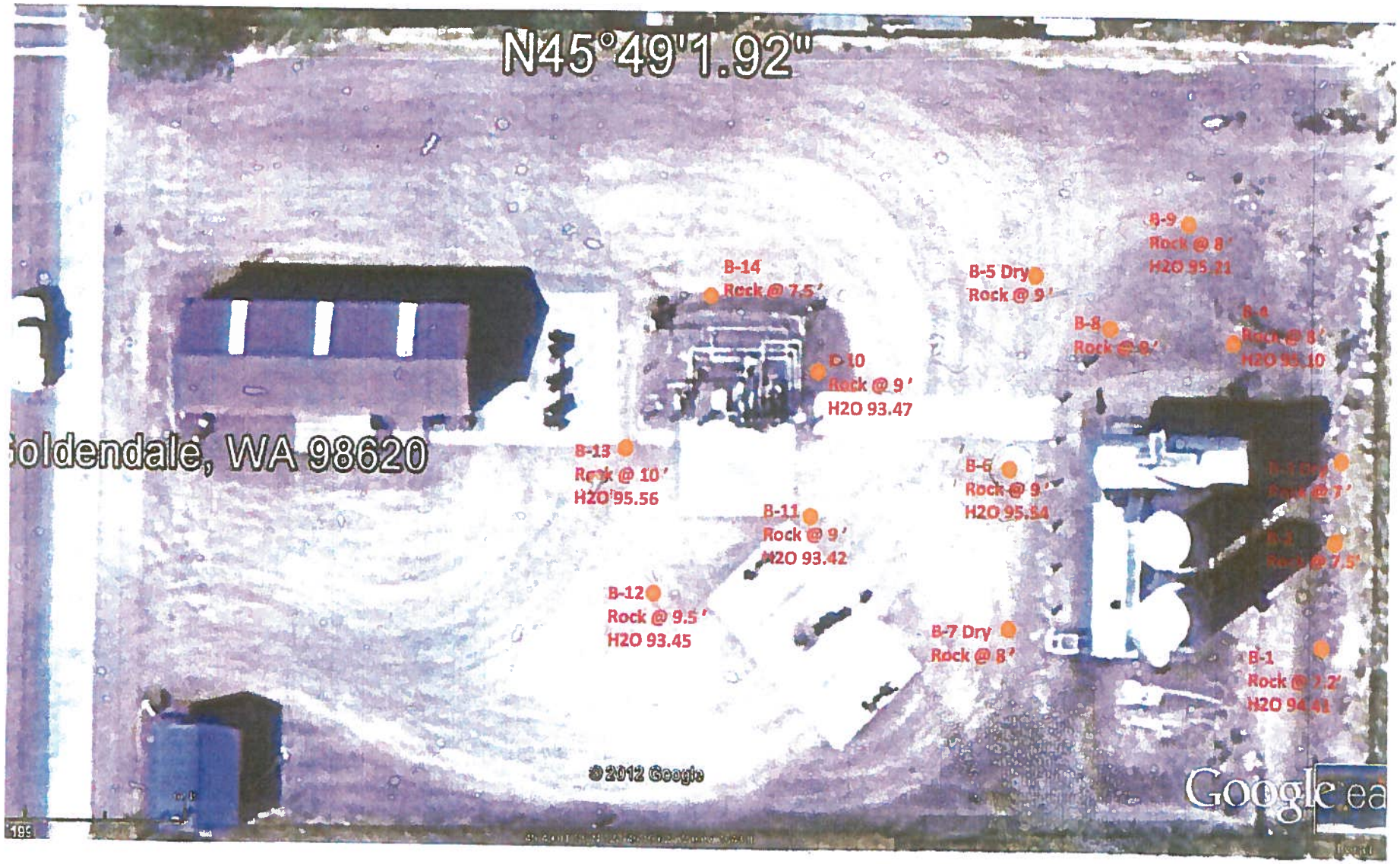


Figure 2
Soil Boring Locations,
Showing Bedrock Depths and
Water levels in open Borings

borings is shown as Table 1. Boring logs for the soil sample location are included in Appendix A.

Soil from the immediate area within the berm was also removed and stored on site for later disposal. During the initial excavation, ground water was detected in the pit at approximately 5-6 feet below grade. Water was pumped from the excavation and stored on site in a 19,000 gallon tank until it could be sampled and disposed of properly.

Because these samples were being collected to determine the lateral extent of the fresh gasoline spill, and not for compliance, soil and water samples that were collected from the excavation were analyzed for gasoline and diesel range hydrocarbons as well as BTEX. Tables 2, 3, and 4 show the sample results. A few of the higher concentration samples were later analyzed for TCLP Lead to determine the proper disposal methodology also.

Table 1
Approximate Depth to bedrock

Location	Depth to bedrock (ft)	Wet?
B-1	7.2	Yes
B-2	7.5	Yes
B-3	7	No
B-4	8	Yes
B-5	9	No
B-6	9	Yes
B-7	8	No
B-8	9	Yes
B-9	8	Yes
B-10	9	Yes
B-11	9	Yes
B-12	9.5	Yes
B-13	10	Yes
B-14	7.5	Yes

Table 2
Soil inside berm area (mg/kg)

Location	Gx	Dx
S- Center 0-6	14200	609
N-Center 0-6	18300	2560
NW 0-6	15600	686
NE 0-6	96.5	675
SE 0-6	34000	1800
SW 0-6	13600	165
S-Center 54"	ND	25.6
S-Center 56"	833	694
NW-36"	4060	3320
NW – 62"	1170	367
N- Center - 58"	2100	2020
N-Center 36"	1120	118
Exc pit Water*	44700 (ug/l)	16100 (mg/l)

* Also have PAHs for exc pit water

Table 3 Boring Samples

Soil Samples (mg/kg)

location	Gx	Dx	Benz	Tol	Ethyl	Xylene
1-5	ND		ND	0.316	ND	ND
2-5	ND		ND	ND	ND	ND
2-7	256		ND	0.543	1.12	2.62
3-5	ND		ND	ND	ND	ND
3-7	ND		ND	ND	ND	ND
4-5	19.9		ND	ND	ND	ND
4-7	ND		ND	ND	ND	ND
5-5	ND		ND	ND	ND	ND
5-8	ND	160	ND	ND	ND	ND
6-5	1330		29.5	155	36.3	176
6-8	36.1	1050	ND	ND	ND	ND
7-5	1380	755	ND	ND	2.52	0.946
7-8	5840	1470	ND	1.14	6.76	3.22
8-5	ND		ND	ND	ND	ND
8-8	ND		ND	ND	ND	ND
9-5	ND		ND	ND	ND	ND
9-7	ND	399	ND	ND	ND	ND
10-5	ND	ND	0.311	0.633	ND	ND
10-9	ND		ND	ND	ND	ND
11-5		909				
11-7	1090	384	0.414	2.89	4.84	6.96
12-5		215				
12-8	36.7	99.9	ND	ND	0.440	ND
13-5		113				
13-9	222	41.3	0.103	2.36	5.35	7.75
14-5		121				
14-7	752	360	0.202	4.31	9.55	13.1

Table 4

Boring Water Samples`

Location	Gx (ug/l)	Dx (mg/l)	Benz (ug/l)	Tol (ug/l)	Ethyl (ug/l)	Xylene (ug/l)
B-1-W	227	ND	0.485	1.17	1.45	1.99
B-2-W	10500		20.7	14.0	615	961
B-4-W	2770	7.96	11.5	9.58	48.9	88.6
B-6-W	127000	8.53	11500	40000	2430	11300
B-8-W	4240	1.24	43.6	5.34	45.9	45.5
B-9-W	288	2.08	2.07	3.26	2.17	2.75
B-10-W		20.7				
B-11-W		294				
B-12-W		169				
B-13-W		36.5				
B-14-W		213				

Complete analytical results are found in Attachment B.

On April 13, 2012, the stockpiled soils from the initial excavation were removed from the site to the Columbia Ridge landfill

Monitoring Well Installation

Four monitoring wells were installed on April 4, 2012. The wells were installed using push probe technology and all had 5 feet of prepacked 0.010 slot screen. Prior to installing the wells, a proposal was given to the Department of Ecology with locations and sampling methodology for the work. Unfortunately, since the site is not in the Voluntary Cleanup Program, Ecology spill response or Toxic Cleanup Program personnel could not comment on the locations.

Without any input from Ecology, the wells were installed using the following rationale:

MW-1 was placed as close as possible to the SE corner of the site. This was done to get background water from the area of the site that was assumed to be least likely to have been contaminated by site activities over the years.

MW-2 was placed in the north central portion of the site. This well was be used to see if the plume is moving to the northwest.

MW-3 was placed between boring B-6 and the fill stand. This well location was chosen because the boring program at this site seems to indicate that there is a preferential pathway for ground water flow in the B-6 area.

The final well, MW-4, was placed south and west of boring B-7. Based on our soil samples, this was assumed to place the well outside of the plume. It is also in a location that would show us if the plume is moving to the southwest. Figure 3 shows the location of the wells. Boring Logs for the wells are included in Appendix A after the soil boring logs.

Remedial Excavation

As mentioned earlier, during the first few days after the initial spill, soil from within the immediate area beneath the overfilled tank was removed and stockpiled on site for later disposal. Prior to disposing of the soil, a landfill permit needed to be issued to assure the proper disposal methods were followed. In discussions with the Waste Management Company that runs the Arlington Landfill, the area around boring B-6 was found to contain too much toluene to allow disposal in the non-haz landfill. An agreement was made to segregate the soils from within 5-feet of boring B-6 in all directions and landfill that soil under a separate manifest so it could be properly treated.

On April 6 and 8, 2012, the remaining soils containing the fresh gasoline were excavated and a series of 19 confirmation samples were collected from the walls and floor of the excavation. Within the excavation area, all soil was removed down to the top of the

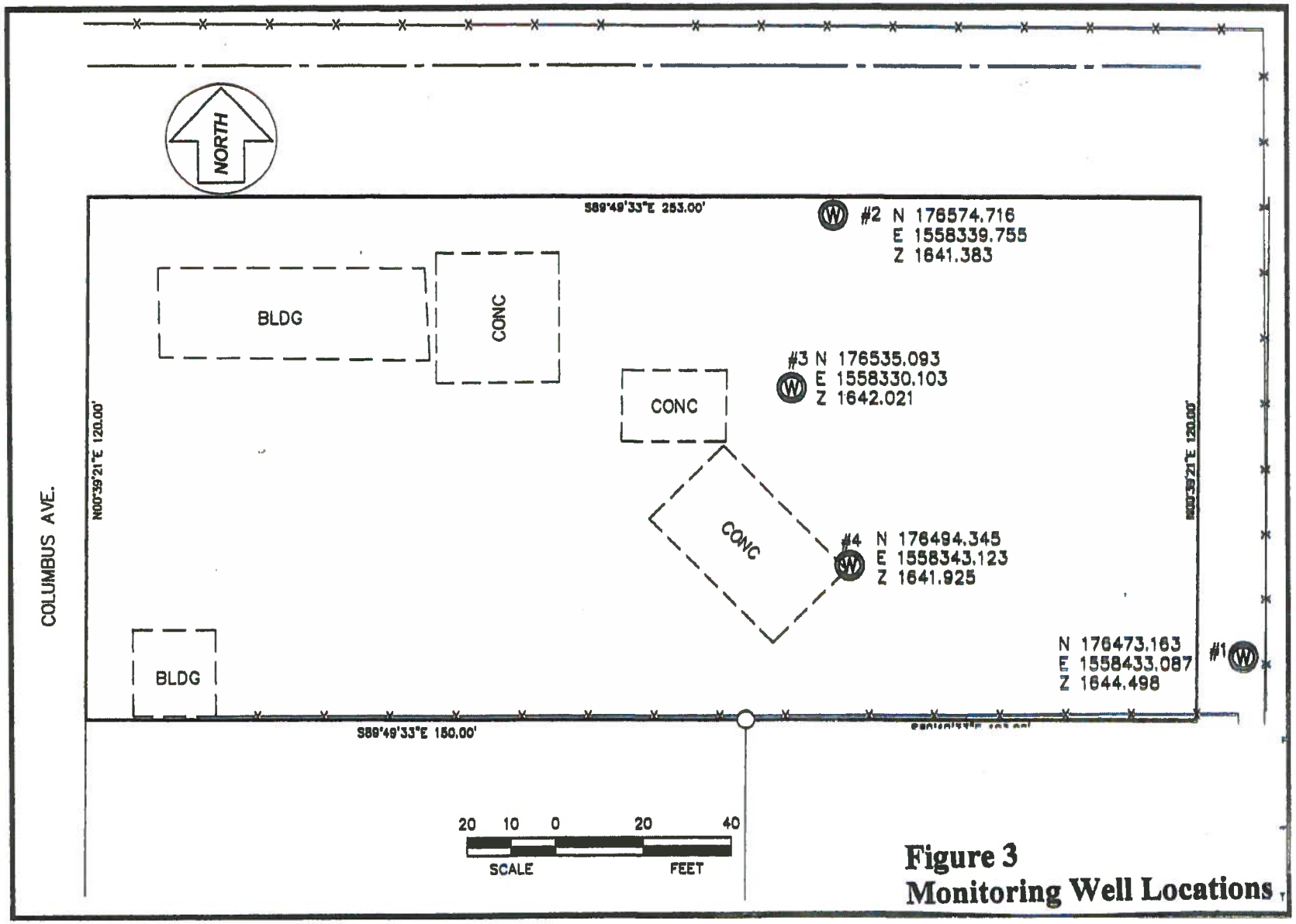


Figure 3
Monitoring Well Locations

basalt bedrock. There was a small area that could not be removed below the pipe run, so samples were collected from the wall in that area to confirm that the soil that was left did not contain fresh gasoline. A total of 389.68 tons of soil was taken off site to the non-haz landfill and an additional 23.94 tons of soil from around B-6 was taken to the hazardous landfill Figure 4 shows the area of excavation in relation to the whole site. Figure 5 is a more detailed drawing showing the locations of all the confirmation samples.

According to Washington Department of Ecology guidance documents, the difference between fresh and weathered gasoline can be determined by the ratio of benzene + toluene divided by the concentration of the ethylbenzene + xylene (B+T)/(E+X). If the result of this is 3 to 5, the gasoline is considered to be fresh. A number of less than 0.5 is considered to be very weathered.

Because the purpose of this work was to remediate the fresh gasoline spill and not to clean up the residual contamination from 85 years of site operations, confirmation samples from the remedial excavation were all tested for gasoline range hydrocarbons and BTEX. The resulting concentrations were all analyzed according to Ecology protocol to determine if any fresh product remained. Table 5 shows the result of the confirmation sampling.

While it is apparent that there is no fresh gasoline remaining in the excavation area, four of the samples were found to be higher than the 0.50 that delineates very weathered gasoline. All four of these samples are bottom samples that were scraped from the top of the bedrock. Since it is difficult to scrape basalt, it is very possible that some of the overlying lightly contaminated soils were also picked up from pockets or low areas in the surface of the rock. The excavation was cleaned as well as possible, but it is impossible to get all soil off a surface that isn't completely flat using an excavator bucket.

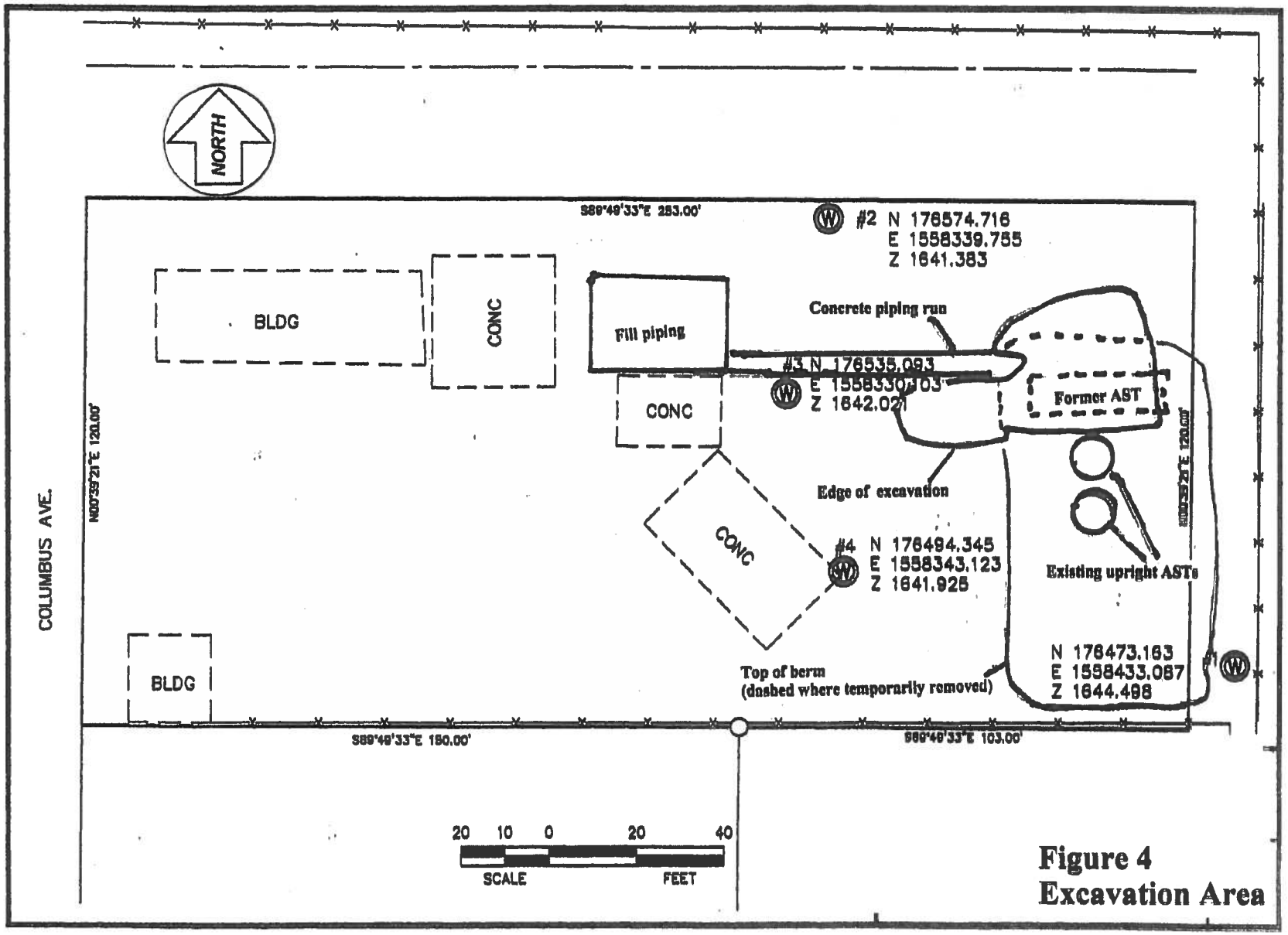


Figure 4
Excavation Area

100/30 0.03 7 6 9

Table 5

Confirmation Sampling Results (mg/kg)

Sample Number	Location/depth	Gx	B	T	E	X	(B+T)/(E+X)
C-1	SE corner @ 4 ft.	346	2.0	2.2	2.0	13	0.29
C-2	East wall @ 3 ft.	1060	6.5	20	30	64	0.28
C-3	East wall @ 3.5 ft.	2190	7.7	26	45	120	0.20
C-4	NE corner @4 ft.	843	4.3	7.1	13	53	0.17
C-5	S. wall @ 3 ft.	1660	3.7	22	27	120	0.17
C-6	N side of pipe run @ 3.5 ft.	1970	27	32	160	160	0.18
C-7	S. wall below berm @4 ft.	2480	36	46	220	240	0.17
C-8	NE Bottom @ 8 ft	3080	13	7.4	12	32	0.46
C-9	SE bottom @7.5 ft	1490	6.6	18	3.9	32	0.68
C-10	Center S. bottom @ 8 ft. @4 ft	1590	7.3	15	25	73	0.22
C-11	NW wall @4 ft	2550	11	33	56	200	0.17
C-12	NW corner @ 3 ft.	2860	9.4	13	48	67	0.19
C-13	Wall by pipe run @ 3.5 ft.	1970	13	27	95	160	0.15
C-14	Bottom beneath berm @ 8 ft.	561	1.6	1.1	1.8	2.7	0.60
C-15	Bottom beneath B-6 @ 8 ft.	1810	4.9	4.1	2.3	9.0	0.79
C-16	S wall at edge of B-6 boring @ 5 ft	766	3.9	13	45	74	0.14
C-17	N wall at edge of B-6 boring @ 5 ft.	1140	8.7	17	70	96	0.15
C-18	W bottom @ 7.5 ft	1290	6.6	3.7	2.0	5.7	1.06
C-19	W wall @ 4 ft.	1220	7.0	22	79	110	0.15

0.03 7 6 9

Monitoring Well Sampling

The wells were sampled on April 20, 2012. Each well was sampled using a peristaltic pump Prior to collecting water samples, the wells were opened and allowed to equilibrate before the water levels were measured. The measuring point on wells had earlier been

surveyed, so the ground water could be determined. Table 6 shows the ground water elevations in the 4 wells. Figure 6 shows the water level in the wells.

Table 6
Ground Water Elevations 4-20-11

Well #	Depth to water (ft.)	Surveyed measuring point elevation (ft. MSL)	Ground water elevation (ft. MSL)
MW-1	6.33	1644.50	1638.17
MW-2	5.60	1641.38	1635.78
MW-3	2.73	1642.02	1639.29
MW-4	2.26	1641.93	1639.67

Based on the widely varying water levels, it appears that the wells are tapping at least two different perched water zones. MW-1, MW-3 and MW-4 are possibly in the same zone, but it appears that MW-2, which is at least 2.5 feet lower than the rest, is tapping a separate perched water body. A ground water direction was determined based on wells 1, 3, and 4. That gradient moves to the northeast.

All of the wells were easily pumped dry after only removing approximately 1.5 well volumes of water. None of them recharged easily either, taking approximately an hour to get enough water in the well casing to fill four 80ml VOA vials for the testing. Well MW-3 seemed to recharge the best, but that was expected because there is a silty sand lens of soil sitting directly on top of the basalt that may provide for a more permeable pathway for water.

During sampling field tests were run for pH, temperature and electrical conductivity. Table 7 shows the initial readings for each well and the readings that were present during pumping after they stabilized.

Table 7
Water Evaluation Parameters

Well	pH	EC	Temp
MW-1 – initial	6.43	457	56.7
MW-1 stabilized	7.01	358	53.4
MW-2 initial	6.96	472	55.3
MW-2 stabilized	7.10	336	57.4
MW-3 initial	7.07	448	54.5
MW-3 stabilized	7.28	460	58.0
MW-4 initial	6.95	318	54.2
MW-4 stabilized	7.80	319	58.8

Because this is a gasoline site, the sample were analyzed for VOCs , including BTEX, MTBE, and EDC, using EPA method 8260B. EDB was analyzed using EPA method 8011. Table 8 shows the sample results.

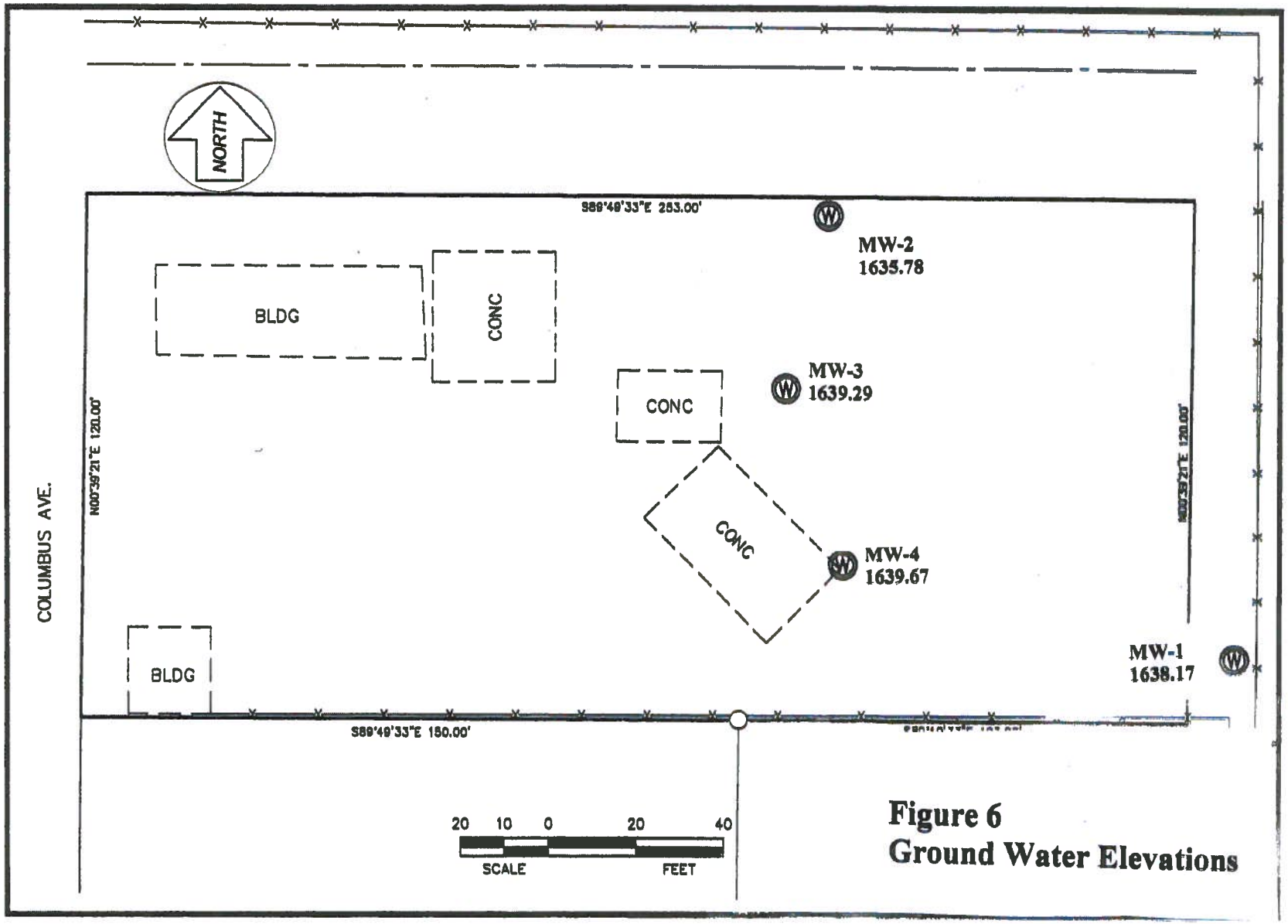


Figure 6
Ground Water Elevations

Table 8
Ground Water sample Results (ug/l)

Chemical	MW-1	MW-2	MW-3	MW-4	Method A Levels
Gasoline Range Hydrocarbons	ND	8,910	5,080	6,000	1,000 (fresh) 800 (weathered)
1,2,4 trimethylbenzene	ND	27.3	125	ND	-
*1,2, dibromoethane (EDB)	ND	ND	ND	ND	0.01
1,2 dicholorethane (EDC)	ND	ND	ND	ND	-
1,3,5 trimethylbenzene	ND	7.79	71.4	ND	-
Benzene	5.38	1,250	4.00	ND	5
Ethylbenzene	ND	72.8	27.0	ND	-
Isopropylbenzene	ND	4.78	30.6	6.76	-
m,p-Xylene	ND	422	9.37	ND	-
MTBE	ND	ND	ND	ND	20
Naphthalene	ND	8.70	66.0	7.19	160
n-Propylbenzene	ND	10.3	124	13.7	-
o-Xylene	ND	351	ND	ND	-
Toluene	9.05	1,800	6.41	ND	1,000

Notes: EDB analysis by EPA Method 8011, all other VOCs by EPA Method 8260
Gasoline Range Hydrocarbons by the NWTPH-Gx Method.

As you can see, if we apply the (B+T)/(E+X) test, the water in monitoring well MW-2 contains fresh gasoline and the others do not. This indicates that the ground water flow from the tank farm is moving to the northwest as expected. Additionally, wells MW-3 and MW-4 were found to contain extremely weathered product. Well MW-1 only contained 5.36 ug/l of benzene and 9.05 ug/l of toluene. This indicates that at one time there may have been a spill in this area, but it is extremely weathered.

After the initial data was receive from the lab, it did not conform to our expectations that well MW-3 was going to be the one with elevated fresh gasoline. Just to make sure that there was no mistake in labeling with the initial sampling, a second set of samples was collected from wells MW-2 and MW-3 on April 30, 2012. This additional sampling confirmed that the fresh gasoline was indeed in well MW-2 and the gasoline in MW-3 was weathered. The resample results are found in Table 9.

Table 9
Resample of MW-2 and MW-3
4-30-12

Chemical	MW-2 (ug/l)	MW-3 (ug/l)	Method A Levels
Gasoline Range Hydrocarbons	14,500	6,180	1,000 (fresh) 800 (weathered)
1,2,4 trimethylbenzene	29.4	67.1	-
*1,2, dibromoethane (EDB)	ND	ND	0.01
1,2 dicholorethane (EDC)	ND	ND	-
1,3,5 trimethylbenzene	14.0	38.1	-
Benzene	829	0.600	5
Ethylbenzene	104	7.75	-
Isopropylbenzene	8.31	13.8	-
m,p-Xylene	221	6.08	-
MTBE	ND	ND	20
Naphthalene	10.2	39.6	160
n-Propylbenzene	17.5	56.8	-
o-Xylene	208	ND	-
Toluene	1,490	ND	1,000

Notes: EDB analysis by EPA Method 8011, all other VOCs by EPA Method 8260
Gasoline Range Hydrocarbons by the NWTPH-Gx Method.

Discussion

Based on the work that has been completed at the site and the confirmation samples, it is evident that the soils containing the fresh gasoline from the recent spill have been removed.

Based on the ground water levels, it appears that there at least two perched water bearing zones at the site. In particular, the water level in MW-2, which was the only well with fresh gasoline in it, was 2.39 feet lower than any other well that was on site. If we plot a ground water gradient using wells MW-1, MW-3, and MW-4, the shallow ground water is moving to the northeast, which is not what we had expected for this site.

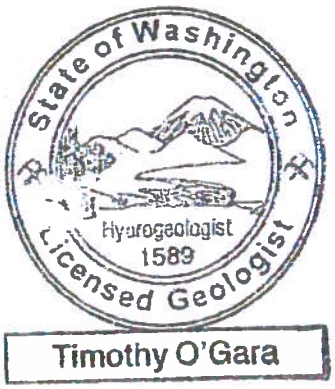
Considering the confirmed contamination in MW-2, it is also odd that, during the soil boring program, the nearest borings (B-5 and B-10) did not have any gasoline detections in the soil samples. Also, boring B-5 was a dry boring.

This leads me to believe that the contamination in MW-2 is not associated with the original spill, but there is a leak from some other buried piping in the area. Because we are dealing with individual perched water zones and not an interconnected aquifer system, we cannot be certain that the ground water in the perched zone that is feeding MW-2 is moving in the same direction as the higher one. If it is, that would lead us to believe that the gasoline in MW-2 is coming either from the fill stand or piping leading to the gasoline dispensers that are located to the west.

While it appears that all of the fresh gasoline from the initial spill has been remediated at this time, further investigation as to the source of the fresh gasoline in MW-2 needs to be completed.

Respectfully Submitted,

Tim O'Gara, LG, LHg
Consulting Hydrogeologist



Appendix A

Boring Logs

And

Monitoring Well Logs

BORING LOG

Drill Rig:		Date Drilled: 3-1-12	Logged By:
Boring Dia:	Inches	Boring Number: B-1	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				5		CL - Clay, stiff, brown
				10		Basalt
				15		
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled boring with bentonite after soil and water sample collection

Site:

Carson - Goldendale

,

Project No.:

Page 1

BORING LOG

Drill Rig:	Date Drilled: 3-1-12	Logged By:
Boring Dia: Inches	Boring Number: B-2	Tim O'Gara LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				5		Cl - Clay, brown
				10		GP - Coarse Sand and Gravel, slight hydrocarbon odor
				15		Basalt
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled boring with bentonite after collecting soil and water samples

Site:

Carson - Goldendale

,

Project No.:

Page 1

BORING LOG

Drill Rig:	Date Drilled: 3-1-12	Logged By:
Boring Dia: Inches	Boring Number: B-3	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				5		ML - Silt, tan
				10		GP - Coarse Sand and Gravel
				15		Basalt
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled boring with bentonite after collecting soil samples. No water detected in this boring

Site:

Carson - Goldendale

,

Project No.:

Page 1

BORING LOG

Drill Rig:	Date Drilled: 3-1-12	Logged By:
Boring Dia: Inches	Boring Number: B-4	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				5		CL - Silty Clay, tan
				10		GP - Coarse Sand and Gravel
				15		Basalt
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled boring with bentonite after collecting soil and water samples

Site:

Carson - Goldendale

,

Project No.:

Page 1

BORING LOG

Drill Rig:	Date Drilled: 3-1-12	Logged By:
Boring Dia: Inches	Boring Number: B-5	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				0		ML - Silt, brown, stiff
				5		
						GP - Sand and Gravel, cemented
				10		Basalt
				15		
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled boring with bentonite after collecting soil sample. No water found in this boring.

Site:

Carson - Goldendale

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Project No.:

BORING LOG

Drill Rig:		Date Drilled: 3-1-12	Logged By:
Boring Dia:	Inches	Boring Number: B-6	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				5		CL - Clay, stiff, brown
				10		SP - Medium to fine Sand Basalt
				15		
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled boring with bentonite after collecting soil and water samples.

Site:

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BORING LOG

Drill Rig:	Date Drilled: 3-1-12	Logged By:
Boring Dia: Inches	Boring Number: B-7	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				0		CL - Silty Clay, stiff, dark brown
				5		SM - Silty Sand, brown
						Basalt
				10		
				15		
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled with bentonite after collecting soil samples. No water found in this boring.

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BORING LOG

Drill Rig:	Date Drilled: 3-1-12	Logged By:
Boring Dia: Inches	Boring Number: B-8	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				5		ML - Clayey Silt, tan
				10		SP - Cemented Sand and Gravel
				15		Basalt
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled with bentonite after collecting soil and water samples

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BORING LOG

Drill Rig:	Date Drilled: 3-1-12	Logged By:
Boring Dia: Inches	Boring Number: B-9	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				5		ML - Silt, tan
				10		GM - Silty angular Gravel
				15		GP - Cemented Sand and Gravel
				20		Basalt
				25		
				30		
				35		

Completion Notes:

Backfilled with bentonite after collecting soil and water samples

Site:

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BORING LOG

Drill Rig:		Date Drilled: 3-1-12	Logged By:
Boring Dia:	Inches	Boring Number: B-10	Tim O'Gara, LG,LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				5		SM - Silty very fine Sand
				10		GP - cemented sand and gravel Basalt
				15		
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled with bentonite after collecting soil and water samples.

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BORING LOG

Drill Rig:		Date Drilled: 3-1-12	Logged By:
Boring Dia:	Inches	Boring Number: B-11	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				0		ML - Silt, black
				5		SP - Partially cemented coarse sand, black
				10		basalt
				15		
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled boring with bentonite after collecting soil and water samples

Site:

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BORING LOG

Drill Rig:		Date Drilled: 3-1-12	Logged By: Tim O'Gara, LG, LHg
Boring Dia:	Inches	Boring Number: B-12	

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				0		ML - Silt, black
				5		
						GP - Partially cemented Sand and Gravel
				10		Basalt
				15		
				20		
				25		
				30		
				35		

Completion Notes:

backfilled boring with bentonite after collecting soil and water samples.

Site:

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BORING LOG

Drill Rig:		Date Drilled: 3-1-12	Logged By:
Boring Dia:	Inches	Boring Number: B-13	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				0		ML - Silt, dark brown
				5		ML - Silt, black
				10		GP - Partially cemented Gravel with some Sand
						Basalt
				15		
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled boring with bentonite after collecting soil and water samples

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BORING LOG

Drill Rig:	Date Drilled: 3-1-12	Logged By:
Boring Dia: Inches	Boring Number: B-14	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
				5		ML - Silt dark brown
				10		SM - Silty Sand GP - Partially cemented Gravel and Sand Basalt
				15		
				20		
				25		
				30		
				35		

Completion Notes:

Backfilled boring with bentonite after collecting soil and water samples.

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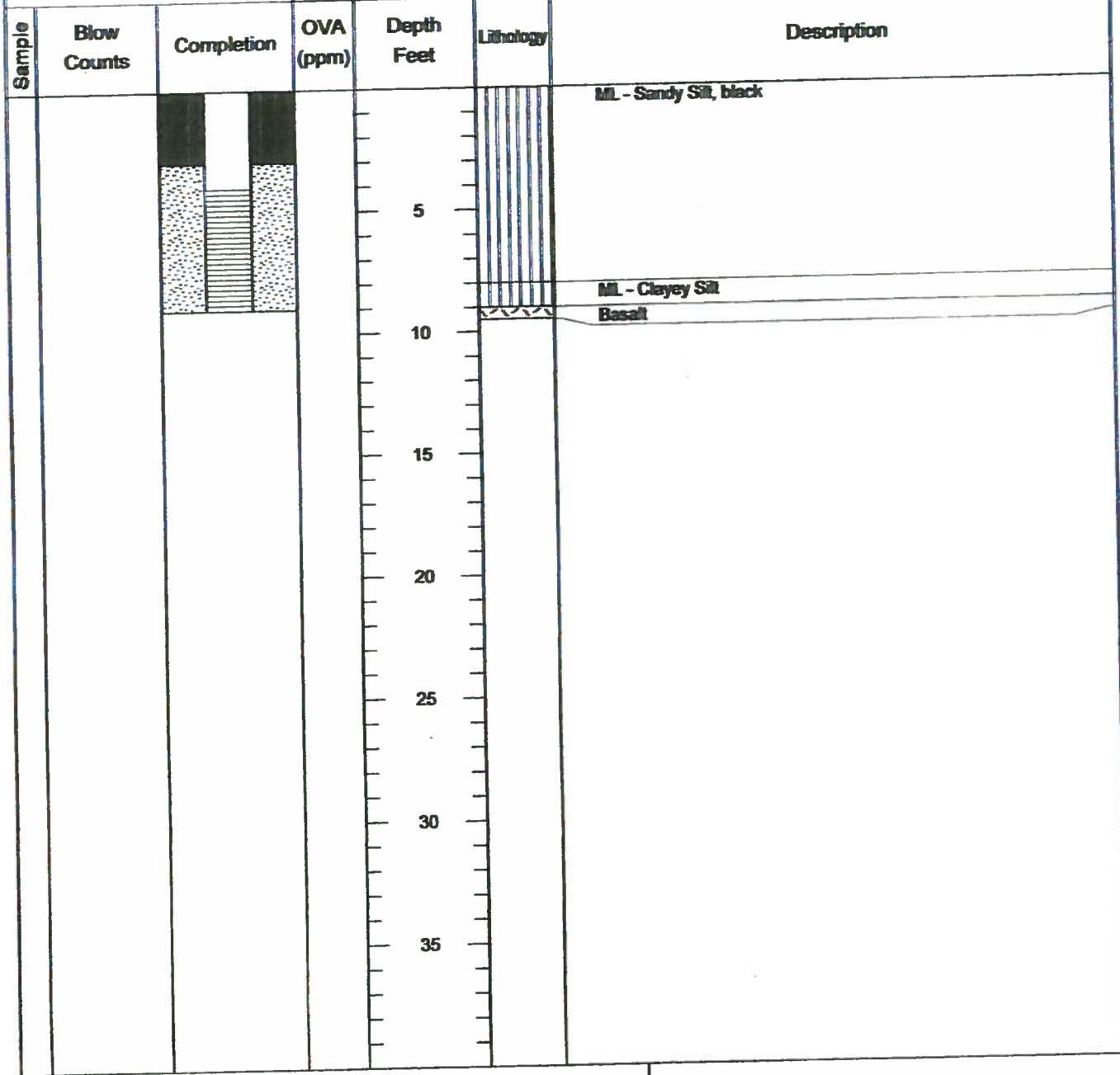
BORING LOG

Drill Rig:		Date Drilled: 4-5-12	Logged By:
Boring Dia:	Inches	Boring Number: MW-1	Tim O'Gara, LG, LHg



Completion Notes:

Flush mount completion.
Well is 2-inch pvc with 5 feet of prepack 0.010 slot screen

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BORING LOG

Drill Rig:		Date Drilled: 4-5-12	Logged By:
Boring Dia:	Inches	Boring Number: MW-2	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
						GP - Gravel fill
						ML - Silt, tan
						SW - Medium Sand, tan
						ML - Clayey Silt, brown
				5		CL - Clay, black
						GP - Gravel and weathered basalt
						Basalt
				10		
				15		
				20		
				25		
				30		
				35		

Completion Notes:

Flush mount completion

Well is 2-inch pvc with 5 feet of prepacked 0.010 slot screen

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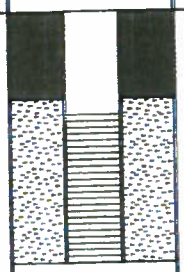
BORING LOG

Drill Rig:		Date Drilled: 4-5-12	Logged By:
Boring Dia:	Inches	Boring Number: MW-3	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
						GP - Gravel fill
						ML - Sandy Silt, black
				5		CL - Clay, black
						SM - Medium Sand with Silt, black
						Basalt
				10		
				15		
				20		
				25		
				30		
				35		



Completion Notes:

Flush mount completion

Well is 2-inch pvc with 0.010 slot prepacked screen

Site:

Carson - Goldendale

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BORING LOG

Drill Rig:	Date Drilled: 4-5-12	Logged By:
Boring Dia: Inches	Boring Number: MW-4	Tim O'Gara, LG, LHg

Sample	Blow Counts	Completion	OVA (ppm)	Depth Feet	Lithology	Description
						GP - Gravel fill
						SM - Silty Sand with minor Clay, black
				5		CL - Clay, black
						Basalt
				10		
				15		
				20		
				25		
				30		
				35		

Completion Notes:

Flush mount completion

Well is 2-inch pvc with 0.010 slot prepack screen

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