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CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY

REVISED FEASIBILITY STUDY REPORT

Cowlitz Food & Fuel

101 Mulford Road

Toledo, Washington

CSID: 7025

FSID: 1166

UST ID: 10669

September 2, 2021

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CONTENTS

TABLES

FIGURES

APPENDICES

ACRONYMS AND ABBREVIATIONS

AO	Agreed Order
Arcadis	Arcadis U.S., Inc.
AST	aboveground storage tank
bgs	below ground surface
CEMC	Chevron Environmental Management Company
COC	constituent of concern
cPAH	carcinogenic polycyclic aromatic hydrocarbon
CSID	Cleanup Site Identification Number
CSL	cleanup screening level
CSM	conceptual site model
CUL	cleanup level
DCA	disproportionate cost analysis
DRO	diesel range organics
Ecology	Washington State Department of Ecology
EIMS	Environmental Information Management System
FSID	Facility Site Identification Number
GRO	gasoline range organics
HO	heavy oil range organics
kg	kilogram
LNAPL	light non-aqueous phase liquid
mg/kg	milligrams per kilogram
MNA	monitored natural attenuation
MTCA	Model Toxics Control Act
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
POC	point of compliance
PVC	polyvinyl chloride
REL	remediation level
RIWP	Remedial Investigation Work Plan
ROI	radius of influence
site	Cowlitz Food & Fuel located at 101 Mulford Road in Toledo, WA

SVE	soil vapor extraction
TEE	terrestrial ecological evaluation
TPH	total petroleum hydrocarbons
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code
µg/kg	micrograms per kilogram
µg/L	micrograms per liter

INTRODUCTION

On behalf of Chevron Environmental Management Company (CEMC), who manages environmental matters on behalf of its affiliate, Texaco Downstream Properties Inc. (TDPI), Arcadis U.S., Inc. (Arcadis) prepared this Revised Feasibility Study Report (Revised FS) for the Cowlitz Food & Fuel Site located at 101 Mulford Road in Toledo, WA (site). Agreed Order (AO) No. DE 5236 with Washington State Department of Ecology (Ecology), effective March 1, 2010, required TDPI to prepare a feasibility study report; and prepare a draft Cleanup Action Plan. This Revised FS was prepared as required by AO No. DE 5236.

The site is also known as Cowlitz BP, , or Former Texaco Service Station No. 211556, and is identified by the Ecology Toxics Cleanup Program as Facility Site ID No. 1166.The FS is focused solely on this active service station; the inactive service station located south across Mulford Road is not included. More information on the history of these two stations is presented in Section 2.2.

The purpose of the FS is to develop and evaluate cleanup action alternatives, in order to select a cleanup action to address residual petroleum hydrocarbon contamination in soil and groundwater at the site, which is believed to have resulted from the past service station operations.

This updated version of the FS was revised to address Ecology comments, provided in a letter dated August 18, 2020, on the previous agency review draft FS that was submitted by Leidos in April 2017 (Leidos 2017), and in a letter dated June 21, 2021 which provided comments on the November 16, 2020 Draft Revised FS submitted by Arcadis. The current FS was also revised to incorporate the findings of additional assessment work performed at the site since 2017.

Updates to this FS include the following:

- Section 2.2.1: Added information regarding the 2019 property transfer.
- Section 3.2: Added the indoor air pathway to the discussion of potential exposure pathways and receptors.
- Section 3.6, table: Changed the proposed cleanup standard for lead from 250 milligrams per kilogram (mg/kg) to 220 mg/kg to match the concentration shown in MTCA Table 749-2.
- Section 4.2, Groundwater: Updated the summary of groundwater results to include data collected since 2018. Added Table 2A, Summary of Groundwater Monitoring Data 2018-2021.
- Section 5.2, Description of Cleanup Action Alternative 4 – Updated to indicate that the property transferred to a new owner in 2019, and CEMC will work with the property owner to coordinate excavation activities in conjunction with service station upgrades, and that excavation activities will take place within three years of the final RIFS report submission, assuming coordination and cooperation with the property owner.
- Appendix C, Alternative 3 cost estimate: Added the reporting task cost of $12,480 to the cost estimate so that it is consistent with the other alternatives that include excavation (Alternatives 2, 4, and 5).

The remainder of the report remains essentially unrevised from the previous draft FS submitted by Leidos, with the exception of the correction of minor errors.

BACKGROUND

This section describes the site and summarizes historical activities conducted.

2.1 Site Description

The site is located east of Interstate 5, off the Vader-Ryderwood exit, near the intersection of Cowlitz Ridge Road and Mulford Road, in Lewis County, Washington (Figure 1). The site is comprised of three land parcels (Figure 2). An operating gasoline service station with mini-mart (currently branded as “Shell”) and a restaurant (Mrs. Beesley’s) are located on the two parcels north of Mulford Road (Lewis County Assessor Parcel Numbers [APNs] 012429003001 and 012429004000, currently owned by Candid Travel Center Land LLC). This portion of the site will hereafter be referred to as the “active station.” The third parcel (APN 012429002001, currently owned by Mr. Charles Vineyard), which is located south of Mulford Road, was formerly the location of another gasoline service station (hereafter “inactive station”). This portion of the site was generally vacant since approximately 1994. However, a drive-thru espresso stand (Ami Rae’s Espresso & More) has been operating on this portion of the site since approximately 2016.

The presence of petroleum contamination was formerly confirmed at both locations. They were combined into the Cowlitz BP Site by Ecology, in part due to their common property ownership.

2.2 Site History

The properties comprising the site were originally purchased by Mr. Frank Vineyard (deceased) as a single tax lot, which was originally used for farming. In 1955, the original lot was subdivided and several of the subdivided lots were leased.

2.2.1 Active Station Operating History

The active station property was initially leased to the Texas Oil Company (Texaco) in 1955. Texaco constructed a service station building and installed the original underground storage tanks (USTs) and piping. A leak in a product delivery line was repaired by Texaco in April 1977. It is estimated that this leak resulted in a loss of approximately 2,296 gallons of gasoline.

The ownership interests in the improvements passed to Olson Brothers Garage, Inc. in 1980 and then to West Coast Oil Company in 1985. Ron and Sheri Smith (the Smiths) purchased the active station property improvements from West Coast Oil in 1986. In March 1990, four USTs and associated piping were removed and replaced with new fiberglass tanks and piping. During this process, petroleum contaminated soil was discovered and reported to Ecology.

In 2004, the active station improvements were sold to Tri-Tex Oil Company of Castle Rock, Washington.

The active station property and improvements were sold to the current owner and operator (Shamshur Singh, Gurpreet [Gary] Singh, and Jag Singh) in 2019.

2.2.2 Inactive Station Operating History

The inactive station property was originally leased to General Petroleum Corporation in May 1955. In 1978, the property was leased by Olson Brothers Garage, Inc. and was occupied until 1984 by a Mobil service station and a small restaurant. After 1984, the station ceased operation and the above-ground infrastructure was subsequently demolished. In 1994, this property was reportedly being used as a sales lot for manufactured homes. The property was vacant since the mid-1990s; however, a drive-thru espresso stand (Ami Rae's Espresso & More) has operated on this portion of the site since approximately 2016.

2.3 Site Regulatory History and Environmental Investigations

The presence of petroleum contamination at the site was first documented during UST upgrades performed at the active station in March 1990. Soil samples collected during this event contained gasoline-range organics (GRO) at concentrations of up 6,300 mg/kg. Approximately 1,000 cubic yards of petroleum contaminated soil was reportedly excavated from the UST basin and treated on-site via aeration. (Cowlitz Clean Sweep, 1990)

During February 1991, four groundwater monitoring wells (B-1, B-2, B-3, and B-4) were installed at the active station. Soil samples collected from the borings did not contain petroleum constituents at concentrations exceeding MTCA Method A cleanup standards; however, groundwater samples from the wells did contain GRO and benzene, toluene, ethylbenzene and xylenes (BTEX) at concentrations exceeding MTCA Method A cleanup standards. (SECOR International Incorporated [SECOR], 1999)

In April 1991, Ecology issued Enforcement Order No. DE 91-S123 to Mr. Frank Vineyard. The Enforcement Order required that a Remedial Investigation/ Feasibility Study (RI/FS) be performed for both the active and inactive station properties, and that the USTs at the inactive station property be removed as part of the RI/FS work activities.

Removal of the inactive station USTs was reportedly performed in January 1992. Two 6,000-gallon gasoline USTs and one 300-gallon used-oil UST were removed. Soil samples collected during the tank removal activities indicated the presence of GRO and diesel-range organics (DRO) at concentrations exceeding MTCA Method A Cleanup standards. Approximately 300 cubic yards of petroleum contaminated soil were removed from the UST excavation and stockpiled on the property.

Remedial investigation field activities were performed at the site in February and March 1992. A total of five soil borings were advanced and nine groundwater monitoring wells (MW-101 through MW-109) were installed to assess the extent of soil impacts at the active station, and groundwater impacts throughout the site. None of the soil samples collected contained petroleum constituents at concentrations exceeding MTCA Method A cleanup standards; however, groundwater samples collected indicated the presence of GRO and BTEX in the vicinity of both the active and inactive station portions of the site. (SECOR, 1999)

The original RI/FS report was completed in 1993 and a draft Cleanup Action Plan (1994 CAP) was prepared and released for public comment in May 1994. The selected cleanup alternative identified in the 1994 CAP consisted of excavating remaining contaminated soil for treatment on-site using bioremediation, followed by groundwater remediation by a pump and treat system that would re-inject treated groundwater through two infiltration trenches. However, this cleanup action was never

implemented due to unauthorized actions on the inactive station property and a request by Mr. Vineyard that additional potentially liable parties (PLPs) be named by Ecology.

In October 1994, TDPI and the Smiths were named as PLPs. At the request of the PLPs, Ecology allowed additional remedial investigation activities to be performed, and a re-evaluation of the selected cleanup approach that had been presented in the 1994 CAP. This work was performed pursuant to AO Nos. DE S361, S362, and S368, which were issued by Ecology in May 1995.

In August 1995, a supplemental investigation was performed by SECOR, on behalf of TDPI, to further assess the extent of petroleum impacts at the site. The supplemental investigation included the collection of 21 groundwater grab samples, installation of 10 additional groundwater monitoring wells (MW-110 through MW-119), and subsequent monitoring and sampling of all newly installed and existing wells. The conclusions of the supplemental investigation were that the groundwater plume was not as extensive as previously believed, and that groundwater impacts were primarily confined to the areas around the former UST basins at the active and inactive station locations. Furthermore, the groundwater plume did not appear to be migrating or increasing in size (SECOR, 1995).

Following completion of the supplemental investigation, additional investigation was performed to assist in the evaluation of a new cleanup approach for the site. This included vapor extraction pilot testing, which was performed in August 1996 (SECOR, 1996) and intrinsic bioremediation sampling, which was part of the 1996 groundwater monitoring and sampling program at the site (SECOR, 1997). Results of the vapor extraction pilot testing indicated relatively low volatile hydrocarbon removal rates (8 to 18 pounds per day at startup) and suggested additional pilot testing to facilitate design of a full-scale remediation system. Results of the intrinsic bioremediation sampling suggested that intrinsic biodegradation of petroleum hydrocarbons appeared to be occurring at the site, and that the groundwater contaminant plume appeared to be in a relatively steady state, where hydrocarbons provided by the source, dispersed and coalesced into a plume that was then degraded.

In August 1999, an updated CAP (1999 CAP) was submitted for the site. The 1999 CAP identified enhanced in-situ biodegradation as the selected cleanup remedy for petroleum contaminated soil and groundwater at the site (SECOR, 1999). In May 2001, Ecology issued AOs DE00 TCPSR-297, -298, and -299 to implement the 1999 CAP.

In June 2001, a Cleanup Work Plan for the site was submitted, which included introducing oxygen to groundwater by placing oxygen release compound (ORC®) into soil borings, installing a product recovery canister into monitoring well MW-111, and continuing groundwater monitoring. Soil boring installation for ORC® placement was performed in July 2001. Although 50 borings were originally proposed, only 37 borings were reportedly completed due to difficult drilling conditions. The ORC® borings were generally placed in proximity to, or immediately upgradient of, monitoring wells B-3, B-4, MW-101, MW-110, MW-111, and MW-115.

In May 2004, SAIC submitted a report summarizing an evaluation of groundwater data that was performed to determine the effectiveness of the 2001 ORC® application. The evaluation concluded that water-quality improvements had begun prior to the ORC® application, and that the ORC® application did not appear to have been effective, except perhaps very locally. This report further indicated that other remedial strategies were being considered to aid in further reductions of hydrocarbon concentrations at the site (SAIC, 2004a).

In November and December 2004, an additional investigation was performed to further delineate the extent of soil impacts at the site. One soil boring (SB-1) was completed at the inactive station, in the vicinity of MW-101, and seven soil borings (SB-2 through SB-8) were completed at the active station, in the vicinity of MW-111. On the inactive station property, SB-1 was installed to collect additional soil data within the area of the former UST basin. On the active station, borings SB-2 though SB-8 were completed to develop a greater understanding of the soil contaminant distribution in the vicinity of MW-111, which routinely contained petroleum light non-aqueous phase liquid (LNAPL) at that time. Results of this investigation suggested that impacts from the active station did not appear to have migrated onto the inactive station portion of the site (SAIC, 2004b).

In December 2004, SAIC submitted a letter report that presented the preliminary results of the November/December 2004 soil sampling activities and also discussed possible remedial alternatives to achieve the cleanup objectives for the site. The letter concluded that excavation followed by natural attenuation would have the highest likelihood of success and provide the shortest remedial time frame. The letter further specified that a new CAP would be completed for the site (SAIC, 2004b).

In 2006, at the request of Ecology, a revised draft CAP (2006 DCAP) was prepared for the site and submitted to Ecology for review. The 2006 DCAP identified the following cleanup actions, which were selected by Ecology and CEMC, for the site:

- Active station – Institutional controls and surface paving for containment of contaminated soil, monitored natural attenuation of soil and groundwater, and long-term monitoring.
- Inactive station – Excavation, monitored natural attenuation of groundwater, and long term monitoring.

Comments on the 2006 DCAP were provided by Ecology in a letter dated November 2, 2006.

Among the comments, Ecology indicated that an alternative evaluation for the active station property would not be complete without considering two additional options: 1) complete excavation of contaminated soil, and 2) hot-spot excavation and removal. However, the 2006 DCAP was never finalized because on December 29, 2006, Ecology provided notice to SAIC and the PLPs that preparation of the final CAP should be delayed until a new AO could be prepared for the site.

The new AO (No. DE 08 TCPSR-5236) became effective on March 1, 2010 and fully superseded and replaced AOs DE-00TCPSR-297, -298, and -299. The new AO required that TDPI perform the following:

1. Prepare a new FS for the site;

2. Continue performing groundwater monitoring at the site;

3. Prepare a DCAP according to the requirements of WAC-173-340-380; and

4. Prepare an Interim Action Work Plan and conduct an Interim Action consisting of the removal of residual contaminated soil associated with the former diesel UST at the active station and the USTs at the inactive station.

SAIC submitted an Interim Remedial Action (IRA) Work Plan for the site, which was approved by Ecology on August 17, 2010. In accordance with the approved IRA Work Plan, SAIC completed the proposed active station diesel UST excavation (Excavation 1) and inactive station excavation (Excavation 2) in October 2010. Confirmation soil sampling results indicated that each of the excavations were successful

in removing soils containing petroleum contaminants above cleanup levels in the vadose zone; however, excavation bottom samples indicated that petroleum contamination in excess of cleanup levels remained in the saturated zone at the base of each excavation. Approximately 700 pounds of ORC® were placed in the bottom of Excavation 1 and approximately 1,300 pounds of ORC® were placed in the bottom of Excavation 2, in order to enhance natural attenuation of the inaccessible petroleum contamination that was left in place.

Additional details regarding implementation of the Interim Action were presented in SAIC's Final- Interim Remedial Action Report, dated April 14, 2011.

SAIC submitted a draft FS to Ecology on February 8, 2011. The draft FS identified monitored natural attenuation (MNA) as the proposed cleanup action for the site. Ecology provided comments on the draft FS, by letter dated April 15, 2011, which requested additional details regarding the alternatives proposed and a re-evaluation of the scoring used to rank the alternatives. Ecology also disagreed with the conclusions presented in the draft FS regarding the elimination of a soil and/or groundwater to vapor exposure pathway.

In response to Ecology's comments on the draft FS, SAIC prepared a work plan to perform supplemental assessment work at the site, which was approved by Ecology on September 7, 2011. Field activities were performed in October 2011, which included installation of four shallow soil-vapor sampling probes (SVSP-1 through SVSP-4), and installation and sampling of one new monitoring well (MW-120). The soil-vapor sampling probes were installed on the active station portion of the site in order to evaluate the potential of a vapor intrusion risk to the service station building and/or Mrs. Beesley's restaurant. Monitoring well MW-120 was installed on the inactive station property, to replace MW-101, in order to evaluate groundwater conditions in the vicinity of Excavation 2. Soil-vapor samples were collected from the probes in December 2011. Results of the soil-vapor sampling indicated that benzene was present at one of the four sampling locations (SVSP-2) at a concentration exceeding Ecology's then-current draft soil-gas screening level. Subsequent modeling of the sampling results predicted that current conditions at the site would not result in indoor air conditions that would create a health risk based on an adult worker exposure scenario, but that further vapor intrusion assessment may be warranted if site use changed in the future.

Soil sampling results from installation of monitoring well MW-120, and subsequent groundwater sampling results from this well did not detect the presence of petroleum contamination at this location. Additional details regarding these assessment activities were presented in SAIC's Draft – Supplemental Site Assessment Summary Report (SAIC, 2012a), which was approved by Ecology by letter dated September 4, 2012.

Following submittal of the Supplemental Site Assessment Summary Report, SAIC prepared a revised FS for the site, which was submitted to Ecology on October 31, 2012 (2012 Draft FS). The 2012 Draft FS identified Alternative 2 (partial excavation, MNA, and institutional controls) or Alternative 4 (MNA, institutional controls, and future property-wide excavation in conjunction with service station upgrades or redevelopment) as the preferred cleanup action for the site. Ecology provided comments on the 2012 Draft FS by letter dated February 25, 2013. Based on their evaluation of the cleanup alternatives presented, Ecology identified Alternative 3 (partial excavation, air sparge/SVE, MNA, and institutional controls) as the preferred remedial alternative.

In response to Ecology's comments on the 2012 Draft FS, CEMC requested a meeting with Ecology to further discuss the evaluation of cleanup alternatives. Representatives of Ecology, CEMC, and SAIC met to discuss a path forward strategy for the site on May 22, 2013. The CEMC/SAIC project team suggested that the costs of Alternative 3 were disproportionate to the benefit offered, and that this aggressive remedial action was not warranted due to the limited extent of contamination remaining at the site and the low risk for exposure to human or ecological receptors. Ecology indicated that insufficient data was available to confirm CEMC's position regarding the site, but agreed to delay completion of the FS to conduct further assessment of the site, specifically collection of current soil sampling data and performance of an assessment to evaluate natural attenuation processes presumed to be occurring in groundwater.

On July 30, 2013, SAIC submitted a work plan to complete soil sampling and natural attenuation assessment activities at the site (SAIC, 2013). The objectives of the assessment were to evaluate current petroleum hydrocarbon concentrations in soil on the active station portion of the site and underlying the 2010 interim remedial action excavation areas, and to evaluate natural attenuation processes in groundwater that were believed to be responsible for ongoing reductions in dissolved-phase petroleum contamination on the active station property. Following receipt of Ecology comments on the draft work plan, provided by letter dated August 21, 2013, SAIC submitted a final work plan on September 25, 2013. The final work plan was conditionally approved by Ecology by letter dated October 2, 2013.

Field activities associated with the soil sampling portion of the work plan were completed by Leidos in November 2013, and the results were presented in Leidos' Soil Sampling Assessment Summary Report, dated March 28, 2014, which is included as Appendix A. Based on the results of the soil sampling assessment, Leidos concluded that the lateral and vertical extent of impacted soil at the site may be decreasing in response to ongoing natural attenuation. However, results of the soil sampling activities also confirmed the presence of shallow soil contamination at the site that was not consistent with a UST release. Based on these data, as well as observations of petroleum sheens in rainwater at the site, Leidos concluded that shallow soil contamination at the site was likely the result of past and on-going surface releases that have occurred in association with the operation of the active service station. In the areas of the former 2010 IRA excavations, confirmation soil sampling results found evidence of GRO at concentrations above the MTCA Method A cleanup level in both of the samples collected at 10.5 feet bgs in the area of Excavation 1. GRO was also detected from the sample collected at 10 feet bgs from the area of Excavation 2; however, at a concentration below the Method A cleanup level.

On October 29, 2015, Leidos submitted a report to Ecology presenting the results of natural attenuation assessment activities for groundwater performed for the site (see Appendix B). The report included an evaluation of all available historical groundwater sampling results for the site, as well as an evaluation of geochemical indicator data collected from 11 monitoring wells during quarterly sampling performed from September 2013 through August 2015. Based on this evaluation, Leidos concluded that conditions at the site were appropriate to consider use of natural attenuation as a cleanup alternative for petroleum contaminated groundwater at the site, and that due to a lack of complete exposure pathways from impacted groundwater to human or ecological receptors, there would be little if any benefit realized from a more active cleanup strategy. However, the conclusions drawn by the natural attenuation assessment were based on an assumption that land use at the site would remain unchanged during the estimated restoration timeframe presented in the report (approximately 33 years). Leidos further stated that future

land use changes at the site would have the potential to create complete exposure pathways or to opportunities for cost-effective remedial actions that could be implemented during property redevelopment or service station upgrades.

Ecology accepted the Natural Attenuation Assessment for Groundwater report as the Draft Final version (pending eventual public comment) by letter dated March 1, 2017. The letter also stated that by accepting the report, Ecology was concluding completion of the additional assessment work proposed by CEMC in June 2013. Therefore, preparation and submittal of a revised draft FS by CEMC to Ecology was the next step required under the terms of the AO for the site.

2.4 Site Geology and Hydrogeology

Geologic interpretations of the site vicinity developed by the United States Geological Survey (USGS) indicate that Quaternary alluvial deposits of silt, sand, and gravel associated with the Cowlitz River are characteristic of the area. The alluvial deposits are bounded by outwash deposits of sand and gravel interbedded with silt and clay associated with the Fraser glaciation of the Cascade Mountains. Shallow groundwater within these deposits generally discharges into the Cowlitz River. (SECOR, 1999)

Data collected during subsequent site investigation and cleanup actions has been consistent with the USGS interpretation of the regional geology. Generally, the site exhibits the characteristics of gravelly alluvial material with interbedded layers of sand and silt. Site data collected during drilling activities, and during the IRA excavations, indicate that the site is underlain by sandy gravel and gravelly sand with cobbles, with varying percentages of silt. This upper stratum varies in thickness from approximately 10 feet to at least 18.5 feet and serves as a shallow aquifer in the vicinity of the site. A clay layer of undetermined thickness has been identified beneath the sand and gravels in many of the soil borings completed at the site, and it is believed to act as a confining bed to the overlying shallow aquifer.

Depth to water measurements collected at the site indicate the water table is approximately 7 to 8 feet bgs, with a 2-foot seasonal fluctuation across the site.

Groundwater has been observed to flow in the southeast direction, toward the Cowlitz River. A river terrace, 15 feet lower than the site elevation, is located approximately 500 feet southeast of the site. Shallow groundwater has been observed discharging through springs and seeps along the bank above this terrace. A groundwater potentiometric map, based on groundwater elevation data collected during the November 2016 groundwater monitoring event, is included as Figure 3.

DEVELOPMENT OF SITE CLEANUP STANDARDS

3.1 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 past

environmental investigations and cleanup actions have confirmed the presence of the following COCs for each of the impacted media at the site:

Contaminants of Concern	Soil	Groundwater
Gasoline Range Organics (GRO)	X	X
Diesel Range Organics (DRO)	X	X
Heavy Oils (HRO)	X	X
Benzene	X	X
Toluene	X	X
Ethylbenzene	X	X
Xylenes (Total)	X	X
Lead	X	X
Carcinogenic polynuclear aromatic hydrocarbons (cPAHs)	X	

3.2 Potential Exposure Pathways and Receptors

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.”

Potential sources of hazardous substances at the site are petroleum contaminated soil and groundwater.

3.2.1 Soil

Contaminated soil has the potential to serve as a source of hazardous substance exposure through the following exposure pathways:

Potential Exposure Pathways – Contaminated Soil	
Potential Soil Exposure Pathway/Scenario	**Applicability**
Ingestion of, or dermal contact with, contaminated soil	**Risk to future workers -** The area of soil impacted by COCs at the site is covered by pavement or service station infrastructure on the active station property, or is located at a depth of approximately 10 – 12 feet bgs in the area of Excavation 1. Therefore, the current potential for ingestion or dermal contact is significantly limited. However, potential ingestion or direct contact exposures 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	**Potential risk to future workers –** Volatilization of hazard 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.
Inhalation of hazardous substances that have volatilized from contaminated soil and migrated to indoor air	**Potential risk to future residents or future workers –** Results of 2011 supplemental site assessment activities indicated that current conditions at the site did not pose a vapor intrusion risk, based on an adult worker exposure scenario. However, there is potential for a complete vapor intrusion exposure pathway if land use changes at the site in the future.
Contamination of groundwater by hazardous substances leaching from soil	**Risk to future residents or future workers -** Soil contamination in contact with groundwater has resulted in concentrations of dissolved-phase petroleum contamination in groundwater (see section 3.2.2).

3.2.2 Groundwater

Contaminated groundwater has the potential to serve as a source of hazardous substance exposure through the following exposure pathways:

Potential Exposure Pathways – Contaminated Groundwater	
Potential Groundwater Exposure Pathway/Scenario	**Applicability**
Ingestion of contaminated groundwater	**Risk to current and future residents and workers –** Three drinking-water wells are currently located within ¼ mile of the site, with the closest well located approximately 500 feet northwest across Interstate 5. None of the wells are located down-gradient of the site. Future residential development could include the installation of drinking-water wells on the site or at down-gradient locations. Potential exposures could also occur during future site redevelopment construction or during underground utility work.
Dermal contact with contaminated groundwater	**Risk to future workers -** Groundwater is typically located at a depth of approximately 6 to 10 feet bgs. Therefore, the current potential for dermal contact is significantly limited. However, dermal contact exposures are possible for workers during future site redevelopment or utility work.
Contamination of surface water by hazardous substance migration through groundwater	**Eliminated -** Groundwater from the site is believed to eventually discharge to the Cowlitz River (approximately ¼ mile south of the site). However, groundwater data from the site indicate that the dissolved-phase petroleum contaminant plume is contained onsite, is not migrating, and appears to be attenuating by naturally occurring degradation processes. Therefore, surface water is not considered to be a receptor of concern.
Inhalation of hazardous vapors in outdoor air	**Potential risk to future workers –** 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.
Inhalation of hazardous substances that have volatilized from contaminated groundwater and migrated to indoor air	**Potential risk to future residents or future workers –** Results of 2011 supplemental site assessment activities indicated that current site conditions did not pose a vapor intrusion risk, based on an adult worker exposure scenario. However, there is potential for a complete vapor intrusion exposure pathway if land use changes at the site in the future.

3.2.3 Soil Vapor

An operating gasoline service station with mini-mart and a restaurant are currently located on the site. Based on the 2011 soil vapor sampling, conditions at the site would not result in indoor air health risk

based on an adult worker exposure scenario. Further vapor intrusion assessment may be warranted if site use changed in the future.

3.3 Terrestrial Ecological Evaluation

In addition to an evaluation of potential human health risks, MTCA [WAC 173-340-7490] requires that a Terrestrial Ecological Evaluation (TEE) be completed to determine whether a release of hazardous substances to soil may pose a threat to the terrestrial environment, and if so, to establish site-specific cleanup standards for the protection of terrestrial plants and animals.

Conditions at and adjacent to the site are not such that require performance of a site-specific TEE. Therefore, a simplified TEE was conducted, as set forth in WAC 173-340-7492. Due to the area of contiguous undeveloped land within 500 feet of any area of the site (greater than 4 acres), it was determined that conditions at the site had the potential to pose a threat of significant adverse effects to terrestrial ecological receptors. Therefore, cleanup levels based on the protection of ecological receptors, as listed in MTCA Table 749-2, must be considered in development of the site cleanup standards.

3.4 Soil Cleanup Levels and Points of Compliance

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) of the MTCA Cleanup Regulation (WAC 173-340) are generally applicable to this site; however, as discussed in section 3.3, soil cleanup levels for this site must also consider the potential threat of significant adverse effects to terrestrial ecological receptors. Therefore, the values in Table 749-2 of WAC 173-340 must also be considered when developing soil cleanup levels. For the COCs identified for this site, only DRO has a Method A cleanup level that must be revised to meet the more stringent cleanup level presented in Table 749-2.

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 encountered). 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.

3.5 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 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. In cases where it is not practicable to meet the cleanup level throughout the site in a reasonable restoration time frame, MTCA allows establishment of a conditional point of compliance. The conditional point of compliance shall be as close as practicable to the source of hazardous substance and not exceed the property boundary. Considering that the future land use for the active station portion of the site is expected to remain as an operating service station, an appropriate conditional point of compliance for protection of drinking water at this site is at the active station property boundary.

3.6 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 – 6 ft bgs)	Entire Site	30	460	2,000	0.03	7	6	9	220	0.1
Soil (mg/kg) (6 – 15 ft bgs)	Entire Site	30	2,000	2,000	0.03	7	6	9	220	0.1
Groundwater (micrograms per liter)	Entire Site	800	500	500	5	1,000	700	1,000	15	0.1

Note: Cleanup levels are a conditional point of compliance subject to the requirements in WAC 173-340-7490 (4).

The cleanup levels presented above are derived from:

- MTCA Table 740-1, Method A soil cleanup levels for unrestricted land uses;
- MTCA Table 749-2, priority contaminants of ecological concern for sites that qualify for simplified terrestrial ecological evaluation procedure; and

- MTCA Table 720-1, Method A cleanup levels for groundwater.

Under WAC 173-340-7492(2)(c), MTCA states that no hazardous substance listed in Table 749-2 is, or will be, present in the soil within 6 feet of the ground surface at concentrations higher than the values provided in Table 749-2. The cleanup levels for the COCs in soil between the ground surface and 6 feet bgs were selected using the most stringent criteria in either MTCA Table 740-1 or Table 749-2. For soils deeper than 6 feet bgs, MTCA Method A CULs as listed in MTCA Table 740-1 will be used.

NATURE AND EXTENT OF CONTAMINATION IN EXCESS OF PROPOSED SITE CLEANUP STANDARDS

Existing contaminant impacts at the site can be attributed to two discrete source areas. On the active station portion of the site, soil and groundwater impacts have resulted from known releases from the gasoline USTs and ancillary piping and fuel-distribution systems located in the southern portion of that area of the site. An additional source area is also associated with the former location of a diesel-fuel UST that was located east of the active station. The former diesel-fuel UST source area was the focus of Excavation 1, which was performed as part of the 2010 IRA at the site.

Formerly, a third discrete source area for petroleum hydrocarbon contamination in soil and groundwater was present in the vicinity of the former UST basin on the inactive station portion of the site. This source area was the focus of Excavation 2, which was also performed as part of the 2010 IRA. However, confirmation soil sampling results from the 2010 IRA, November 2013 soil sampling assessment, and groundwater sampling results for monitoring well MW-120 indicate that petroleum hydrocarbon impacts are no longer present in this area at concentrations above the proposed cleanup standards for the site.

4.1 Soil

In the southern portion of the active station area, GRO and BTEX have been detected in soil at concentrations above the proposed cleanup levels for the site. Soil impacts in this area have generally been found at depths of 2 to 15 feet bgs and are most predominant within a narrow smear zone near the water table. Horizontal delineation of the extent of soil impacts in this area has been somewhat limited by the active station infrastructure (i.e., USTs, pump islands, and piping) and the proximity of this area to Mulford and Cowlitz Ridge roads. However, soil data from borings installed adjacent to Mulford Road (e.g. SB-18, SB-20 and SB-21) suggest that soil impacts likely extend beneath the roadway.

In the eastern portion of the active station area, soil contamination related to the former diesel UST that was located in this area has been partially addressed by the IRA excavation performed in October 2010. Within the vadose zone, soil impacts above the proposed site cleanup levels have been removed by excavation, with the result that clean samples were obtained in all sidewall samples. However, samples collected in 2013 from boring locations within the boundary of Excavation 1 (SB-12 and SB-13) contained GRO at concentrations in excess of the proposed cleanup levels for the site.

On the inactive station portion of the site, previous soil impacts related to the former service station UST basin appear to have been addressed by the IRA excavation that was performed in this area in October 2010. Results for soil samples collected in 2013 from soil boring SB-11 were in compliance with the proposed cleanup standards for all COCs for the site. A summary of historical soil analytical data is provided in Table 1, and Figure 4 presents the approximate areal extent of petroleum contaminated soil that is believed to be remaining at the site, and the relevant data used for horizontal delineation. Cross-sections showing both the estimated vertical and horizontal extent of petroleum contaminated soil on the active station property are also included as Figures 5 through 7.

Based on these data, a rough (i.e., “order of magnitude”) approximation of the amount of petroleum contaminated soil remaining in the southern portion of the active station property was developed by assuming that within the estimated area of contaminant impact (approximately 13,500 square feet) that contaminated soil would be present from 5 to 15 feet bgs. The resulting volume of petroleum contaminated soil is estimated to be approximately 5,000 cubic yards.

4.2 Groundwater

As previously presented in the Natural Attenuation Assessment for Groundwater (see Appendix B) completed by Leidos in October 2015, long-term groundwater sampling results indicate that groundwater conditions throughout much of the site are in compliance with drinking water quality standards. Remaining dissolved-phase petroleum impacts exceeding the proposed site cleanup standards are confined to a small area of the site located immediately downgradient of the active station UST basin and pump islands, which includes the locations of monitoring wells B-3, B-4, and MW-111 (see Figure 8). Within this area, results of the natural attenuation assessment indicate that the dissolved-phase plume is shrinking due to microbial degradation that is occurring in this residual source area.

In monitoring wells B-3, B-4, and MW-111, GRO and DRO have been regularly detected above their proposed site cleanup standards, and HRO is sometimes detected at concentrations in excess of the proposed cleanup standard. Benzene has been in compliance with the proposed cleanup standard at B-3 and B-4 since at least 2012. Regression analysis of temporal data using Ecology’s natural attenuation tool package has suggested that groundwater cleanup standards could be attained at monitoring wells B-3 and B-4 in less than 5 years, but that the restoration timeframe for monitoring well MW-111 would likely exceed 30 years for a cleanup remedy based on natural attenuation alone (see Appendix B for additional details).

A summary of historical groundwater monitoring data from 1991 through 2016 is provided in Table 2.

Groundwater monitoring was conducted semi-annually from 2018 through 2020. The groundwater flow direction has continued to be primarily toward the southeast. In monitoring well MW-111, GRO, DRO and HRO continue to be detected in concentrations above MTCA Method A cleanup levels. Concentrations of GRO and DRO have exceeded MTCA Method A cleanup levels in monitoring well B-3, and concentrations of GRO have exceeded the cleanup level in monitoring well B-4.

No LNAPL was observed in any of the monitoring wells during the recent sampling events. With the exception of wells MW-111, MW-114, B-3, and B-4, COC concentrations in the well network were either not detected or detected at concentrations less that the MTCA Method A CULs.

A summary of groundwater data from 2018 to 2020 is included in Table 2A.

DEVELOPMENT OF CLEANUP ACTION ALTERNATIVES

5.1 Initial Screening of Cleanup Action Components

The first step in developing cleanup action alternatives for the site was to perform an initial screening of treatment technologies, containment actions, removal actions, engineered controls, institutional controls or other type of remedial actions that could become components of cleanup action alternatives to be evaluated in the FS. To begin this process, the following remedial action approaches were identified, which were screened to determine their appropriateness for further evaluation as a cleanup action alternative, or as a component of a cleanup action alternative. Each of the following remedial action approaches was selected for evaluation based on well-established histories of success in addressing petroleum related contaminants:

- Monitored Natural Attenuation
- Air Sparge
- Soil Vapor Extraction
- Multi-Phase Extraction
- In-Situ Chemical Oxidation
- Excavation
- Institutional Controls

A brief description of each approach and a discussion regarding their appropriateness for further evaluation are included in sections 5.1.1 through 5.1.7.

5.1.1 Monitored Natural Attenuation (MNA)

Under an MNA cleanup strategy, cleanup of the site would be achieved through naturally occurring degradation of the contaminants remaining at the site. Although MNA would eventually achieve the site cleanup goals, it is likely that an MNA-only strategy would require a longer restoration time frame to achieve the site cleanup objectives than alternatives including more active cleanup action components. MNA was retained as a cleanup action component to be used in conjunction with other remedial approaches.

5.1.2 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. Air sparge systems are generally capable of significantly reducing concentrations of volatile petroleum hydrocarbons in the saturated zone; however, they are rarely effective in reducing contaminant levels low enough to meet cleanup standards. This is due to the inability to control the distribution of air to ensure contact with all contaminant mass present in the subsurface. Like water, injected air will tend to follow the path of least resistance and volatile contaminants in these areas will be quickly removed, while contamination present in less permeable

materials will persist due to a lack of contact with the injected air. Cleanup of additional contaminant mass then becomes limited by the contaminant's ability to diffuse from an area with low air permeability and high contaminant mass to an area with air high permeability and low contaminant mass.

The effectiveness of air sparge systems is also limited to highly volatile compounds, such as gasoline constituents like BTEX. Therefore, sparge systems are not effective for less volatile petroleum contamination, such as DRO or heavy oils. Air sparge systems also have limited effect in remediating vadose zone soil contamination.

Due to the limitations of air sparge technology to remediate low-volatility petroleum contamination and vadose zone soil contamination, it is not considered appropriate as a stand-alone cleanup alternative for this site; however, this technology was retained as a cleanup action component to be used in conjunction with other remedial approaches.

5.1.3 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.

Because SVE is dependent on the ability to induce movement of soil vapor in the subsurface, this technology is less effective for remediating contamination in the capillary fringe and would not address contamination in saturated zone soils; therefore, it would not be well suited as a stand-alone technology to address the contaminant conditions at this site. However, this technology was retained as a cleanup action component to be used in conjunction with other remedial approaches.

5.1.4 Multi-Phase Extraction (MPE)

MPE is an in-situ remediation technology that combines SVE with groundwater extraction. This technology is typically used at sites where some or all of the contaminant mass is located in capillary fringe or saturated zone soils. Groundwater extraction is used to dewater the contaminated soils so that they become accessible for remediation by SVE. Although some minor amount of contaminant mass will be removed by groundwater extraction, this amount is typically negligible in comparison to the amount of contaminant mass removed by the SVE component of this technology. Groundwater extraction can be achieved by vacuum drop tubes installed in each well (commonly referred to as stingers) or via groundwater extraction pumps.

Due to the high groundwater transmissivity of subsurface soils at this site, it is unlikely that saturated zone soils could be effectively dewatered to the degree necessary to successfully implement this alternative; therefore, MPE was not retained as a cleanup action alternative component.

5.1.5 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. CEMC does not consider ISCO to be a viable cleanup alternative to be implemented at an operating service station, because of the health and safety concerns associated with this technology. Therefore, this technology was not retained as a cleanup action alternative component.

5.1.6 Excavation

Under an excavation-based remediation approach, petroleum contaminated soil would be addressed by physically removing the impacted soil mass and replacing this material with clean backfill. Contaminated soil would then be transported from the site for disposal at a regulated waste disposal facility. As previously discussed, an IRA completed at the site in 2010 consisted of excavation to address petroleum contamination “hot-spots” on both the active and inactive station properties.

Under the current land-use scenario, the extent of contaminated soil that could be excavated on the active service station property would likely be limited by the location of nearby service station infrastructure and utilities. Also, as was the case for the 2010 IRA excavations, it is anticipated that any future excavation at the site would be limited to a depth of approximately 12 feet bgs, due to the highly transmissive shallow aquifer beneath the site. Observations from those excavations suggest that dewatering a future excavation would likely be cost prohibitive or technically infeasible.

Excavation was retained as a cleanup action alternative component due to its known ability to achieve significant and permanent reductions in petroleum hydrocarbon source mass at the site.

5.1.7 Institutional Controls

Institutional controls are measures undertaken to limit or prohibit activities that may interfere with the integrity of a cleanup action, or may result in exposure to hazardous substances at a site, and may include:

- Physical measures such as fences or capping;
- Restrictions to limit the use of property or resources, or requirements that cleanup action occur if existing structures or pavement are disturbed or removed;
- Maintenance requirements for engineered controls such as the inspection and repair of monitoring wells, treatment systems, caps, or groundwater barrier systems;
- Educational programs such as signs, postings, public notices, health advisories, mailings, and similar measures that educate the public and /or employees about site contamination and ways to limit exposure; and
- Financial assurances.

It is anticipated that any cleanup action alternative for the site will include some form of institutional controls.

5.2 Description of Cleanup Action Alternatives

Based on the initial screening of cleanup action components, the following five cleanup action alternatives were developed to be further evaluated in the FS:

- Alternative 1: Air Sparge/SVE, MNA, and Institutional Controls
- Alternative 2: Partial Excavation, MNA, and Institutional Controls
- Alternative 3: Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls
- Alternative 4: MNA, Institutional Controls, and Future Site-Wide Excavation in Conjunction with Service Station Upgrades or Redevelopment
- Alternative 5: Site-Wide Excavation, MNA, and Institutional Controls

Descriptions of the cleanup alternatives are provided in the following sections. For each cleanup alternative, a “conceptual design” has been developed to use as a framework for comparing the alternatives. The conceptual designs include identification of the primary components of the cleanup alternative, and estimates of the implementation and restoration time frames to achieve the cleanup standards for the site. Although site-specific conditions were considered in development of these conceptual designs, they are to a large degree based on industry rules-of thumb or past experience implementing cleanups at similar sites. Therefore, the actual details of a future cleanup action may differ from the conceptual designs provided here.

5.2.1 Alternative 1: Air Sparge/SVE, MNA, and Institutional Controls

Under Alternative 1, air sparge and SVE remediation technologies would be combined to perform active in-situ remediation at the site in order to reduce contaminant concentrations to the extent practicable in the vicinity of the UST basin, pump islands, and monitoring wells B-3, B-4, and MW-111, while MNA would be used to address residual petroleum contamination in the vicinity of Excavation 1 on the active station property.

The air sparge system would consist of a network of vertical air sparge wells, located throughout the plume area, to inject low pressure air (generally less than 10 pounds per square inch) into saturated-zone soils. Sparging acts to remove volatile petroleum hydrocarbons from the groundwater and soil by transferring these compounds into the vapor phase. Additional petroleum hydrocarbon concentration reduction would also take place due to enhanced natural attenuation that would result from oxygenation of impacted soil and groundwater.

In addition to the air sparge system, an SVE system would also be installed, which would consist of another network of vertical wells that would be used to extract soil vapor from vadose zone soils and capture hydrocarbon laden air emissions from the sparge system. Extracted hydrocarbon vapor would be treated on site using a catalytic oxidizer system or vapor-phase carbon treatment units.

Based on current CEMC standards for air sparge/SVE system design and construction, it is estimated that approximately 24 air sparge and 8 SVE wells would be installed at the site. Subsurface piping would be installed to connect each of the wells to a centrally located treatment system compound that would

house the sparge blower(s), SVE vacuum pump(s), vapor treatment equipment, and other ancillary system components. Figure 9 shows a conceptual layout of the air sparge well network.

Implementation of this alternative is estimated to require a period of approximately two years, which would include pilot testing, system design, equipment procurement, and construction. Onsite construction is estimated to take place over a period of six to ten weeks, during which there would likely be relatively significant disruptions to business operations at the active Shell station and possibly to Mrs. Beesley's restaurant.

It is estimated that the air sparge/SVE system would be operated until monitoring data indicated that operation of the system was no longer contributing to further reduction of petroleum contamination at the site (generally one to two years). After that time, it is likely that the subsurface air flow that is inherent with both of these technologies would have limited impact on reducing concentrations of DRO, heavy oils, and other less volatile petroleum constituents. Therefore, MNA would be used to address remaining petroleum contamination until cleanup standards could be achieved throughout the site.

Alternative 1 would also include the use of institutional controls during implementation of the remedy, in order to prevent conditions that could result in human or environmental exposure to the contaminants on-site. Institutional controls would likely include: access restrictions during construction and operation phases of the air sparge/SVE system; maintenance of asphalt and/or concrete surface covers over contaminated soil; an environmental covenant to prevent groundwater use and to place controls on subsurface activities at the site; and a soil management plan to establish guidelines for utility or other subsurface work in the right-of-ways for Mulford and Cowlitz Ridge roads.

Due to the MNA component of this alternative, it is not possible to develop a meaningful estimate of the length of time that may be required to achieve site cleanup levels; however, it is reasonable to expect that the overall restoration time frame for this alternative would be on the order of 10 to 15 years.

Alternative 1 - Conceptual Design Summary

- Air Sparge/SVE system pilot testing, design, and construction would require approximately two years, following final approval of the CAP.
- On-site system construction would require six to ten weeks.
- System would consist of approximately 26 sparge wells and 8 SVE wells.
- Air sparge/SVE system would operate for a period of one to two years.
- Institutional controls would be used to restrict site access, require asphalt/concrete cover maintenance, and restrict groundwater use and subsurface activities at the site.
- Following completion of the air sparge/SVE system operation, MNA would be performed until groundwater cleanup standards were met throughout the site. Post-remedy soil and soil-vapor confirmation sampling would also be performed to demonstrate that all potential exposure pathways were permanently eliminated.
- The estimated restoration timeframe to attain site cleanup levels is 10 to 15 years.

Alternative 1 - Advantages Compared to Other Alternatives

- System installation could likely be completed without the need to shut down business operations of the active service station or Mrs. Beesley's restaurant.

- Air sparge/SVE system could potentially remediate soil and groundwater in the vicinity of existing service station infrastructure.

Alternative 1 - Disadvantages Compared to Other Alternatives

- Air sparge/SVE is unlikely to result in concentration reductions for DRO, heavy oils, and other less volatile petroleum constituents.
- Applicability of using air sparge/SVE at this site is not completely known. Successful implementation would require pilot testing to evaluate feasibility and collect data for design of a full-scale system.
- System installation and operation are likely to impact business operations of the active service station and Mrs. Beesley's restaurant.

5.2.2 Alternative 2: Partial Excavation, MNA and Institutional Controls

Under Alternative 2, excavation would be performed to remove contaminated soil, to the extent practicable, in the southern portion of the active service station property. The extent of contaminated soil removed would be limited by the proximity of the existing USTs, pump islands, fuel transfer piping, utilities and roadways, which are located in this area of the site.

Performance of the limited excavation would be implemented in a matter similar to the IRA excavations performed at the site in October 2010. The excavation would be performed during September or October, in order to take advantage of the seasonal low groundwater elevation, and to minimize impacts to business operations at the Shell station and Mrs. Beesley's restaurant, which typically see more business during the summer tourism season. Excavated soil would be transported offsite for disposal at a licensed waste disposal facility.

Figure 10 shows a preliminary estimate of the area (approximately 7,500 square feet) that would be available for excavation, based on the current understanding of station infrastructure and utilities in this area. As observed during performance of the 2010 IRA excavations, the rate of groundwater recharge in this area is relatively high, so dewatering of the excavation is not considered practicable. Therefore, the extent of soil excavation is also likely to be limited vertically by shallow groundwater. It is anticipated that the maximum depth of the excavation would be approximately 12 feet bgs, which would equate to a depth of approximately 2 feet below the seasonal-low water table elevation. Assuming this entire area could be excavated to a depth of 12 feet bgs, and that all soil between 5 and 12 feet bgs was contaminated, it is estimated that approximately 2,000 cubic yards of petroleum contaminated soil could be removed under a partial excavation alternative. This would be approximately 40 percent of the total volume of contaminated soil (5,000 cubic yards) that is estimated to be present in this portion of the site. It should be noted that this estimate represents a best-case scenario, where the entire 7,500-square-foot area can be excavated to 12 feet bgs. It is likely that some sidewalls of the excavation will require sloping, or that utilities or other infrastructure will be encountered, which would further limit the amount of impacted soil that could be removed by a partial excavation alternative. Where necessary and practicable, shoring methods may be used to maximize the practicable limits of the excavation. Cross-sectional views of the anticipated excavation area are included as Figures 11 and 12.

As was previously performed during the 2010 IRA excavations, ORC® or a similar biological or chemical oxidation enhancement could be placed into the bottom of the excavation to assist in additional

contaminant mass reductions through hydrocarbon destruction that would occur in saturated soils that would remain in place below 12 feet bgs.

Implementation of this alternative is estimated to require a period of approximately one year to complete planning, permitting and implementation of the excavation. However, as previously mentioned, excavation activities are likely to be scheduled for a September/October timeframe. Actual excavation field work is estimated to take place over a period of two to four weeks, during which there will likely be relatively significant disruptions to business operations at the active Shell station and possibly to Mrs. Beesley's restaurant.

Similar to Alternative 1, the active remediation component of this alternative is expected to be successful in only removing a portion of the petroleum contaminant mass that is estimated to be present at this site. Therefore, this alternative also proposes the use of MNA to attain the site cleanup standards after the active remediation component (i.e., partial excavation) has been performed.

Alternative 2 would also include the use of institutional controls during implementation of the remedy, in order to prevent conditions that could result in human or environmental exposure to the contaminants on-site. Institutional controls would likely include: access restrictions during excavation implementation; maintenance of asphalt and/or concrete surface covers over contaminated soil; an environmental covenant to prevent groundwater use and to place controls on subsurface activities at the site; and a soil management plan to establish guidelines for utility or other subsurface work in the right-of-ways for Mulford and Cowlitz Ridge roads.

Due to the MNA component of this alternative, it is not possible to develop a meaningful estimate of the length of time that may be required to achieve site cleanup levels; however, it is reasonable to expect that the overall restoration time frame for this alternative would be on the order of 10 to 15 years.

Alternative 2 Conceptual Design Summary

- Excavation implementation could generally occur within one year of final approval of the CAP (assumes sufficient time to plan for an excavation to be performed during seasonal groundwater and tourism low [September/October]).
- Excavation would be limited to impacted soils that could be removed without disturbing existing service station infrastructure (e.g., USTs, pump islands, fuel transfer piping) and utilities. However, the existing service station sign would be removed, and replaced following excavation, if necessary.
- An estimated 2,000 cubic yards (40 percent) of contaminated soil could be removed under a best-case excavation scenario.
- An estimated 3,000 cubic yards of contaminated soil would remain following the excavation.
- ORC® or an equivalent product could be used to assist in additional contaminant mass reductions through hydrocarbon destruction in saturated soils that would remain in place below 12 feet bgs.
- Institutional controls would be used to restrict site access, require asphalt/concrete cover maintenance, and restrict groundwater use and subsurface activities at the site.
- Following completion of the partial excavation, MNA would be performed until groundwater cleanup standards were met throughout the site. Post-remedy soil and soil vapor confirmation

sampling would also be performed to demonstrate that all potential exposure pathways were permanently eliminated.
- The estimated restoration time frame to attain site cleanup levels is 10 to 15 years.

Alternative 2 - Advantages Compared to Other Alternatives

Partial source removal by excavation is likely to be more effective than Alternative 1 (air sparge/ SVE) in reducing DRO and HRO contamination.

Alternative 2 - Disadvantages Compared to Other Alternatives

- Contaminant source mass removal by excavation would be limited due to the presence of existing service station infrastructure and shallow groundwater, which is likely to result in a relatively long restoration time frame to achieve cleanup standards with MNA.
- This alternative is likely to result in more disruption to business at the active Shell service station and Mrs. Beesley's restaurant than Alternative 4, because the partial excavation would be performed during a period when both businesses would likely be operating.

5.2.3 Alternative 3: Partial Excavation, Air Sparge/SVE, MNA and Institutional Controls

Under Alternative 3, components of Alternative 1 and Alternative 2 would be combined. The first part of this alternative would be the same as for Alternative 2, which would consist of a partial excavation in the southern portion of the active service station property. Following completion of this excavation, an air sparge/SVE system would be installed to address contamination remaining in areas inaccessible for excavation.

The conceptual design for Alternative 3 assumes that the air sparge/SVE system would be similar to the system described for Alternative 1, except that the system would cover a smaller area and would therefore require less air sparge and SVE wells. A conceptual layout for the air sparge/SVE well network for Alternative 3 is shown in Figure 13.

Under Alternative 3, the timeframe for planning, permitting, and implementation of the limited excavation is expected to be the same as for Alternative 2, approximately one year. Some of the planning activities associated with the air sparge/SVE system could be performed concurrently with excavation planning and implementation. Therefore, it is expected that the air sparge/SVE system could be installed and operational by the end of year two. Similar to Alternative 1, the air sparge/SVE system would be expected to operate for a period of one to two years.

Similar to Alternative 1 and Alternative 2, it is expected that some contamination will remain in place at the site following completion of both the excavation and air sparge/SVE remedies. The limited excavation is expected to leave a portion of the contamination in place near existing service station infrastructure and below 12 feet bgs, and the air sparge/SVE system will only be effective in reducing the volatile components of the petroleum contamination present. Therefore, this alternative also includes an MNA component to address remaining petroleum contamination until cleanup standards could be achieved throughout the site.

Alternative 3 would also include the use of institutional controls during implementation of the remedy, in order to prevent conditions that could result in human or environmental exposure to the contaminants on-

site. Institutional controls would likely include: access restrictions during excavation implementation and air sparge/SVE system construction and operation; maintenance of asphalt and/or concrete surface covers over contaminated soil; an environmental covenant to prevent groundwater use and to place controls on subsurface activities at the site; and a soil management plan to establish guidelines for utility or other subsurface work in the right-of-ways for Mulford and Cowlitz Ridge roads.

Again, due to the MNA component of this alternative, it is not possible to develop a meaningful estimate of the length of time that may be required to achieve site cleanup levels; however, is reasonable to expect that the overall restoration time frame for this alternative would be approximately 10 years.

Alternative 3 Conceptual Design Summary

- Excavation implementation could generally occur within one year of final approval of the CAP (assumes sufficient time to plan for an excavation to be performed during seasonal groundwater and tourism low [September/October]).
- Excavation would be limited to impacted soils that could be removed without disturbing existing service station infrastructure (e.g., USTs, pump islands, fuel transfer piping) and utilities. However, the existing service station sign would be removed, and replaced following excavation, if necessary.
- An estimated 2,000 cubic yards (40 percent) of contaminated soil could be removed under a best-case excavation scenario.
- An estimated 3,000 cubic yards of contaminated soil would remain following the excavation.
- ORC® or an equivalent product could be used to assist in additional contaminant mass reductions through hydrocarbon destruction in saturated soils that would remain in place below 12 feet bgs.
- Air sparge/SVE system would consist of approximately 12 sparge wells and 4 SVE wells.
- Air sparge/SVE system would operate for a period of one to two years.
- Institutional controls would be used to restrict site access, require asphalt/concrete cover maintenance, and restrict groundwater use and subsurface activities at the site.
- Following completion of the partial excavation and air sparge/SVE operation, MNA would be performed until groundwater cleanup standards were met throughout the site. Post-remedy soil and soil-vapor confirmation sampling would also be performed to demonstrate that all potential exposure pathways were permanently eliminated.
- The estimated restoration time frame to attain site cleanup levels is approximately 10 years.

Alternative 3 - Advantages Compared to Other Alternatives

- Two phases of active remediation would likely result in a shorter restoration time frame than for Alternatives 1 or 2.

Alternative 3 - Disadvantages Compared to Other Alternatives

- Two phases of active remediation would result in a greater level of disruption to business at the active Shell service station and Mrs. Beesley’s restaurant, than for Alternatives 1 and 2.
- Despite two phases of active remediation, this alternative is still expected to require an MNA phase to meet the site cleanup standards.

5.2.4 Alternative 4: MNA, Institutional Controls, and Future Property-Wide Excavation in Conjunction with Service Station Upgrades or Redevelopment

Under Alternative 4, excavation will be coordinated with the property owner's planned station upgrades, which we understand includes removal and replacement of the USTs, which would allow a property-wide excavation to be performed to remove the majority of the petroleum contamination remaining at the site.

Figure 14 shows a preliminary estimate of the area (approximately 11,500 square feet) that would be available for excavation, based on the current understanding of station infrastructure and utilities in this area. Similar to the partial excavation component of Alternatives 2 and 3, it is anticipated that the maximum depth of the excavation would be approximately 12 feet bgs, which would equate to a depth of approximately 2 feet below the seasonal-low water table elevation. Assuming this entire area could be excavated to a depth of 12 feet bgs, and that all soil between 5 and 12 feet bgs was contaminated, it is estimated that approximately 3,000 cubic yards of petroleum contaminated soil could be removed under a property-wide excavation alternative. This would be approximately 60 percent of the total volume of contaminated soil (5,000 cubic yards) that is estimated to be present in this portion of the site. Cross-sectional views of the anticipated excavation area are included as Figures 15 and 16.

The excavation component of this alternative would be more effective than the partial excavation that is a component of Alternatives 2 and Alternative 3; however, it is anticipated that contaminated soil will remain in saturated soils below approximately 12 feet bgs, or in the vicinity of utilities along the adjacent rights-of-way. Therefore, this alternative would also include the addition of ORC® or an equivalent product, to enhance in-situ remediation of impacted groundwater and saturated zone soils remaining after the excavation.

This alternative is considered to be an appropriate cleanup remedy for this site because under the current and future land use scenario (i.e., active station), petroleum contamination in soil and groundwater does not pose an imminent risk to human or environmental receptors. Therefore, there is limited benefit to more aggressive cleanup strategies that would provide a shorter restoration time frame, but which are more expensive and disruptive to current use of the site.

As mentioned previously, the active station property and facilities were transferred to a new owner in December 2019. The new property owner has indicated that upgrades to the service station are currently planned, pending the schedule and implementation of the cleanup activities. Therefore, the restoration timeframe for this alternative, which includes excavation implementation and post-excavation confirmation monitoring, is estimated to be 5 to 10 years. However, the restoration time frame for this alternative is highly dependent on the timing of station upgrades. Assuming that station upgrades will take place within the next year, the restoration time frame could be reduced accordingly. CEMC will work with the property owner to coordinate excavation activities in conjunction with service station upgrades; with the excavation activities planned for completion within 3 years.

Alternative 4 Conceptual Design Summary

- The property-wide excavation would remove an estimated 3,000 cubic yards (60 percent) of contaminated soil, assuming a best-case excavation scenario.
- An estimated 2,000 cubic yards of contaminated soil would remain following the excavation.

- ORC® or an equivalent product would be used to assist in additional contaminant mass reductions through hydrocarbon destruction in saturated soils that would remain in place below 12 feet bgs.
- Following completion of the property-wide excavation, MNA would resume until groundwater cleanup standards were met throughout the site. Post-remedy soil and soil vapor confirmation sampling would also be performed to demonstrate that all potential exposure pathways were permanently eliminated.
- The estimated restoration time frame (including post-excavation monitoring) to attain site cleanup levels is 5 to 10 years.

Alternative 4 - Advantages Compared to Other Alternatives

- Implementation of this alternative in conjunction with active station upgrades would allow better management of short-term risks because one or both of the businesses would not be operating; therefore, public access to the site could be controlled by fencing or similar physical barriers.
- Would result in the least amount of disruption to business operations of the active service station and Mrs. Beesley's restaurant because it would be performed during a period when one or both of the businesses was not operating.

Alternative 4 - Disadvantages Compared to Other Alternatives

- Restoration time frame will depend on coordination of station upgrades with the property owner; but performance of the excavation component will likely be performed within 3 years.
- Contaminated soil would still likely remain in place below groundwater and in the vicinity of existing utilities and adjacent roadways.

5.2.5 Alternative 5: Property-Wide Excavation, MNA, and Institutional Controls

Under Alternative 5, existing service station infrastructure on the active station property would be removed to allow excavation of additional petroleum contaminated soil, beyond what would be achieved by the partial excavation component of Alternative 2 and Alternative 3. The excavation component of Alternative 5 is expected to be the same as for Alternative 4; however, under Alternative 5, the excavation would be performed as soon as practicable, instead of performing the excavation in conjunction with redevelopment, or upgrades to the service station infrastructure. Therefore, this alternative would also include restoration of the service station infrastructure following completion of the remedial excavation.

Implementation of this alternative would require long-term closure of the active service station to allow removal of service station infrastructure, followed by reconstruction of the service station facilities at the conclusion of the source removal activities.

As presented for Alternative 4, a property-wide excavation would be expected to result in removal of approximately 3,000 of the estimated 5,000 cubic yards (60 percent) of petroleum contaminated soil on the active station property. Therefore, this alternative would also include an MNA component to address remaining petroleum contamination remaining in place, and institutional controls to hazardous substance exposure pathways until site cleanup levels were attained.

Alternative 5 Conceptual Design Summary

- Excavation implementation could likely occur within one year of final approval of the CAP (assumes sufficient time to plan for an excavation to be performed during seasonal groundwater and tourism low [September/October]); assuming cooperation with the property owner.
- Existing service station infrastructure (i.e., USTs, dispensers, fuel supply piping, and station building) would be dismantled/demolished to allow additional access to contaminated soil that is believed to exist in close proximity.
- An estimated 3,000 cubic yards (60 percent) of contaminated soil would be removed under a best-case excavation scenario.
- An estimated 2,000 cubic yards of contaminated saturated zone soils would remain following the excavation.
- ORC® or an equivalent product would be used to assist in additional contaminant mass reductions through hydrocarbon destruction in saturated soils that would remain in place below 12 feet bgs.
- Following completion of the excavation, MNA would be required for an estimated period of approximately 5 to 10 years before site cleanup levels were achieved.
- Prior to closure, institutional controls would be used to restrict site access, require asphalt/concrete cover maintenance, and restrict groundwater use at the site.
- The estimated restoration timeframe to attain site cleanup levels is 5 to 10 years.
- This alternative would include restoration of the active service station infrastructure.

Alternative 5 - Disadvantages Compared to Other Alternatives

- Implementation would require long-term closure (estimated 6 months) of the active service station and would likely result in significant disruption of business operations at Mrs. Beesley's restaurant.
- Contaminated soil would still likely remain in place below groundwater and in the vicinity of existing utilities and adjacent roadways.
- Would still rely on MNA to attain site cleanup standards.

EVALUATION OF CLEANUP ACTION ALTERNATIVES

6.1 Compliance with Threshold Requirements

MTCA establishes the minimum requirements and procedures for selecting cleanup actions, as defined in WAC 173-340-360(2). These minimum requirements define the following threshold requirements that must be met by the selected cleanup action:

- Protection of human health and the environment;
- Compliance with cleanup standards;
- Compliance with applicable state and federal laws; and
- Provisions for compliance monitoring.

Each of the five alternatives evaluated for this FS are considered able to meet these requirements; therefore, none of the alternatives were eliminated from further consideration due to an inability to meet the threshold requirements.

6.2 Compliance with Other Requirements

In addition to the threshold requirements, WAC 173-340-360(2) also establishes other requirements that must be fulfilled by the selected cleanup action. These requirements include:

Provision for a reasonable restoration timeframe;

Consideration of public concerns; and

Use of permanent solutions to the maximum extent practicable.

6.2.1 Provisions for a Reasonable Restoration Time Frame

WAC 173-340-360(4)(b) establishes the following factors that must be considered to determine whether a cleanup action provides for a reasonable restoration timeframe:

- Potential risks posed by the site to human health and the environment;
- Practicability of achieving a shorter restoration timeframe;
- Current use of the site, surrounding areas, and associated resources that are, or may be, affected by releases from the site;
- Potential future use of the site, surrounding areas, and associated resources that are, or may be, affected by releases from the site;
- Availability of alternative water supplies;
- Likely effectiveness and reliability of institutional controls;
- Ability to control and monitor migration of hazardous substances from the site;
- Toxicity of the hazardous substances at the site; and
- Natural processes that reduce concentrations of hazardous substances that have been documented to occur at the site or under similar site conditions.

An estimated restoration time frame was included in the description for each of the alternatives, presented in Section 5.2. Each of the alternatives evaluated for the FS are considered to provide for a reasonable restoration time frame, based on the following:

- Although petroleum contamination continues to be present at the site, there are no imminent risks posed by the site to human health or the environment, and potential exposure pathways can be effectively controlled by institutional controls.
- Land use of the site is expected to remain as an active service station; therefore, a shorter restoration time frame will not decrease the potential for exposure to hazardous petroleum vapors associated with refueling operations, or the potential for additional petroleum releases to soil or groundwater at the site.
- Groundwater monitoring data indicate that contamination still remaining at the site is GRO and DRO petroleum hydrocarbons, and that more toxic petroleum constituents, such as benzene, have been attenuated by naturally occurring processes to concentrations that are approaching or

are currently below cleanup levels. Additionally, groundwater monitoring data indicate that hazardous substances are not migrating from the site.

Therefore, all of the alternatives were retained for further evaluation.

6.2.2 Consideration of Public Concerns

MTCA requires that public concerns be considered in selection of a cleanup action. This process 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.

To date, we are not aware of any public concerns regarding the selection of a cleanup action for this site; therefore, none of the alternatives were eliminated from further consideration due to an inability to meet this requirement.

Consideration of public concerns is also an evaluation criterion used in the disproportionate cost analysis (DCA) performed for this FS. Additional details regarding the DCA and cleanup alternatives ranking are provided in Section 6.2.3.1 and Table 3.

6.2.3 Use of Permanent Solutions to the Maximum Extent Practicable

In order to determine which of the alternatives use permanent solutions to the maximum extent practicable, a DCA was performed per the requirements of WAC 173-340-360(3).

6.2.3.1 Disproportionate Cost Analysis – Cleanup Action Alternatives Ranking

To perform the DCA, 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 DCA 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 DCA, the alternative considered to have the least benefit was assigned a rank of “1” and the other alternatives were assigned successively higher ranks based on their relative degree of increased benefit, with a maximum rank of “5.” In cases where two or more alternatives were considered to have equal benefit, the highest rank assigned would be equal to the number of degrees of relative benefit for that criterion. For example, if two of the alternatives were considered to be equal in benefit, then the maximum possible rank would be 4. If all of the alternatives were considered to be equal in benefit, then the maximum possible rank would be 1.

A summary of the DCA alternative ranking, which includes a justification for the ranks assigned, is presented in Table 3.

6.2.3.2 Disproportionate Cost Analysis – Cleanup Action Alternatives Cost Estimates

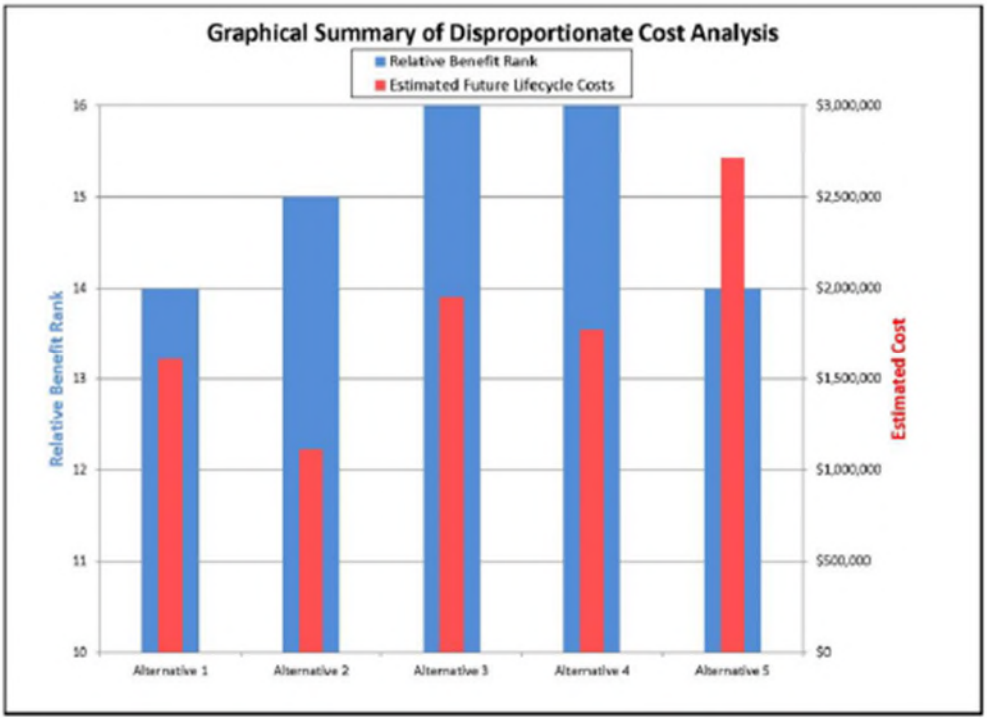
To complete the DCA, project lifecycle costs were estimated for each of the alternatives. The following estimated lifecycle costs include all costs associated with implementation of alternative, until the site cleanup levels are met and no further action is required by Ecology:

Summary of Estimated Project Lifecycle Costs				
Alternative 1	**Alternative 2**	**Alternative 3**	**Alternative 4**	**Alternative 5**
$1,607,318	$1,108,144	$1,952,093	$1,773,406	$2,711,113

Detailed cost estimates for each alternative are included in Appendix A.

6.2.3.3 Disproportionate Cost Analysis – Results

The results of the DCA are summarized graphically in the following figure:



On the figure, the relative benefit ranks for each alternative are indicated by the blue columns, which correspond to the primary (left) axis of the graph. Estimated future lifecycle costs for each alternative are indicated by the superimposed red columns, which correspond to the secondary (right) axis. Therefore, on a benefit per unit cost basis, the preferred alternative would be the one anticipated to have the greatest level of benefit above the estimated cost level. As shown on the figure, the results of the DCA for this FS indicate that Alternatives 3 and 4 would provide the greatest benefit relative to the other alternatives, with each assigned a relative benefit rank of 16. However, the estimated future lifecycle

costs for Alternative 4 (MNA, institutional controls, and property-wide excavation in conjunction with service station upgrades) are lower than any of the other alternatives; therefore, Alternative 4 would provide the greatest benefit and lowest project lifecycle costs relative to the other alternatives evaluated.

SUMMARY AND 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 five cleanup action alternatives were developed and compared in this FS based on current best practices for petroleum contamination remediation, and the professional experience and judgment of the project team.

Each of the five alternatives evaluated for this FS are considered to meet the minimum requirements established by MTCA for cleanup actions and, generally speaking, the five alternatives are considered to be relatively equivalent with regard to the level of benefit they would provide toward the protection of human health and the environment at this site. All of the alternatives are expected to require a relatively long restoration time frame, due to conditions at this site such as: the vicinity of service station infrastructure and utilities; the presence of low volatility petroleum contamination; the presence of petroleum contamination at depths of 5 or more feet below the water table; and high groundwater recharge rates in this area, which would prevent implementation of a cost-effective remedy to completely remediate the site in a short-term restoration timeframe. Therefore, all of the alternatives include institutional controls and MNA components to control contaminant exposure pathways and ultimately achieve the site cleanup standards.

As discussed in Section 6.2.1, land use at this site is expected to remain as an active service station for the foreseeable future. Therefore, a shorter restoration timeframe to complete remediation of current levels of petroleum contamination in soil and groundwater will not decrease the potential for exposure to hazardous petroleum vapors associated with refueling operations, or the potential for additional petroleum releases to soil or groundwater at the site.

Based on the evaluation of alternatives presented in the previous sections, the project team recommends selection of Alternative 4 (MNA, institutional controls, and property-wide excavation in conjunction with service station upgrades) as the preferred cleanup action for this site. Under this alternative, active remediation would take place at the site in coordination with service station upgrades which would allow a property-wide excavation to be performed within 3 years.

Assuming excavation is coordinated with the property owner’s upgrade activities to take place within the next 3 years, the restoration time frame (including post-excavation monitoring) of this alternative would be 5 to 10 years.

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TABLES

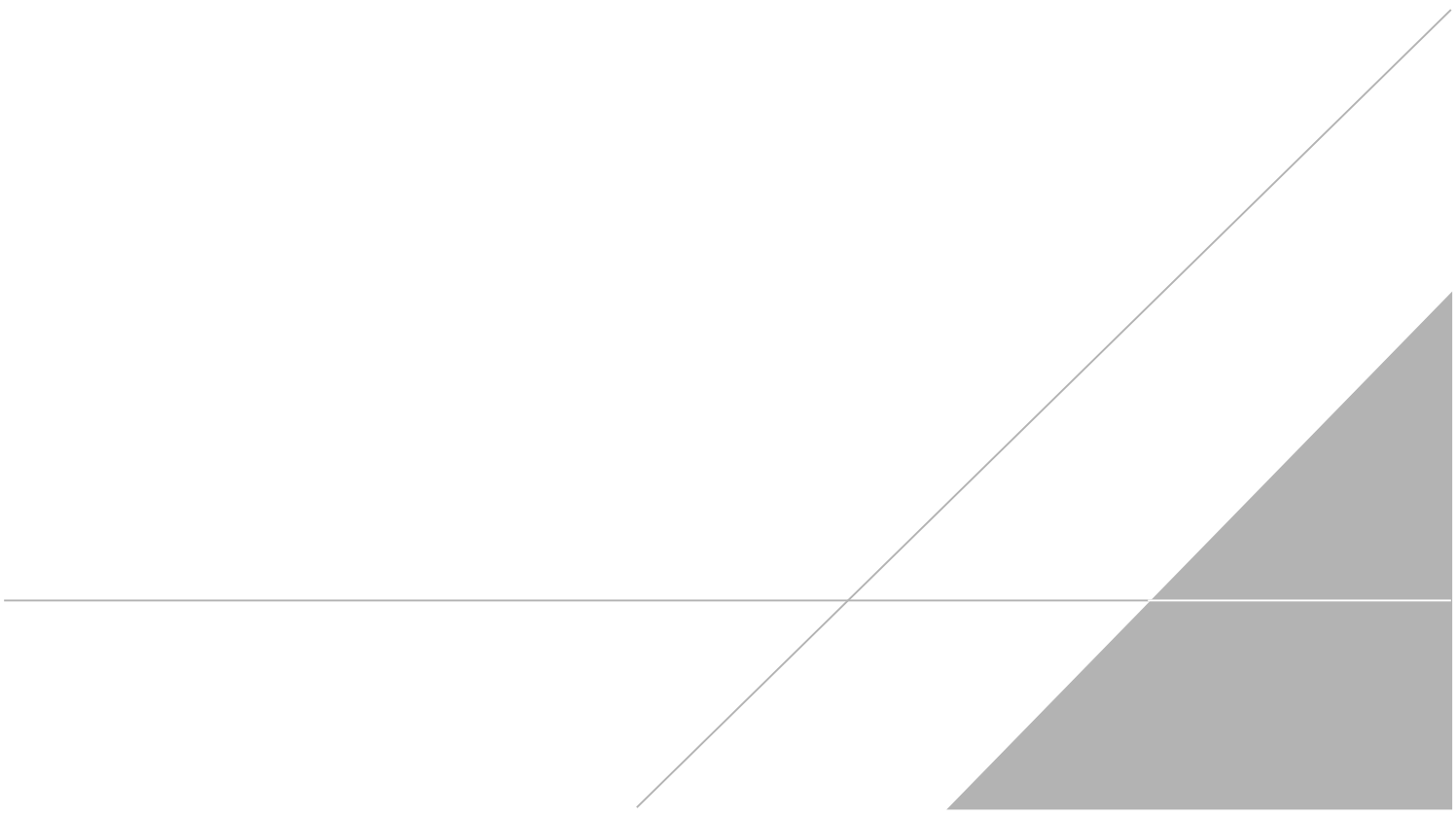


Table 1
Well Construction Details
Former Chevron Service Station No. 209335
1201 - 1225 North 45th Street
Seattle, Washington

PRELIMINARY
DRAFT

ARCADIS

Well ID	Well Setup	Construction Details					
		Installation Date	Decommission Date	Well Diameter	Top of Screen Depth	Bottom of Screen Depth	Total Well Depth
				inches	feet bgs	feet bgs	feet bgs
ON SITE							
MW-1	Single casing, PVC	10/10/2000	3/18/2005	2	32	42	42
MW-2	Single casing, PVC	10/11/2000	3/18/2005	2	32	42	43
MW-3	Single casing, PVC	10/11/2000	3/18/2005	2	35	45	45.5
MW-4	Single casing, PVC	10/10/2000	3/18/2005	2	32	42	43
MW-5	Single casing, PVC	10/11/2000	3/18/2005	2	32	42	43
MW-6	Single casing, PVC	11/7/2005	--	2	18	35	35
MW-7	Single casing, PVC	11/7/2005	--	2	20	35	35
MW-8	Single casing, PVC	11/7/2005	--	2	20	35	35
OFF SITE							
MW-9	Single casing, PVC	12/4/2006	--	2	29.1	44.1	45
MW-10	Single casing, PVC	12/4/2006	--	2	30	45	44.1

Notes and Acronyms:
MW = monitoring well
-- = Not applcable
bgs = below ground surface

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
						MTCA Method A CULs		500	500	500	500	800/1,000	5	1,000	700	1,000	20	15
MW-103	2/14/91		107.81		8.08		99.73											
MW-103	2/18/92		107.81	--	8.08	--	99.73	--		--		--	--	--	--	--	--	--
MW-103	3/9/92		107.81	--	7.80	--	100.01	--		<50		--	--	--	--	--	--	--
MW-103	3/13/92		107.81	--	8.08	--	99.73	<250		<250		<50	--	--	--	--	--	--
MW-103	4/21/92		107.81	--	7.78	--	100.03	--		--		<50	--	--	--	--	--	--
MW-103	3/3/94		107.81	--	--	--	--	<250		<250		<50	<13	--	--	--	--	--
MW-103	6/13/95		107.81	--	8.55	--	99.26	<250		<250		<50	--	--	Table 2A: Summary of	--	--	<3.0
MW-103	8/22/95		107.81	--	--	--	--	<250		<250		<50	--	--	--	--	--	<2.0
MW-103	8/23/95		107.81		8.91		98.90	<250		<250		<50						<2.0
MW-103	11/28/95		107.81	--	7.30	--	100.51	<250		<250		<50	--	--	--	--	--	<2.0
MW-103	3/12/96		107.81		8.03		99.78	<250		<250		<50						<2.0
MW-103	6/26/96		107.81	--	8.67	--	99.14	<250		<250		<50	--	--	--	--	--	<2.0
MW-103	10/9/96		107.81		8.82		98.99	<250		<250		<50						<2.0
MW-103	2/12/97		107.81	--	7.81	--	100.00	<250		<250		<50	--	--	--	--	--	<2.0
MW-103	4/22/97		107.81	--	7.42	--	100.39	<250		<250		<50	--	--	--	--	--	<2.0
MW-103	8/5/97		107.81	--	8.83	--	98.98	257		110		257	--	--	--	--	--	<2.0
MW-103	11/11/97		107.81	--	9.01	--	98.80	<250		<250		<50	--	--	--	--	--	<2.0
MW-103	2/11/98		107.81	--	8.03	--	99.78	<250		<250		<50	--	--	--	--	--	<2.0
MW-103	5/28/98		107.81	--	8.17	--	99.64	<250		<250		<50	--	--	--	--	--	2.84
MW-103	8/20/98		107.81	--	9.21	--	98.60	<250		<250		<50	--	--	--	--	--	<1.0
MW-103	11/19/98		107.81		9.03		98.78	<250		<250		<50						<1.0
MW-103	3/11/99		107.81	--	7.51	--	100.30	<250		<250		<50	--	--	--	--	--	<1.0
MW-103	5/25/99		107.81		8.51		99.30	<250		<250		<50						
MW-103	8/17/99		107.81	--	8.93	--	98.88	<250		<250		<50	--	--	--	--	--	<1.0
MW-103	11/19/99		107.81		7.18		100.63	<250		<250		<80						<1.0
MW-103	3/9/00		107.81	--	7.48	--	100.33	<250		<250		<80	--	--	--	--	--	<1.0
MW-103	6/13/00		107.81		8.29		99.52	<250		<250		<80						<1.0
MW-103	9/26/00		107.81	--	9.05	--	98.76	<250		<250		--	--	--	--	--	--	<1.0
MW-103	12/13/00		107.81	--	8.65	--	99.16	<250		<250		--	--	--	--	--	--	<1.0
MW-103	2/28/01		107.81	--	8.34	--	99.47	<250		<250		89	--	--	--	--	--	<1.0
MW-103	5/2/01		107.81	--	8.12	--	99.69	<250		<250		214	--	--	--	--	--	<1.0
MW-103	10/30/02		107.81	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-103	1/23/03		107.81	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-103	4/18/03		107.81	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-103	7/11/03		107.81	UNABLE TO LOCATE														
MW-103	10/31/03		107.81	UNABLE TO LOCATE - COVERED BY SOIL						--		--	--	--	--	--	--	--
MW-103	12/30/03		107.81	--	7.32	0.00	100.49	<50		<85		<110	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-103	5/3/04		107.81	UNABLE TO LOCATE - COVERED BY SOIL						--		--	--	--	--	--	--	--
MW-103	7/20/04		107.81	--	9.09	0.00	98.72	<250		<500		<50.0	<0.500	<0.500	<0.500	<1.00	--	--
MW-103	10/7/04		107.81	--	8.66	0.00	99.15	<160		<50		--	--	--	--	--	--	--
MW-103	1/27/05		107.81	--	7.95	0.00	99.86	<83		<83		<48	--	--	--	--	--	--
MW-103	4/12/05		107.81	--	7.65	0.00	100.16	<78		<78		<48	--	--	--	--	--	--
MW-103	7/18/05		107.81	--	8.76	0.00	99.05	<79		<79		<48	--	--	--	--	--	--
MW-103	10/21/05		107.81	--	8.87	0.00	98.94	<79		<79		<48	--	--	--	--	--	--
MW-103	9/5/07		107.81	UNABLE TO LOCATE														
MW-103	5/27-28/08		107.81	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-103	8/27-29/08		107.81	UNABLE TO LOCATE														
MW-103	11/17-19/08		107.81	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-103	2/16-18/09		107.81	UNABLE TO LOCATE														
MW-103	5/4-6/09		107.81	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-103	8/19-21/09		107.81	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-103	11/18-20/09		107.81	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-103	2/8-10/10		107.81	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-103	5/12-13/10		107.81	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-103	8/12/10	LFP	107.81	--	8.90	0.00	98.91	30		120		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
MW-103	11/3-4/10		107.81	--	7.69	0.00	100.12	<29		91		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.17
MW-103	2/3-4/11	LFP	107.81		7.99	0.00	99.82	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
MW-103	5/24/11	LFP	107.81	--	8.25	0.00	99.56	30		340		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
MW-103	8/23-24/11	LFP	107.81	UNABLE TO LOCATE														
MW-103	11/7-9/11	LFP	107.81	--	8.90	0.00	98.91	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
MW-103	2/6-8/12	LFP	107.81		7.80	0.00	100.01	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-103	5/2-4/12	LFP	107.81	--	8.05	0.00	99.76	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.083

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-103	8/1-3/12	LFP	107.81		8.95	0.00	98.86	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.088
MW-103	11/26-28/12	LFP	107.81	--	7.36	0.00	100.45	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
MW-103	02/4-6/13	LFP	107.81	--	7.85	0.00	99.96	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.087
MW-103	5/6-8/713	LFP	107.81	--	8.60	0.00	99.21	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
MW-103	9/9-13/13	LFP	107.81	--	8.55	0.00	99.26	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
MW-103	11/18-21/13	LFP	107.81	--	7.62	0.00	100.19	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.21
MW-103	2/4-11/14	LFP	107.81	--	8.36	0.00	99.45	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
MW-103	6/12-14/14	LFP	107.81	INACCESSIBLE			--	--		--		--	--	--	--	--	--	--
MW-103	8/18-21/14	LFP	107.81		6.81	0.00	101.00	<29/<29		<68/<68		62	<0.5	<0.5	<0.5	<0.5	<0.5	0.18
MW-103	11/19-20/14	LFP	107.81	--	8.41	0.00	99.40	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-103	2/17-20/15	LFP	107.81	--	7.83	0.00	99.98	<29/<29		<69/<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-103	5/11-15/15	LFP	107.81	--	8.77	0.00	99.04	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
MW-103	8/10-11/15	LFP	107.81	--	9.35	0.00	98.46	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.13
MW-103	11/16-18/15	LFP	107.81	--	6.67	0.00	101.14	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.00
MW-103	05/13-14/16	LFP	107.81	--	8.60	0.00	99.21	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-103	11/14/16	LFP	107.81	--	7.83	0.00	99.98	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-103	5/11/18		107.81	--	8.56	0.00	99.25											
MW-103	11/11-12/2018		107.81	--	8.91	0.00	98.90											
MW-103	4/27/19		107.81	--	8.29	0.00	99.52											
MW-103	11/3/19		107.81	--	8.55	0.00	99.26											
MW-103	11/3/19		107.81	--	--	--	--	WELL ABANDONED										
MW-109	3/13/92		107.35	--	7.72	0.00	99.63	--		--		<50	--	--	--	--	--	--
MW-109	4/21/92		107.35		7.42	0.00	99.93											
MW-109	3/3/94		107.35	--	--	0.00	--	**900**		**1,500**		**4,900**	--	--	--	--	--	--
MW-109	8/22/95		107.35		8.57	0.00	98.78	**2,900**		**2,400**		<50						
MW-109	11/28/95		107.35	--	5.87	0.00	101.48	480		**1,900**		72	--	--	--	--	--	<2.0
MW-109	3/12/96		107.35	--	7.16	0.00	100.19	<250		<750		<50	--	--	--	--	--	<2.0
MW-109	6/26/96		107.35	--	8.24	0.00	99.11	**554**		<750		<50	--	--	--	--	--	<2.0
MW-109	10/9/96		107.35	--	8.54	0.00	98.81	405		<750		<50	--	--	--	--	--	<2.0
MW-109	2/12/97		107.35	--	5.82	0.00	101.53	393		**1,290**		<50	--	--	--	--	--	<2.0
MW-109	4/22/97		107.35	--	7.10	0.00	100.25	356		**1,270**		<50	--	--	--	--	--	<2.0
MW-109	8/5/97		107.35	--	8.81	0.00	98.54	**560**		**1,690**		<50	--	--	--	--	--	<2.0
MW-109	11/11/97		107.35		7.57	0.00	99.78	269		**780**		<50						<2.0
MW-109	2/11/98		107.35	--	6.20	0.00	101.15	387		**1,700**		<50	--	--	--	--	--	<2.0
MW-109	5/28/98		107.35		7.62	0.00	99.73	332		**920**		<50						2.25
MW-109	8/20/98		107.35	--	9.00	0.00	98.35	**520**		**1,450**		<50	--	--	--	--	--	<1.0
MW-109	11/19/98		107.35		8.21	0.00	99.14	409		**1,130**		<50						<1.3
MW-109	3/11/99		107.35	--	6.94	0.00	100.41	**539**		**2,000**		<80	--	--	--	--	--	<1.0
MW-109	5/25/99		107.35		8.13	0.00	99.22	**916**				<80						
MW-109	8/17/99		107.35	--	8.66	0.00	98.69	**1,520**		**7,770**		<80	--	--	--	--	--	<1.0
MW-109	11/19/99		107.35	--	6.65	0.00	100.70	<250		--		<80	--	--	--	--	--	<1.0
MW-109	3/9/00		107.35	--	5.67	0.00	101.68	<250		<500		<80	--	--	--	--	--	<1.0
MW-109	6/13/00		107.35	--	6.65	0.00	100.70	<250		<500		<80	--	--	--	--	--	<1.0
MW-109	9/26/00		107.35	--	8.36	0.00	98.99	<250		<500		--	--	--	--	--	--	<1.0
MW-109	12/13/00		107.35	--	7.72	0.00	99.63	<250		<500		--	--	--	--	--	--	<1.0
MW-109	2/28/01		107.35	--	7.44	0.00	99.91	<250		<500		<80	--	--	--	--	--	<1.0
MW-109	5/2/01		107.35		9.50	0.00	97.85	<250		<500		<80						<1.0
MW-109	10/30/02		107.35	--	8.69	0.00	98.66	<250		<500		<80	<0.500	<0.500	<0.500	<1.0	--	6.44
MW-109	1/23/03		107.35	MONITORED/SAMPLED ANNUALLY														
MW-109	4/18/03		107.35	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-109	7/11/03		107.35	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-109	10/31/03		107.35	--	7.63	0.00	99.72	<250		<500		<50	<0.500	<0.500	<0.500	<1.0	--	<1.0[1]
MW-109	12/31/03		107.35	--	6.42	0.00	100.93	<50		440		**2,300**	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-109	5/3/04		107.35	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-109	7/20/04		107.35	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-109	10/6/04		107.35	--	7.71	0.00	99.64	<81		110		<50	--	--	--	--	--	--
MW-109	10/24/05		107.35		7.93	0.00	99.42	<81		<100		<48						
MW-109	9/5/07		107.35	--	8.45	0.00	98.90	<79		240		91	--	--	--	--	--	0.15
MW-109	5/27-28/08		107.35		7.86	0.00	99.49	<79		<98		<50	<0.5	0.6	<0.5	<0.5	<0.5	<0.050
MW-109	8/27-29/08	LFP	107.35	--	7.92	0.00	99.43	<79		<99		<50	<5	<5	<5	<5	<5	<0.050

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-109	11/17-19/08	LFP	107.35		6.60	0.00	100.75	35		110		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-109	2/16-18/09	LFP	107.35	--	7.59	0.00	99.76	53		130		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.093
MW-109	5/4-6/09	LFP	107.35	--	7.09	0.00	100.26	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-109	8/19-21/09	LFP	107.35	--	8.35	0.00	99.00	49		290		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
MW-109	11/18-20/09	LFP	107.35	--	5.74	0.00	101.61	98		340		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
MW-109	2/8-10/10	LFP	107.35	--	7.04	0.00	100.31	31		<72		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-109	5/12-13/10	LFP	107.35	--	7.41	0.00	99.94	60		270		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-109	8/11/10	LFP	107.35	--	8.90	0.00	98.45	34		300		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.1
MW-109	11/3-4/10	LFP	107.35		6.37	0.00	100.98	65		430		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-109	2/3-4/11	LFP	107.35	--	7.12	0.00	100.23	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-109	5/23/11	LFP	107.35		7.26	0.00	100.09	47		**520**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-109	8/23-24/11	LFP	107.35	--	8.35	0.00	99.00	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
MW-109	11/7-9/11	LFP	107.35		8.00	0.00	99.35	<300		**890**		84	<0.5	<0.5	0.6	<0.5	<0.5	0.19
MW-109	2/6-8/12	LFP	107.35	--	6.85	0.00	100.50	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-109	5/2-4/12	LFP	107.35		6.90	0.00	100.45	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-109	8/1-3/12	LFP	107.35	--	8.13	0.00	99.22	<30		<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.034
MW-109	11/26-28/12	LFP	107.35	--	6.42	0.00	100.93	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
MW-109	02/4-6/13	LFP	107.35	--	6.95	0.00	100.40	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-109	05/6-8/13	LFP	107.35	--	7.35	0.00	100.00	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-109	9/9-13/13	LFP	107.35	--	7.34	0.00	100.01	<31/<31		<72/<72		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.62
MW-109	11/18-22/13	LFP	107.35	--	8.12	0.00	99.23	<29/68		<67/170		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-109	02/4-11/14	LFP	107.35	--	7.33	0.00	100.02	<30/<30		<70/<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.20
MW-109	6/12-14/14	LFP	107.35		7.31	0.00	100.04	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	
MW-109	8/18-21/14	LFP	107.35	--	9.93	0.00	97.42	INSUFFICIENT WATER										
MW-109	11/19-20/14	LFP	107.35		7.38	0.00	99.97	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-109	2/17-20/15	LFP	107.35	--	6.91	0.00	100.44	<30/<30		<69/<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-109	5/11-15/15	LFP	107.35	--	7.29	0.00	100.06	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
MW-109	8/10-11/15	LFP	107.35	--	8.62	0.00	98.73	<29/130		210/640		<50	<0.5	<0.5	<0.5	<0.5	<0.5	**136**
MW-109	11/16-18/15	LFP	107.35	--	5.34	0.00	102.01	<28/36		<66/97		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.0028
MW-109	5/13-14/16	LFP	107.35	--	7.76	0.00	99.59	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	--	<0.13
MW-109	11/14/16	LFP	107.35	--	6.40	0.00	100.95	<28/77		<65/65		<50	<0.5	<0.5	<0.5	<0.5	--	0.55
MW-109	5/11/18		107.35		7.38	0.00	99.97	<28	31	<66	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.11
MW-109	11/11-12/18		107.35		7.47	0.00	99.88	40	<28	260	96	<19	<0.2	<0.2	<0.4	<1	--	<1.1
MW-109	4/27/19		107.35		7.28	0.00	100.07	97	<30	<67	<67	<19	<0.2	<0.2	<0.4	<1	--	<1.1
MW-109	11/3/19		107.35		7.49	0.00	99.86	41 J	<30	95 J	<68	<19	<0.2	<0.2	<0.4	<1	--	**29.4**
MW-109	5/6/20		107.35		7.50	0.00	99.85	<200	<200	<250	<250	51.3 B J	<1.00	<1.00	<1.00	<3.00	--	<5.00
MW-110	8/22/95		108.89		9.62	0.00	99.27	400		<750		**11,000**						
MW-110	11/28/95		108.89	--	8.08	0.00	100.81	**540**		<750		**6,000**	--	--	--	--	--	14
MW-110	3/12/96		108.89		8.74	0.00	100.15	340		<750		**3,600**						14
MW-110	6/26/96		108.89	--	9.41	0.00	99.48	274		<750		**2,750**	--	--	--	--	--	8.14
MW-110	10/9/96		108.89		9.67	0.00	99.22	<250		<750		**1,160**						5.96
MW-110	2/12/97		108.89	--	8.42	0.00	100.47	393		<750		**1,830**	--	--	--	--	--	11.7
MW-110	4/22/97		108.89	--	8.18	0.00	100.71	371		<750		**1,950**	--	--	--	--	--	7.27
MW-110	8/5/97		108.89	--	9.80	0.00	99.09	282		<750		**1,480**	--	--	--	--	--	3.16
MW-110	11/11/97		108.89	--	8.57	0.00	100.32	**659**		<750		**2,330**	--	--	--	--	--	**22.9**
MW-110	2/11/98		108.89	--	8.54	0.00	100.35	390		<750		**2,040**	--	--	--	--	--	**15.3**
MW-110	5/28/98		108.89	--	8.69	0.00	100.20	324		<750		**1,350**	--	--	--	--	--	**15.5**
MW-110	8/20/98		108.89	--	10.91	0.00	97.98	<250		<750		**812**	--	--	--	--	--	1.55
MW-110	11/19/98		108.89		9.51	0.00	99.38	258		<750		637						7.27
MW-110	3/11/99		108.89	--	8.09	0.00	100.80	486		<500		**2,350**	--	--	--	--	--	11
MW-110	5/25/99		108.89		9.28	0.00	99.61	<250				**2,950**						
MW-110	8/17/99		108.89	--	9.81	0.00	99.08	<250		<500		749	--	--	--	--	--	2.2
MW-110	11/19/99		108.89		7.77	0.00	101.12	453				**2,030**						**32.4**
MW-110	3/9/00		108.89	--	8.15	0.00	100.74	<250		<500		**3,780**	--	--	--	--	--	9.59
MW-110	6/13/00		108.89		8.81	0.00	100.08	<250		<500		**2,330**						5.45
MW-110	9/26/00		108.89	--	9.98	0.00	98.91	<250		<500		--	--	--	--	--	--	2.83
MW-110	12/13/00		108.89	--	9.37	0.00	99.52	<250		<500		**1,340**	--	--	--	--	--	4.15
MW-110	2/28/01		108.89	--	9.07	0.00	99.82	<250		<500		**1,800**	--	--	--	--	--	6.32
MW-110	5/2/01		108.89	--	8.62	0.00	100.27	<250		<500		**905**	--	--	--	--	--	4.23
MW-110	10/30/02		108.89	--	10.28	0.00	98.61	<250		<500		**3,880**	<2.50	<2.50	22.5	108	--	6.36

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-110	1/23/03		108.89	--	8.74	0.00	100.15	<250		<500		**1,190**	0.902	0.585	9.83	13.9	--	**26.55**
MW-110	4/18/03		108.89	--	8.40	0.00	100.49	<250		<500		499	1.94	<0.500	0.799	1.65	--	**16.8'**
MW-110	7/11/03		108.89		9.99	0.00	98.90	<250		<500		586	1.76	<0.500	1.08	1.11		2.115
MW-110	10/31/03		108.89	--	9.25	0.00	99.64	<250		<500		184	0.529	<0.500	<0.500	<1.0	--	<1.0'
MW-110	12/31/03		108.89		7.94	0.00	100.95	**1,800**		410		<99	<10	<2.0	23	25		**17.3**
MW-110	5/3/04		108.89	--	9.56	0.00	99.33	<250		<500		454	1.8	<0.500	<0.500	<1.0	--	3.865
MW-110	7/20/04		108.89	--	10.03	0.00	98.86	<250		<500		308	0.893	<0.500	<0.500	<1.0	--	<1.0[5]
MW-110	10/6/04		108.89	--	9.38	0.00	99.51	<79		<99		160	--	--	--	--	--	--
MW-110	1/27/05		108.89	--	8.65	0.00	100.24	<81		<100		150	--	--	--	--	--	--
MW-110	4/12/05		108.89	--	8.22	0.00	100.67	370		<100		290	--	--	--	--	--	--
MW-110	7/18/05		108.89	--	9.50	0.00	99.39	<79		<99		100	--	--	--	--	--	--
MW-110	7/18/05 (D)		108.89	--	9.50	0.00	99.39	<79		<99		100	--	--	--	--	--	--
MW-110	10/20/05		108.89		9.62	0.00	99.27	82		100		110						
MW-110	9/4/07		108.89	--	10.08	0.00	98.81	<150		220		290	--	--	--	--	--	5
MW-110	5/27-28/08	LFP	108.89		9.52	0.00	99.37	<76		<96		210	<0.5	<0.5	9	0.7	<0.5	9.1
MW-110	8/27-29/08	LFP	108.89	--	9.60	0.00	99.29	120		<100		240	<5	<5	<5	<5	<5	1.5
MW-110	11/17-19/08	LFP	108.89		8.17	0.00	100.72	410		<68		150	<0.5	<0.5	<0.5	<0.5	<0.5	**34.1**
MW-110	2/16-18/09	LFP	108.89	--	9.23	0.00	99.66	58		170		<50	<0.5	<0.5	<0.5	<0.5	<0.5	**27.7**
MW-110	5/4-6/09	LFP	108.89	--	8.60	0.00	100.29	380		**670**		96	<0.5	<0.5	<0.5	<0.5	<0.5	5.4
MW-110	8/19-21/09	LFP	108.89	--	9.98	0.00	98.91	<30		76		69	<0.5	<0.5	<0.5	<0.5	<0.5	0.63
MW-110	11/18-20/09	LFP	108.89	--	6.97	0.00	101.92	200		<67		670	<0.5	<0.5	2	<0.5	<0.5	5
MW-110	2/8-10/10	LFP	108.89	--	8.64	0.00	100.25	51		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	12.5
MW-110	5/12-13/10	LFP	108.89	--	9.08	0.00	99.81	39		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	4.2
MW-110	8/11/10	LFP	108.89	--	9.75	0.00	99.14	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.4
MW-110	11/3-4/10	LFP	108.89		8.15	0.00	100.74	49		98		<50	<0.5	<0.5	<0.5	<0.5	<0.5	2.5
MW-110	2/3-4/11	LFP	108.89	--	8.77	0.00	100.12	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.72
MW-110	5/24/11	LFP	108.89		8.90	0.00	99.99	<29		180		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.43
MW-110	8/23-24/11	LFP	108.89	--	9.96	0.00	98.93	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.62
MW-110	11/7-9/11	LFP	108.89		9.30	0.00	99.59	<31		<72		95	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
MW-110	2/6-8/12	LFP	108.89	--	8.40	0.00	100.49	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
MW-110	5/2-4/12	LFP	108.89		8.40	0.00	100.49	<31		<72		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.23
MW-110	8/1-3/12	LFP	108.89	--	8.46	0.00	100.43	50		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.093
MW-110	11/26-28/12	LFP	108.89	--	7.95	0.00	100.94	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.30
MW-110	02/4-6/13	LFP	108.89	--	8.38	0.00	100.51	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-110	05/6-8/13	LFP	108.89	--	9.52	0.00	99.37	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.23
MW-110	9/9-13/13	LFP	108.89	--	9.03	0.00	99.86	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.39
MW-110	11/18-21/13	LFP	108.89	--	8.22	0.00	100.67	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.33
MW-110	02/4-11/14	LFP	108.89	--	8.98	0.00	99.91	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.16
MW-110	6/12-14/14	LFP	108.89		9.50	0.00	99.39	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
MW-110	8/18-21/14	LFP	108.89	--	8.53	0.00	100.36	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
MW-110	11/19-20/14	LFP	108.89		9.08	0.00	99.81	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.94
MW-110	2/17-20/15	LFP	108.89	--	8.39	0.00	100.50	<30/<30		<70/<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-110	5/11-15/15	LFP	108.89	--	9.51	0.00	99.38	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.46
MW-110	8/10-11/15	LFP	108.89	--	10.23	0.00	98.66	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.88
MW-110	11/16-18/15	LFP	108.89	--	6.54	0.00	102.35	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.00
MW-110	5/13-14/16	LFP	108.89	--	9.04	0.00	99.85	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-110	11/14/16	LFP	108.89	--	8.21	0.00	100.68	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-110	5/11/18		108.89	--	9.12	0.00	99.77	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-110	11/11-12/2018		108.89	--	9.30	0.00	99.59	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-110	4/27/19		108.89	--	8.93	0.00	99.96	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-110	11/3/19		108.89	--	9.15	0.00	99.74	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-110	5/5/20		108.89	--	9.15	0.00	99.74	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-111	8/22/95		107.12	--	7.86	0.00	99.26	360		<750		**33,000**						
MW-111	11/28/95		107.12	--	6.14	0.00	100.98	**640**		<750		**17,000**	--	--	--	--	--	10
MW-111	3/12/96		107.12		6.84	0.00	100.28	290		<750		**11,000**						7.6
MW-111	6/26/96		107.12	--	7.55	0.00	99.57	479		<750		**7,690**	--	--	--	--	--	4.8
MW-111	10/9/96		107.12		7.81	0.00	99.31	256		<750		**3,560**						4.7
MW-111	2/12/97		107.12	--	6.52	0.00	100.60	**631**		<750		**17,200**	--	--	--	--	--	8.7
MW-111	4/22/97		107.12	--	6.31	0.00	100.81	**920**		<750		**13,800**	--	--	--	--	--	5.3
MW-111	8/5/97		107.12	--	7.90	0.00	99.22	444		<750		**4,290**	--	--	--	--	--	3.5

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-111	11/11/97		107.12	--	6.70	0.00	100.42	**770**		<750		**14,300**	--	--	--	--	--	12.4
MW-111	2/11/98		107.12	--	6.65	0.00	100.47	**587**		<750		**13,600**	--	--	--	--	--	8.3
MW-111	5/28/98		107.12	--	6.89	0.00	100.23	**526**		<750		**11,200**	--	--	--	--	--	**16.6**
MW-111	8/20/98		107.12	--	9.08	0.00	98.04	**637**		<750		**5,950**	--	--	--	--	--	1.7
MW-111	11/19/98		107.12		7.60	0.00	99.52	**3,890**		<750		**10,500,000**						2.2
MW-111	1/22/99		107.12	--	5.36	0.00	101.76	--		--		**19,000**	--	--	--	--	--	--
MW-111	3/11/99		107.12		6.19	0.00	100.93	**611**		<500		**6,910**						6.3
MW-111	5/25/99		107.12	--	7.43	0.00	99.69	388		--		**8,500**	--	--	--	--	--	4.2
MW-111	8/17/99		107.12		7.98	0.00	99.14	**547**		<500		**17,600**						3
MW-111	11/19/99		107.12	--	5.87	0.00	101.25	**547**		--		**27,900**	--	--	--	--	--	14.4
MW-111	3/9/00		107.12		6.27	0.00	100.85	**12,400**		**646**		**20,800**						11.8
MW-111	6/13/00		107.12	--	6.91	0.00	100.21	**7,670**		<500		**29,600**	--	--	--	--	--	12.8
MW-111	9/26/00		107.12	--	8.37	0.00	98.75	--		--		--	--	--	--	--	--	--
MW-111	12/13/00		107.12	--	7.65	0.00	99.47	**13,800**		<500		**23,100**	--	--	--	--	--	4.1
MW-111	2/28/01		107.12	--	7.26	0.00	99.86	**3,740**		<500		**16,400**	--	--	--	--	--	5.6
MW-111	5/2/01		107.12	--	6.89	0.00	100.23	**7,530**		<500		**17,700**	--	--	--	--	--	10.7
MW-111	10/30/02		107.12	8.42	8.70	0.28	98.64	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL							--	--	--	--
MW-111	1/23/03		107.12	6.95	6.99	0.04	100.16	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL							--	--	--	--
MW-111	4/18/03		107.12	6.83	6.89	0.06	100.28	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL										--
MW-111	7/11/03		107.12	8.18	8.25	0.07	98.93	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL							--	--	--	--
MW-111	10/31/03		107.12	7.45	7.48	0.03	99.66	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL										--
MW-111	12/31/03		107.12	--	6.40	0.00	100.72					**50,000 I 2,800 I** 300 I **8.3** 6.5			**1,100**	**3,300**	**--**	**15.2**
MW-111	5/3/04		107.12	7.76	7.79	0.03	99.35	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL							--	--	--	--
MW-111	7/20/04		107.12	8.10	8.16	0.06	99.01	NOT SAMPLED DUE TO THE PRESENCE OF LNAPL							--	--	--	--
MW-111	10/6/04		107.12	--	7.54	0.00	99.58	240		<100		**5,700**	--	--	--	--	--	--
MW-111	1/27/05		107.12	--	6.79	0.00	100.33	310		<98		**8,800**	--	--	--	--	--	--
MW-111	1/27/05(D)		107.12	--	6.79	0.00	100.33	310		<98		**9,100**	--	--	--	--	--	--
MW-111	4/12/05		107.12	--	6.32	0.00	100.80	**820**		<100		**10,000**	--	--	--	--	--	--
MW-111	4/12/05(D)		107.12		6.32	0.00	100.80	**850**		<110		**10,000**						
MW-111	7/18/05		107.12	--	7.75	0.00	99.37	460		<96		**6,300**	--	--	--	--	--	--
MW-111	10/20/05		107.12		7.84	0.00	99.28											
MW-111	9/4/07		107.12	--	8.26	0.00	98.86	1,100		<220		**6,800**	--	--	--	--	--	2.8
MW-111	9/4/07		107.12			0.00		<81		<100		<50						<0.047
MW-111	5/27-28/08		107.12	--	7.64	0.00	99.48	NOT SAMPLED DUE TO OBSTRUCTION IN WELL @ 7 FEET								--	--	--
MW-111	8/27-29/08		107.12	--	7.71	0.00	99.41	NOT SAMPLED DUE TO OBSTRUCTION IN WELL @ 8 FEET								--	--	--
MW-111	11/17-19/08	LFP	107.12	--	6.27	0.00	100.85	**2,300**		<1,400		**18,000**	3	<1	300	220	<1	**36.8**
MW-111	2/16-18/09	LFP	107.12	--	7.36	0.00	99.76	350		74		**20,000**	4	2	190	110	<1	8.5
MW-111	5/4-6/09	LFP	107.12	--	6.62	0.00	100.50	**1,200**		<70		**13,000**	**8**	2	220	120	<0.5	**20.1**
MW-111	8/19-21/09	LFP	107.12	--	8.12	0.00	99.00	**780**		<70		11,000	4	0.6	180	130	<0.5	5.3
MW-111	11/18-20/09	LFP	107.12	--	5.42	0.00	101.70	400		<68		**4,700**	**5**	0.7	53	21	<0.5	6.3
MW-111	2/08-10/10	LFP	107.12		6.79	0.00	100.33	**2,700**		<140		**19,000**	**16**	1	270	110	<0.5	**18.8**
MW-111	5/11-13/10	LFP	107.12	--	7.25	0.00	99.87	**3,400**		380		**21,000**	**10**	1	300	110	<1	**22.6**
MW-111	8/11/10	LFP	107.12		7.92	0.00	99.20	**1,300**		<700		**9,200**	4	<1	220	55	<1	**20.2**
MW-111	11/3-4/10	LFP	107.12	--	6.12	0.00	101.00	**1,700**		**640**		**7,000**	**4**	<1	160	68	<1	**29.5**
MW-111	2/3-4/11	LFP	107.12		6.91	0.00	100.21	**2,800**		<340		**14,000**	**10**	0.9	250	72	<0.5	**19.9**
MW-111	5/24/11	LFP	107.12	--	7.03	0.00	100.09	**500**		130		**2,700**	<0.5	<0.5	65	15	<0.5	2.8
MW-111	8/23-24/11	LFP	107.12		9.16	0.00	97.96	**1,600**		<69		**6,900**	3	<0.5	130	11	<0.5	12.2
MW-111	11/7-9/11	LFP	107.12	--	7.85	0.00	99.27	**4,700**		<730		**20,000**	1	<1	140	26	<1	**45.8**
MW-111	2/6-8/12	LFP	107.12	--	6.55	0.00	100.57	**690**		110		**5,100**	**5**	<0.5	140	<0.5	<0.5	**22.1**
MW-111	5/2-4/12	LFP	107.12	--	6.50	0.00	100.62	420		<68		**4,400**	**5**	0.7	170	23	<0.5	8.9
MW-111	8/1-3/12	LFP	107.12	--	7.93	0.00	99.19	**620**		140		**6,900**	0.6	<0.5	<0.5	12	<0.5	**22.9**
MW-111	11/26-28/12	LFP	107.12	--	6.07	0.00	101.05	**15,000**		<3,500		**5,200**	4	<0.5	140	32	<0.5	**36.1**
MW-111	02/4-6/13	LFP	107.12	--	6.53	0.00	100.59	**2,300**		**710**		**7,500**	<3	<3	120	24	<0.5	**17.8**
MW-111	05/6-8/13	LFP	107.12	--	7.46	0.00	99.66	300		<67		**5,500**	2	<0.5	100	13	<0.5	**16.6**
MW-111	9/9-13/13	LFP	107.12		7.15	0.00	99.97	330/3,600		<66/89		**5,500**	1	<0.5	110	39	<0.5	**59.4**
MW-111	11/18-22/13	LFP	107.12	--	6.42	0.00	100.70	370/1,000		<66/<66		**3,300**	0.9	<0.5	77	13	<0.5	**17.8**
MW-111	2/4-11/14	LFP	107.12		7.11	0.00	100.01	**410/1,000**		<68/<68		**4,800**	1	<0.5	75	7	<0.5	**27.3**
MW-111	6/12-14/14	LFP	107.12	--	7.70	0.00	99.42	**380/1,200**		<67/83		**4,200**	2	<0.5	130	14	<0.5	**16.1**
MW-111	8/18-21/14	LFP	107.12	--	8.07	0.00	99.05	**310/1,400**		<67/100		**4,700**	1	<0.5	49	1	<0.5	1.09
MW-111	11/19-20/14	LFP	107.12	--	6.47	0.00	100.65	**430/1,800**		<69/320		**6,000**	2	<0.5	120	11	<0.5	**45.3**
MW-111	2/17-20/15	LFP	107.12	--	6.57	0.00	100.55	230/730		<68/180		**3,600**	1	<0.5	44	3	<0.5	14.3

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-111	5/11-15/15	LFP	107.12	--	9.02	0.00	98.10	**320/1,000**		<66/<66		**4,400**	**1**	<0.5	71	5	<0.5	0.0202
MW-111	8/10-11/15	LFP	107.12	--	8.43	0.00	98.69	**470/2,700**		<67/93		**4,500**	**<3**	**<3**	**31**	**6**	<3	12.5
MW-111	11/16-18/15	LFP	107.12	--	4.59	0.00	102.53	150/450		<67/270		**1,900**	<0.5	<0.5	9	1	<0.5	0.0078
MW-111	5/13-14/16	LFP	107.12		8.95	0.00	98.17	**350/1,200**		**680/1,600**		**4,200**	<0.5	<0.5	19	2		7.8
MW-111	11/14/16	LFP	107.12	--	--	--	--	WELL FLOODED-UNABLE TO ACCESS								2	--	7.8
MW-111	5/11/18		107.12		7.57	0	99.55	**1,400**	440	**970**	400	**6,600**	**14**	2	45	3	<0.5	13.8
MW-111	11/11-12/2018		107.12		7.31	0	99.81	**3,300**	300	320	<68	**4,000**	3	0.6	33	3	--	**92.8**
MW-111	4/27/19		107.12		7.11	0	100.01	**1,800**	**900**	**1,900**	**1,100**	**5,800**	3	0.6 J	29	2 J	--	**17.8**
MW-111	11/3/19		107.12		7.31	0	99.81	**2,100**	250	**970**	400	**4,500**	1	0.3 J	20	2 J	--	**49.4**
MW-111	5/6/20		107.12		7.6	0	99.52	**1,530**	**739**	**1,670**	**1,050**	37.8 B J	0.824 J	0.394 J	14	1.53 J	--	10.2
MW-112	8/22/95		107.58	--	8.42	0.00	99.16	<250		<750		480	--	--	--	--	--	--
MW-112	11/28/95		107.58		6.73	0.00	100.85	<250		<750		150						5.8
MW-112	3/12/96		107.58	--	7.43	0.00	100.15	<250		<750		250	--	--	--	--	--	<2.0
MW-112	6/26/96		107.58	--	8.12	0.00	99.46	<250		<750		63.8	--	--	--	--	--	<2.0
MW-112	10/9/96		107.58	--	8.36	0.00	99.22	<250		<750		93.1	--	--	--	--	--	2.62
MW-112	2/12/97		107.58	--	7.11	0.00	100.47	322		<750		**1,250**	--	--	--	--	--	2.99
MW-112	4/22/97		107.58	--	6.85	0.00	100.73	<250		<750		323	--	--	--	--	--	<2.0
MW-112	8/5/97		107.58	--	8.45	0.00	99.13	<250		<750		124	--	--	--	--	--	<2.0
MW-112	11/11/97		107.58	--	7.26	0.00	100.32	<250		<750		112	--	--	--	--	--	<2.0
MW-112	2/11/98		107.58		7.25	0.00	100.33	<250		<750		658						<2.0
MW-112	5/28/98		107.58	--	7.46	0.00	100.12	315		<750		713	--	--	--	--	--	10.4
MW-112	8/20/98		107.58		9.64	0.00	97.94	<250		<750		<50						<1.0
MW-112	11/19/98		107.58	--	8.20	0.00	99.38	<250		<750		367	--	--	--	--	--	<1.0
MW-112	3/11/99		107.58		6.79	0.00	100.79	<250		<500		**1,370**						1.42
MW-112	5/25/99		107.58	--	7.97	0.00	99.61	<250		--		<80	--	--	--	--	--	--
MW-112	8/17/99		107.58		8.51	0.00	99.07	<250		<500		106						<1.6
MW-112	11/19/99		107.58	--	6.46	0.00	101.12	<250		--		<80	--	--	--	--	--	<1.0
MW-112	3/9/00		107.58	--	6.85	0.00	100.73	<250		<500		<80	--	--	--	--	--	<1.0
MW-112	6/13/00		107.58	--	7.48	0.00	100.10	<250		<500		**824**	--	--	--	--	--	2.14
MW-112	9/26/00		107.58	--	8.66	0.00	98.92	<250		<500		--	--	--	--	--	--	<1.0
MW-112	12/13/00		107.58	--	8.07	0.00	99.51	<250		<500		<80	--	--	--	--	--	<1.0
MW-112	2/28/01		107.58	--	7.77	0.00	99.81	<250		<500		<80	--	--	--	--	--	<1.0
MW-112	5/2/01		107.58	--	7.31	0.00	100.27	<250		<500		710	--	--	--	--	--	1.44
MW-112	10/30/02		107.58		8.95	0.00	98.63	<250		<500		95.7	<0.500	<0.500	<0.500	<1.00		2.63
MW-112	1/23/03		107.58	--	7.39	0.00	100.19	<250		<500		178	<0.500	<0.500	0.730	<1.00	--	<1.0'
MW-112	4/18/03		107.58		7.28	0.00	100.30	<250		<500		93.4	<0.500	<0.500	<0.500	<1.00		<1.0[5]
MW-112	7/11/03		107.58	--	8.68	0.00	98.90	--		--		<50.0	<0.500	<0.500	<0.500	<1.00	--	<1.0[5]
MW-112	10/31/03		107.58	--	8.04	0.00	99.54	<250		<500		<50.0	<0.500	<0.500	<0.500	<1.00	--	<1.0[5]
MW-112	12/30/03		107.58	--	6.62	0.00	100.96	<50		<77		<97	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-112	5/3/04		107.58	--	8.22	0.00	99.36	<250		<500		<50.0	<0.500	<0.500	<0.500	<1.00	--	<1.0[5]
MW-112	7/20/04		107.58	--	8.69	0.00	98.89	<250		<500		<50.0	<0.500	<0.500	<0.500	<1.00	--	--
MW-112	10/7/04		107.58	--	8.06	0.00	99.52	<82		<100		<50	--	--	--	--	--	--
MW-112	7/18/05		107.58	--	8.26	0.00	99.32	<77		<96		<48	--	--	--	--	--	--
MW-112	10/21/05		107.58		8.25	0.00	99.33	<82		<100		48						
MW-112	9/5/07		107.58	--	8.79	0.00	98.79	<79		<99		<50	--	--	--	--	--	0.52
MW-112	5/27-28/08	LFP	107.58		8.22	0.00	99.36	<80		<100		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.24
MW-112	8/27-29/08	LFP	107.58	--	8.26	0.00	99.32	<79		<99		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.92
MW-112	11/17-19/08	LFP	107.58		6.87	0.00	100.71	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.057
MW-112	2/16-18/09	LFP	107.58	--	7.92	0.00	99.66	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.51
MW-112	5/4-06/09	LFP	107.58	--	7.26	0.00	100.32	120		<69		380	2	<0.5	<0.5	<0.5	<0.5	2.1
MW-112	8/19-21/09	LFP	107.58	--	8.67	0.00	98.91	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.27
MW-112	11/18-20/09	LFP	107.58	--	5.58	0.00	102.00	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
MW-112	2/8-10/10	LFP	107.58	--	7.35	0.00	100.23	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.46
MW-112	5/12-13/10	LFP	107.58	--	7.77	0.00	99.81	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.58
MW-112	8/12/10	LFP	107.58	--	8.45	0.00	99.13	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.29
MW-112	11/3-4/10	LFP	107.58		6.85	0.00	100.73	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.19
MW-112	2/3-4/11	LFP	107.58	--	8.21	0.00	99.37	49		89		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.56
MW-112	5/24/11	LFP	107.58		7.58	0.00	100.00	<29		270		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.49
MW-112	8/23-24/11	LFP	107.58	--	8.52	0.00	99.06	**860**		<66		72	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-112	11/7-9/11	LFP	107.58		8.35	0.00	99.23	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.24

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-112	2/6-8/12	LFP	107.58	--	7.10	0.00	100.48	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
MW-112	5/2-4/12	LFP	107.58		7.20	0.00	100.38	<30		<69		68	<0.5	<0.5	<0.5	<0.5	<0.5	1.5
MW-112	8/1-3/12	LFP	107.58	--	8.45	0.00	99.13	<31		<72		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.39
MW-112	11/26-28/12	LFP	107.58	--	6.67	0.00	100.91	<30		<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.14
MW-112	02/4-6/13	LFP	107.58	--	7.22	0.00	100.36	<28		<66		50	<0.5	<0.5	<0.5	<0.5	<0.5	0.64
MW-112	5/6-8/13	LFP	107.58	--	8.00	0.00	99.58	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.47
MW-112	9/9-13/13	LFP	107.58	--	7.71	0.00	99.87	<29/32		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.85
MW-112	11/18-22/13	LFP	107.58	--	6.76	0.00	100.82	<29/33		<67/<67		68	<0.5	<0.5	<0.5	<0.5	<0.5	0.58
MW-112	2/4-11/2014	LFP	107.58	--	7.67	0.00	99.91	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.38
MW-112	6/12-14/14	LFP	107.58	INACCESSIBLE														
MW-112	8/18-21/14	LFP	107.58		-- I	8.63	0.00	98.95	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
MW-112	5/11/18		107.58		7.82	0.00	99.76	--	59	--	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.2
MW-112	11/11-12/2018		107.58		7.81	0.00	99.77	--	<28	--	<66	<19	<0.2	<0.2	<0.4	<1	--	<1.1
MW-112	4/27/19		107.58		7.62	0.00	99.96	--	130	--	98 J	38 J	<0.2	<0.2	<0.4	<1	--	<1.1
MW-112	11/3/19		107.58		7.82	0.00	99.76	--	60 J	--	<68	38 J	<0.2	<0.2	<0.4	<1	--	0.25 J
MW-112	5/6/20		107.58		7.83	0.00	99.75	<200	--	<250	--	42.6 B J	<1.00	<1.00	<1.00	<3.00	--	<5.00
MW-113	8/22/95		108.44		9.26	0.00	99.18	320		<750		**3,100**						
MW-113	11/28/95		108.44	--	7.55	0.00	100.89	<250		<750		180	--	--	--	--	--	<2.0
MW-113	3/12/96		108.44		8.26	0.00	100.18	<250		<750		750						<2.0
MW-113	6/26/96		108.44	--	8.95	0.00	99.49	<250		<750		**809**	--	--	--	--	--	2.43
MW-113	10/9/96		108.44		9.21	0.00	99.23	<250		<750		494						2.95
MW-113	2/12/97		108.44	--	7.93	0.00	100.51	<250		<750		**1,600**	--	--	--	--	--	<2.0
MW-113	4/22/97		108.44	--	7.71	0.00	100.73	291		<750		748	--	--	--	--	--	<2.0
MW-113	8/5/97		108.44	--	9.37	0.00	99.07	<250		<750		**876**	--	--	--	--	--	<2.0
MW-113	11/11/97		108.44	--	8.04	0.00	100.40	<250		<750		<50	--	--	--	--	--	<2.0
MW-113	2/11/98		108.44	--	8.02	0.00	100.42	<250		<750		76.10	--	--	--	--	--	<2.0
MW-113	5/28/98		108.44	--	8.31	0.00	100.13	<250		<750		116	--	--	--	--	--	6.26
MW-113	8/20/98		108.44	--	10.48	0.00	97.96	<250		<750		235	--	--	--	--	--	<1.0
MW-113	11/19/98		108.44		9.02	0.00	99.42	<250		<750		<50						<1.0
MW-113	3/11/99		108.44	--	7.59	0.00	100.85	<250		<750		162	--	--	--	--	--	<1.0
MW-113	5/25/99		108.44		8.83	0.00	99.61	<250				321						
MW-113	8/17/99		108.44	--	9.34	0.00	99.10	<250		<500		265	--	--	--	--	--	1.2
MW-113	11/19/99		108.44		7.27	0.00	101.17	<250				<80						<1.0
MW-113	3/9/00		108.44	--	7.66	0.00	100.78	<250		<500		96.70	--	--	--	--	--	<1.0
MW-113	6/13/00		108.44		8.29	0.00	100.15	<250		<500		154						<1.0
MW-113	9/26/00		108.44	--	9.51	0.00	98.93	<250		<500		--	--	--	--	--	--	<1.0
MW-113	12/13/00		108.44	--	8.91	0.00	99.53	<250		**588**		<80	--	--	--	--	--	<1.0
MW-113	2/28/01		108.44	--	8.60	0.00	99.84	<250		<500		<80	--	--	--	--	--	<1.0
MW-113	5/2/01		108.44	--	8.14	0.00	100.30	<250		<500		<80	--	--	--	--	--	<1.0
MW-113	10/30/02		108.44	--	9.85	0.00	98.59	<250		<500		<80	<0.500	<0.500	<0.500	<1.0	--	1.55
MW-113	1/23/03		108.44	--	8.29	0.00	100.15	<250		<500		<80	<0.500	<0.500	<0.500	<1.0	--	<1.0[5]
MW-113	4/18/03		108.44	--	8.09	0.00	100.35	<250		<500		<50	<0.500	<0.500	<0.500	<1.0	--	<1.0[1]
MW-113	7/11/03		108.44		9.51	0.00	98.93	<250		<500		<50	<0.500	<0.500	<0.500	<1.0		<1.0[5]
MW-113	10/31/03		108.44	--	8.80	0.00	99.64	<250		<500		<50	<0.500	<0.500	<0.500	<1.0	--	<1.0[1]
MW-113	12/31/03		108.44		7.44	0.00	101.00	<50		<77		<97	<0.5	<0.5	<0.5	<1.5		<1.2
MW-113	5/3/04		108.44	--	9.14	0.00	99.30	<250		<500		<50	<0.500	<0.500	<0.500	<1.0	--	<1.0[5]
MW-113	7/20/04		108.44	--	9.58	0.00	98.86	<250		<500		<50	<0.500	<0.500	<0.500	<1.0	--	--
MW-113	10/6/04		108.44	--	8.92	DRY	--	--		--		--	--	--	--	--	--	--
MW-113	1/27/05		108.44	--	8.15	0.00	--	<84		<110		<48	--	--	--	--	--	--
MW-113	4/12/05		108.44	--	7.76	0.00	--	<88		<110		<48	--	--	--	--	--	--
MW-113	7/18/05		108.44	--	9.11	0.00	--	<79		<98		<48	--	--	--	--	--	--
MW-113	10/26/05		108.44	--	9.10	0.00	--	<82		<100		<48	--	--	--	--	--	--
MW-113	9/5/07		108.44		9.59	0.00	98.85	<82		<100		<50						0.32
MW-113	9/5/07 (D)		108.44	--	9.59	0.00	98.85	<82		<100		<50	--	--	--	--	--	0.32
MW-113	5/27-28/08	LFP	108.44		9.02	0.00	99.42	<82		<100		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.16
MW-113	8/27-29/08	LFP	108.44	--	9.10	0.00	99.34	<81		<100		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.19
MW-113	11/17-19/08	LFP	108.44		7.68	0.00	100.76	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-113	2/16-18/09	LFP	108.44	--	8.75	0.00	99.69	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.087
MW-113	5/4-6/09	LFP	108.44	--	8.28	0.00	100.16	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-113	8/19-21/09	LFP	108.44	--	9.50	0.00	98.94	<31		<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.14

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-113	11/18-20/09	LFP	108.44	--	6.39	0.00	102.05	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.16
MW-113	2/8-10/10	LFP	108.44	--	8.15	0.00	100.29	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-113	5/12-13/10	LFP	108.44	--	8.60	0.00	99.84	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.093
MW-113	8/12/10	LFP	108.44	--	9.29	0.00	99.15	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.077
MW-113	11/3-4/10	LFP	108.44		7.65	0.00	100.79	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-113	2/3-4/11	LFP	108.44	--	8.26	0.00	100.18	<30		<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-113	5/24/11	LFP	108.44		8.42	0.00	100.02	<30		330		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-113	8/23-24/11	LFP	108.44	--	9.32	0.00	99.12	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.096
MW-113	11/7-9/11	LFP	108.44		9.20	0.00	99.24	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
MW-113	2/6-8/12	LFP	108.44	--	7.95	0.00	100.49	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-113	5/2-4/12	LFP	108.44		8.00	0.00	100.44	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-113	8/1-3/12	LFP	108.44	--	9.30	0.00	99.14	<31		<72		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.048
MW-113	11/26-28/12	LFP	108.44	--	7.49	0.00	100.95	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
MW-113	02/4-6/13	LFP	108.44	--	8.06	0.00	100.38	30		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-113	05/6-8/13	LFP	108.44	--	8.83	0.00	99.61	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-113	9/9-13/13	LFP	108.44	--	8.56	0.00	99.88	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
MW-113	11/18-21/13	LFP	108.44	--	7.74	0.00	100.70	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
MW-113	2/4-11/14	LFP	108.44	--	6.56	0.00	101.88	<29/<29		<69/<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-113	6/12-14/14	LFP	108.44		8.79	0.00	99.65	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-113	8/18-21/14	LFP	108.44	--	9.39	0.00	99.05	<30/<30		<71/<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.35
MW-113	11/19-20/14	LFP	108.44		8.59	0.00	99.85	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-113	2/17-20/15	LFP	108.44	--	8.01	0.00	100.43	<30/<30		<70/<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-113	5/11-15/15	LFP	108.44	--	9.08	0.00	99.36	<29/<29		<671<67		75	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-113	8/10-11/15	LFP	108.44	--	9.28	0.00	99.16	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.13
MW-113	11/16-18/15	LFP	108.44	--	5.99	0.00	102.45	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.00019
MW-113	5/13-14/16	LFP	108.44	--	8.95	0.00	99.49	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	--	<0.13
MW-113	11/14/16	LFP	108.44	--	7.73	0.00	100.71	57		<66		<50	<0.5	<0.5	<0.5	<0.5	--	<0.090
MW-113	5/11/18		108.44		8.65	0.00	99.79	--	<28	--	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.11
MW-113	11/11-12/2018		108.44		8.68	0.00	99.76	--	<28	--	<65	<19	<0.2	<0.2	<0.4	<1	--	<1.1
MW-113	4/27/19		108.44		8.11	0.00	100.33	--	81 J	--	130 J	<19	<0.2	<0.2	<0.4	<1	--	<1.1
MW-113	11/3/19		108.44		8.65	0.00	99.79	--	100	--	<66	<19	<0.2	<0.2	<0.4	<1	--	0.25 J
MW-113	5/6/20		108.44		8.67	0.00	99.77	<200	--	<250	--	<100	<1.00	<1.00	<1.00	<3.00	--	<5.00
MW-114	8/22/95		106.89		7.47	0.00	99.42	<250		<750		<50						
MW-114	11/28/95		106.89	--	5.83	0.00	101.06	<250		<750		<50	--	--	--	--	--	<2.0
MW-114	3/12/96		106.89		6.39	0.00	100.50	<250		<750		<50						<2.0
MW-114	6/26/96		106.89	--	7.11	0.00	99.78	<250		<750		<50	--	--	--	--	--	<2.0
MW-114	10/9/96		106.89		7.42	0.00	99.47	<250		<750		<50						<2.0
MW-114	2/12/97		106.89	--	5.47	0.00	101.42	<250		<750		<50	--	--	--	--	--	<2.0
MW-114	4/22/97		106.89	--	14.30	0.00	92.59	<250		<750		<50	--	--	--	--	--	<2.0
MW-114	8/5/97		106.89	--	7.65	0.00	99.24	<250		**1,410**		<50	--	--	--	--	--	<2.0
MW-114	11/11/97		106.89	--	6.45	0.00	100.44	<250		<750		<50	--	--	--	--	--	<2.0
MW-114	2/11/98		106.89	--	6.23	0.00	100.66	<250		<750		<50	--	--	--	--	--	<2.0
MW-114	5/28/98		106.89	--	6.44	0.00	100.45	<250		<750		<50	--	--	--	--	--	5.91
MW-114	8/20/98		106.89	--	8.75	0.00	98.14	<250		<750		<50	--	--	--	--	--	<1.0
MW-114	11/19/98		106.89		7.05	0.00	99.84	<250		<750		<50						<1.0
MW-114	3/11/99		106.89	--	5.90	0.00	100.99	<250		<500		<80	--	--	--	--	--	<1.0
MW-114	5/25/99		106.89		7.10	0.00	99.79	<250				<80						
MW-114	8/17/99		106.89	--	7.59	0.00	99.30	<250		**607**		<80	--	--	--	--	--	<1.0
MW-114	11/19/99		106.89		5.59	0.00	101.30	<250				<80						<1.0
MW-114	3/9/00		106.89	--	5.98	0.00	100.91	<250		<500		<80	--	--	--	--	--	<1.0
MW-114	6/13/00		106.89		6.04	0.00	100.85	<250		<500		<80						<1.0
MW-114	9/26/00		106.89	--	7.81	0.00	99.08	<250		<500		--	--	--	--	--	--	<1.0
MW-114	12/13/00		106.89	--	7.06	0.00	99.83	<250		<500		--	--	--	--	--	--	<1.0
MW-114	2/28/01		106.89	--	6.79	0.00	100.10	<250		<500		<80	--	--	--	--	--	<1.0
MW-114	5/2/01		106.89	--	8.84	0.00	98.05	<250		**1,880**		<80	--	--	--	--	--	<1.0
MW-114	10/30/02		106.89	--	8.32	0.00	98.57	<250		**1,090**		115	<0.500	<0.500	1.17	5.18	--	1.01
MW-114	1/23/03		106.89	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-114	4/18/03		106.89	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-114	7/11/03		106.89	MONITORED/SAMPLED ANNUALLY														
MW-114	10/31/03		106.89	-- I 6.61 0.00 I 100.28 I <250						<500		<50.0	<0.500	<0.500	<0.500	<1.0	--	<1.0'

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-114	12/30/03		106.89	I	5.81	0.00	101.08	<50		480		**3,600**	<0.5	<0.5	<0.5	<1.5		<1.2
MW-114	5/3/04		106.89	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-114	7/20/04		106.89	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-114	10/6/04		106.89	--	6.98	0.00	99.91	<76		<95		<50	--	--	--	--	--	--
MW-114	10/24/05		106.89	--	7.28	0.00	99.61	<79		<99		<48	--	--	--	--	--	--
MW-114	9/5/07		106.89	--	7.87	0.00	99.02	94		**810**		<50	--	--	--	--	--	0.38
MW-114	5/27-28/08	LFP	106.89	--	7.19	0.00	99.70	<1,600		**15,000**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.14
MW-114	8/27-29/08	LFP	106.89	--	7.30	0.00	99.59	270		**2,200**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.25
MW-114	11/17-19/08	LFP	106.89		6.01	0.00	100.88	330		**4,600**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
MW-114	2/16-18/09	LFP	106.89	--	6.91	0.00	99.98	210		**1,900**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
MW-114	5/4-6/09	LFP	106.89		6.42	0.00	100.47	180		**1,400**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.43
MW-114	8/19-21/09	LFP	106.89	--	7.78	0.00	99.11	<30		<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.79
MW-114	11/18-20/09	LFP	106.89		5.10	0.00	101.79	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.34
MW-114	2/8-10/10	LFP	106.89	--	6.38	0.00	100.51	110		**790**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.19
MW-114	5/12-13/10	LFP	106.89	--	6.71	0.00	100.18	<30		80		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.23
MW-114	8/11/10	LFP	106.89	--	7.45	0.00	99.44	<29		220		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
MW-114	11/3-4/10	LFP	106.89	--	5.88	0.00	101.01	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.24
MW-114	2/3-4/11	LFP	106.89	--	6.48	0.00	100.41	60		460		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
MW-114	5/23/11	LFP	106.89	--	6.55	0.00	100.34	55		380		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
MW-114	8/23-24/11	LFP	106.89	--	7.70	0.00	99.19	130		**1,500**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.41
MW-114	11/7-9/11	LFP	106.89		7.35	0.00	99.54	120		**950**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.19
MW-114	2/6-8/12	LFP	106.89	--	6.25	0.00	100.64	<29		180		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.088
MW-114	5/2-4/12	LFP	106.89		5.95	0.00	100.94	<30		140		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.72
MW-114	8/1-3/12	LFP	106.89	--	7.50	0.00	99.39	140		**910**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.084
MW-114	11/26-28/12	LFP	106.89		5.88	0.00	101.01	<31		<72		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.19
MW-114	02/4-6/13	LFP	106.89	--	6.27	0.00	100.62	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.13
MW-114	05/6-8/13	LFP	106.89		6.97	0.00	99.92	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.20
MW-114	9/9-13/13	LFP	106.89	--	6.96	0.00	99.93	<29/60		<67/260		<50	<0.5	<0.5	<0.5	<0.5	<0.5	2.3
MW-114	11/18-22/13	LFP	106.89	--	8.36	0.00	98.53	200/99		<68/340		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
MW-114	02/4-11/14	LFP	106.89	--	6.56	0.00	100.33	<29/<29		<67/71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.12
MW-114	6/12-14/14	LFP	106.89	--	6.96	0.00	99.93	38/94		340/820		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.18
MW-114	8/18-21/14	LFP	106.89	--	7.57	0.00	99.32	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
MW-114	11/19-20/14	LFP	106.89	--	6.75	0.00	100.14	<28/<28		<66/140		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.20
MW-114	2/17-20/15	LFP	106.89	--	6.31	0.00	100.58	<30/<30		<69/<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-114	5/11-15/15	LFP	106.89		6.89	0.00	100.00	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.55
MW-114	8/10-11/15	LFP	106.89	--	8.03	0.00	98.86	<29/130		170/570		<50	<0.5	<0.5	<0.5	<0.5	<0.5	39.2
MW-114	11/16-18/15	LFP	106.89		4.54	0.00	102.35	<29/49		<67/280		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.0145
MW-114	5/13-14/16	LFP	106.89	--	7.97	0.00	98.92	35/67		260/490		<50	<0.5	<0.5	<0.5	<0.5	--	<0.13
MW-114	11/14/16	LFP	106.89	--	5.40	0.00	101.49	36/220		280/790		<50	<0.5	<0.5	<0.5	<0.5	--	2.5000
MW-114	5/11/18		106.89		6.70	0.00	100.19	29	<28	230	98	<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.4
MW-114	11/11-12/2018		106.89		--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-114	4/27/19		106.89		6.60	0.00	100.29	99	<29	300	<66	<19	<0.2	<0.2	<0.4	<1	--	5
MW-114	11/3/19		106.89		6.80	0.00	100.09	110	<30	670	310	<19	<0.2	<0.2	<0.4	<1	--	0.21 J
MW-114	5/6/20		106.89		6.77	0.00	100.12	<200	--	<250	--	38.2 B J	<1.00	<1.00	<1.00	<3.00	--	<5.00
MW-115	8/22/95		107.94	--	8.79	0.00	99.15	<250		<750		**1,800**	--	--	--	--	--	--
MW-115	11/28/95		107.94	--	7.05	0.00	100.89	<250		<750		460	--	--	--	--	--	<2.0
MW-115	3/12/96		107.94	--	7.76	0.00	100.18	<250		<750		630	--	--	--	--	--	<2.0
MW-115	6/26/96		107.94	--	8.45	0.00	99.49	<250		<750		706	--	--	--	--	--	<2.0
MW-115	10/9/96		107.94		8.71	0.00	99.23	<250		<750		722						2.54
MW-115	2/12/97		107.94	--	7.48	0.00	100.46	<250		<750		58	--	--	--	--	--	<2.0
MW-115	4/22/97		107.94		7.25	0.00	100.69	<250		<750		<50						<2.0
MW-115	8/5/97		107.94	--	8.77	0.00	99.17	<250		<750		611	--	--	--	--	--	2.0
MW-115	11/11/97		107.94		7.71	0.00	100.23	<250		<750		57						<2.0
MW-115	2/11/98		107.94	--	7.72	0.00	100.22	<250		<750		89.5	--	--	--	--	--	<2.0
MW-115	5/28/98		107.94	--	7.92	0.00	100.02	<250		<750		<50	--	--	--	--	--	8.08
MW-115	8/20/98		107.94	--	9.18	0.00	98.76	<250		<750		155	--	--	--	--	--	<1.0
MW-115	11/19/98		107.94	--	8.58	0.00	99.36	<250		<750		<50	--	--	--	--	--	<1.0
MW-115	3/11/99		107.94	--	7.12	0.00	100.82	<250		<750		<80	--	--	--	--	--	<1.0
MW-115	5/25/99		107.94	--	8.33	0.00	99.61	<250		--		<80	--	--	--	--	--	--
MW-115	8/17/99		107.94	--	8.87	0.00	99.07	<250		<500		163	--	--	--	--	--	1.4

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-115	11/19/99		107.94		6.82	0.00	101.12	<250				<80						<1.0
MW-115	3/9/00		107.94	--	7.20	0.00	100.74	<250		<500		103	--	--	--	--	--	<1.0
MW-115	6/13/00		107.94		7.82	0.00	100.12					<80						<1.0
MW-115	9/26/00		107.94	--	9.02	0.00	98.92	<250		<500		--	--	--	--	--	--	1.02
MW-115	12/13/00		107.94		8.43	0.00	99.51	<250		<500		313						<1.0
MW-115	2/28/01		107.94	--	8.13	0.00	99.81	<250		<500		177	--	--	--	--	--	<1.0
MW-115	5/2/01		107.94		10.37	0.00	97.57	<250		<500		162						<1.0
MW-115	10/30/02		107.94	--	9.33	0.00	98.61	<250		<500		175	<0.500	<0.500	<0.500	<1.0	--	4.36
MW-115	1/23/03		107.94	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-115	4/18/03		107.94	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-115	7/11/03		107.94	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-115	10/31/03		107.94	--	8.30	0.00	99.64	<250		<500		78.9	<0.500	<0.500	<0.500	<1.0	--	<1.0'
MW-115	12/31/03		107.94	--	6.98	0.00	100.96	<50		<79		<99	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-115	5/3/04		107.94	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-115	7/20/04		107.94	MONITORED/SAMPLED ANNUALLY														
MW-115	10/6/04		107.94	-- I 8.43 0.00 I 99.51 I <160						<200		<50	--	--	--	--	--	--
MW-115	10/21/05		107.94		8.67	0.00	99.27	<81		<100		<48						
MW-115	10/21/05(D)		107.94	--	8.67	0.00	99.27	<82		<100		<48	--	--	--	--	--	--
MW-115	9/5/07		107.94	--	9.11	0.00	98.83	<76		<95		<50	--	--	--	--	--	0.37
MW-115	5/27-28/08		107.94	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-115	8/27-29/08	LFP	107.94	--	8.63	0.00	99.31	<82		<100		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.35
MW-115	11/17-19/08	LFP	107.94	--	7.25	0.00	100.69	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.097
MW-115	2/16-18/09	LFP	107.94	--	8.31	0.00	99.63	<31		<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.17
MW-115	5/4-6/09	LFP	107.94	--	7.66	0.00	100.28	42		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
MW-115	8/19-21/09	LFP	107.94		9.04	0.00	98.90	320		**2,700**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.64
MW-115	10/19/09	LFP	107.94	--	8.70	0.00	99.24	<29		<68		--	--	--	--	--	--	--
MW-115	11/18-20/09	LFP	107.94		5.85	0.00	102.09	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.92
MW-115	2/8-10/10	LFP	107.94	--	7.69	0.00	100.25	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.17
MW-115	5/12-13/10	LFP	107.94		8.14	0.00	99.80	30		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.20
MW-115	8/12/10	LFP	107.94	--	8.81	0.00	99.13	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.92
MW-115	11/3-4/10	LFP	107.94	--	7.07	0.00	100.87	<30		<70		70	<0.5	<0.5	<0.5	<0.5	<0.5	0.83
MW-115	2/3-4/11	LFP	107.94	--	7.81	0.00	100.13	33		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
MW-115	5/24/11	LFP	107.94	--	7.95	0.00	99.99	42		220		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.53
MW-115	8/23-24/11	LFP	107.94	--	9.05	0.00	98.89	68		74		73	<0.5	<0.5	<0.5	<0.5	<0.5	1.2
MW-115	11/7-9/11	LFP	107.94	--	8.70	0.00	99.24	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.60
MW-115	2/6-8/12	LFP	107.94	--	7.55	0.00	100.39	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-115	5/2-4/12	LFP	107.94		7.55	0.00	100.39	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-115	8/1-3/12	LFP	107.94	--	8.82	0.00	99.12	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.63
MW-115	11/26-28/12	LFP	107.94		7.04	0.00	100.90	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.052
MW-115	02/4-6/13	LFP	107.94	--	7.58	0.00	100.36	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-115	05/6-8/13	LFP	107.94		8.34	0.00	99.60	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.41
MW-115	9/9-13/13	LFP	107.94	--	8.09	0.00	99.85	<28/31		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.89
MW-115	11/18-21/13	LFP	107.94		7.45	0.00	100.49	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.45
MW-115	2/4-11/14	LFP	107.94	--	8.05	0.00	99.89	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.43
MW-115	6/12-14/14	LFP	107.94	INACCESSIBLE			--	--		--		--	--	--	--	--	--	--
MW-115	8/18-21/14	LFP	107.94	--	8.88	0.00	99.06	<29/36		<68/<68		66	<0.5	<0.5	<0.5	<0.5	<0.5	0.82
MW-115	11/19-20/14	LFP	107.94	--	8.07	0.00	99.87	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.28
MW-115	2/17-20/15	LFP	107.94	--	7.57	0.00	100.37	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-115	5/11-15/15	LFP	107.94	--	8.33	0.00	99.61	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.60
MW-115	8/10-11/15	LFP	107.94	--	9.28	0.00	98.66	<28/33		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.71
MW-115	11/16-18/15	LFP	107.94		6.53	0.00	101.41	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.00
MW-115	5/13-14/16	LFP	107.94	--	8.48	0.00	99.46	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-115	11/14/2016	LFP	107.94	--	7.32	0.00	100.59	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-115	5/11/18		107.94		8.2	0	99.74	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-115	11/11-12/2018		107.94		8.31	0	99.63	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-115	4/27/19		107.94		7.49	0	100.45	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-115	11/3/19		107.94		8.2	0	99.74	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-115	Nov 2019		107.94		--	--	--	WELL ABANDONED										
MW-116	8/22/95		107.56	--	8.82	0.00	98.74	<250		<750		<50	--	--	--	--	--	--

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-116	3/12/96		107.56	--	8.08	0.00	99.48	<250		<750		<50	--	--	--	--	--	<2.0
MW-116	10/9/96		107.56	--	8.69	0.00	98.87	<250		<750		<50	--	--	--	--	--	<2.0
MW-116	2/12/97		107.56	--	7.86	0.00	99.70	<250		<750		<50	--	--	--	--	--	<2.0
MW-116	4/22/97		107.56	--	7.65	0.00	99.91	<250		<750		<50	--	--	--	--	--	<2.0
MW-116	8/5/97		107.56	--	8.71	0.00	98.85	<250		<750		<50	--	--	--	--	--	<2.0
MW-116	11/11/97		107.56		8.07	0.00	99.49	<250		<750		<50						<2.0
MW-116	2/11/98		107.56	--	8.06	0.00	99.50	<250		<750		<50	--	--	--	--	--	<2.0
MW-116	5/28/98		107.56		8.25	0.00	99.31	<250		<750		<50						4.66
MW-116	8/20/98		107.56	--	9.05	0.00	98.51	<250		<750		<50	--	--	--	--	--	<1.0
MW-116	11/19/98		107.56		9.16	0.00	98.40	<250		<750		<50						<1.0
MW-116	3/11/99		107.56	--	7.64	0.00	99.92	<250		<750		<80	--	--	--	--	--	<1.0
MW-116	5/25/99		107.56	--	8.40	0.00	99.16	<250		--		<80	--	--	--	--	--	--
MW-116	8/17/99		107.56	--	8.78	0.00	98.78	<250		<500		<80	--	--	--	--	--	<1.0
MW-116	11/19/99		107.56	--	7.60	0.00	99.96	<250		--		<80	--	--	--	--	--	<1.0
MW-116	3/9/00		107.56	--	7.70	0.00	99.86	<250		<500		<80	--	--	--	--	--	<1.0
MW-116	6/13/00		107.56	--	8.37	0.00	99.19	--		--		<80	--	--	--	--	--	<1.0
MW-116	9/26/00		107.56	--	8.88	0.00	98.68	<250		<500		--	--	--	--	--	--	<1.0
MW-116	12/13/00		107.56		8.52	0.00	99.04	<250		<500								<1.0
MW-116	2/28/01		107.56	--	8.25	0.00	99.31	<250		<500		<80	--	--	--	--	--	<1.0
MW-116	5/2/01		107.56		10.84	0.00	96.72	<250		<500		<80						<1.0
MW-116	10/30/02		107.56	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-116	1/23/03		107.56	UNABLE TO LOCATE														
MW-116	4/18/03		107.56	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-116	7/11/03		107.56	UNABLE TO LOCATE														
MW-116	10/31/03		107.56	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-116	12/30/03		107.56	--	I 7.54	0.00	100.02	<50		<79		<99	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-116	5/3/04		107.56	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-116	7/20/04		107.56	--	8.92	0.00	98.64	<284		<568		<50	<0.500	<0.500	<0.500	<1.00	--	--
MW-116	10/7/04		107.56	--	7.54	0.00	100.02	<75		<94		<50	--	--	--	--	--	--
MW-116	10/20/05		107.56	--	8.73	0.00	98.83	<81		<100		<48	--	--	--	--	--	--
MW-116	9/6/07		107.56	--	9.00	0.00	98.56	<76		<95		<50	--	--	--	--	--	0.15
MW-116	5/27-28/08		107.56	INACCESSIBLE														
MW-116	8/27-29/08	LFP	107.56	--	I 8.68	0.00	98.88	89		<100		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-116	11/17-19/08	LFP	107.56		7.93	0.00	99.63	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-116	2/16-18/09	LFP	107.56	--	8.45	0.00	99.11	**590**		350		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
MW-116	5/4-6/09	LFP	107.56	--	8.20	0.00	99.36	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-116	8/19-21/09	LFP	107.56	--	8.91	0.00	98.65	34		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-116	11/18-20/09	LFP	107.56	--	6.85	0.00	100.71	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
MW-116	2/8-10/10	LFP	107.56	--	8.07	0.00	99.49	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
MW-116	8/12/10	LFP	107.56	--	8.78	0.00	98.78	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
MW-116	11/3-4/10	LFP	107.56	--	8.04	0.00	99.52	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-116	2/3-4/11	LFP	107.56		8.16	0.00	99.40	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-116	5/24/11		107.56	UNABLE TO LOCATE				--		--		--	--	--	--	--	--	--
MW-116	8/23-24/11	LFP	107.56		9.00	0.00	98.56	<31		<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-116	11/7-9/11	LFP	107.56	--	8.75	0.00	98.81	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-116	2/6-8/12	LFP	107.56		8.05	0.00	99.51	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-116	5/2-4/12	LFP	107.56	--	8.10	0.00	99.46	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-116	8/1-3/12	LFP	107.56	--	8.80	0.00	98.76	<30		<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.034
MW-116	11/26-28/12	LFP	107.56	--	7.84	0.00	99.72	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
MW-116	02/4-6/13	LFP	107.56	--	8.04	0.00	99.52	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-116	05/6-8/13	LFP	107.56	--	8.51	0.00	99.05	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-116	9/9-13/13	LFP	107.56	--	8.61	0.00	98.95	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-116	11/18-21/13	LFP	107.56	--	8.15	0.00	99.41	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
MW-116	2/4-11/14	LFP	107.56		8.28	0.00	99.28	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-116	6/12-14/14	LFP	107.56	INACCESSIBLE			--	--		--		--	--	--	--	--	--	--
MW-116	8/18-21/14	LFP	107.56		8.83	0.00	98.73	<29/38		<67/<67		68	<0.5	<0.5	<0.5	<0.5	<0.5	0.78
MW-116	11/19-20/14	LFP	107.56	--	8.38	0.00	99.18	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-116	2/17-20/15	LFP	107.56		8.08	0.00	99.48	<30/<30		<69/<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.17
MW-116	5/11-15/15	LFP	107.56	--	8.71	0.00	98.85	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-116	8/10-11/15	LFP	107.56		9.17	0.00	98.39	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.42
MW-116	11/16-18/15	LFP	107.56	--	7.37	0.00	100.19	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.0062

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-116	5/13-14/16	LFP	107.56	--	8.59	0.00	98.97	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-116	11/14/16	LFP	107.56	--	8.06	0.00	99.50	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-116	5/11/18		107.56		8.43	0.00	-8.43	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-116	11/11-12/2018		107.56		9.04	0.00	-9.04	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-116	4/27/19		107.56		8.30	0.00	-8.30	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-116	11/3/19		107.56		8.48	0.00	-8.48	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-116	Nov 2019		107.56		--	--	--	WELL ABANDONED										
MW-117	8/22/95		106.57	--	7.45	0.00	99.12	<250		<750		<50	--	--	--	--	--	--
MW-117	11/28/95		106.57	--	5.45	0.00	101.12	<250		<750		<50	--	--	--	--	--	<2.0
MW-117	3/12/96		106.57	--	6.32	0.00	100.25	<250		<750		<50	--	--	--	--	--	<2.0
MW-117	6/26/96		106.57		7.18	0.00	99.39	<250		<750		<50						<2.0
MW-117	10/9/96		106.57	--	7.42	0.00	99.15	<250		<750		<50	--	--	--	--	--	7.1
MW-117	2/12/97		106.57		5.93	0.00	100.64	<250		<750		<50						<2.0
MW-117	4/22/97		106.57	--	5.78	0.00	100.79	<250		<750		<50	--	--	--	--	--	<2.0
MW-117	8/5/97		106.57	--	7.58	0.00	98.99	<250		<750		<50	--	--	--	--	--	<2.0
MW-117	11/11/97		106.57	--	6.21	0.00	100.36	<250		<750		<50	--	--	--	--	--	<2.0
MW-117	2/11/98		106.57	--	6.21	0.00	100.36	<250		<750		<50	--	--	--	--	--	<2.0
MW-117	5/28/98		106.57	--	6.44	0.00	100.13	<250		<750		<50	--	--	--	--	--	2.68
MW-117	8/20/98		106.57	--	7.90	0.00	98.67	<250		<750		<50	--	--	--	--	--	<1.0
MW-117	11/19/98		106.57	--	7.18	0.00	99.39	<250		<750		<50	--	--	--	--	--	<1.0
MW-117	3/11/99		106.57		5.51	0.00	101.06	<250		<500		<80						<1.0
MW-117	5/25/99		106.57	--	7.00	0.00	99.57	<250		--		<80	--	--	--	--	--	--
MW-117	8/17/99		106.57		7.56	0.00	99.01	<250		<500		<80						<1.0
MW-117	11/19/99		106.57	--	5.11	0.00	101.46	<250		--		<80	--	--	--	--	--	<1.0
MW-117	3/9/00		106.57		5.65	0.00	100.92	<250		<500		<80						<1.0
MW-117	6/13/00		106.57	--	6.25	0.00	100.32	<250		<500		<80	--	--	--	--	--	<1.0
MW-117	9/26/00		106.57	--	7.70	0.00	98.87	<250		<500		--	--	--	--	--	--	<1.0
MW-117	12/13/00		106.57	--	7.11	0.00	99.46	<250		<500		--	--	--	--	--	--	<1.0
MW-117	2/28/01		106.57	--	6.78	0.00	99.79	<250		<500		<80	--	--	--	--	--	<1.0
MW-117	5/2/01		106.57	--	8.90	0.00	97.67	<250		<500		<80	--	--	--	--	--	<1.0
MW-117	10/30/02		106.57	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-117	1/23/03		106.57	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-117	4/18/03		106.57	MONITORED/SAMPLED ANNUALLY														
MW-117	7/11/03		106.57	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-117	10/31/03		106.57	UNABLE TO LOCATE - POSSIBLY PAVED OVER														
MW-117	12/30/03		106.57	-- I 5.46 0.00 I 101.11 I <50						<80		<100	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-117	5/3/04		106.57	MONITORED/SAMPLED ANNUALLY														
MW-117	7/20/04		106.57	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-117	10/6/04		106.57		7.07	0.00	99.50	<79		<98		<50						
MW-117	10/21/05		106.57	--	7.33	0.00	99.24	<81		<100		<48	--	--	--	--	--	--
MW-117	9/5/07		106.57	--	7.92	0.00	98.65	<82		<100		<50	--	--	--	--	--	0.22
MW-117	5/27-28/08	LFP	106.57	--	7.42	0.00	99.15	<80		<100		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.056
MW-117	8/27-29/08	LFP	106.57	--	7.38	0.00	99.19	<82		<100		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-117	11/17-19/08	LFP	106.57	--	5.90	0.00	100.67	55		<72		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-117	2/16-18/09	LFP	106.57	--	7.06	0.00	99.51	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.095
MW-117	5/4-6/09	LFP	106.57	--	6.51	0.00	100.06	38		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-117	8/19-21/09	LFP	106.57		7.82	0.00	98.75	40		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.073
MW-117	11/18-20/09	LFP	106.57	--	3.85	0.00	102.72	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-117	2/8-10/10	LFP	106.57	--	6.43	0.00	100.14	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-117	5/12-13/10	LFP	106.57		6.96	0.00	99.61	36		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-117	8/12/10	LFP	106.57	--	7.68	0.00	98.89	<29		210		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-117	11/3-4/10	LFP	106.57	--	5.97	0.00	100.60	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-117	2/3-4/11	LFP	106.57	--	6.5	0.00	100.07	<31		<72		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-117	5/24/11	LFP	106.57	--	6.77	0.00	99.80	<30		150		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-117	8/23-24/11	LFP	106.57	--	7.85	0.00	98.72	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
MW-117	11/7-9/11	LFP	106.57	--	7.55	0.00	99.02	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-117	2/6-8/12	LFP	106.57	--	6.20	0.00	100.37	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-117	5/2-4/12	LFP	106.57	--	6.00	0.00	100.57	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-117	8/1-3/12	LFP	106.57	--	7.66	0.00	98.91	<32		<75		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.034
MW-117	11/26-28/12	LFP	106.57	--	5.60	0.00	100.97	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-117	02/4-6/13	LFP	106.57	--	6.29	0.00	100.28	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-117	05/6-8/13	LFP	106.57	--	7.18	0.00	99.39	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-117	9/9-13/13	LFP	106.57	--	8.11	0.00	98.46	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-117	11/18-21/13	LFP	106.57		5.99	0.00	100.58	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-117	2/4-11/14	LFP	106.57	--	6.85	0.00	99.72	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-117	6/12-14/14	LFP	106.57		7.11	0.00	99.46	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-117	8/18-21/14	LFP	106.57	--	7.71	0.00	98.86	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.37
MW-117	11/19-20/14	LFP	106.57		6.91	0.00	99.66	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-117	2/17-20/15	LFP	106.57	--	6.26	0.00	100.31	<29/<29		<69/<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-117	5/11-15/15	LFP	106.57		6.91	0.00	99.66	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-117	8/10-11/15	LFP	106.57	--	8.10	0.00	98.47	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	1.10
MW-117	11/16-18/15	LFP	106.57	--	3.89	0.00	102.68	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.0021
MW-117	5/13-14/16	LFP	106.57	--	7.38	0.00	99.19	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-117	11/14/16	LFP	106.57	--	5.60	0.00	100.97	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-117	5/11/18		106.57		7.04	0.00	99.53	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-117	11/11-12/2018		106.57		6.58	0.00	99.99	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-117	4/27/19		106.57		6.82	0.00	99.75	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-117	11/3/19		106.57		7.09	0.00	99.48	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-117	Nov 2019		106.57		--	--	--	WELL ABANDONED										
MW-118	8/22/95		106.72	--	7.87	0.00	98.85	470		<750		<50	--	--	--	--	--	--
MW-118	11/28/95		106.72	--	5.76	0.00	100.96	<250		<750		<50	--	--	--	--	--	<2.0
MW-118	3/12/96		106.72		6.67	0.00	100.05	<250		<750		<50						<2.0
MW-118	6/26/96		106.72	--	7.51	0.00	99.21	<250		<750		<50	--	--	--	--	--	<2.0
MW-118	10/9/96		106.72		7.78	0.00	98.94	<250		<750		50.1						<2.0
MW-118	2/12/97		106.72	--	6.35	0.00	100.37	<250		<750		<50	--	--	--	--	--	<2.0
MW-118	4/22/97		106.72		5.98	0.00	100.74	<250		<750		<50						<2.0
MW-118	8/5/97		106.72	--	7.85	0.00	98.87	<250		<750		<50	--	--	--	--	--	<2.0
MW-118	11/11/97		106.72	--	6.52	0.00	100.20	<250		<750		<50	--	--	--	--		<2.0
MW-118	2/11/98		106.72		6.56	0.00	100.16	<250		<750		<50						<2.0
MW-118	5/28/98		106.72	--	6.85	0.00	99.87	<250		<750		<50	--	--	--	--	--	2.84
MW-118	8/20/98		106.72	--	7.26	0.00	99.46	<250		<750		<50	--	--	--	--	--	<1.0
MW-118	11/19/98		106.72	--	7.70	0.00	99.02	<250		<750		<50	--	--	--	--	--	<1.0
MW-118	3/11/99		106.72	--	5.81	0.00	100.91	<250		<750		<80	--	--	--	--	--	<1.0
MW-118	5/25/99		106.72	--	7.39	0.00	99.33	<250		--		<80	--	--	--	--	--	--
MW-118	8/17/99		106.72	--	7.95	0.00	98.77	<250		<500		<80	--	--	--	--	--	<1.0
MW-118	11/19/99		106.72	--	5.53	0.00	101.19	<250		--		<80	--	--	--	--	--	<1.0
MW-118	3/9/00		106.72		5.99	0.00	100.73	<250		<500		<80						<1.0
MW-118	6/13/00		106.72	--	7.08	0.00	99.64	<250		<500		<80	--	--	--	--	--	<1.0
MW-118	9/26/00		106.72		8.07	0.00	98.65	<250		<500								<1.0
MW-118	12/13/00		106.72	--	7.53	0.00	99.19	<250		<500		--	--	--	--	--	--	<1.0
MW-118	2/28/01		106.72		7.17	0.00	99.55	<250		<500		<80						<1.0
MW-118	5/2/01		106.72	--	6.81	0.00	99.91	<250		<500		<80	--	--	--	--	--	<1.0
MW-118	10/30/02		106.72	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-118	1/23/03		106.72	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-118	4/18/03		106.72	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-118	7/11/03		106.72	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-118	10/31/03		106.72	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-118	12/30/03		106.72	--	I	5.71	0.00	101.01	<50		<400		<500	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-118	5/3/04		106.72	UNABLE TO LOCATE														
MW-118	7/20/04		106.72	--	8.14	0.00	98.58	<250		<500		<50	<0.500	<0.500	<0.500	<1.00	--	--
MW-118	10/7/04		106.72		7.55	0.00	99.17	<76		<96		<50						
MW-118	10/7/04(D)		106.72	--	7.55	0.00	99.17	<80		160		<50	--	--	--	--	--	--
MW-118	10/20/05		106.72		7.78	0.00	98.94	<83		<100		<48						
MW-118	9/5/07		106.72	--	8.20	0.00	98.52	**980**		**710**		<50	--	--	--	--	--	0.13
MW-118	5/27-28/08		106.72	UNABLE TO LOCATE														
MW-118	8/27-29/08	LFP	106.72	--	7.64	0.00	99.08	260		230		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-118	11/17-19/08	LFP	106.72	--	6.20	0.00	100.52	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-118	2/16-18/09	LFP	106.72	--	7.29	0.00	99.43	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.068
MW-118	5/4-6/09	LFP	106.72	--	6.70	0.00	100.02	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-118	8/19-21/09	LFP	106.72	--	8.04	0.00	98.68	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.23

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-118	11/18-20/09	LFP	106.72	--	4.45	0.00	102.27	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-118	2/8-10/10	LFP	106.72	--	6.65	0.00	100.07	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-118	5/12-13/10	LFP	106.72		7.21	0.00	99.51	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-118	8/12/10	LFP	106.72	--	7.90	0.00	98.82	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-118	11/3-4/10	LFP	106.72		6.39	0.00	100.33	<29		160		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-118	2/3-4/11	LFP	106.72	--	6.77	0.00	99.95	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
MW-118	5/24/11		106.72	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-118	8/23-24/11	LFP	106.72	--	8.15	0.00	98.57	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-118	11/7-9/11	LFP	106.72	--	7.80	0.00	98.92	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-118	2/6-8/12	LFP	106.72	--	6.50	0.00	100.22	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-118	5/2-4/12	LFP	106.72	--	5.85	0.00	100.87	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-118	8/1-3/12	LFP	106.72	--	7.87	0.00	98.85	97		230		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.042
MW-118	11/26-28/12	LFP	106.72		5.84	0.00	100.88	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
MW-118	02/4-6/13	LFP	106.72	--	6.57	0.00	100.15	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-118	05/6-8/13	LFP	106.72		7.47	0.00	99.25	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-118	9/9-13/13	LFP	106.72	--	7.28	0.00	99.44	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-118	11/18-21/13	LFP	106.72		6.57	0.00	100.15	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
MW-118	2/4-11/14	LFP	106.72	--	7.02	0.00	99.70	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-118	6/12-14/14	LFP	106.72	INACCESSIBLE			--	--		--		--	--	--	--	--	--	--
MW-118	8/18-21/14	LFP	106.72	--	7.92	0.00	98.80	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.41
MW-118	11/19-20/14	LFP	106.72	--	7.15	0.00	99.57	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-118	2/17-20/15	LFP	106.72	--	6.54	0.00	100.18	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.083
MW-118	5/11-15/15	LFP	106.72	--	8.93	0.00	97.79	75/69		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.170
MW-118	8/10-11/15	LFP	106.72	--	8.27	0.00	98.45	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.13
MW-118	11/16-18/15	LFP	106.72		4.69	0.00	102.03	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.00067
MW-118	5/13-14/16	LFP	106.72	--	7.61	0.00	99.11	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-118	11/14/16	LFP	106.72		6.36	0.00	100.36	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-118	5/11/18		106.72		7.31	0.00	99.41	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-118	11/11-12/2018		106.72		7.34	0.00	99.38	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-118	4/27/19		106.72		7.05	0.00	99.67	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-118	11/3/19		106.72		7.66	0.00	99.06	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-118	Nov 2019		106.72		--	--	--	WELL ABANDONED										
MW-119	8/22/95		108.35		9.22	0.00	99.13	<250		<750		<50						
MW-119	11/28/95		108.35	--	7.54	0.00	100.81	<250		<750		100	--	--	--	--	--	<2.0
MW-119	3/12/96		108.35		8.21	0.00	100.14	<250		<750		240						2.2
MW-119	6/26/96		108.35	--	8.91	0.00	99.44	<250		<750		174	--	--	--	--	--	<2.0
MW-119	10/9/96		108.35	--	9.14	0.00	99.21	<250		<750		78	--	--	--	--	--	2.16
MW-119	2/12/97		108.35	--	7.84	0.00	100.51	<250		<750		<50	--	--	--	--	--	<2.0
MW-119	4/22/97		108.35	--	7.67	0.00	100.68	<250		<750		<50	--	--	--	--	--	<2.0
MW-119	8/5/97		108.35	--	9.15	0.00	99.20	<250		<750		53.6	--	--	--	--	--	<2.0
MW-119	11/11/97		108.35	--	8.02	0.00	100.33	264		<750		<50	--	--	--	--	--	<2.0
MW-119	2/11/98		108.35	--	8.02	0.00	100.33	<250		<750		<50	--	--	--	--	--	<2.0
MW-119	5/28/98		108.35		8.20	0.00	100.15	<250		<750		102						3.33
MW-119	8/20/98		108.35	--	10.40	0.00	97.95	<250		<750		<50	--	--	--	--	--	<1.0
MW-119	11/19/98		108.35		8.98	0.00	99.37	<250		<750		78.5						1.82
MW-119	3/11/99		108.35	--	7.61	0.00	100.74	<250		<750		<80	--	--	--	--	--	<1.0
MW-119	5/25/99		108.35	--	8.77	0.00	99.58	<250		--		<80	--	--	--	--	--	--
MW-119	8/17/99		108.35	--	9.29	0.00	99.06	<250		<500		<80	--	--	--	--	--	<1.0
MW-119	11/19/99		108.35	--	7.25	0.00	101.10	<250		--		<80	--	--	--	--	--	<1.0
MW-119	3/9/00		108.35	--	7.63	0.00	100.72	<250		<500		<80	--	--	--	--	--	<1.0
MW-119	6/13/00		108.35	--	8.28	0.00	100.07	<250		<500		413	--	--	--	--	--	2.64
MW-119	9/26/00		108.35	--	9.44	0.00	98.91	<250		<500		--	--	--	--	--	--	<1.0
MW-119	12/13/00		108.35		8.86	0.00	99.49	<250		<500								1.79
MW-119	2/28/01		108.35	--	8.56	0.00	99.79	<250		<500		227	--	--	--	--	--	2.64
MW-119	5/2/01		108.35		8.10	0.00	100.25	<250		<500		104						1.56
MW-119	10/30/02		108.35	--	9.76	0.00	98.59	<250		<500		<80	<0.500	<0.500	<0.500	<1.00	--	4.2
MW-119	1/23/03		108.35	MONITORED/SAMPLED ANNUALLY														
MW-119	4/18/03		108.35	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-119	7/11/03		108.35	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-119	10/31/03		108.35	--	8.62	0.00	99.73	<250		<500		<50	<0.500	<0.500	<0.500	<1.00	--	1.315

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-119	12/30/03		108.35	--	7.40	0.00	100.95	<50		<77		<96	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-119	5/3/04		108.35	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-119	7/20/04		108.35	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-119	10/7/04		108.35	--	8.85	0.00	99.50	<79		<98		<50	--	--	--	--	--	--
MW-119	10/20/05		108.35		9.08	0.00	99.27	<80		<100		<48						
MW-119	9/5/07		108.35	--	9.53	0.00	98.82	<800		<1,000		<50	--	--	--	--	--	0.57
MW-119	5/27-28/08		108.35	INACCESSIBLE														
MW-119	8/27-29/08	LFP	108.35	--	9.05	0.00	99.30	<79		<99		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.52
MW-119	11/17-19/08	LFP	108.35		7.65	0.00	100.70	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.29
MW-119	2/16-18/09	LFP	108.35	--	8.70	0.00	99.65	45		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.44
MW-119	5/4-6/09	LFP	108.35		8.06	0.00	100.29	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.74
MW-119	8/19-21/09	LFP	108.35	--	9.45	0.00	98.90	36		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.25
MW-119	11/18-20/09	LFP	108.35	--	6.41	0.00	101.94	32		<68		150	<0.5	<0.5	<0.5	<0.5	<0.5	1
MW-119	2/8-10/10	LFP	108.35	--	8.11	0.00	100.24	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.33
MW-119	5/12-13/10	LFP	108.35	--	8.56	0.00	99.79	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.69
MW-119	8/12/10	LFP	108.35	--	9.22	0.00	99.13	<30		70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.36
MW-119	11/3-4/10	LFP	108.35	--	7.52	0.00	100.83	38		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	1.3
MW-119	2/3-4/11	LFP	108.35	--	8.22	0.00	100.13	30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.30
MW-119	5/24/11	LFP	108.35		8.37	0.00	99.98	<30		210		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.49
MW-119	8/23-24/11	LFP	108.35	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-119	11/7-9/11	LFP	108.35		9.10	0.00	99.25	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.34
MW-119	2/6-8/12	LFP	108.35	--	7.90	0.00	100.45	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-119	5/2-4/12	LFP	108.35	--	8.00	0.00	100.35	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.26
MW-119	8/1-3/12	LFP	108.35	--	9.23	0.00	99.12	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.27
MW-119	11/26-28/12	LFP	108.35	--	7.43	0.00	100.92	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
MW-119	02/4-6/13	LFP	108.35	--	7.99	0.00	100.36	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.099
MW-119	05/6-8/13	LFP	108.35	--	8.76	0.00	99.59	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
MW-119	9/9-13/13	LFP	108.35	--	8.51	0.00	99.84	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.26
MW-119	11/18-21/13	LFP	108.35		7.67	0.00	100.68	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.80
MW-119	2/4-11/14	LFP	108.35	--	8.47	0.00	99.88	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.16
MW-119	6/12-14/14	LFP	108.35	INACCESSIBLE														
MW-119	8/18-21/14	LFP	108.35	--	9.23	0.00	99.12	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.17
MW-119	11/19-20/14	LFP	108.35		8.50	0.00	99.85	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.14
MW-119	2/17-20/15	LFP	108.35	--	7.97	0.00	100.38	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.18
MW-119	5/11-15/15	LFP	108.35	--	8.96	0.00	99.39	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.24
MW-119	8/10-11/15	LFP	108.35	--	9.70	0.00	98.65	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.13
MW-119	11/16-18/15	LFP	108.35	--	6.43	0.00	101.92	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.0041
MW-119	5/13-14/16	LFP	108.35	--	8.39	0.00	99.96	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-119	11/14/16	LFP	108.35	--	7.70	0.00	100.65	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-120	11/7-9/11	LFP	107.11		8.00	0.00	99.11	220		160		740	<0.5	<0.5	<0.5	<0.5	<0.5	1.8
MW-120	2/6-8/12	LFP	107.11	--	6.80	0.00	100.31	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-120	5/2-4/12	LFP	107.11		6.20	0.00	100.91	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
MW-120	8/1-3/12	LFP	107.11	--	8.11	0.00	99.00	59		75		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.29
MW-120	11/26-28/12	LFP	107.11		6.21	0.00	100.90	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
MW-120	02/4-6/13	LFP	107.11	--	6.84	0.00	100.27	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-120	05/6-8/13	LFP	107.11		7.64	0.00	99.47	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
MW-120	9/9-13/13	LFP	107.11	--	7.36	0.00	99.75	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
MW-120	11/18-21/13	LFP	107.11	--	6.61	0.00	100.50	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.088
MW-120	2/4-11/14	LFP	107.11	--	7.32	0.00	99.79	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
MW-120	6/12-14/14	LFP	107.11	--	7.70	0.00	99.41	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-120	8/18-21/14	LFP	107.11	--	8.13	0.00	98.98	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.32
MW-120	11/19-20/14	LFP	107.11	--	7.37	0.00	99.74	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
MW-120	2/17-20/15	LFP	107.11	--	6.83	0.00	100.28	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
MW-120	5/11-15/15	LFP	107.11		7.71	0.00	99.40	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
MW-120	8/10-11/15	LFP	107.11	--	8.53	0.00	98.58	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.13
MW-120	11/16-18/15	LFP	107.11		4.94	0.00	102.17							<28/<28	<66/<66	<50 I	<0.5 <0.5 I	<0.5 <0.5 <0.5	0.0019
MW-120	5/13-14/16	LFP	107.11	--	7.81	0.00	99.30	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-120	11/14/16	LFP	107.11	--	6.47	0.00	100.64	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-120	5/11/18		107.11		7.49	0.00	99.62	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-120	11/11-12/2018		107.11		7.46	0.00	99.65	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-120	4/27/19		107.11		--	--	--	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-120	11/3/19		107.11		7.50	0.00	99.61	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-120	Nov 2019		107.11		--	--	--	WELL ABANDONED										
B-1	2/14/91		107.74	--	--	0.00	--	<250		--		**5,100**	--	--	--	--	--	--
B-1	2/14/92		107.74	--	6.90	0.00	100.84	--		--		--	--	--	--	--	--	--
B-1	2/18/92		107.74	--	6.72	0.00	101.02	--		--		--	--	--	--	--	--	--
B-1	3/13/92		107.74	--	6.93	0.00	100.81	--		--		<50	--	--	--	--	--	--
B-1	4/21/92		107.74		6.66	0.00	101.08											
B-1	8/22/95		107.74	--	8.03	0.00	99.71	<250		<750		<50	--	--	--	--	--	--
B-1	11/28/95		107.74		6.13	0.00	101.61	<250		<750		<50						<2
B-1	3/11/96		107.74	--	6.99	0.00	100.75	<250		<750		<50	--	--	--	--	--	7.5
B-1	6/26/96		107.74		7.73	0.00	100.01	<250		<750		<50						<2
B-1	10/9/96		107.74	--	8.05	0.00	99.69	<250		<750		<50	--	--	--	--	--	<2
B-1	2/12/97		107.74	--	6.46	0.00	101.28	<250		<750		<50	--	--	--	--	--	<2
B-1	4/22/97		107.74	--	6.25	0.00	101.49	<250		<750		<50	--	--	--	--	--	<2
B-1	8/5/97		107.74	--	8.20	0.00	99.54	<250		<750		<50	--	--	--	--	--	<2
B-1	11/11/97		107.74	--	6.84	0.00	100.90	300		<750		<50	--	--	--	--	--	<2
B-1	2/11/98		107.74	--	6.70	0.00	101.04	<250		<750		<50	--	--	--	--	--	<2
B-1	5/28/98		107.74	--	6.85	0.00	100.89	<250		<750		<50	--	--	--	--	--	<I
B-1	8/20/98		107.74		9.42	0.00	98.32	<250		<750		<50						<1
B-1	11/19/98		107.74	--	7.43	0.00	100.31	<250		<750		<50	--	--	--	--	--	<I
B-1	3/11/99		107.74		6.34	0.00	101.40	<250		<750		<80						<1
B-1	5/25/99		107.74	--	7.60	0.00	100.14	<1,450		--		<80	--	--	--	--	--	--
B-1	8/17/99		107.74		8.28	0.00	99.46	<250		<500		<80						<I
B-1	11/19/99		107.74	--	5.90	0.00	101.84	<250		--		<80	--	--	--	--	--	<1
B-1	3/9/00		107.74		6.38	0.00	101.36	<250		<500		<80						<1
B-1	6/12/00		107.74	--	6.26	0.00	101.48	<250		<500		<80	--	--	--	--	--	<1
B-1	9/26/00		107.74	--	8.51	0.00	99.23	<250		<500		--	--	--	--	--	--	<1
B-1	12/13/00		107.74	--	7.69	0.00	100.05	<250		<500		--	--	--	--	--	--	<I
B-1	2/28/01		107.74	--	7.37	0.00	100.37	<250		<500		<80	--	--	--	--	--	<1
B-1	5/2/01		107.74	--	6.69	0.00	101.05	<250		<500		109	--	--	--	--	--	<1
B-1	10/30/02		107.74	UNABLE TO LOCATE - PAVED OVER						--		--	--	--	--	--	--	--
B-1	1/23/03		107.74	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
B-1	4/18/03		107.74	MONITORED/SAMPLED ANNUALLY														
B-1	7/11/03		107.74	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
B-1	10/31/03		107.74	UNABLE TO LOCATE - PAVED OVER														
B-1	12/30/03		107.74	-- I 6.11 0.00 I 101.63				<50		<78		<98	<0.5	<0.5	<0.5	<1.5	--	<1.2
B-1	5/3/04		107.74	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
B-1	7/20/04		107.74	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
B-1	10/6/04		107.74	--	8.87	0.00	98.87	81		100		<50	--	--	--	--	--	--
B-1	10/24/05		107.74	--	7.96	0.00	99.78	<81		<100		<48	--	--	--	--	--	--
B-1	9/5/07		107.74	--	8.60	0.00	99.14	<80		<100		<50	--	--	--	--	--	0.13
B-1	5/27-28/08	LFP	107.74	--	7.85	0.00	99.89	<75		<94		<50	<0.5	0.6	<0.5	<0.5	<0.5	<0.050
B-1	8/27-29/08	LFP	107.74		8.00	0.00	99.74	<82		<100		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-1	11/17-19/08	LFP	107.74	--	6.39	0.00	101.35	83		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-1	2/16-18/09	LFP	107.74		7.55	0.00	100.19	300		**2,000**		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.098
B-1	5/4-6/09	LFP	107.74	--	6.47	0.00	101.27	39		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-1	8/19-21/09	LFP	107.74		8.54	0.00	99.20	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-1	11/18-20/09	LFP	107.74	--	5.35	0.00	102.39	60		<69		66	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
B-1	2/8-10/10	LFP	107.74	--	6.89	0.00	100.85	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-1	5/12-13/10	LFP	107.74	--	7.34	0.00	100.40	70		82		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-1	8/11/10	LFP	107.74	--	8.16	0.00	99.58	<30		83		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
B-1	11/3-4/10	LFP	107.74	--	6.02	0.00	101.72	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
B-1	2/3-4/11	LFP	107.74	--	7.03	0.00	100.71	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
B-1	5/24/11	LFP	107.74	--	7.10	0.00	100.64	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
B-1	8/23-24/11	LFP	107.74		8.46	0.00	99.28	<30		<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
B-1	11/7-9/11	LFP	107.74	--	8.10	0.00	99.64	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
B-1	2/6-8/12	LFP	107.74		6.75	0.00	100.99	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
B-1	5/2-4/12	LFP	107.74	--	6.45	0.00	101.29	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
B-1	8/1-3/12	LFP	107.74		8.23	0.00	99.51	<30		<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.034
B-1	11/26-28/12	LFP	107.74	--	6.29	0.00	101.45	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
B-1	02/4-6/13	LFP	107.74		6.81	0.00	100.93	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
B-1	05/6-8/13	LFP	107.74	--	8.66	0.00	99.08	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
B-1	9/9-13/13	LFP	107.74	--	7.18	0.00	100.56	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
B-1	11/18-22/13	LFP	107.74	--	6.64	0.00	101.10	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
B-1	2/4-11/14	LFP	107.74	--	7.25	0.00	100.49	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
B-1	6/12-14/14	LFP	107.74	--	7.87	0.00	99.87	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
B-1	8/18-21/14	LFP	107.74	--	8.40	0.00	99.34	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
B-1	11/19-20/14	LFP	107.74	--	7.43	0.00	100.31	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
B-1	2/17-20/15	LFP	107.74		6.79	0.00	100.95	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
B-1	5/11-15/15	LFP	107.74	--	8.77	0.00	98.97	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
B-1	8/10-11/15	LFP	107.74		8.80	0.00	98.94	<28/89		<66/74		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.13
B-1	11/16-18/15	LFP	107.74	--	4.69	0.00	103.05	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.00063
B-1	5/13-14/16	LFP	107.74	--	7.80	0.00	99.94	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	--	<0.13
B-1	11/14/16	LFP	107.74	--	6.15	0.00	101.59	51		<67		<50	<0.5	<0.5	<0.5	<0.5	--	<0.090
B-1	5/11/18	LFP	107.74	--	7.31	0.00	100.43	--	<29	--	<67	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.11
B-1	11/11-12/2018	LFP	107.74	--	7.48	0.00	100.26	--	30	--	<67	<19	<0.2	<0.2	<0.4	<1	--	<1.1
B-1	4/27/19	LFP	107.74	--	7.23	0.00	100.51	--	32 J	--	<66	<19	<0.2	<0.2	<0.4	<1	--	<1.1
B-1	11/3/19	LFP	107.74	--	7.45	0.00	100.29	--	<29	--	<66	<19	<0.2	<0.2	<0.4	<1	--	0.30 J
B-1	5/6/20	LFP	107.74	--	7.46	0.00	100.28	<200	--	--	<250	32.9 B J	<1.00	<1.00	<1.00	<3.00	--	<5.00
B-2	2/14/91		108.99	--	--	0.00	--	<250		--		180	--	--	--	--	--	--
B-2	2/14/92		108.99	--	8.08	0.00	100.91	--		--		--	--	--	--	--	--	--
B-2	2/18/92		108.99	--	7.97	0.00	101.02	--		--		--	--	--	--	--	--	--
B-2	3/9/92		108.99		7.88	0.00	101.11											
B-2	3/13/92		108.99	--	8.12	0.00	100.87	--		--		--	--	--	--	--	--	--
B-2	4/21/92		108.99		7.82	0.00	101.17											
B-2	8/22/95		108.99	--	9.30	0.00	99.69	<250		<750		<50	--	--	--	--	--	--
B-2	11/27/95		108.99		7.33	0.00	101.66	<250		<750		<50						<2
B-2	3/12/96		108.99	--	8.20	0.00	100.79	<250		<750		<50	--	--	--	--	--	<2
B-2	6/27/96		108.99	--	8.95	0.00	100.04	<250		<750		<50	--	--	--	--	--	<2
B-2	10/10/96		108.99	--	9.28	0.00	99.71	<250		<750		<50	--	--	--	--	--	<2
B-2	2/12/97		108.99	--	7.73	0.00	101.26	<250		<750		<50	--	--	--	--	--	<2
B-2	4/22/97		108.99	--	7.41	0.00	101.58	<250		<750		<50	--	--	--	--	--	2
B-2	8/5/97		108.99	--	9.40	0.00	99.59	<250		<750		<50	--	--	--	--	--	<2
B-2	11/11/97		108.99	--	8.00	0.00	100.99	<250		<750		<50	--	--	--	--	--	<2
B-2	2/11/98		108.99		7.90	0.00	101.09	<250		<750		<50						<2
B-2	5/28/98		108.99	--	8.03	0.00	100.96	<250		<750		<50	--	--	--	--	--	<1
B-2	8/20/98		108.99		10.64	0.00	98.35	<250		<750		<50						<1
B-2	11/19/98		108.99	--	8.67	0.00	100.32	<250		<750		<50	--	--	--	--	--	<1
B-2	3/11/99		108.99		7.56	0.00	101.43	<250		<500		<80						<1
B-2	5/25/99		108.99	--	8.82	0.00	100.17	<250		<1,600		<80	--	--	--	--	--	--
B-2	8/17/99		108.99		9.51	0.00	99.48	<250		<500		<80						<1
B-2	11/19/99		108.99	--	7.08	0.00	101.91	<250		<500		<80	--	--	--	--	--	<1
B-2	3/9/00		108.99	--	7.59	0.00	101.40	<250		<500		<80	--	--	--	--	--	<1
B-2	6/12/00		108.99	--	8.00	0.00	100.99	<250		<500		<80	--	--	--	--	--	<1
B-2	9/26/00		108.99		9.74	0.00	99.25	<250		<500								<1
B-2	12/13/00		108.99	--	8.91	0.00	100.08	<250		<500		--	--	--	--	--	--	<1
B-2	2/28/01		108.99	--	8.59	0.00	100.40	<250		<500		<80	--	--	--	--	--	<1
B-2	5/2/01		108.99	--	7.89	0.00	101.10	<250		<500		<80	--	--	--	--	--	<1
B-2	10/30/02		108.99	UNABLE TO LOCATE - PAVED OVER														
B-2	1/23/03		108.99	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
B-2	4/18/03		108.99	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
B-2	7/11/03		108.99	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
B-2	10/31/03		108.99	UNABLE TO LOCATE - PAVED OVER						--		--	--	--	--	--	--	--
B-2	12/30/03		108.99	I 7.36 I 0.00 I 101.63				<50					<0.5	<0.5	<0.5	<1.5		<1.2
B-2	5/3/04		108.99	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
B-2	7/20/04		108.99	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
B-2	10/6/04		108.99	--	7.65	0.00	101.34	<79		<99		<50	--	--	--	--	--	--
B-2	7/18/05		108.99		9.20	0.00	99.79	<77		<96		<48						
B-2	10/21/05		108.99	--	9.17	0.00	99.82	<82		<100		<48	--	--	--	--	--	--
B-2	9/5/07		108.99	--	9.83	0.00	99.16	<81		<100		<50	--	--	--	--	--	0.1

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
B-2	5/27-28/08		108.99	UNABLE TO LOCATE				--		--		--	--	--	--	--	--	--
B-2	8/27-29/08	LFP	108.99		9.28	0.00	99.71	<80		<100		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-2	11/17-19/08	LFP	108.99	--	7.57	0.00	101.42	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-2	2/16-18/09	LFP	108.99	--	8.77	0.00	100.22	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.070
B-2	5/4-6/09	LFP	108.99	--	7.69	0.00	101.30	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-2	8/19-21/09	LFP	108.99		9.75	0.00	99.24	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-2	11/18-20/09	LFP	108.99	--	6.46	0.00	102.53	94		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.15
B-2	2/8-10/10	LFP	108.99	--	8.10	0.00	100.89	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-2	5/12-13/10	LFP	108.99	--	8.55	0.00	100.44	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
B-2	8/11/10	LFP	108.99		9.38	0.00	99.61	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
B-2	11/3-4/10	LFP	108.99	--	7.20	0.00	101.79	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
B-2	2/3-4/11	LFP	108.99	--	8.25	0.00	100.74	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
B-2	5/24/11	LFP	108.99	--	8.33	0.00	100.66	<30		140		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.052
B-2	8/23-24/11	LFP	108.99		9.70	0.00	99.29	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.26
B-2	11/7-9/11	LFP	108.99	--	9.30	0.00	99.69	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
B-2	2/6-8/12	LFP	108.99		7.95	0.00	101.04	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.10
B-2	5/2-4/12	LFP	108.99	--	7.40	0.00	101.59	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.080
B-2	8/1-3/12	LFP	108.99		8.20	0.00	100.79	<31		<72		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.034
B-2	11/26-28/12	LFP	108.99	--	7.47	0.00	101.52	<37		<86		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.047
B-2	02/4-6/13	LFP	108.99	--	8.04	0.00	100.95	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
B-2	05/6-8/13	LFP	108.99	--	8.89	0.00	100.10	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.073
B-2	9/9-13/13	LFP	108.99	--	8.41	0.00	100.58	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
B-2	11/18-22/13	LFP	108.99	--	7.77	0.00	101.22	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
B-2	2/4-11/14	LFP	108.99	--	8.47	0.00	100.52	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
B-2	6/12-14/14	LFP	108.99	--	8.91	0.00	100.08	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.085
B-2	8/18-21/14	LFP	108.99		9.53	0.00	99.46	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
B-2	11/19-20/14	LFP	108.99	--	8.54	0.00	100.45	<29/<29		<68/<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
B-2	2/17-20/15	LFP	108.99		7.93	0.00	101.06	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.082
B-2	5/11-15/15	LFP	108.99	--	8.91	0.00	100.08	<28/<28		<66/<66		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.08?
B-2	8/10-11/15	LFP	108.99		10.01	0.00	98.98	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	1.20
B-2	11/16-18/15	LFP	108.99	--	5.75	0.00	103.24	<29/<29		<67/<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.00060
B-2	5/13-14/16	LFP	108.99		9.02	0.00	99.97	37		<67		<50	<0.5	<0.5	<0.5	<0.5		<0.13
B-2	11/14/16	LFP	108.99	--	7.47	0.00	101.52	<28		<66		<50	<0.5	<0.5	<0.5	<0.5	--	<0.090
B-2	5/11/18	LFP	108.99		8.47	0.00	100.52	--	<28	--	<66	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.11
B-2	11/11-12/2018	LFP	108.99		8.63	0.00	100.36	--	<29	--	<67	<19	<0.2	<0.2	<0.4	<1	--	<1.1
B-2	4/27/19	LFP	108.99		8.43	0.00	100.56	--	31 J	--	<66	<19	<0.2	<0.2	<0.4	<1	--	<1.1
B-2	11/3/19	LFP	108.99		8.66	0.00	100.33	--	67 J	--	<66	<19	<0.2	<0.2	<0.4	<1	--	1.2
B-2	5/6/20	LFP	108.99		8.67	0.00	100.32	<200	--	--	<250	32.6 B J	<1.00	<1.00	<1.00	<3.00	--	<5.00
B-3	2/14/91		108.46	--	--	0.00	--	<250		--		**98,000**	--	--	--	--	--	--
B-3	2/14/92		108.46	--	7.82	0.00	100.64	--		--		--	--	--	--	--	--	--
B-3	2/18/92		108.46	--	7.82	0.00	100.64	--		--		--	--	--	--	--	--	--
B-3	3/9/92		108.46	--	7.55	0.00	100.91	--		--		--	--	--	--	--	--	--
B-3	3/13/92		108.46	--	7.82	0.00	100.64	**31,000**		--		**28,000**	--	--	--	--	--	--
B-3	4/21/92		108.46	--	7.50	0.00	100.96	--		--		--	--	--	--	--	--	--
B-3	3/3/94		108.46	--	--	0.00	--	**3,940**		<750		**43,000**	--	--	--	--	--	--
B-3	8/23/95		108.46		8.93	0.00	99.53	**2,600**		<750		**46,000**						
B-3	11/28/95		108.46	--	7.12	0.00	101.34	**1,500**		<750		**63,000**	--	--	--	--	--	--
B-3	3/12/96		108.46		7.85	0.00	100.61	**900**		<750		**42,000**						
B-3	6/27/96		108.46	--	8.67	0.00	99.79	**1,510**		**1,080**		**37,900**	--	--	--	--	--	--
B-3	10/10/96		108.46		8.97	0.00	99.49	**729**		<750		**16,200**						
B-3	2/12/97		108.46	--	7.55	0.00	100.91	**4,060**		**986**		**35,200**	--	--	--	--	--	--
B-3	4/22/97		108.46	--	7.30	0.00	101.16	**3,980**		**767**		**31,900**	--	--	--	--	--	--
B-3	8/2/97		108.46	--	9.05	0.00	99.41	**3,370**		**1,270**		**20,400**	--	--	--	--	--	--
B-3	11/11/97		108.46	--	6.76	0.00	101.70	**3,230**		**777**		**28,400**	--	--	--	--	--	--
B-3	2/11/98		108.46	--	7.54	0.00	100.92	**3,240**		**1,460**		**28,400**	--	--	--	--	--	--
B-3	5/28/98		108.46	--	7.76	0.00	100.70	**3,360**		<750		**34,600**	--	--	--	--	**29.5**	--
B-3	8/20/98		108.46	--	10.30	0.00	98.16	**2,150**		<750		**32,900**	--	--	--	--	<1.89	--
B-3	11/19/98		108.46		8.39	0.00	100.07	**6,650**		<3,750		**23,800**						
B-3	3/11/99		108.46	--	7.15	0.00	101.31	**2,920**		<5,000		**17,000**	--	--	--	--	--	--
B-3	5/25/99		108.46		8.50	0.00	99.96	**1,850**				**30,500**						

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
B-3	8/17/99		108.46	--	9.15	0.00	99.31	**2,570**		**711**		**29,600**	--	--	--	--	--	--
B-3	11/19/99		108.46		6.76	0.00	101.70	**7,880**				**30,700**						
B-3	3/9/00		108.46	--	7.24	0.00	101.22	<250		<500		**10,400**	--	--	--	--	--	--
B-3	6/13/00		108.46		8.15	0.00	100.31	<250		<500		**23,000**						
B-3	9/26/00		108.46	--	9.35	0.00	99.11	<250		<500		--	--	--	--	--	--	--
B-3	12/13/00		108.46	--	8.58	0.00	99.88	<250		<500		**21,600**	--	--	--	--	--	--
B-3	2/28/01		108.46	--	8.28	0.00	100.18	<250		<500		**25,700**	--	--	--	--	--	--
B-3	5/2/01		108.46	--	7.79	0.00	100.67	<250		<500		**17,200**	--	--	--	--	--	--
B-3	10/30/02		108.46	UNABLE TO LOCATE - PAVED OVER						--		--	--	--	--	--	--	--
B-3	1/23/03		108.46	UNABLE TO LOCATE - PAVED OVER														
B-3	4/18/03		108.46	UNABLE TO LOCATE - PAVED OVER						--		--	--	--	--	--	--	--
B-3	7/11/03		108.46	UNABLE TO LOCATE - PAVED OVER						--		--	--	--	--	--	--	--
B-3	10/31/03		108.46	UNABLE TO LOCATE - PAVED OVER						--		--	--	--	--	--	--	--
B-3	12/30/03		108.46	--	7.04	0.00	101.42	**14,000**		**3,800**		<980	<5.0	1.9	130	61	--	17.3
B-3	5/3/04		108.46	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
B-3	7/20/04		108.46	--	9.31	0.00	99.15	**1,220**		<500		**13,200**	**12.5**	<10.0	874	204	--	24.65
B-3	10/6/04		108.46	--	8.68	0.00	99.78	**1,200**		<500		**13,000**	--	--	--	--	--	--
B-3	1/27/05		108.46		7.70	0.00	100.76	**1,100**		<190		**6,200**						
B-3	4/12/05		108.46	--	7.21	0.00	101.25	**1,200**		<100		**5,300**	--	--	--	--	--	--
B-3	7/18/05		108.46		8.83	0.00	99.63	**1,200**		<97		**6,400**						
B-3	10/21/05		108.46	--	8.85	0.00	99.61	**2,400**		<510		**8,900**	--	--	--	--	--	--
B-3	9/4/07		108.46		9.41	0.00	99.05	**1,500**		<200		**10,000**						
B-3	5/27-28/08	LFP	108.46	--	8.73	0.00	99.73	**2,400**		<540		**3,700**	2	2	98	3	<0.5	**20.2**
B-3	8/27-29/08	LFP	108.46	--	8.85	0.00	99.61	**2,400**		<98		**10,000**	**5**	2	230	17	<0.5	**21.5**
B-3	11/17-19/08	LFP	108.46	--	7.13	0.00	101.33	**1,700**		<690		**7,100**	<0.5	<0.5	57	2	<0.5	**20**
B-3	2/16-18/09	LFP	108.46	--	8.40	0.00	100.06	**1,900**		<340		**8,800**	**180**	130	130	21	<0.5	**19.5**
B-3	5/4-6/09	LFP	108.46	--	7.65	0.00	100.81	**2,400**		<340		**5,800**	**68**	15	120	7	<0.5	13.1
B-3	8/19-21/09	LFP	108.46	--	9.33	0.00	99.13	**2,900**		<360		**5,900**	**39**	10	170	16	<0.5	**19**
B-3	11/18-20/09	LFP	108.46	--	6.35	0.00	102.11	**2,200**		<340		**2,500**	1	<0.5	12	1	<0.5	**16.5**
B-3	2/8-10/10	LFP	108.46		7.73	0.00	100.73	**1,700**		140		**6,200**	2	<0.5	25	1	<0.5	9.9
B-3	5/12-13/10	LFP	108.46	--	8.18	0.00	100.28	**1,200**		<68		**8,200**	2	<0.5	47	2	<0.5	10.3
B-3	8/11/10	LFP	108.46		9.00	0.00	99.46	**2,700**		<340		5,900	7	1.0	270	20	<0.5	**19.3**
B-3	11/3-4/10	LFP	108.46	--	6.96	0.00	101.50	**2,500**		<350		**3,100**	0.60	<0.5	24	1	<0.5	13.3
B-3	2/3-4/11	LFP	108.46		6.70	0.00	101.76	**1,400**		<340		4,900	0.80	<0.5	53	2	<0.5	10.2
B-3	5/24/11	LFP	108.46	--	7.96	0.00	100.50	**1,200**		300		**1,800**	1	<0.5	76	3	<0.5	14
B-3	8/23-24/11	LFP	108.46		9.24	0.00	99.22	**960**		<72		**3,700**	**8**	2	160	8	<0.5	11.7
B-3	11/7-9/11	LFP	108.46	--	8.95	0.00	99.51	**1,500**		460		**5,800**	**7**	2	180	6	<0.5	12.3
B-3	2/6-8/12	LFP	108.46	--	7.40	0.00	101.06	<31		<71		<50	<0.5	<0.5	<0.5	<0.5	<0.5	4.4
B-3	5/2-4/12	LFP	108.46	--	7.50	0.00	100.96	53		<72		**1,300**	<0.5	<0.5	19	<0.5	0.7	3.9
B-3	8/1-3/12	LFP	108.46	--	8.24	0.00	100.22	460		110		600	0.6	<0.5	1	<0.5	<0.5	8.0
B-3	11/26-28/12	LFP	108.46	--	6.98	0.00	101.48	73		<68		500	<0.5	<0.5	0.8	<0.5	<0.5	7.4
B-3	2/4-6/13	LFP	108.46	--	6.33	0.00	102.13	45		<66		120	<0.5	<0.5	<0.5	<0.5	<0.5	5.6
B-3	05/6-8/13	LFP	108.46	--	8.50	0.00	99.96	150		<67		**2,600**	<0.5	<0.5	73	3	<0.5	8.9
B-3	9/9-13/13	LFP	108.46		8.09	0.00	100.37	160/2,700		<66/72		**1,700**	0.6	<0.5	37	0.9	<0.5	**16.0**
B-3	11/18-22/13	LFP	108.46	--	6.45	0.00	102.01	**42/1,600**		<67/180		190	<0.5	<0.5	<0.5	<0.5	<0.5	11.2
B-3	2/4-11/14	LFP	108.46		8.10	0.00	100.36	36/730		<67/<67		480	<0.5	<0.5	2	<0.5	<0.5	7.4
B-3	6/12-14/14	LFP	108.46	--	8.69	0.00	99.77	100/780		<66/100		260	<0.5	<0.5	1	<0.5	<0.5	8.3
B-3	8/18-21/14	LFP	108.46	--	9.23	0.00	99.23	180/1,000		<68/170		**1,000**	<0.5	<0.5	9	0.7	<0.5	8.9

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
B-3	11/19-20/14	LFP	108.46	--	8.17	0.00	100.29	**130/1,400**		<67/160		**900**	<0.5	<0.5	7	<0.5	<0.5	13.4
B-3	2/17-20/15	LFP	108.46	--	6.36	0.00	102.10	150/490		<66/180		650	<0.5	<0.5	<0.5	<0.5	<0.5	2.9
B-3	5/11-15/15	LFP	108.46	--	8.16	0.00	100.30	120/690		<66/<66		**1,400**	<0.5	<0.5	33	0.9	<0.5	0.0081
B-3	8/10-11/15	LFP	108.46	--	9.59	0.00	98.87	**130/2,000**		<67/550		660	<0.5	<0.5	5	0.5	<0.5	9.5
B-3	11/16-18/15	LFP	108.46	--	5.58	0.00	102.88	**57/1,200**		<67/180		**880**	<0.5	<0.5	2	<0.5	<0.5	0.0185
B-3	5/13-14/16	LFP	108.46		8.64	0.00	99.82	38/650		<67/220		400	<0.5	<0.5	1	<0.5		5.1
B-3	11/14/16	LFP	108.46	--	7.45	0.00	101.01	<29/380		<67/<67		560	<0.5	<0.5	1	<0.5	--	10.6
B-3	5/11/18	LFP	108.46		8.14	0.00	100.32	82	33	68	<67	**900**	<0.5	<0.5	5	<0.5	<0.5	1
B-3	11/11-12/2018	LFP	108.46		8.24	0.00	100.22	**2800**	180	370	<66	**2100**	1	0	5	<1	--	11
B-3	4/27/19	LFP	108.46		8.02	0.00	100.44	--	160	--	<66	<19	<0.2	<0.2	<0.4	<1	--	3
B-3	11/3/19	LFP	108.46		8.25	0.00	100.21	**1400**	90 J	84 J	<67	**1500**	0.2 J	0.3 J	8	<1	--	8
B-3	5/6/20	LFP	108.46		8.35	0.00	100.11	273	79.5 J	--	104 J	92.3 B J	<1.00	<1.00	<1.00	<3.00	--	<5.00
B-4	2/14/91		107.68	--	--	0.00	--	<250		--		**33,000**	--	--	--	--	--	--
B-4	2/14/92		107.68		6.82	0.00	100.86											
B-4	2/18/92		107.68	--	5.94	0.00	101.74	--		--		--	--	--	--	--	--	--
B-4	3/9/92		107.68	--	6.62	0.00	101.06	--		--		--	--	--	--	--	--	--
B-4	3/13/92		107.68	--	6.88	0.00	100.80	--		--		**21,000**	--	--	--	--	--	--
B-4	4/21/92		107.68	--	6.57	0.00	101.11	--		--		--	--	--	--	--	--	--
B-4	3/3/94		107.68	--	--	0.00	--	**1,040**		**1,250**		**15,800**	--	--	--	--	--	--
B-4	8/22/95		107.68	--	7.92	0.00	99.76	**840**		**820**		**22,000**	--	--	--	--	--	--
B-4	11/28/95		107.68	--	6.11	0.00	101.57	**1,900**		**990**		**22,000**	--	--	--	--	--	3.1
B-4	3/12/96		107.68		6.85	0.00	100.83	**3,200**		**2,500**		**11,000**						4.7
B-4	6/26/96		107.68	--	7.58	0.00	100.10	**757**		<750		**16,100**	--	--	--	--	--	2.83
B-4	10/9/96		107.68		7.90	0.00	99.78	**543**		**<750**		**10,200**						4.13
B-4	2/12/97		107.68	--	6.01	0.00	101.67	**4,710**		**4,830**		**12,200**	--	--	--	--	--	2.82
B-4	4/22/97		107.68		10.10	0.00	97.58	**5,840**		**1,191**		**15,500**						4.18
B-4	8/5/97		107.68	--	8.37	0.00	99.31	**2,560**		**3,160**		**15,800**	--	--	--	--	--	6.26
B-4	11/11/97		107.68		7.67	0.00	100.01	**2,080**		**1,040**		**31,100**						4.75
B-4	2/11/98		107.68	--	6.45	0.00	101.23	**1,340**		**1,630**		**3,750**	--	--	--	--	--	<2.0
B-4	5/28/98		107.68	--	7.25	0.00	100.43	**3,180**		**1,250**		**2,510**	--	--	--	--	--	4.69
B-4	8/20/98		107.68	--	9.12	0.00	98.56	**1,460**		**1,240**		**7,240**	--	--	--	--	--	1.17
B-4	11/19/98		107.68	--	7.22	0.00	100.46	**2,470**		**3,750**		**1,880**	--	--	--	--	--	<1.0
B-4	3/11/99		107.68	--	5.41	0.00	102.27	**1,130**		**585**		**11,900**	--	--	--	--	--	3.54
B-4	5/25/99		107.68	--	7.45	0.00	100.23	<1,450		--		**5,380**	--	--	--	--	--	--
B-4	8/17/99		107.68	--	8.06	0.00	99.62	**670**		**868**		**2,700**	--	--	--	--	--	2.3
B-4	11/19/99		107.68		5.75	0.00	101.93	**1,700**				**11,400**						**17.5**
B-4	3/9/00		107.68	--	6.34	0.00	101.34	<1,250		**2,830**		**105,000**	--	--	--	--	--	10.9
B-4	6/13/00		107.68		6.80	0.00	100.88	<250		**943**		**8,810**						6.92
B-4	9/26/00		107.68	--	8.31	0.00	99.37	<250		0.565		--	--	--	--	--	--	5
B-4	12/13/00		107.68	--	7.54	0.00	100.14	**1,250**		<500		--	--	--	--	--	--	5.98
B-4	2/28/01		107.68	--	7.24	0.00	100.44	<250		<500		**12,100**	--	--	--	--	--	5.34
B-4	5/2/01		107.68	--	6.59	0.00	101.09	**15,700**		**757**		**12,300**	--	--	--	--	--	5.75
B-4	10/30/02		107.68	UNABLE TO LOCATE - PAVED OVER						--		--	--	--	--	--	--	--
B-4	1/23/03		107.68	UNABLE TO LOCATE - PAVED OVER						--		--	--	--	--	--	--	--
B-4	4/18/03		107.68	UNABLE TO LOCATE - PAVED OVER						--		--	--	--	--	--	--	--
B-4	7/11/03		107.68	UNABLE TO LOCATE - PAVED OVER														
B-4	10/31/03		107.68	UNABLE TO LOCATE - PAVED OVER						--		--	--	--	--	--	--	--
B-4	12/30/03		107.68	I 6.07 0.00 101.61				**17,000**		**2,000**		**1,700**	**<10**	<5.0	310	370		7.5
B-4	5/3/04		107.68	UNABLE TO LOCATE - PAVED OVER						--		--	--	--	--	--	--	--
B-4	7/20/04		107.68		8.23	0.00	99.45	<250		<500		**4,660**	**15.1**	1.3	42.3	10.1		--
B-4	10/6/04		107.68	--	7.45	0.00	100.23	390		180		**2,300**	--	--	--	--	--	--
B-4	1/27/05		107.68	--	6.72	0.00	100.96	200		<195		**2,800**	--	--	--	--	--	--
B-4	4/12/05		107.68	--	6.62	0.00	101.06	340		<100		**2,600**	--	--	--	--	--	--
B-4	7/18/05		107.68	--	6.62	0.00	101.06	**560**		<1,100		**1,600**	--	--	--	--	--	--
B-4	10/21/05		107.68	--	7.81	0.00	99.87	190		260		**1,800**	--	--	--	--	--	--
B-4	9/4/07		107.68	--	8.40	0.00	99.28	310		<100		**3,200**	--	--	--	--	--	1.8
B-4	9/4/07 (D)		107.68	--	8.40	0.00	99.28	340		140		**3,300**	--	--	--	--	--	1.7
B-4	5/27-28/08	LFP	107.68		7.52	0.00	100.16	310		330		**1,800**	3	3	25	7	<0.5	2.9
B-4	8/27-29/08	LFP	107.68	--	7.88	0.00	99.80	330		**1,100**		**3,100**	1	0.9	22	4	<0.5	1.6
B-4	11/17-19/08	LFP	107.68		6.26	0.00	101.42	**700**		**2,600**		**3,500**	1	0.7	27	3	<0.5	2.3

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
B-4	2/16-18/09	LFP	107.68	--	7.40	0.00	100.28	440		480		**2,000**	0.6	<0.5	11	2	<0.5	2
B-4	5/4-6/09	LFP	107.68		6.46	0.00	101.22	**590**		**1,300**		**2,100**	<0.5	<0.5	20	2	<0.5	1.6
B-4	8/19-21/09	LFP	107.68	--	8.35	0.00	99.33	**590**		**810**		**910**	1	<0.5	5	1	<0.5	1.2
B-4	11/18-20/09	LFP	107.68		5.30	0.00	102.38	490		450		**5,700**	3	0.7	36	3	<0.5	5.2
B-4	2/8-10/10	LFP	107.68	--	6.78	0.00	100.90	400		**1,400**		350	<0.5	<0.5	4	<0.5	<0.5	0.46
B-4	5/12-13/10	LFP	107.68	--	7.23	0.00	100.45	**940**		**7,100**		360	<0.5	<0.5	1	<0.5	<0.5	0.15
B-4	8/11/10	LFP	107.68	--	8.00	0.00	99.68	**600**		**2,000**		170	<0.5	<0.5	1	<0.5	<0.5	0.26
B-4	11/3-4/10	LFP	107.68	--	6.19	0.00	101.49	400		**1,500**		530	<0.5	<0.5	4	0.7	<0.5	1
B-4	2/3-4/11	LFP	107.68	--	7.15	0.00	100.53	**1,400**		**4,700**		**2,200**	0.9	0.7	11	1	<0.5	2.9
B-4	5/24/11	LFP	107.68	--	7.22	0.00	100.46	300		**680**		**840**	<0.5	<0.5	0.8	<0.5	<0.5	1.2
B-4	8/23-24/11	LFP	107.68	--	8.50	0.00	99.18	230		<68		**1,400**	<0.5	<0.5	1	0.6	<0.5	1.4
B-4	11/7-9/11	LFP	107.68		8.15	0.00	99.53	120		360		**950**	<0.5	<0.5	1	0.5	<0.5	0.57
B-4	2/6-8/12	LFP	107.68	--	6.80	0.00	100.88	64		120		320	<0.5	<0.5	2	<0.5	<0.5	1.6
B-4	5/2-4/12	LFP	107.68		6.75	0.00	100.93	110		72		580	<0.5	<0.05	2	<0.5	<0.5	1.7
B-4	8/1-3/12	LFP	107.68	--	8.26	0.00	99.42	100		190		510	<0.5	<0.5	<0.5	<0.5	<0.5	0.83
B-4	11/26-28/12	LFP	107.68	--	6.34	0.00	101.34	320		210		**1,200**	<0.5	<0.5	8	0.7	<0.5	3.0
B-4	02/4-6/13	LFP	107.68	--	6.95	0.00	100.73	150		<69		**1,600**	<0.5	<0.5	4	<0.5	<0.5	2.5
B-4	05/6-8/13	LFP	107.68	--	7.53	0.00	100.15	140		<67		**2,400**	<0.5	<0.5	4	0.5	<0.5	2.4
B-4	9/9-13/13	LFP	107.68	--	7.30	0.00	100.38	130/250		<66/110		**1,200**	<0.5	<0.5	3	0.5	<0.5	1.6
B-4	11/18-22/13	LFP	107.68	--	6.76	0.00	100.92	120/150		<67/<67		**1,200**	<0.5	<0.5	3	<0.5	<0.5	1.9
B-4	2/4-11/14	LFP	107.68	--	7.36	0.00	100.32	140/170		<68/<68		**1,800**	<0.5	<0.5	3	<0.5	<0.5	2.4
B-4	6/12-14/14	LFP	107.68		7.94	0.00	99.74	120/260		<67/73		**1,200**	<0.5	<0.5	1	<0.5	<0.5	1.8
B-4	8/18-21/14	LFP	107.68	--	8.43	0.00	99.25	140/300		<67/88		**1,800**	<0.5	<0.5	1	0.5	<0.5	1.4
B-4	11/19-20/14	LFP	107.68		6.77	0.00	100.91	120/270		<66/<66		**1,300**	<0.5	<0.5	2	<0.5	<0.5	2.4
B-4	2/17-20/15	LFP	107.68	--	6.93	0.00	100.75	95/290		240/470		550	<0.5	<0.5	<0.5	<0.5	<0.5	0.73
B-4	5/11-15/15	LFP	107.68		7.91	0.00	99.77	130/210		<66/<66		**940**	<0.5	<0.5	1	<0.5	<0.5	0.0016
B-4	8/10-11/15	LFP	107.68	--	8.94	0.00	98.74	66/500		<66/340		600	<0.5	<0.5	<0.5	0.6	<0.5	0.89
B-4	11/16-18/15	LFP	107.68	--	4.73	0.00	102.95	**130/750**		**270/740**		**2,000**	**<0.5**	<0.5	4	<0.5	<0.5	0.0171
B-4	5/13-14/16	LFP	107.68	--	7.84	0.00	99.84	120/390		**300/550**		**2,100**	<0.5	<0.5	0.9	<0.5	--	0.81
B-4	11/14/16	LFP	107.68	--	6.30	0.00	101.38	**400/1,000**		**610/1,000**		**1,200**	<0.5	<0.5	<0.5	<0.5	--	1.00
B-4	5/11/18	LFP	107.68	--	7.39	0.00	100.29	650	180	**700**	260	**3600**	4	<0.5	1	<0.5	--	1.0
B-4	11/11-12/2018	LFP	107.68	--	7.52	0.00	100.16	230	110	330	150	**1600**	<0.2	<0.2	<0.4	<1	--	1.8
B-4	4/27/19	LFP	107.68	--	7.31	0.00	100.37	--	90 J	--	<68	**940**	<0.2	<0.2	<0.4	<1	--	6.9
B-4	11/3/19	LFP	107.68	--	7.51	0.00	100.17	290	120	410	270	**1500**	<0.2	<0.2	0.4 J	<1	--	**36.3**
B-4	5/6/20	LFP	107.68	--	7.54	0.00	100.14	230	115 J	--	106 J	**1800**	<1.00	<1.00	<1.00	<3.00	--	9.6
MW-101	2/14/92		99.51	--	6.94	--	92.57	**33,000**		--		**45,000**	--	--	--	--	--	--
MW-101	2/18/92		99.51	--	6.88	--	92.63	--		--		--	--	--	--	--	--	--
MW-101	3/9/92		99.51		6.76		92.75											
MW-101	3/13/92		99.51	--	7.02	--	92.49	--		--		--	--	--	--	--	--	--
MW-101	4/21/92		99.51		7.73		91.78											
MW-101	3/3/94		99.51	--	--	--	--	**1,730**		<750		**73,000**	--	--	--	--	--	--
MW-101	8/22/95		99.51		7.90		91.61	**1,300**		<750		**12,000**						
MW-101	11/28/95		99.51	--	6.12	--	93.39	**1,400**		<750		**49,000**	--	--	--	--	--	**24**
MW-101	3/12/96		99.51		6.86		92.65	**760**		<750		**43,000**						9.3
MW-101	6/26/96		99.51	--	7.59	--	91.92	**656**		<750		**22,000**	--	--	--	--	--	8.22
MW-101	10/9/96		99.51	--	7.85	--	91.66	309		<750		**5,800**	--	--	--	--	--	4.24
MW-101	2/12/97		99.51	--	6.55	--	92.96	**1,090**		<750		**33,900**	--	--	--	--	--	7.04
MW-101	4/22/97		99.51	--	6.31	--	93.20	**1,870**		**977**		**21,500**	--	--	--	--	--	7.41
MW-101	11/11/97		99.51	--	6.76	--	92.75	**952**		<750		**23,400**	--	--	--	--	--	11.3
MW-101	2/11/98		99.51	--	6.78	--	92.73	**793**		<750		**28,400**	--	--	--	--	--	6.51
MW-101	5/28/98		99.51	--	6.91	--	92.60	**798**		<750		**11,900**	--	--	--	--	--	4.71
MW-101	8/20/98		99.51		8.30		91.21	414		<750		**4,400**						1.6
MW-101	11/19/98		99.51	--	7.69	--	91.82	**714**		<750		**5,820**	--	--	--	--	--	1.7
MW-101	3/11/99		99.51		6.17		93.34	**1,200**		<500		**38,500**						6.82
MW-101	5/25/99		99.51	--	100.97	--	-1.46	**1,450**		--		**18,000**	--	--	--	--	--	--
MW-101	8/17/99		99.51	--	7.99	--	91.52	**810**		**750**		**2,940**	--	--	--	--	--	2.9
MW-101	11/19/99		99.51	--	5.84	--	93.67	**1,010**		--		**16,300**	--	--	--	--	--	**15.4**
MW-101	3/9/00		99.51	--	6.25	--	93.26	<250		<500		**15,800**	--	--	--	--	--	13
MW-101	6/13/00		99.51	--	6.98	--	92.53	<250		<500		**4,870**	--	--	--	--	--	4.3
MW-101	9/26/00		99.51	--	8.15	--	91.36	--		<250		<500	--	--	--	--	--	1.88

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-101	12/13/00		99.51	--	7.65	--	91.86	**988**		442		<500	--	--	--	--	--	1.13
MW-101	2/28/01		99.51		7.25		92.26	<250		<500		**2,710**						2.45
MW-101	5/2/01		99.51	--	9.55	--	89.96	<250		<500		**2,280**	--	--	--	--	--	2.6
MW-101	10/30/02		99.54	UNABLE TO LOCATE														
MW-101	1/23/03		99.54	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-101	4/18/03		99.54	UNABLE TO LOCATE														
MW-101	7/11/03		99.54	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-101	10/31/03		99.54	UNABLE TO LOCATE - POSSIBLY PAVED OVER								--	--	--	--	--	--	--
MW-101	12/30/03		99.54	-- I 6.04 0.00 93.50 **13,000**						**890**		<96	<5.0	0.6	260	290	--	**27.9**
MW-101	5/3/04		99.54	UNABLE TO LOCATE - POSSIBLY PAVED OVER								--	--	--	--	--	--	--
MW-101	7/20/04		99.54	--	8.18	0.00	91.36	<250		<500		**1,040**	3.01	<0.500	0.822	1.21	--	<1.0'
MW-101	10/6/04		99.51	--	7.54	0.00	91.97	<81		<100		<260	--	--	--	--	--	--
MW-101	1/27/05		99.51	--	6.78	0.00	92.73	190		<100		**2,900**	--	--	--	--	--	--
MW-101	4/12/05		99.51		6.32	0.00	93.19	160		<100		**1,700**						
MW-101	7/18/05		99.51	--	7.78	0.00	91.73	93		<99		240	--	--	--	--	--	--
MW-101	10/21/05		99.51		7.75	0.00	91.76	110		<100		470						
MW-101	9/5/07		99.51	--	8.22	0.00	91.29	110		140		200	--	--	--	--	--	1.2
MW-101	5/27-28/08	LFP	99.51		7.71	0.00	91.80	<80		<99		410	<0.5	<0.5	0.5	<0.5	<0.5	1.2
MW-101	8/27-29/08	LFP	99.51	--	7.75	0.00	91.76	<79		<99		450	<0.5	<0.5	<0.5	<0.5	<0.5	0.39
MW-101	11/17-19/08	LFP	99.51		6.33	0.00	93.18	74		<68		520	<0.5	<0.5	1	<0.5	<0.5	1.1
MW-101	2/16-18/09	LFP	99.51	--	7.43	0.00	92.08	68		<67		590	<0.5	<0.5	<0.5	<0.5	<0.5	0.96
MW-101	5/4-6/09	LFP	99.51	--	6.93	0.00	92.58	66		<68		370	<0.5	<0.5	<0.5	<0.5	<0.5	0.39
MW-101	8/19-21/09	LFP	99.51	--	8.16	0.00	91.35	65		<70		510	<0.5	<0.5	<0.5	<0.5	<0.5	0.22
MW-101	11/18-20/09	LFP	99.51	--	4.97	0.00	94.54	42		<69		84	<0.5	<0.5	<0.5	<0.5	<0.5	1
MW-101	2/8-10/10	LFP	99.51	--	6.82	0.00	92.69	130		190		**970**	<0.5	<0.5	1	<0.5	<0.5	2.1
MW-101	5/12-13/10	LFP	99.51	--	7.32	0.00	92.19	64		<70		470	<0.5	<0.5	<0.5	<0.5	<0.5	0.65
MW-101	8/12/10	LFP	99.51	--	7.96	0.00	91.55	52		<68		370	<0.5	<0.5	<0.5	<0.5	<0.5	0.24
MW-101	MONITORING WELL DECOMMISSIONED/SAMPLINC DISCONTINUED																	
MW-102	2/14/92				6.94	0.00												
MW-102	2/18/92		--	--	6.88	0.00	--	--		--		--	--	--	--	--	--	--
MW-102	3/9/92		--	--	6.76	0.00	--	--		--		--	--	--	--	--	--	--
MW-102	3/13/92		--	--	7.02	0.00	--	--		--		150	--	--	--	--	--	--
MW-102	4/21/92		--	--	7.72	0.00	--	--		--		--	--	--	--	--	--	--
MW-102	NOT PART OF MONITORING/SAMPLING PROGRAM																	
MW-104	2/14/92		100.45	--	8.86	0.00	91.59	--		--		--	--	--	--	--	--	--
MW-104	02/1892		100.45		8.84	0.00	91.61											
MW-104	3/9/92		100.45	--	8.73	0.00	91.72	--		--		--	--	--	--	--	--	--
MW-104	3/13/92		100.45		8.84	0.00	91.61					<50						
MW-104	4/21/92		100.45	--	8.72	0.00	91.73	--		--		--	--	--	--	--	--	--
MW-104	8/22/95		100.45		9.30	0.00	91.15	<250		<750		<50						
MW-104	11/27/95		100.45	--	8.39	0.00	92.06	--		--		--	--	--	--	--	--	--
MW-104	3/12/96		100.45	--	8.78	0.00	91.67	--		--		--	--	--	--	--	--	--
MW-104	6/27/96		100.45	--	9.00	0.00	91.45	--		--		--	--	--	--	--	--	--
MW-104	10/10/96		100.45	--	9.18	0.00	91.27	--		--		--	--	--	--	--	--	--
MW-104	2/12/97		100.45	--	8.65	0.00	91.80	<250		<750		<50	--	--	--	--	--	<2.0
MW-104	4/22/97		100.45	--	8.50	0.00	91.95	<250		<750		<50	--	--	--	--	--	<2.0
MW-104	8/5/97		100.45	--	9.20	0.00	91.25	<250		<750		<50	--	--	--	--	--	<2.0
MW-104	11/11/97		100.45		8.81	0.00	91.64	<250		<750		<50						<2.0
MW-104	2/11/98		100.45	--	8.83	0.00	91.62	<250		<750		<50	--	--	--	--	--	<2.0
MW-104	5/28/98		100.45		8.97	0.00	91.48	<250		<750		<50						9.54
MW-104	8/20/98		100.45	--	9.51	0.00	90.94	<250		<750		<50	--	--	--	--	--	<1.0
MW-104	11/19/98		100.45		9.82	0.00	90.63	<250		<750		<50						<1.0
MW-104	3/11/99		100.45	--	8.48	0.00	91.97	<250		<500		<80	--	--	--	--	--	<1.0
MW-104	5/25/99		100.45		8.96	0.00	91.49	<250				<80						
MW-104	8/17/99		100.45	--	9.24	0.00	91.21	<250		<500		<80	--	--	--	--	--	<1.0
MW-104	11/19/99		100.45	--	8.40	0.00	92.05	<250		--		<80	--	--	--	--	--	1.0
MW-104	3/9/00		100.45	--	8.49	0.00	91.96	<250		<50		<80	--	--	--	--	--	<1.0
MW-104	6/13/00		100.45	--	8.89	0.00	91.56	<250		<500		<80	--	--	--	--	--	<1.0
MW-104	9/26/00		100.45	--	9.32	0.00	91.13	<250		<500		--	--	--	--	--	--	<1.0
MW-104	12/13/00		100.45	--	9.09	0.00	91.36	<250		<500		--	--	--	--	--	--	<1.0
MW-104	2/28/01		100.45	--	8.89	0.00	91.56	<250		<500		<80	--	--	--	--	--	<1.0

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-104	5/2/01		100.45		8.79	0.00	91.66	<250		<500		103						<1.0
MW-104	10/30/02		100.44	UNABLE TO LOCATE -- --						--		--	--	--	--	--	--	--
MW-104	1/23/03		100.44	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-104	4/18/03		100.44	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-104	7/11/03		100.44	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-104	10/31/03		100.44	--	9.15	0.00	91.29	<250		<500		<50	<0.500	<0.500	<0.500	<1.00	--	<1.0[5]
MW-104	12/30/03		100.44	--	8.39	0.00	92.05	<50		<77		<96	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-104	5/3/04		100.44	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-104	7/20/04		100.44	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-104	10/7/04		100.45	--	9.09	0.00	91.36	<83		<100		<50	--	--	--	--	--	--
MW-104	10/20/05		100.45	--	9.19	0.00	91.26	<82		<100		<48	--	--	--	--	--	--
MW-104	9/6/07		100.45	--	9.42	0.00	91.03	<79		<98		<50	--	--	--	--	--	0.087
MW-104	5/27-28/08		100.45	**INACCESSIBLE**			--	--		--		--	--	--	--	--	--	--
MW-104	8/27-29/08	LFP	100.45	--	9.23	0.00	91.22	<79		<99		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-104	11/17-19/08	LFP	100.46	--	8.75	0.00	91.71	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-104	2/16-18/09	LFP	100.46	--	9.01	0.00	91.45	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.1
MW-104	5/4-6/09	LFP	100.46	--	8.88	0.00	91.58	38		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-104	8/19-21/09	LFP	100.46	--	9.32	0.00	91.14	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.057
MW-104	11/18-20/09	LFP	100.46	--	8.08	0.00	92.38	<29		<68		98	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
MW-104	2/8-10/10	LFP	100.46	--	8.76	0.00	91.70	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.053
MW-104	MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED																	
MW-105	2/14/92		96.14	--	3.36	0.00	92.78	--		--		--	--	--	--	--	--	--
MW-105	2/18/92		96.14	--	3.34	0.00	92.80	--		--		--	--	--	--	--	--	--
MW-105	3/9/92		96.14	--	3.25	0.00	92.89	--		--		--	--	--	--	--	--	--
MW-105	3/13/92		96.14	--	3.60	0.00	92.54	--		--		<50	--	--	--	--	--	--
MW-105	4/21/92		96.14	--	3.40	0.00	92.74	--		--		--	--	--	--	--	--	--
MW-105	8/22/95		96.14	--	5.08	0.00	91.06	<250		**900**		<50	--	--	--	--	--	--
MW-105	11/28/95		96.14	--	2.53	0.00	93.61	--		--		--	--	--	--	--	--	--
MW-105	3/12/96		96.14	--	3.37	0.00	92.77	--		--		--	--	--	--	--	--	--
MW-105	6/26/96		96.14	--	4.74	0.00	91.40	--		--		--	--	--	--	--	--	--
MW-105	10/9/96		96.14	--	4.93	0.00	91.21	--		--		--	--	--	--	--	--	--
MW-105	2/12/97		96.14	--	3.19	0.00	92.95	<250		<750		<50	--	--	--	--	--	2
MW-105	4/22/97		96.14	--	3.08	0.00	93.06	<250		<750		<50	--	--	--	--	--	2
MW-105	8/5/97		96.14	--	4.85	0.00	91.29	<250		<750		<50	--	--	--	--	--	2
MW-105	11/11/97		96.14	--	3.11	0.00	93.03	<250		<750		<50	--	--	--	--	--	2
MW-105	2/11/98		96.14	--	3.24	0.00	92.90	<250		<750		<50	--	--	--	--	--	2
MW-105	5/28/98		96.14	--	3.91	0.00	92.23	<250		<750		<50	--	--	--	--	--	6.62
MW-105	8/20/98		96.14	--	5.28	0.00	90.86	<250		<750		<50	--	--	--	--	--	<1.00
MW-105	11/19/98		96.14	--	5.37	0.00	90.77	<250		<750		<50	--	--	--	--	--	<1.00
MW-105	3/11/99		96.14	--	2.43	0.00	93.71	<250		<500		<80	--	--	--	--	--	<1.00
MW-105	5/25/99		96.14	--	4.29	0.00	91.85	<250		--		<80	--	--	--	--	--	--
MW-105	8/17/99		96.14	--	5.06	0.00	91.08	<250		<500		<80	--	--	--	--	--	<1.00
MW-105	11/19/99		96.14	--	3.08	0.00	93.06	<250		--		<80	--	--	--	--	--	<1.00
MW-105	3/9/00		96.14	--	2.75	0.00	93.39	<250		<500		<80	--	--	--	--	--	<1.00
MW-105	6/13/00		96.14	--	4.45	0.00	91.69	<250		<500		<80	--	--	--	--	--	<1.00
MW-105	9/26/00		96.14	--	5.20	0.00	90.94	<250		<500		--	--	--	--	--	--	<1.00
MW-105	12/13/00		96.14	--	4.67	0.00	91.47	<250		<500		--	--	--	--	--	--	1.37
MW-105	2/28/01		96.14	--	3.92	0.00	92.22	<250		<500		<80	--	--	--	--	--	<1.00
MW-105	5/2/01		96.14	--	3.53	0.00	92.61	<250		<750		87	--	--	--	--	--	<1.00
MW-105	10/30/02		96.15	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-105	1/23/03		96.15	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-105	4/18/03		96.15	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-105	7/11/03		96.15	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-105	10/31/03		96.15	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-105	12/31/03		96.15		-- I 2.45	0.00	93.70	<50		<400		<500	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-105	5/3/04		96.15	MONITORED/SAMPLED **ANNUALLY**						--		--	--	--	--	--	--	--
MW-105	7/20/04		96.15	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-105	10/7/04		96.14	--	4.71	0.00	91.43	<160		<200		<50	--	--	--	--	--	--
MW-105	10/20/05		96.14	--	5.16	0.00	90.98	<82		<100		<48	--	--	--	--	--	--
MW-105	9/6/07		96.14	--	5.34	0.00	90.80	<100		<81		<50	--	--	--	--	--	0.47
MW-105	5/27-28/08		96.14	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-105	8/27-29/08	LFP	96.14	--	5.16	0.00	90.98	<81		<100		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-105	11/17-19/08	LFP	96.14	--	3.75	0.00	92.39	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-105	2/16-18/09	LFP	96.14	--	6.15	0.00	89.99	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.57
MW-105	5/4-6/09	LFP	96.14	--	3.68	0.00	92.46	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-105	8/19-21/09	LFP	96.14	--	5.25	0.00	90.89	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.064
MW-105	11/18-20/09	LFP	96.14	--	1.56	0.00	94.58	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.053
MW-105	2/8-10/10	LFP	96.14	--	3.37	0.00	92.77	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.078
MW-105	MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED																	
MW-106	2/14/92		99.71	--	8.18	0.00	91.53	--		--		--	--	--	--	--	--	--
MW-106	2/18/92		99.71	--	8.20	0.00	91.51	--		--		--	--	--	--	--	--	--
MW-106	3/9/92		99.71	--	8.04	0.00	91.67	--		--		--	--	--	--	--	--	--
MW-106	3/13/92		99.71	--	8.18	0.00	91.53	--		--		<50	--	--	--	--	--	--
MW-106	4/21/92		99.71	--	8.02	0.00	91.69	--		--		--	--	--	--	--	--	--
MW-106	8/22/95		99.71	--	8.79	0.00	90.92	<250		<750		<50	--	--	--	--	--	--
MW-106	11/28/95		99.71	--	7.63	0.00	92.08	--		--		--	--	--	--	--	--	--
MW-106	3/12/96		99.71	--	8.04	0.00	91.67	<250		<750		<50	--	--	--	--	--	<2.0
MW-106	6/26/96		99.71	--	8.61	0.00	91.10	<250		<750		<50	--	--	--	--	--	<2.0
MW-106	10/9/96		99.71	--	8.65	0.00	91.06	<250		<750		<50	--	--	--	--	--	2.16
MW-106	2/12/97		99.71	--	7.95	0.00	91.76	<250		<750		<50	--	--	--	--	--	<2.0
MW-106	4/22/97		99.71	--	7.73	0.00	91.98	<250		<750		<50	--	--	--	--	--	<2.0
MW-106	8/5/97		99.71	--	8.68	0.00	91.03	<250		<750		<50	--	--	--	--	--	<2.0
MW-106	11/11/97		99.71	--	8.07	0.00	91.64	<250		<750		<50	--	--	--	--	--	<2.0
MW-106	2/11/98		99.71	--	8.12	0.00	91.59	<250		<750		<50	--	--	--	--	--	<2.0
MW-106	5/28/98		99.71	--	8.35	0.00	91.36	<250		<750		<50	--	--	--	--	--	4.53
MW-106	8/20/98		99.71	--	8.96	0.00	90.75	<250		<750		<50	--	--	--	--	--	<1.0
MW-106	11/19/98		99.71	--	9.37	0.00	90.34	<250		<750		<50	--	--	--	--	--	<1.0
MW-106	3/11/99		99.71	--	7.70	0.00	92.01	<250		<50		<80	--	--	--	--	--	1.1
MW-106	5/25/99		99.71	--	8.32	0.00	91.39	<250		--		<80	--	--	--	--	--	--
MW-106	8/17/99		99.71	--	8.70	0.00	91.01	<250		<500		<80	--	--	--	--	--	<1.0
MW-106	11/19/99		99.71	--	7.88	0.00	91.83	<250		--		<80	--	--	--	--	--	<1.0
MW-106	3/9/00		99.71	--	7.74	0.00	91.97	<250		<500		<80	--	--	--	--	--	<1.0
MW-106	6/13/00		99.71	--	8.39	0.00	91.32	<250		<500		<80	--	--	--	--	--	<1.0
MW-106	9/26/00		99.71	--	8.79	0.00	90.92	<250		<500		--	--	--	--	--	--	<1.0
MW-106	12/13/00		99.71	--	8.51	0.00	91.20	<250		<500		--	--	--	--	--	--	<1.0
MW-106	2/28/01		99.71	--	8.18	0.00	91.53	<250		<500		<80	--	--	--	--	--	<2.0
MW-106	5/2/01		99.71	--	8.17	0.00	91.54	<250		<500		88	--	--	--	--	--	<1.0
MW-106	10/30/02		99.73	--	8.98	0.00	90.75	<250		<500		<80	<0.500	<0.500	<0.500	<1.00	--	<1.0
MW-106	1/23/03		99.73	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-106	4/18/03		99.73	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-106	7/11/03		99.73	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-106	10/31/03		99.73	--	8.52	0.00	91.21	<250		<500		<50	<0.500	<0.500	<0.500	<1.00	--	<1.0[5]
MW-106	12/31/03		99.73	--	7.54	0.00	92.19	<50		<78		<98	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-106	5/3/04		99.73	**MONITORED/SAMPLED ANNUALLY**						--		--	--	--	--	--	--	--
MW-106	7/20/04		99.73	**MONITORED/SAMPLED ANNUALLY**						--		--	--	--	--	--	--	--
MW-106	10/7/04		99.71	--	8.50	0.00	91.21	<78		<97		<50	--	--	--	--	--	--
MW-106	10/20/05		99.71	--	8.70	0.00	91.01	<82		<100		<48	--	--	--	--	--	--
MW-106	9/6/07		99.71	--	8.88	0.00	90.83	<80		<100		<50	--	--	--	--	--	0.13
MW-106	5/27-28/08		99.71	**INACCESSIBLE**			--	--		--		--	--	--	--	--	--	--
MW-106	8/27-29/08	LFP	99.71	--	8.72	0.00	90.99	<79		<99		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-106	11/17-19/08	LFP	99.71	--	8.18	0.00	91.53	30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-106	2/16-18/09	LFP	99.71	--	8.40	0.00	91.31	<29		<67		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.072
MW-106	5/4-6/09	LFP	99.71	--	8.30	0.00	91.41	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-106	8/19-21/09	LFP	99.71	--	8.65	0.00	91.06	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-106	11/18-20/09	LFP	99.71	--	7.40	0.00	92.31	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.11
MW-106	2/8-10/10	LFP	99.71	--	8.05	0.00	91.66	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-106	MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED																	
MW-107	2/14/92		100.00	--	8.50	0.00	91.50	--		--		--	--	--	--	--	--	--
MW-107	2/18/92		100.00	--	8.50	0.00	91.50	--		--		--	--	--	--	--	--	--
MW-107	3/9/92		100.00	--	8.36	0.00	91.64	--		--		--	--	--	--	--	--	--

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-107	3/13/92		100.00	--	8.52	0.00	91.48	--		--		<50	--	--	--	--	--	--
MW-107	4/21/92		100.00	--	8.36	0.00	91.64	--		--		--	--	--	--	--	--	--
MW-107	8/22/95		100.00	--	9.06	0.00	90.94	<250		<750		<50	--	--	--	--	--	--
MW-107	11/28/95		100.00	--	8.00	0.00	92.00	--		--		--	--	--	--	--	--	--
MW-107	3/12/96		100.00	--	8.36	0.00	91.64	--		--		--	--	--	--	--	--	--
MW-107	6/26/96		100.00	--	8.89	0.00	91.11	--		--		--	--	--	--	--	--	--
MW-107	10/9/96		100.00	--	8.94	0.00	91.06	--		--		--	--	--	--	--	--	--
MW-107	2/12/97		100.00	--	8.25	0.00	91.75	<250		<750		<50	--	--	--	--	--	<2.0
MW-107	4/22/97		100.00	--	8.05	0.00	91.95	<250		<750		<50	--	--	--	--	--	<2.0
MW-107	8/5/97		100.00	--	8.95	0.00	91.05	<250		<809		<50	--	--	--	--	--	<2.0
MW-107	11/11/97		100.00	--	8.37	0.00	91.63	<250		**750**		<50	--	--	--	--	--	<2.0
MW-107	2/11/98		100.00	--	8.44	0.00	91.56	351		**750**		<50	--	--	--	--	--	<2.0
MW-107	5/28/98		100.00	--	8.73	0.00	91.27	<250		754		<50	--	--	--	--	--	--
MW-107	8/20/98		100.00	--	9.24	0.00	90.76	<250		**750**		<50	--	--	--	--	--	1
MW-107	11/19/98		100.00	--	9.65	0.00	90.35	<250		**750**		<50	--	--	--	--	--	<1.0
MW-107	3/11/99		100.00	--	8.08	0.00	91.92	**539**		**750**		<80	--	--	--	--	--	<1.0
MW-107	5/25/99		100.00	--	8.82	0.00	91.18	<250		<500		<80	--	--	--	--	--	--
MW-107	8/17/99		100.00	--	8.10	0.00	91.90	<250		--		<80	--	--	--	--	--	<1.0
MW-107	11/19/99		100.00	--	8.21	0.00	91.79	<250		<500		<80	--	--	--	--	--	<1.0
MW-107	3/9/00		100.00	--	8.08	0.00	91.92	<250		--		<80	--	--	--	--	--	<1.0
MW-107	6/13/00		100.00	--	8.88	0.00	91.12	<250		<500		<80	--	--	--	--	--	<1.0
MW-107	9/26/00		100.00	--	9.07	0.00	90.93	<250		<500		--	--	--	--	--	--	<1.0
MW-107	12/13/00		100.00	--	8.78	0.00	91.22	<250		<500		--	--	--	--	--	--	<1.0
MW-107	2/28/01		100.00	--	8.63	0.00	91.37	<250		<500		<80	--	--	--	--	--	<1.0
MW-107	5/2/01		100.00	--	8.63	0.00	91.37	<250		<500		88	--	--	--	--	--	<1.0
MW-107	10/30/02		100.00	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-107	1/23/03		100.00	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-107	4/18/03		100.00	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-107	7/11/03		100.00	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-107	10/31/03		100.00	UNABLE TO LOCATE			--	--		--		--	--	--	--	--	--	--
MW-107	12/31/03		100.00	--	7.92	0.00	92.08	<50		85		150	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-107	5/3/04		100.00	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-107	7/20/04		100.00	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-107	10/7/04		100.00	--	8.78	0.00	91.22	<80		<100		<50	--	--	--	--	--	--
MW-107	10/20/05		100.00	--	8.97	0.00	91.03	<81		<100		<48	--	--	--	--	--	--
MW-107	9/6/07		100.00	--	9.18	0.00	90.82	<78		<98		<50	--	--	--	--	--	0.07
MW-107	5/27-28/08		100.00	INACCESSIBLE			--	--		--		--	--	--	--	--	--	--
MW-107	8/27-29/08	LFP	100.00	--	8.98	0.00	91.02	<79		<99		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-107	11/17-19/08	LFP	100.00	--	8.46	0.00	91.54	38		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-107	2/16-18/09	LFP	100.00	--	8.62	0.00	91.38	35		70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.068
MW-107	5/4-6/09	LFP	100.00	--	8.95	0.00	91.05	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-107	8/19-21/09	LFP	100.00	--	9.11	0.00	90.89	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.27
MW-107	11/18-20/09	LFP	100.00	--	7.77	0.00	92.23	99		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-107	2/8-10/10	LFP	100.00	--	8.25	0.00	91.75	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-107	MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED																	
MW-108	2/14/92		99.79	--	8.10	0.00	91.69	--		--		--	--	--	--	--	--	--
MW-108	2/18/92		99.79	--	8.62	0.00	91.17	--		--		--	--	--	--	--	--	--
MW-108	3/9/92		99.79	--	8.49	0.00	91.30	--		--		--	--	--	--	--	--	--
MW-108	3/13/92		99.79	--	8.63	0.00	91.16	--		--		<50	--	--	--	--	--	--
MW-108	4/21/92		99.79	--	8.47	0.00	91.32	--		--		--	--	--	--	--	--	--
MW-108	8/22/95		99.79	--	9.04	0.00	90.75	<250		<750		<50	--	--	--	--	--	--
MW-108	11/28/95		99.79	--	7.98	0.00	91.81	--		--		--	--	--	--	--	--	--
MW-108	3/12/96		99.79	--	8.50	0.00	91.29	--		--		--	--	--	--	--	--	--
MW-108	6/26/96		99.79	--	8.86	0.00	90.93	--		--		--	--	--	--	--	--	--
MW-108	10/9/96		99.79	--	8.91	0.00	90.88	--		--		--	--	--	--	--	--	--
MW-108	2/12/97		99.79	--	8.41	0.00	91.38	<250		<750		<50	--	--	--	--	--	<2.0
MW-108	4/22/97		99.79	--	8.08	0.00	91.71	<250		<750		<50	--	--	--	--	--	<2.0
MW-108	8/5/97		99.79	--	8.94	0.00	90.85	<250		**825**		<50	--	--	--	--	--	<2.0
MW-108	11/11/97		99.79	--	8.53	0.00	91.26	<250		<750		<50	--	--	--	--	--	<2.0
MW-108	2/11/98		99.79	--	8.59	0.00	91.20	<250		**873**		<50	--	--	--	--	--	<2.0

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
MW-108	5/28/98		99.79	--	8.72	0.00	91.07	<250		<750		<50	--	--	--	--	--	4.27
MW-108	8/20/98		99.79	--	9.20	0.00	90.59	<250		<750		<50	--	--	--	--	--	<1.0
MW-108	11/19/98		99.79	--	9.60	0.00	90.19	<250		<750		<50	--	--	--	--	--	<1.0
MW-108	3/11/99		99.79	--	8.16	0.00	91.63	<250		<500		<80	--	--	--	--	--	<1.0
MW-108	5/25/99		99.79	--	8.69	0.00	91.10	<250		--		<80	--	--	--	--	--	--
MW-108	8/17/99		99.79	--	8.96	0.00	90.83	<250		<500		<80	--	--	--	--	--	<1.0
MW-108	11/19/99		99.79	--	8.08	0.00	91.71	<250		--		<80	--	--	--	--	--	<1.0
MW-108	3/9/00		99.79	--	8.16	0.00	91.63	<250		<500		<80	--	--	--	--	--	<1.0
MW-108	6/13/00		99.79	--	8.69	0.00	91.10	<250		<500		<80	--	--	--	--	--	<1.0
MW-108	9/26/00		99.79	--	9.04	0.00	90.75	<250		<500		--	--	--	--	--	--	<1.0
MW-108	12/13/00		99.79	--	8.81	0.00	90.98	<250		<500		--	--	--	--	--	--	<1.0
MW-108	2/28/01		99.79	--	8.60	0.00	91.19	<250		<500		<80	--	--	--	--	--	<1.0
MW-108	5/2/01		99.79	--	8.53	0.00	91.26	<250		<500		<80	--	--	--	--	--	<1.0
MW-108	10/30/02		99.79	--	9.24	0.00	90.55	<250		<500		<80	<0.500	<0.500	<0.500	<1.0	--	<1.0
MW-108	1/23/03		99.79	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-108	4/18/03		99.79	MONITORED/SAMPLED ANNUALLY						--		--	--	--	--	--	--	--
MW-108	7/11/03		99.79	**MONITORED/SAMPLED ANNUALLY**						--		--	--	--	--	--	--	--
MW-108	10/31/03		99.79	--	8.82	0.00	90.97	<250		<500		<50.0	<0.500	<0.500	<0.500	<1.0	--	<1.0[5]
MW-108	12/31/03		99.79	--	7.95	0.00	91.84	<50		<77		<97	<0.5	<0.5	<0.5	<1.5	--	<1.2
MW-108	5/3/04		99.79	**MONITORED/SAMPLED ANNUALLY**						--		--	--	--	--	--	--	--
MW-108	7/20/04		99.79	**MONITORED/SAMPLED ANNUALLY**						--		--	--	--	--	--	--	--
MW-108	10/7/04		99.79	--	8.80	0.00	90.99	<80		<100		<50	--	--	--	--	--	--
MW-108	10/20/05		99.79	--	8.89	0.00	90.90	<81		<100		<48	--	--	--	--	--	--
MW-108	10/20/05(D)		99.79	--	8.89	0.00	90.90	<81		<100		<48	--	--	--	--	--	--
MW-108	9/6/07		99.79	--	9.15	0.00	90.64	<80		<100		<50	--	--	--	--	--	0.12
MW-108	5/27-28/08		99.79	**INACCESSIBLE**			--	--		--		--	--	--	--	--	--	--
MW-108	8/27-29/08	LFP	99.79	--	9.00	0.00	90.79	<78		<98		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-108	11/17-19/08	LFP	99.79	--	8.48	0.00	91.31	<30		<70		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-108	2/16-18/09	LFP	99.79	--	8.74	0.00	91.05	1,100		230		<50	<0.5	<0.5	<0.5	<0.5	<0.5	0.070
MW-108	5/4-6/09	LFP	99.79	--	8.62	0.00	91.17	<29		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-108	8/19-21/09	LFP	99.79	--	9.07	0.00	90.72	<30		<69		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-108	11/18-20/09	LFP	99.79	--	7.64	0.00	92.15	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-108	2/8-10/10	LFP	99.79	--	8.50	0.00	91.29	<29		<68		<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
MW-108	MONITORING WELL DECOMMISSIONED/SAMPLING DISCONTINUED																	
Trip Blank	10/30/02		--	--	--	--	--	--		--		--	--	--	--	--	--	--
Trip Blank	1/23/03		--	--	--	--	--	--		--		<80	<0.500	<0.500	<0.500	<1.0	--	--
Trip Blank	4/18/03		--	--	--	--	--	--		--		<50	<0.500	<0.500	<0.500	<1.0	--	--
QA	7/11/03		--	--	--	--	--	--		--		<50	<0.500	<0.500	<0.500	<1.00	--	--
QA	10/31/03		--	--	--	--	--	--		--		<50	<0.500	<0.500	<0.500	<1.00	--	--
QA	12/31/03		--	--	--	--	--	<50		--		--	<0.5	<0.5	<0.5	<1.5	--	--
QA	5/3/2046		--	--	--	--	--	--		--		--	--	--	--	--	--	--
QA	7/20/04		--	--	--	--	--	--		--		<50	<0.500	<0.500	<0.500	<1.00	--	--
QA	5/27-28/08		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	8/27-29/08		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	11/17-19/08		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	2/16-18/09		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	5/4-6/09		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	8/19-21/09		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	11/18-20/09		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	2/8-10/10		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	5/12-13/10		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	8/11/10		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	11/3-4/10		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	2/3-4/11		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	5/23/11		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	8/23-24/11		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	11/7-9/11		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	2/6-8/12		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	5/2-4/12		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Well	Date	Purge Method	TOC[2] (ft.)	DTP (ft.)	DTW (ft.)	LNAPLT (ft.)	GWE[3] (ft.)	TPH-DRO[4]	TPH-DRO w/Si gel	TPH-HRO[4]	TPH-HRO w/Si gel	TPH-GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	D. Lead
QA	8/1-3/12		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	11/26-28/12		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	02/4-6/13		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	05/6-8/13		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	9/9-13/13		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	11/18-22/13		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	2/4-11/14		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	6/12-14/14		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	8/18-21/14		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	11/19-20/14		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	2/17-20/14		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	5/11-15/15		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	8/10-11/15		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	11/16-18/15		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	5/13-14/16		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	11/14/16		--	--	--	--	--	--		--		<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	5/11/18		--	--	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	11/11-12/2018		--	--	--	--	--	--	--	--	--	<19	<0.2	<0.2	<0.4	<1	--	--
QA	4/27/19		--	--	--	--	--	--	--	--	--	<19	<0.2	<0.2	<0.4	<1	--	--
QA	11/3/19		--	--	--	--	--	--	--	--	--	<19	<0.2	<0.2	<0.4	<1	--	--
QA	5/6/20		--	--	--	--	--	--	--	--	--	38.7 B J	<1.00	<1.00	<1.00	<3.00	--	--
	Standard Laboratory Reporting Limits:							--		--		50	0.5	0.5	0.5	1.0	0.5	0.5
	Current Method:[7]							NWTPH-Dx Extended				NWTPH-Gx and USEPA 8260B						USEPA 6020

Table 2. Historical Groundwater Gauging Data and Select Analytical Results
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Notes:
800/1,000 = GRO MTCA Method A CUL with benzene present is 800 µg/L and without is 1,000 µg/L
BOLD and highlighted values exceed their respective MTCA Method A cleanup level
BOLD values are non-detect do not exceed the laboratory method detection limit (MDL), but the MDL exceeds the MTCA Method A cleanup level
Results reported in micrograms per liter (µg/L)

Abbreviations:
TOC = Top of Casing in feet above North American Vertical Datum of 1988 (NAVD 88)
DTW = Depth to water in feet below TOC
NAPL = Non-aqueous phase liquid thickness in feet
GWE = Groundwater elevation in feet relative to NAVD88
-- = Not applicable, not available, or not analyzed
MTCA = Model Toxics Control Act Cleanup
CUL = Cleanup Level
DUP = Blind duplicate sample results
LFP = Low flow (purge) sample
QA = Quality Assurance

Laboratory Qualifiers:
< = Not detected at or above the laboratory Reporting Limit (RL) or Limit of Quantification (LOQ)
J = Estimated value; result is greater than the laboratory Method Detection Limit (MDL) but less than the RL or LOQ.

Analytical Methods:
Samples analyzed by USEPA Method 8260
BTEX = benzene, toluene, ethylbenzene, and total xylenes
MTBE = Methyl tertiary butyl ether
TPH-GRO = Total Petroleum Hydrocarbons as Gasoline Range Organics analyzed by NWTPH-Gx
Samples analyzed by NWTPH-Dx
TPH-DRO = Total Petroleum Hydrocarbon as Diesel Range Organics
TPH-HRO = Total Petroleum Hydrocarbons as Heavy Oil Range Organics
Dissolved Lead analyzed by USEPA 6020

Table 2A. Summary of Groundwater Monitoring Data 2018-2020
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

ARCADIS Design & Consultancy for natural and built assets

Well	Date	TOC	DTW	NAPL	GWE	TPH-GRO	TPH-DRO	TPH-DRO w/Si gel	TPH-HRO	TPH-HRO w/Si gel	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Dissolved Lead
				MTCA Method A CULs		800/1,000	500	500	500	500	5	1,000	700	1,000	20	15
MW-103	05/11/2018	107.81	8.56	0.00	99.25				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-103	11/11-12/2018	107.81	8.91	0.00	98.90				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-103	04/27/2019	107.81	8.29	0.00	99.52				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-103	11/03/2019	107.81	8.55	0.00	99.26				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-103	Nov 2019	107.81	--	--	--				WELL ABANDONED							
MW-109	05/11/2018	107.35	7.38	0.00	99.97	<50	<28	31	<66	<66	<0.5	<0.5	<0.5	<0.5	<0.5	<0.11
MW-109	11/11-12/2018	107.35	7.47	0.00	99.88	<19	40	<28	260	96	<0.2	<0.2	<0.4	<1	--	<1.1
MW-109	04/27/2019	107.35	7.28	0.00	100.07	<19	97	<30	<67	<67	<0.2	<0.2	<0.4	<1	--	<1.1
MW-109	11/03/2019	107.35	7.49	0.00	99.86	<19	41 J	<30	95 J	<68	<0.2	<0.2	<0.4	<1	--	**29.4**
MW-109	05/06/2020	107.35	7.50	0.00	99.85	51.3 B J	<200	<200	<250	<250	<1.00	<1.00	<1.00	<3.00	--	<5.00
MW-109	11/7/2020	107.35	6.62	0.00	100.73				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-110	05/11/2018	108.89	9.12	0.00	99.77				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-110	11/11-12/2018	108.89	9.30	0.00	99.59				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-110	04/27/2019	108.89	8.93	0.00	99.96				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-110	11/03/2019	108.89	9.15	0.00	99.74				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-110	05/05/2020	108.89	9.15	0.00	99.74				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-110	05/05/2020	108.89	9.15	0.00	99.74				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-110	11/7/2020	108.89	8.27	0.00	100.62				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-110	05/24/2021	108.89	9.61	0.00	99.28				WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY							
MW-111	05/11/2018	107.12	7.57	0.00	99.55	**6,600**	**1,400**	440	**970**	400	**14**	2	45	3	<0.5	13.8
MW-111	11/11-12/2018	107.12	7.31	0.00	99.81	**4,000**	**3,300**	300	320	<68	3	0.6	33	3	--	**92.8**
MW-111	04/27/2019	107.12	7.11	0.00	100.01	**5,800**	**1,800**	**900**	**1,900**	**1,100**	3	0.6 J	29	2 J	--	**17.8**
MW-111	11/03/2019	107.12	7.31	0.00	99.81	**4,500**	**2,100**	250	**970**	400	1	0.3 J	20	2 J	--	**49.4**
MW-111	05/06/2020	107.12	7.60	0.00	99.52	37.8 B J	**1,530**	**739**	**1,670**	**1,050**	0.824 J	0.394 J	14	1.53 J	--	10.2
MW-111	11/7/2020	107.12	6.45	0.00	100.67	511	**1,300**	144 B J	**2,980**	494 B	<1.00	1.15	0.415 J	<3.00	--	1.84 J
MW-111	05/24/2021	107.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-112	05/11/2018	107.58	7.82	0.00	99.76	<50	--	59	--	<66	<0.5	<0.5	<0.5	<0.5	<0.5	0.20
MW-112	11/11-12/2018	107.58	7.81	0.00	99.77	<19	--	<28	--	<66	<0.2	<0.2	<0.4	<1	--	<1.1
MW-112	04/27/2019	107.58	7.62	0.00	99.96	38 J	--	130	--	98 J	<0.2	<0.2	<0.4	<1	--	<1.1
MW-112	11/03/2019	107.58	7.82	0.00	99.76	38 J	--	60 J	--	<68	<0.2	<0.2	<0.4	<1	--	0.25 J
MW-112	05/06/2020	107.58	7.83	0.00	99.75	42.6 B J	<200	--	<250	--	<1.00	<1.00	<1.00	<3.00	--	<5.00
MW-112	11/7/2020	107.58	6.94	0.00	100.64	183 B	<200	<200	131 J	<250	<1.00	<1.00	<1.00	<3.00	--	<5.00
MW-113	05/11/2018	108.44	8.65	0.00	99.79	<50	--	<28	--	<66	<0.5	<0.5	<0.5	<0.5	<0.5	<0.11
MW-113	11/11-12/2018	108.44	8.68	0.00	99.76	<19	--	<28	--	<65	<0.2	<0.2	<0.4	<1	--	<1.1
MW-113	04/27/2019	108.44	8.11	0.00	100.33	<19	--	81 J	--	130 J	<0.2	<0.2	<0.4	<1	--	<1.1
MW-113	11/03/2019	108.44	8.65	0.00	99.79	<19	--	100	--	<66	<0.2	<0.2	<0.4	<1	--	0.25 J
MW-113	05/06/2020	108.44	8.67	0.00	99.77	<100	<200	--	<250	--	<1.00	<1.00	<1.00	<3.00	--	<5.00
MW-113	11/7/2020	108.44	7.77	0.00	100.67	44.4 B J	<200	<200	<250	<250	<1.00	<1.00	<1.00	<3.00	--	0.888 J
MW-114	05/11/2018	106.89	6.70	0.00	100.19	<50	29	<28	230	98	<0.5	<0.5	<0.5	<0.5	<0.5	0.40
MW-114	11/11-12/2018	106.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-114	04/27/2019	106.89	6.60	0.00	100.29	<19	99	<29	300	<66	<0.2	<0.2	<0.4	<1	--	5

Table 2A. Summary of Groundwater Monitoring Data 2018-2020
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

ARCADIS Design & Consultancy for natural and built assets

Well	Date	TOC	DTW	NAPL	GWE	TPH-GRO	TPH-DRO	TPH-DRO w/Si gel	TPH-HRO	TPH-HRO w/Si gel	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Dissolved Lead
MW-114	11/03/2019	106.89	6.80	0.00	100.09	<19	110	<30	**670**	310	<0.2	<0.2	<0.4	<1	--	0.21 J
MW-114	05/06/2020	106.89	6.77	0.00	100.12	38.2 B J	<200	--	<250	--	<1.00	<1.00	<1.00	<3.00	--	<5.00
MW-114	11/7/2020	106.89	5.95	0.00	100.94	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-115	05/11/2018	107.94	8.20	0.00	99.74	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-115	11/11-12/2018	107.94	8.31	0.00	99.63	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-115	04/27/2019	107.94	7.49	0.00	100.45	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-115	11/03/2019	107.94	8.20	0.00	99.74	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-115	Nov 2019	107.94	--	--	--	WELL ABANDONED										
MW-116	05/11/2018	107.56	8.43	0.00	99.13	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-116	11/11-12/2018	107.56	9.04	0.00	98.52	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-116	04/27/2019	107.56	8.30	0.00	99.26	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-116	11/03/2019	107.56	8.48	0.00	99.08	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-116	Nov 2019	107.56	--	--	--	WELL ABANDONED										
MW-117	05/11/2018	106.57	7.04	0.00	99.53	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-117	11/11-12/2018	106.57	6.58	0.00	99.99	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-117	04/27/2019	106.57	6.82	0.00	99.75	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-117	11/03/2019	106.57	7.09	0.00	99.48	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-117	Nov 2019	106.57	--	--	--	WELL ABANDONED										
MW-118	05/11/2018	106.72	7.31	0.00	99.41	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-118	11/11-12/2018	106.72	7.34	0.00	99.38	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-118	04/27/2019	106.72	7.05	0.00	99.67	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-118	11/03/2019	106.72	7.66	0.00	99.06	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-118	Nov 2019	106.72	--	--	--	WELL ABANDONED										
MW-120	05/11/2018	107.11	7.49	0.00	99.62	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-120	11/11-12/2018	107.11	7.46	0.00	99.65	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-120	04/27/2019	107.11	--	--	--	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-120	11/03/2019	107.11	7.50	0.00	99.61	WELL REMOVED FROM SAMPLING PROGRAM - MONITORING ONLY										
MW-120	Nov 2019	107.11	--	--	--	WELL ABANDONED										
B-1	05/11/2018	107.74	7.31	0.00	100.43	<50	--	<29	--	<67	<0.5	<0.5	<0.5	<0.5	<0.5	<0.11
B-1	11/11-12/2018	107.74	7.48	0.00	100.26	<19	--	30	--	<67	<0.2	<0.2	<0.4	<1	--	<1.1
B-1	04/27/2019	107.74	7.23	0.00	100.51	<19	--	32 J	--	<66	<0.2	<0.2	<0.4	<1	--	<1.1
B-1	11/03/2019	107.74	7.45	0.00	100.29	<19	--	<29	--	<66	<0.2	<0.2	<0.4	<1	--	0.30 J
B-1	05/06/2020	107.74	7.46	0.00	100.28	32.9 B J	<200	--	--	<250	<1.00	<1.00	<1.00	<3.00	--	<5.00
B-1	11/7/2020	107.74	6.6	0.00	101.14	--	--	--	--	--	--	--	--	--	--	--
B-2	05/11/2018	108.99	8.47	0.00	100.52	<50	--	<28	--	<66	<0.5	<0.5	<0.5	<0.5	<0.5	<0.11
B-2	11/11-12/2018	108.99	8.63	0.00	100.36	<19	--	<29	--	<67	<0.2	<0.2	<0.4	<1	--	<1.1
B-2	04/27/2019	108.99	8.43	0.00	100.56	<19	--	31 J	--	<66	<0.2	<0.2	<0.4	<1	--	<1.1
B-2	11/03/2019	108.99	8.66	0.00	100.33	<19	--	67 J	--	<66	<0.2	<0.2	<0.4	<1	--	1.2
B-2	05/06/2020	108.99	8.67	0.00	100.32	32.6 B J	<200	--	--	<250	<1.00	<1.00	<1.00	<3.00	--	<5.00
B-2	11/7/2020	108.99	7.59	0.00	101.40	--	--	--	--	--	--	--	--	--	--	--
B-3	05/11/2018	108.46	8.14	0.00	100.32	**900**	82	33	68	<67	<0.5	<0.5	5	<0.5	<0.5	0.76

Table 2A. Summary of Groundwater Monitoring Data 2018-2020
COWLITZ BP / COWLITZ Food and Fuel / Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

ARCADIS Design & Consultancy for natural and built assets

Well	Date	TOC	DTW	NAPL	GWE	TPH-GRO	TPH-DRO	TPH-DRO w/Si gel	TPH-HRO	TPH-HRO w/Si gel	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Dissolved Lead
B-3	11/11-12/2018	108.46	8.24	0.00	100.22	**2,100**	**2,800**	180	370	<66	0.9	0.3	5	<1	--	11.1
B-3	04/27/2019	108.46	8.02	0.00	100.44	<19	--	160	--	<66	<0.2	<0.2	<0.4	<1	--	3.4
B-3	11/03/2019	108.46	8.25	0.00	100.21	**1,500**	**1,400**	90 J	84 J	<67	0.2 J	0.3 J	8	<1	--	8.2
B-3	05/06/2020	108.46	8.35	0.00	100.11	92.3 B J	273	79.5 J	--	104 J	<1.00	<1.00	<1.00	<3.00	--	<5.00
B-3	11/7/2020	108.46	7.51	0.00	100.95	**807**	**1,280**	122 B J	386	<250	0.240 J	<1.00	1.52	0.315 J	--	5.89
B-4	05/11/2018	107.68	7.39	0.00	100.29	**3,600**	**650**	180	**700**	260	4	<0.5	1	<0.5	--	0.97
B-4	11/11-12/2018	107.68	7.52	0.00	100.16	**1,600**	230	110	330	150	<0.2	<0.2	<0.4	<1	--	1.8
B-4	04/27/2019	107.68	7.31	0.00	100.37	940	--	90 J	--	<68	<0.2	<0.2	<0.4	<1	--	6.9
B-4	11/03/2019	107.68	7.51	0.00	100.17	**1,500**	290	120	410	270	<0.2	<0.2	0.4 J	<1	--	**36.3**
B-4	05/06/2020	107.68	7.54	0.00	100.14	**1,800**	230	115 J	--	106 J	<1.00	<1.00	<1.00	<3.00	--	9.59
B-4	11/7/2020	107.68	6.63	0.00	101.05	**1,360**	**1,490**	157 B J	**507**	<250	<1.00	<1.00	<1.00	<3.00	--	0.857 J
TPWHD	11/7/2020	--	--	--	--	55.9 B J	<200	<200	<250	<250	<1.00	<1.00	<1.00	<3.00	--	<5.00
							--		--							
QA	05/11/2018	--	--	--	--	<50	--	--	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	11/11-12/2018	--	--	--	--	<19	--	--	--	--	<0.2	<0.2	<0.4	<1	--	--
QA	04/27/2019	--	--	--	--	<19	--	--	--	--	<0.2	<0.2	<0.4	<1	--	--
QA	11/03/2019	--	--	--	--	<19	--	--	--	--	<0.2	<0.2	<0.4	<1	--	--
QA	05/06/2020	--	--	--	--	38.7 B J	--	--	--	--	<1.00	<1.00	<1.00	<3.00	--	--
QA	11/7/2020	--	--	--	--	43.1 B J	--	--	--	--	<1.00	<1.00	<1.00	<3.00	--	--

Notes:
800/1,000 = GRO MTCA Method A CUL with benzene present is 800 µg/L and without is 1,000 µg/L
BOLD and highlighted values exceed their respective MTCA Method A cleanup level
BOLD values are non-detect do not exceed the laboratory method detection limit (MDL), but the MDL exceeds the MTCA Method A cleanup level
Results reported in micrograms per liter (µg/L)

Abbreviations:
TOC = Top of Casing in feet above North American Vertical Datum of 1988 (NAVD 88)
DTW = Depth to water in feet below TOC
NAPL = Non-aqueous phase liquid thickness in feet
GWE = Groundwater elevation in feet relative to NAVD88
-- = Not applicable, not available, or not analyzed
MTCA = Model Toxics Control Act Cleanup
CUL = Cleanup Level
DUP = Blind duplicate sample results
QA = Quality Assurance

Laboratory Qualifiers:
< = Not detected at or above the laboratory Reporting Limit (RL) or Limit of Quantification (LOQ)
J = Estimated value; result is greater than the laboratory Method Detection Limit (MDL) but less than the RL or LOQ.

Analytical Methods:
Samples analyzed by USEPA Method 8260
BTEX = benzene, toluene, ethylbenzene, and total xylenes
MTBE = Methyl tertiary butyl ether
TPH-GRO = Total Petroleum Hydrocarbons as Gasoline Range Organics analyzed by NWTPH-Gx
Samples analyzed by NWTPH-Dx
TPH-DRO = Total Petroleum Hydrocarbon as Diesel Range Organics
TPH-HRO = Total Petroleum Hydrocarbons as Heavy Oil Range Organics
Dissolved Lead analyzed by USEPA 6020

TABLE 3
DISPROPORTIONATE COST ANALYSIS – CLEANUP ACTION ALTERNATIVES RANKING
COWLITZ BP SITE / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Evaluation Criteria	Alternative 1 Air Sparge/SVE, MNA, and Institutional Controls	Alternative 2 Partial Excavation, MNA, and Institutional Controls	Alternative 3 Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls	Alternative 4 MNA, Institutional Controls, and Site-Wide Excavation in Conjunction with Redevelopment or Service Station Upgrades	Alternative 5 Site-Wide Excavation, MNA, and Institutional Controls
Protectiveness	Short term - existing risks would be reduced by partial source remediation by in-situ air sparge/SVE, 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 estimated restoration time frame to attain cleanup standards for the Site is approximately 10 - 15 years. This alternative is considered to be more protective than Alternative 4 due to reduction in short-term risks by active remediation. This alternative is considered to be similar to Alternative 2 in protectiveness. Protectiveness Rank = 2	Short term - existing risks would be reduced by partial source remediation by excavation, 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 estimated restoration time frame to attain cleanup standards for the Site is approximately 10 - 15 years. This alternative is considered to be more protective than Alternative 4 due to reduction in short-term risks by active remediation. This alternative is considered to be similar to Alternative 1 in protectiveness. Protectiveness Rank = 2	Short term - existing risks would be reduced by partial source remediation by excavation and air sparge/SVE, 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 estimated restoration time frame to attain cleanup standards for the Site is approximately 10 years. This alternative is considered to be more protective than Alternatives 1, 2, and 4 due to additional reduction in short-term risks by two phases of active remediation. Protectiveness Rank = 3	Short term - existing risks would be managed using institutional controls. Long term – existing risks would be eliminated by achieving Site cleanup levels through site-wide excavation and MNA. Improvement of overall environmental quality is likely to be the same for each of the alternatives evaluated. The estimated restoration time frame to attain cleanup standards for the Site is approximately 10 - 25 years. This alternative is considered the least protective because it has the potential to result in the longest restoration time frame. Protectiveness Rank = 1	Short term - existing risks would be reduced by source remediation through site-wide excavation, 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 estimated restoration time frame to attain cleanup standards for the Site is approximately 5 - 10 years. This alternative is considered the most protective because it is the most aggressive cleanup action and would likely result in the shortest restoration time frame. Protectiveness Rank = 4

TABLE 3
DISPROPORTIONATE COST ANALYSIS – CLEANUP ACTION ALTERNATIVES RANKING
COWLITZ BP SITE / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Evaluation Criteria	Alternative 1 Air Sparge/SVE, MNA, and Institutional Controls	Alternative 2 Partial Excavation, MNA, and Institutional Controls	Alternative 3 Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls	Alternative 4 MNA, Institutional Controls, and Site-Wide Excavation in Conjunction with Redevelopment or Service Station Upgrades	Alternative 5 Site-Wide Excavation, MNA, and Institutional Controls
Permanence	Alternative 1 is considered to provide the least degree of permanence relative to the other alternatives because this alternative does not include an excavation phase that would physically remove a portion of the contaminated soil from the Site. Permanence Rank = 1	Alternatives 2 and 3 are considered to provide greater permanence than Alternative 1 because these alternatives would physically remove a portion of the contaminated soil from the Site. However, these alternatives are less permanent than Alternatives 4 and 5, which would physically remove a greater portion of contaminated soil. Permanence Rank = 2	Alternatives 2 and 3 are considered to provide greater permanence than Alternative 1 because these alternatives would physically remove a portion of the contaminated soil from the Site. However, these alternatives are less permanent than Alternatives 4 and 5, which would physically remove a greater portion of contaminated soil. Permanence Rank = 2	Alternatives 4 and 5 are considered to provide the greatest degree of permanence because these alternatives will physically remove the most mass of contaminated soil from the Site. Permanence Rank = 3	Alternatives 4 and 5 are considered to provide the greatest degree of permanence because these alternatives will physically remove the most mass of contaminated soil from the Site. Permanence Rank = 3
Long-Term Effectiveness	Alternative 1 is considered to provide the least certainty of long-term effectiveness because this alternative would rely on active in-situ remediation by technologies that have not been pilot tested or otherwise confirmed to be effective at the Site. Long-Term Effectiveness Rank = 1	Alternative 2 is considered to have more certainly of long-term effectiveness than Alternative 1 because this alternative would include physical removal of a portion of the contaminated soil mass at the Site. However, this alternative is considered to have less long-term effectiveness than Alternatives 3 (because it includes active in-situ remediation by air sparge/SVE) and Alternatives 4 and 5 (because they include removal of a greater mass of contaminated soil at the Site). Long-Term Effectiveness Rank = 2	Alternative 3 is considered to have less certainty of long-term effectiveness than Alternatives 4 and 5 because it partially relies on an air sparge/SVE system (with unknown effectiveness) to achieve the Site cleanup standards. However, the addition of the air sparge/SVE system to this alternative is considered to provide a higher certainty of long-term effectiveness than Alternative 2, which relies solely on the partial excavation, MNA, and institutional controls. Long-Term Effectiveness Rank = 3	Alternatives 4 and 5 are considered to have the highest certainty of long-term effectiveness because these alternatives would physically remove the most mass of contaminated soil from the Site. Long-Term Effectiveness Rank = 4	Alternatives 4 and 5 are considered to have the highest certainty of long-term effectiveness because these alternatives would physically remove the most mass of contaminated soil from the Site. Long-Term Effectiveness Rank = 4

TABLE 3
DISPROPORTIONATE COST ANALYSIS – CLEANUP ACTION ALTERNATIVES RANKING
COWLITZ BP SITE / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Evaluation Criteria	Alternative 1 Air Sparge/SVE, MNA, and Institutional Controls	Alternative 2 Partial Excavation, MNA, and Institutional Controls	Alternative 3 Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls	Alternative 4 MNA, Institutional Controls, and Site-Wide Excavation in Conjunction with Redevelopment or Service Station Upgrades	Alternative 5 Site-Wide Excavation, MNA, and Institutional Controls
Management of Short-Term Risks	Short-term risks associated with Alternative 1 include: • Risks to workers and the public from physical hazards during well installation, trenching, and system construction activities. • Risks to workers and the public from exposure to hazardous substances during well installation and trenching activities. • Risks to workers from physical hazards and/or exposure to hazardous substances during system operation and site monitoring activities. This alternative is considered to have a greater degree of short-term risk than Alternative 2 because it includes a phase of system operation following construction of the air sparge/SVE system. Management of Short-Term Risks Rank = 3	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. • Risks to workers from physical hazards and/or exposure to hazardous substances during site monitoring activities. This alternative is considered to have a greater degree of short-term risk than Alternative 4 because it would require an additional phase of soil excavation and offsite transportation beyond what would be expected to occur during future station upgrades or redevelopment of the active station property. Management of Short-Term Risks Rank = 3	Short-term risks associated with Alternative 3 include: • Risks to workers and the public from physical hazards during excavation activities. • Risks to workers and the public from exposure to hazardous substances during excavation activities. • Risks to workers and the public from physical hazards during well installation, trenching, and system construction activities. • Risks to workers and the public from exposure to hazardous substances during well installation and trenching activities. • Risks to workers from physical hazards and/or exposure to hazardous substances during system operation and site monitoring activities. This alternative is considered to have a greater degree of short-term risk than Alternative 1 because it includes two phases of construction. Management of Short-Term Risks Rank = 2	Short-term risks associated with Alternative 4 include: • Risks to workers from physical hazards and/or exposure to hazardous substances during site monitoring activities. This alternative would likely result in the least amount of incremental short-term risks because the active remediation phase would be performed in conjunction with future station upgrades or redevelopment of the active station property. Although the extent of site work associated with Alternative 4 would be greater than Alternatives 1, 2, and 3, this alternative would likely be implemented while the active service station was shut down. Therefore, short-term risks could be effectively reduced by fencing or similar physical barriers to control public access to the Site. Management of Short-Term Risks Rank = 3	Short-term risks associated with Alternative 5 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. • Risks to workers from physical hazards and/or exposure to hazardous substances during site monitoring activities. This alternative is considered to have the greatest degree of short-term risks due to the magnitude of the associated demolition, excavation, and construction activities. Management of Short-Term Risks Rank = 1

TABLE 3
DISPROPORTIONATE COST ANALYSIS – CLEANUP ACTION ALTERNATIVES RANKING
COWLITZ BP SITE / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Evaluation Criteria	Alternative 1 Air Sparge/SVE, MNA, and Institutional Controls	Alternative 2 Partial Excavation, MNA, and Institutional Controls	Alternative 3 Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls	Alternative 4 MNA, Institutional Controls, and Site-Wide Excavation in Conjunction with Redevelopment or Service Station Upgrades	Alternative 5 Site-Wide Excavation, MNA, and Institutional Controls
Technical and Administrative Implementability	This alternative is likely to be technically and administratively implementable; however, pilot testing of the air sparge/SVE system will likely be necessary to fully evaluate the appropriateness of this alternative. This alternative may also require an air discharge permit for the SVE system. Institutional controls needed for this alternative are similar to Alternatives 2 and 3. Implementation of this alternative is considered to be technically and administratively equivalent to Alternative 2. Technical and Administrative Implementability Rank = 4	This alternative is considered to be technically and administratively implementable. Institutional controls needed for this alternative are similar to Alternatives 1 and 3. Implementation of this alternative is considered to be technically and administratively equivalent to Alternative 1. Technical and Administrative Implementability Rank = 4	This alternative is likely to be technically and administratively implementable; however, pilot testing of the air sparge/SVE system will likely be necessary to fully evaluate the appropriateness of this alternative. This alternative may also require an air discharge permit for the SVE system. Institutional controls needed for this alternative are similar to Alternatives 1 and 2. Implementation of this alternative will be similar to Alternatives 1 and 2; however, it is considered more technically challenging because it combines two phases of active remediation. This alternative would potentially be less administratively challenging than Alternatives 1 and 2, due to the shorter anticipated restoration time frame. Technical and Administrative Implementability Rank = 2	This alternative is considered to be technically and administratively implementable. This alternative is likely to require additional institutional controls, beyond those required for Alternatives 1 through 3, in order to guarantee funding for cleanup implementation at the time of a future site redevelopment. Implementation of this alternative is likely to be technically equivalent to Alternative 2; however, this alternative is likely to be more administratively challenging due to the longer period of MNA and maintenance of institutional controls that would be required to complete cleanup of the Site. Technical and Administrative Implementability Rank = 3	Administratively, this would be the most difficult alternative to implement due to impacts to operations of the existing active station facility. This alternative would be the most logistically challenging to implement due to the need to remove and replace existing service station infrastructure. Technical and Administrative Implementability Rank = 1

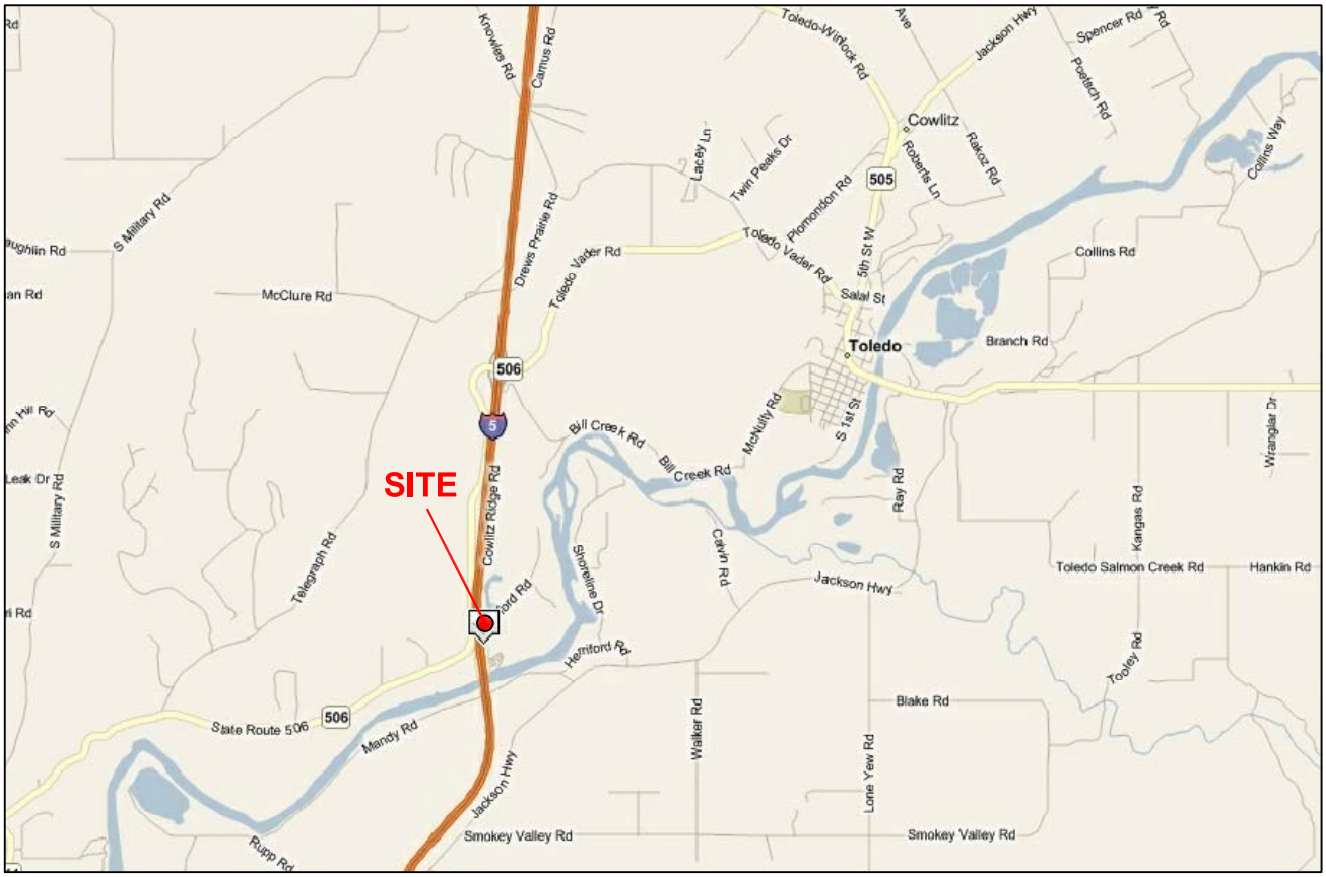
TABLE 3
DISPROPORTIONATE COST ANALYSIS – CLEANUP ACTION ALTERNATIVES RANKING
COWLITZ BP SITE / COWLITZ FOOD AND FUEL / FORMER TEXACO SERVICE STATION NO. 211556
101 Mulford Road
Toledo, Washington

Evaluation Criteria	Alternative 1 Air Sparge/SVE, MNA, and Institutional Controls	Alternative 2 Partial Excavation, MNA, and Institutional Controls	Alternative 3 Partial Excavation, Air Sparge/SVE, MNA, and Institutional Controls	Alternative 4 MNA, Institutional Controls, and Site-Wide Excavation in Conjunction with Redevelopment or Service Station Upgrades	Alternative 5 Site-Wide Excavation, MNA, and Institutional Controls
Consideration of Public Concerns	Alternatives 1 and 2 are generally considered equivalent with regard to public concerns because both of these alternatives would actively remediate a portion of the remaining petroleum hydrocarbon contamination at the Site. However, Alternative 1 was assigned a higher rank than Alternative 2 because Alternative 1 would likely be considered a "greener" or more environmentally sustainable alternative. Although a detailed analysis of the environmental impact of these two alternatives has not been performed, Alternative 2 would likely have a greater carbon footprint due to the trucking of impacted soil from the Site. Consideration of Public Concerns Rank = 3	Alternatives 1 and 2 are generally considered equivalent with regard to public concerns because both of these alternatives would actively remediate a portion of the remaining petroleum hydrocarbon contamination at the Site. However, Alternative 1 was assigned a higher rank than Alternative 2 because Alternative 1 would likely be considered a "greener" or more environmentally sustainable alternative. Although a detailed analysis of the environmental impact of these two alternatives has not been performed, Alternative 2 would likely have a greater carbon footprint due to the trucking of impacted soil from the Site. Consideration of Public Concerns Rank = 2	Currently, there are no known public concerns regarding the completion of cleanup actions at this Site. However, Alternative 3 was assigned the highest rank under this evaluation criterion because it would likely achieve the Site cleanup standards within the shortest restoration timeframe, without requiring the complete demolition and rebuilding of the current active service station. Consideration of Public Concerns Rank = 4	Alternative 4 is considered to be equivalent to Alternative 2 with regard to public concerns. Although Alternative 4 would likely have a larger carbon footprint than Alternative 2, this Alternative would result in near complete physical removal of all contaminated soil at the Site and would be efficiently implemented by taking advantage of other earth work being performed at the Site. This alternative would also result in the least amount of disruption to the operators, employees and customers of the businesses at the Site. Consideration of Public Concerns Rank = 2	Alternative 5 was assigned the lowest rank under this evaluation criterion because this alternative would result in the greatest disruption to the operators, employees and customers of the businesses at the Site, and would result in the largest carbon footprint of all the alternatives considered. Consideration of Public Concerns Rank = 1
Cumulative Ranking[1]	**14**	**15**	**16**	**16**	**14**

Notes:

1. The alternative with the highest cumulative ranking is considered to provide the greatest degree of benefit, relative to the other alternatives. A description of the process used to assign ranks for each of the disproportionate cost analysis evaluation criteria is presented in Section 6.2.3.1 of the FS text.

FIGURES



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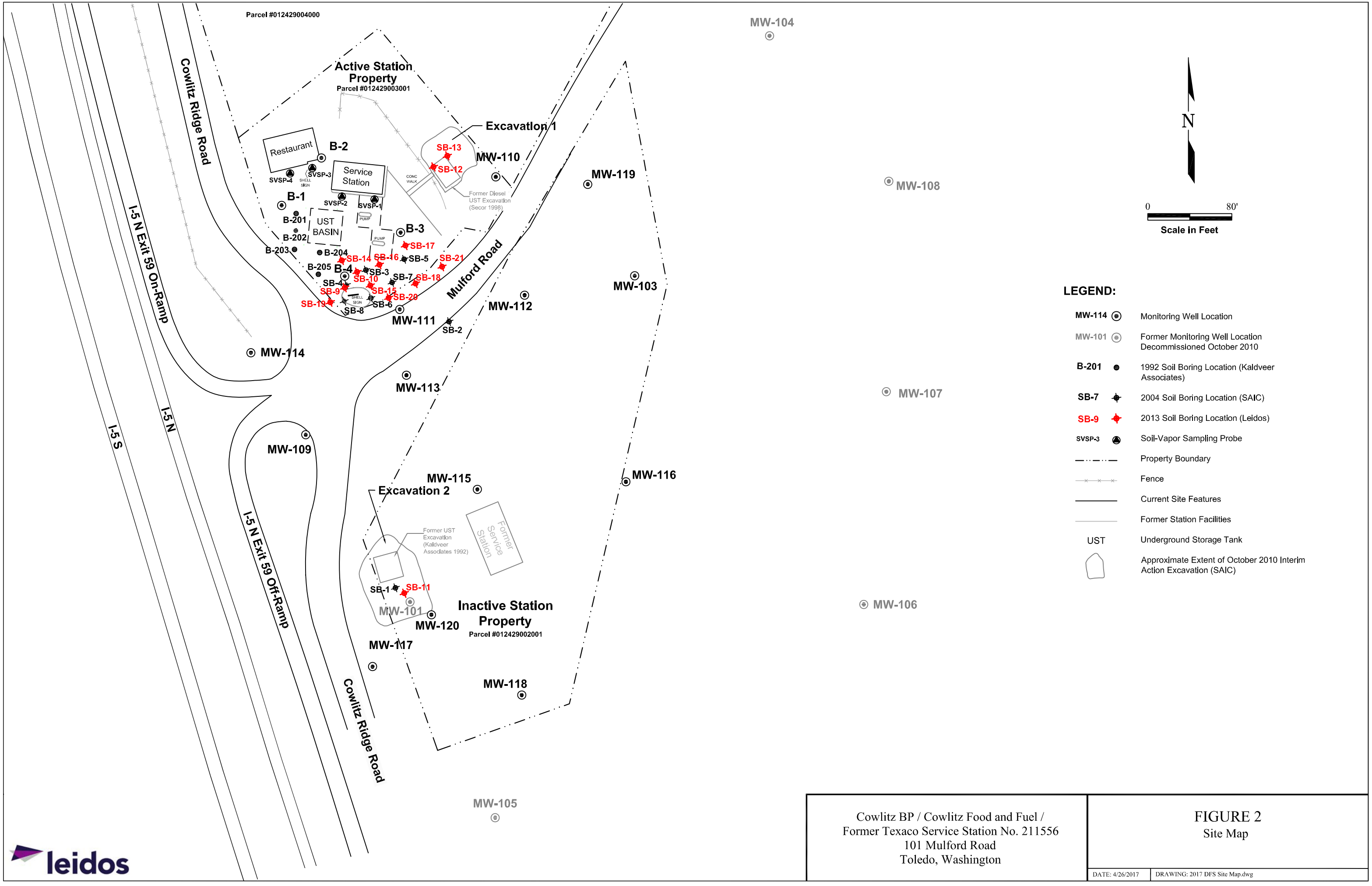
Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 1
Vicinity Map

DATE: 2/21/2014 | DRAWING: 211556_VM.dwg



LEGEND:

MW-114	Monitoring Well Location
MW-101	Former Monitoring Well Location Decommissioned October 2010
B-201	1992 Soil Boring Location (Kaldveer Associates)
SB-7	2004 Soil Boring Location (SAIC)
SB-9	2013 Soil Boring Location (Leidos)
SVSP-3	Soil-Vapor Sampling Probe
	Property Boundary
	Fence
	Current Site Features
	Former Station Facilities
UST	Underground Storage Tank
	Approximate Extent of October 2010 Interim Action Excavation (SAIC)

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101 Mulford Road
Toledo, Washington

FIGURE 2
Site Map

DATE: 4/26/2017 | DRAWING: 2017 DFS Site Map.dwg

C:\Users\salotagn7992\ACCDocs\Arcadis\AUS-CHEVRON-211556-TOLEDO Washington\Project Files\2021101-In Progress\01-DWG\GWM-1SA21-F03-GWE CONTOUR.dwg LAYOUT: 3 SAVED: 7/13/2021 4:44 PM ACADVER: 24.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 7/13/2021 4:47 PM BY: SALOTAGI, NANDITHA
XREFS: IMAGES: PROJECTNAME: ----
GEN-X-Base Map

COWLITZ RIDGE ROAD

I-5 N EXIT 59 ON-RAMP

I-5 N

MULFORD ROAD

Restaurant

B-2 (99.82)

SVSP-4

SVSP-3

SHELL SIGN

SERVICE STATION

SVSP-2

SVSP-1

CONC. WALK

FORMER DISPENSER ISLAND/ PRODUCT LINE EXCAVATION

FORMER DIESEL UST EXCAVATION (SECOR 1998)

B-1 (99.82)

UST BASIN

PUMP

B-3 (99.61)

B-4 (99.79)

SHELL SIGN

MW-110 (99.28)

MW-119

MW-111 (NG)

MW-112 (99.37)

MW-103

MW-114 (99.63)

MW-113 (99.33)

MW-109 (99.41)

MW-115

MW-116

99.80

99.60

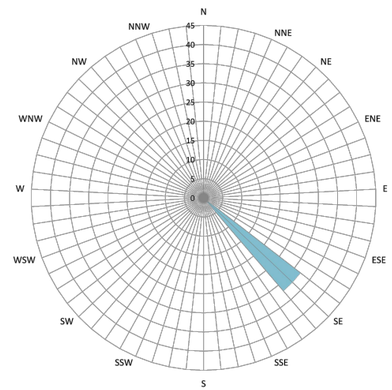
99.40

0.004 FT/FT

LEGEND:

- LEWIS COUNTY PARCEL No. 012429003001 BOUNDARY
- LEWIS COUNTY PARCEL No. 012429002001 BOUNDARY
- FENCE
- MW-119 — GROUNDWATER MONITORING WELL
- MW-119 — ABANDONED MONITORING WELL
- SVSP-2 — SOIL VAPOR SAMPLING PROBES
- UST — UNDERGROUND STORAGE TANK
- 99.80 — GROUNDWATER ELEVATION CONTOUR (DASHED WHERE INFERRED)
- (99.82) — GROUNDWATER ELEVATION (FEET)
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- 0.004 FT/FT — APPROXIMATE HYDRAULIC GRADIENT (FEET/FOOT)

N



Groundwater Gradient Direction

0 40' 80'

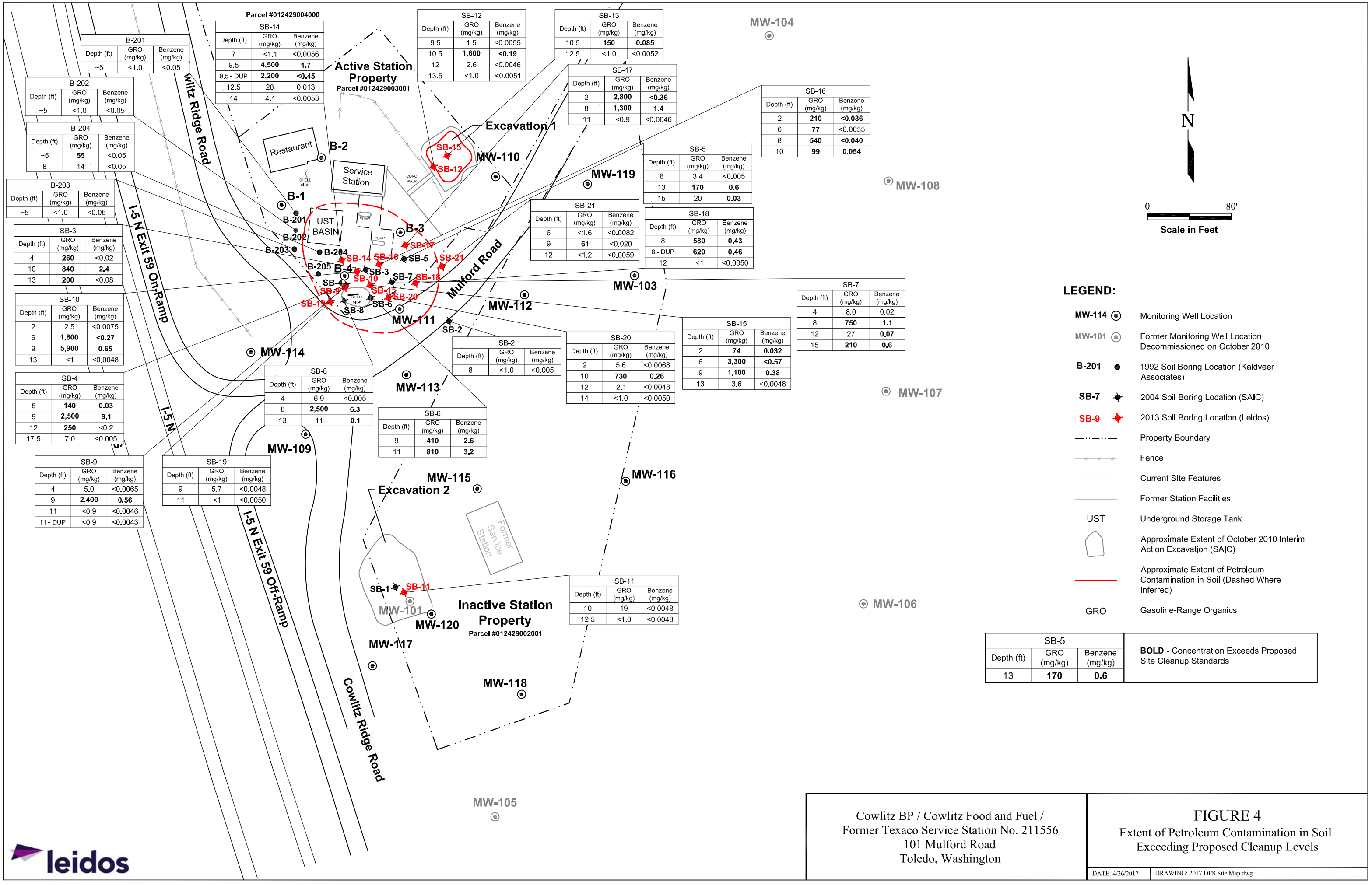
APPROXIMATE SCALE : 1 in. = 40 ft.

COWLITZ BP / COWLITZ FOOD AND FUEL /
FORMER TEXACO SERVICE STATION No. 211556
101 MULFORD ROAD
TOLEDO, WASHINGTON

GROUNDWATER ELEVATION CONTOUR MAP MAY 24, 2021

ARCADIS

FIGURE 3



B-201		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
~5	<1.0	<0.05

B-202		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
~5	<1.0	<0.05

B-204		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
~5	**55**	<0.05
8	14	<0.05

B-203		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
~5	<1.0	<0.05

SB-3		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
4	**260**	<0.02
10	**840**	**2.4**
13	**200**	<0.08

SB-10		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
2	2.5	<0.0075
6	**1,800**	**<0.27**
9	**5,900**	**0.65**
13	<1	<0.0048

SB-4		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
5	**140**	**0.03**
9	**2,500**	**9.1**
12	**250**	<0.2
17.5	7.0	<0.005

SB-9		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
4	5.0	<0.0065
9	**2,400**	**0.56**
11	<0.9	<0.0046
11 - DUP	<0.9	<0.0043

SB-19		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
9	5.7	<0.0048
11	<1	<0.0050

SB-14		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
7	<1.1	<0.0056
9.5	**4,500**	**1.7**
9.5 - DUP	**2,200**	**<0.45**
12.5	28	0.013
14	4.1	<0.0053

SB-12		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
9.5	1.5	<0.0055
10.5	**1,600**	**<0.19**
12	2.6	<0.0046
13.5	<1.0	<0.0051

SB-13		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
10.5	**150**	**0.085**
12.5	<1.0	<0.0052

SB-17		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
2	**2,800**	**<0.36**
8	**1,300**	**1.4**
11	<0.9	<0.0046

SB-16		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
2	**210**	**<0.036**
6	**77**	<0.0055
8	**540**	**<0.040**
10	**99**	**0.054**

SB-5		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
8	3.4	<0.005
13	**170**	**0.6**
15	20	**0.03**

SB-21		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
6	<1.6	<0.0082
9	**61**	<0.020
12	<1.2	<0.0059

SB-18		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
8	**580**	**0.43**
8 - DUP	**620**	**0.46**
12	<1	<0.0050

SB-7		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
4	8.0	0.02
8	**750**	**1.1**
12	27	**0.07**
15	**210**	**0.6**

SB-15		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
2	**74**	**0.032**
6	**3,300**	**<0.57**
9	**1,100**	**0.38**
13	3.6	<0.0048

SB-2		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
8	<1.0	<0.005

SB-20		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
2	5.6	<0.0068
10	**730**	**0.26**
12	2.1	<0.0048
14	<1.0	<0.0050

SB-8		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
4	6.9	<0.005
8	**2,500**	**6.3**
13	11	**0.1**

SB-6		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
9	**410**	**2.6**
11	**810**	**3.2**

SB-11		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
10	19	<0.0048
12.5	<1.0	<0.0048

LEGEND:

- **MW-114** — Monitoring Well Location
- MW-101 — Former Monitoring Well Location Decommissioned on October 2010
- **B-201** — 1992 Soil Boring Location (Kaldveer Associates)
- **SB-7** — 2004 Soil Boring Location (SAIC)
- **SB-9** — 2013 Soil Boring Location (Leidos)
- Property Boundary
- Fence
- Current Site Features
- Former Station Facilities
- UST — Underground Storage Tank
- Approximate Extent of October 2010 Interim Action Excavation (SAIC)
- Approximate Extent of Petroleum Contamination in Soil (Dashed Where Inferred)
- GRO — Gasoline-Range Organics

SB-5		
Depth (ft)	GRO (mg/kg)	Benzene (mg/kg)
13	**170**	**0.6**

BOLD - Concentration Exceeds Proposed Site Cleanup Standards

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Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 4
Extent of Petroleum Contamination in Soil
Exceeding Proposed Cleanup Levels

DATE: 4/26/2017 | DRAWING: 2017 DFS Site Map.dwg

Parcel #012429004000

Active Station Property
Parcel #012429003001

Cowlitz Ridge Road

I-5 N Exit 59 On-Ramp

Mulford Road

Restaurant

Service Station

SHELL SIGN

CONC WALK

PUMP

PUMP

SHELL SIGN

UST BASIN

Excavation 1

A

A'

B

B'

B-1

B-2

B-3

B-4

B-201

B-202

B-203

B-204

B-205

SB-2

SB-3

SB-4

SB-5

SB-6

SB-7

SB-8

SB-9

SB-10

SB-12

SB-13

SB-14

SB-15

SB-16

SB-17

SB-18

SB-19

SB-20

SB-21

MW-110

MW-111

MW-112

MW-113

MW-114

MW-119

N

0 40'

Scale in Feet

LEGEND:

- MW-114 — Monitoring Well Location
- B-201 — 1992 Soil Boring Location (Kaldveer Associates)
- SB-7 — 2004 Soil Boring Location (SAIC)
- SB-9 — 2013 Soil Boring Location (Leidos)
- Property Boundary
- Fence
- Current Site Features
- UST — Underground Storage Tank
- Approximate Extent of Petroleum Contamination in Soil (Dashed Where Inferred)
- A — A' — Approximate Geologic Cross Section Transect Line

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Toledo, Washington

FIGURE 5
Geologic Cross-Section Location Map

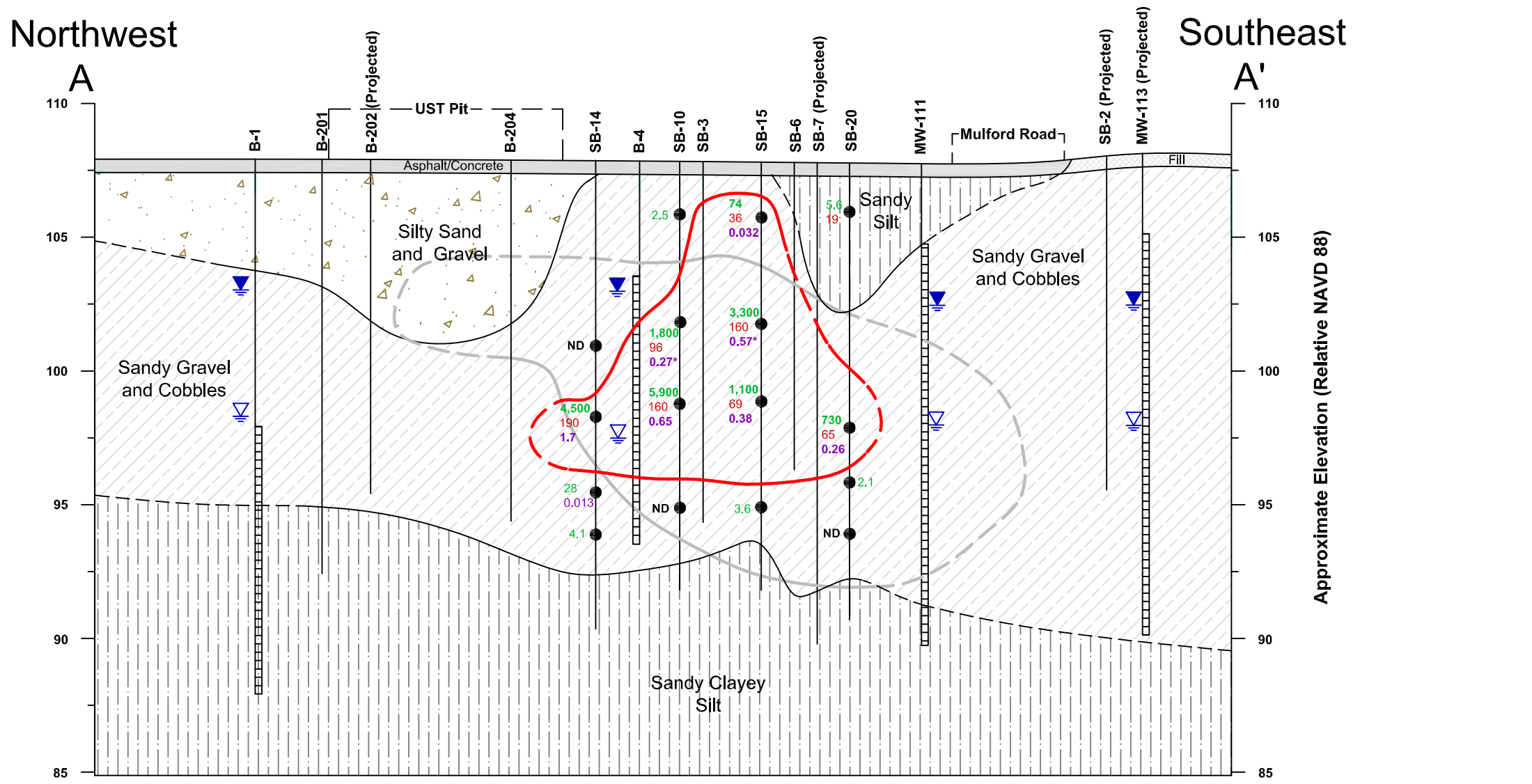
DATE: 4/26/2017 | DRAWING: 2017 DFS Site Map.dwg

LEGEND:

- Boring
- Screened interval
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on November 2013 soil sampling results (dashed where inferred)
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on pre-2005 soil sampling results (dashed where inferred)
- Highest recorded groundwater elevation
- Lowest recorded groundwater elevation
- Soil analytical sample location
- 3,300 — Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- 160 — Diesel-range hydrocarbon concentration in mg/kg
- 0.38 — Benzene concentration in mg/kg
- ND — No analytes were detected at or above laboratory detection limits
- **0.38** — Bold indicates analyte concentration exceeding the proposed Site cleanup standard
- **0.27*** — Analyte not detected at or above indicated laboratory detection limit; however, the detection limit exceeded the proposed Site cleanup standard
- Contact line between soil types

SOIL/ROCK CLASSIFICATION LEGEND:

- Concrete or Asphalt
- Brown, fine to coarse Sand and Gravel with some cobbles and silt
- Brown to gray, medium to coarse sandy Gravel and Cobbles
- Brown to greenish gray, fine sandy, clayey Silt



0 15 30 60

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

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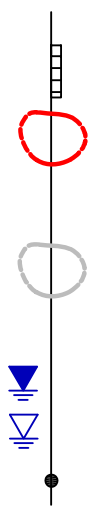
Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 6
Geologic Cross-Section A-A'

DATE: 4/28/2017 | DRAWING: 2017 DFS X-Section.dwg

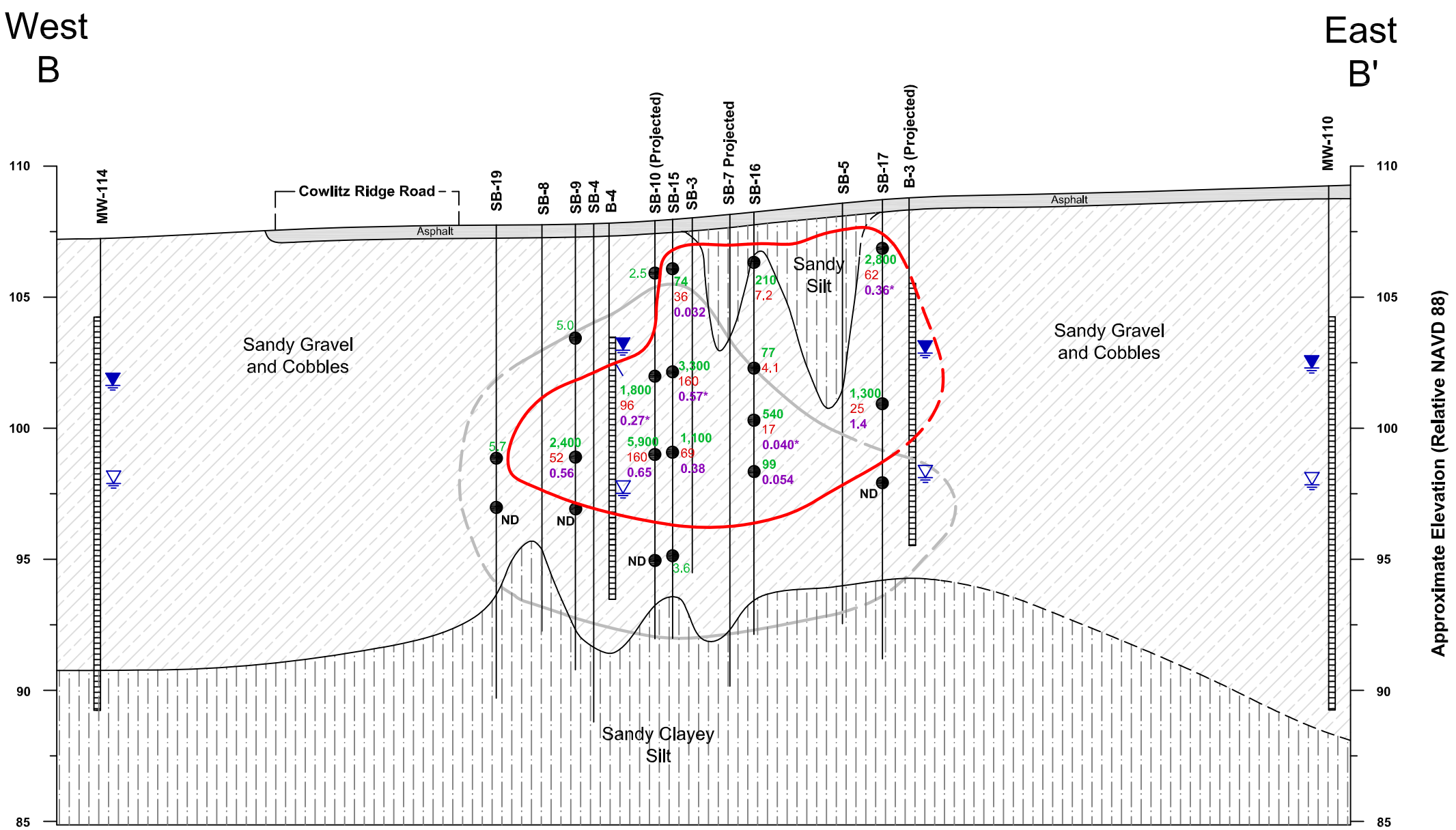
LEGEND:



- Boring
- Screened interval
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on November 2013 soil sampling results (dashed where inferred)
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on pre-2005 soil sampling results (dashed where inferred)
- Highest recorded groundwater elevation
- Lowest recorded groundwater elevation
- Soil analytical sample location
- 3,300 — Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- 160 — Diesel-range hydrocarbon concentration in mg/kg
- 0.38 — Benzene concentration in mg/kg
- ND — No analytes were detected at or above laboratory detection limits
- **0.38** — Bold indicates analyte concentration exceeding the proposed Site cleanup standard
- 0.27* — Analyte not detected at or above indicated laboratory detection limit; however, the detection limit exceeded the proposed Site cleanup standard
- Contact line between soil types

SOIL/ROCK CLASSIFICATION LEGEND:

- Concrete or Asphalt
- Brown, fine to coarse Sand and Gravel with some cobbles and silt
- Brown to gray, medium to coarse sandy Gravel and Cobbles
- Brown to greenish gray, fine sandy, clayey Silt



0 15 30 60

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

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Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 7

Geologic Cross-Section B-B'

DATE: 4/28/2017 | DRAWING: 2017 DFS X-Section.dwg

B-1

Date	8/11/2015	11/18/2015	5/14/2016	11/14/2016
GRO	<50	<50	<50	<50
DRO	<28	<29	–	–
DRO*	89	<29	<29	51
HRO	<66	<67	–	–
HRO*	74	<67	<67	<67
Benzene	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	<0.5	<0.5	<0.5
Total Xylenes	<0.5	<0.5	<0.5	<0.5

B-2

Date	8/11/2015	11/18/2015	5/14/2016	11/14/2016
GRO	<50	<50	<50	<50
DRO	<29	<29	--	--
DRO*	<29	<29	37	<28
HRO	<67	<67	--	--
HRO*	<67	<67	<67	<66
Benzene	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	<0.5	<0.5	<0.5
Total Xylenes	<0.5	<0.5	<0.5	<0.5

B-4

Date	8/11/2015	11/18/2015	5/14/2016	11/14/2016
GRO	600	**2,000**	**2,100**	**1,200**
DRO	66	130	120	400
DRO*	500	**750**	390	**1,000**
HRO	<66	270	300	**610**
HRO*	340	**740**	550	**1,000**
Benzene	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	4	0.9	0.9
Total Xylenes	0.6	<0.5	<0.5	<0.5

MW-110

Date	8/11/2015	11/16/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<29	NS	NS
DRO*	<28	<29	NS	NS
HRO	<66	<67	NS	NS
HRO*	<66	<67	NS	NS
Benzene	<0.5	<0.5	NS	NS
Toluene	<0.5	<0.5	NS	NS
Ethylbenzene	<0.5	<0.5	NS	NS
Total Xylenes	<0.5	<0.5	NS	NS

MW-119

Date	8/10/2015	11/16/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<29	NS	NS
DRO*	<28	<29	NS	NS
HRO	<66	<67	NS	NS
HRO*	<66	<67	NS	NS
Benzene	<0.5	<0.5	NS	NS
Toluene	<0.5	<0.5	NS	NS
Ethylbenzene	<0.5	<0.5	NS	NS
Total Xylenes	<0.5	<0.5	NS	NS

B-3

Date	8/11/2015	11/18/2015	5/14/2016	11/14/2016
GRO	660	**880**	400	560
DRO	130	57	38	<29
DRO*	**2,000**	**1,200**	**650**	380
HRO	<67	<67	<67	<67
HRO*	**550**	180	220	<67
Benzene	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	5	2	5	0.9
Total Xylenes	0.5	<0.5	<0.5	<0.5

MW-103

Date	8/10/2015	11/16/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<28	NS	NS
DRO*	<28	<28	NS	NS
HRO	<66	<66	NS	NS
HRO*	<66	<66	NS	NS
Benzene	<0.5	<0.5	NS	NS
Toluene	<0.5	<0.5	NS	NS
Ethylbenzene	<0.5	<0.5	NS	NS
Total Xylenes	<0.5	<0.5	NS	NS

MW-112

Date	8/10/2015	11/16/2015	5/13/2016	11/14/2016
GRO	<50	<50	<50	<50
DRO	<28	<29	--	–
DRO*	<28	<29	<28	56
HRO	<66	<67	--	–
HRO*	<66	<67	<66	<70
Benzene	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	<0.5	<0.5	<0.5
Total Xylenes	<0.5	<0.5	<0.5	<0.5

MW-111

Date	8/11/2015	11/18/2015	5/13/2016	11/14/2016
GRO	**4,500**	**1,900**	**4,200**	NS
DRO	470	150	350	NS
DRO*	**2,700**	450	**1,200**	NS
HRO	<67	<67	**680**	NS
HRO*	93	270	**1,600**	NS
Benzene	<3	<0.5	<0.5	NS
Toluene	<3	<0.5	<0.5	NS
Ethylbenzene	31	9	19	NS
Total Xylenes	6	1	2	NS

MW-116

Date	8/10/2015	11/17/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<29	NS	NS
DRO*	<28	<29	NS	NS
HRO	<66	<67	NS	NS
HRO*	<66	<67	NS	NS
Benzene	<0.5	<0.5	NS	NS
Toluene	<0.5	<0.5	NS	NS
Ethylbenzene	<0.5	<0.5	NS	NS
Total Xylenes	<0.5	<0.5	NS	NS

MW-113

Date	8/10/2015	11/16/2015	5/13/2016	11/14/2016
GRO	<50	<50	<50	<50
DRO	<28	<29	–	--
DRO*	<28	<29	<29	57
HRO	<66	<68	–	--
HRO*	<66	<68	<67	<66
Benzene	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	<0.5	<0.5	<0.5
Total Xylenes	<0.5	<0.5	<0.5	<0.5

MW-114

Date	8/11/2015	11/18/2015	5/14/2016	11/14/2016
GRO	<50	<50	<50	<50
DRO	<29	<29	35	36
DRO*	130	49	67	220
HRO	170	<67	260	280
HRO*	**570**	280	490	**790**
Benzene	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	<0.5	<0.5	<0.5
Total Xylenes	<0.5	<0.5	<0.5	<0.5

MW-109

Date	8/11/2015	11/17/2015	5/14/2016	11/14/2016
GRO	<50	<50	<50	<50
DRO	<29	<28	<28	<28
DRO*	130	36	<28	77
HRO	210	<66	<66	<65
HRO*	**640**	97	<66	94
Benzene	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	<0.5	<0.5	<0.5
Total Xylenes	<0.5	<0.5	<0.5	<0.5

MW-115

Date	8/10/2015	11/17/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<29	NS	NS
DRO*	33	<29	NS	NS
HRO	<66	<67	NS	NS
HRO*	<66	<67	NS	NS
Benzene	<0.5	<0.5	NS	NS
Toluene	<0.5	<0.5	NS	NS
Ethylbenzene	<0.5	<0.5	NS	NS
Total Xylenes	<0.5	<0.5	NS	NS

MW-120

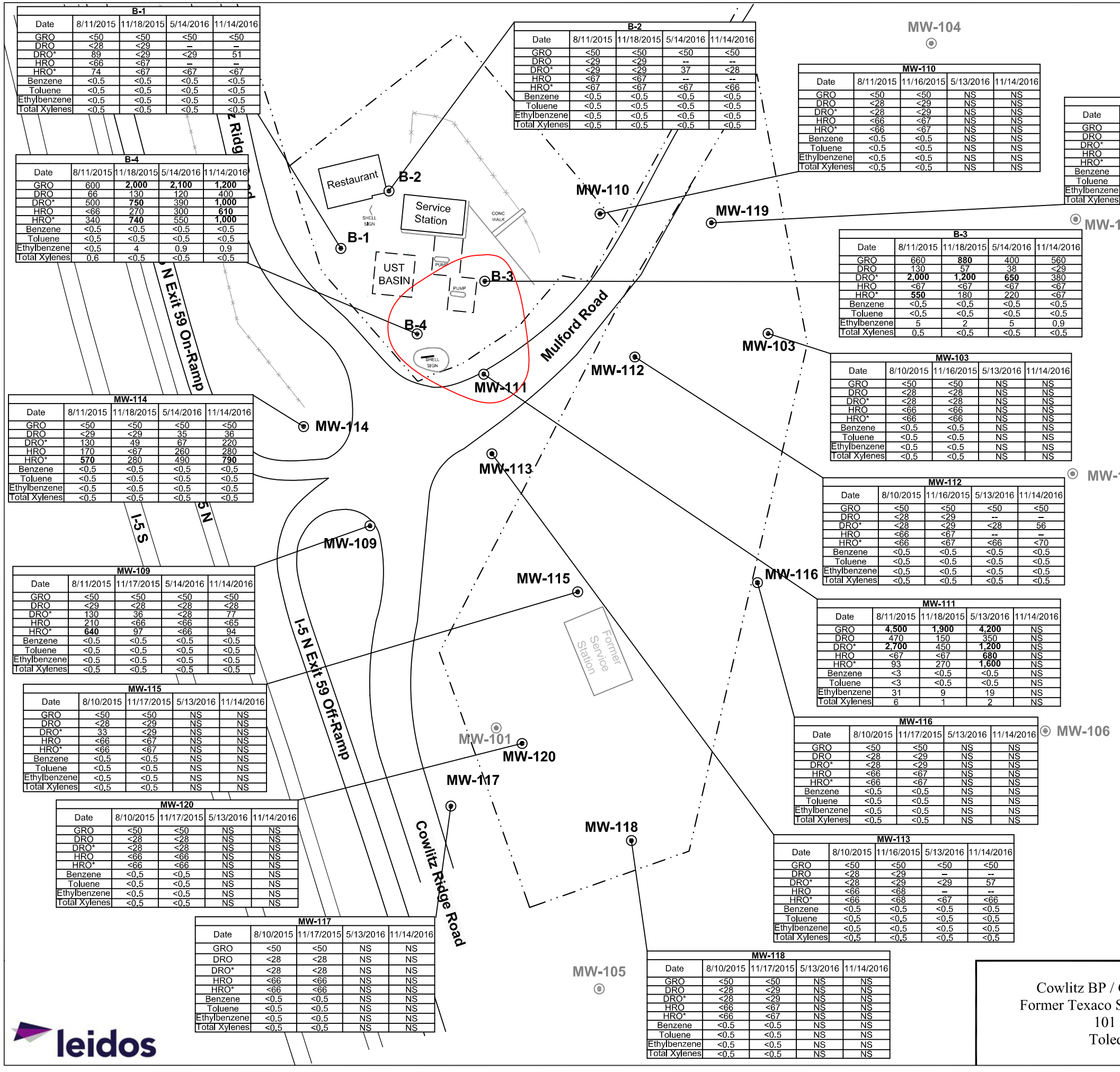
Date	8/10/2015	11/17/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<28	NS	NS
DRO*	<28	<28	NS	NS
HRO	<66	<66	NS	NS
HRO*	<66	<66	NS	NS
Benzene	<0.5	<0.5	NS	NS
Toluene	<0.5	<0.5	NS	NS
Ethylbenzene	<0.5	<0.5	NS	NS
Total Xylenes	<0.5	<0.5	NS	NS

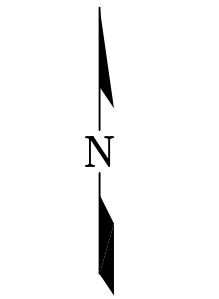
MW-117

Date	8/10/2015	11/17/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<28	NS	NS
DRO*	<28	<28	NS	NS
HRO	<66	<66	NS	NS
HRO*	<66	<66	NS	NS
Benzene	<0.5	<0.5	NS	NS
Toluene	<0.5	<0.5	NS	NS
Ethylbenzene	<0.5	<0.5	NS	NS
Total Xylenes	<0.5	<0.5	NS	NS

MW-118

Date	8/10/2015	11/17/2015	5/13/2016	11/14/2016
GRO	<50	<50	NS	NS
DRO	<28	<29	NS	NS
DRO*	<28	<29	NS	NS
HRO	<66	<67	NS	NS
HRO*	<66	<67	NS	NS
Benzene	<0.5	<0.5	NS	NS
Toluene	<0.5	<0.5	NS	NS
Ethylbenzene	<0.5	<0.5	NS	NS
Total Xylenes	<0.5	<0.5	NS	NS





LEGEND:

MW-114 ◉	Monitoring Well Location
MW-101 ◉	Former Monitoring Well Location
— · — · —	Property Boundary
— × — × —	Fence
———	Current SIte Features
———	Former Station Facilities
UST	Underground Storage Tank
	Estimated Horizontal Extent of Groundwater Containing Petroleum Hydrocarbon Contamination Above Proposed Site Cleanup Standards
<0.5	Laboratory Analytlcal Result Less Than The Achlevable Method Detectlon Llmlt
1	Laboratory Analytlcal Result Less Than The Proposed Site Cleanup Standard
5,500	Laboratory Analytical Result In Excess of the Proposed Site Cleanup Standard
NS	Not Sampled
–	Not Analyzed
*	Analyzed wlthout SIllca Gel Cleanup

All Concentration Data Reported in Micrograms per Liter

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Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 8
Groundwater Analytical Results -
August 2015 through November 2016

DATE: 4/28/2017 | DRAWING: 2017 DFS Site Map.dwg

Parcel #012429004000

Active Station Property
Parcel #012429003001

No Air sparge or SVE wells planned for the area between the UST basin and pump islands due to the presence of subsurface product supply piping.

Excavation 1

Restaurant

Service Station

SHELL SIGN

CONC WALK

PUMP

PUMP

UST BASIN

SHELL SIGN

B-1

B-2

B-3

B-4

B-201

B-202

B-203

B-204

B-205

SB-2

SB-3

SB-4

SB-5

SB-6

SB-7

SB-8

SB-9

SB-10

SB-12

SB-13

SB-14

SB-15

SB-16

SB-17

SB-18

SB-19

SB-20

SB-21

MW-110

MW-111

MW-112

MW-113

MW-114

MW-119

Cowlitz Ridge Road

I-5 N Exit 59 On-Ramp

Mulford Road

N

0 40'

Scale in Feet

LEGEND:

MW-114	Monitoring Well Location
B-201	1992 Soil Boring Location (Kaldveer Associates)
SB-7	2004 Soil Boring Location (SAIC)
SB-9	2013 Soil Boring Location (Leidos)
	Property Boundary
	Fence
	Current Site Features
UST	Underground Storage Tank
	Approximate Extent of Petroleum Contamination in Soil (Dashed Where Inferred)
	Anticipated Air Sparge Zone of Influence (20' Diameter). SVE Wells Omitted for Clarity

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Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 9
Alternative 1
Conceptual Layout of Air Sparge Wells

DATE: 4/26/2017 | DRAWING: 2017 DFS Site Map.dwg

Parcel #012429004000

Active Station Property
Parcel #012429003001

No excavation planned for the area in the vicinity of the UST basin and pump islands due to the presence of subsurface product supply piping and other service station infrastructure.

Cowlitz Ridge Road

I-5 N Exit 59 On-Ramp

Mulford Road

Partial excavation would be expected to maintain minimum 10 foot setback from edges of UST basin to prevent potential undermining of tanks due to sloughing of pea gravel backfill.

Restaurant

Service Station

SHELL SIGN

CONC WALK

UST BASIN

PUMP

PUMP

SHELL SIGN

Excavation 1

A

A'

B

B'

B-1

B-2

B-3

B-4

B-201

B-202

B-203

B-204

B-205

SB-2

SB-3

SB-4

SB-5

SB-6

SB-7

SB-8

SB-9

SB-10

SB-12

SB-13

SB-14

SB-15

SB-16

SB-17

SB-18

SB-19

SB-20

SB-21

MW-110

MW-111

MW-112

MW-113

MW-114

MW-119

N

0 40'

Scale in Feet

LEGEND:

- MW-114 — Monitoring Well Location
- B-201 — 1992 Soil Boring Location (Kaldveer Associates)
- SB-7 — 2004 Soil Boring Location (SAIC)
- SB-9 — 2013 Soil Boring Location (Leidos)
- Property Boundary
- Fence
- Current Site Features
- UST — Underground Storage Tank
- Approximate Extent of Petroleum Contamination in Soil (Dashed Where Inferred)
- Estimated Extent of Partial Excavation
- A — A' Approximate Geologic Cross-Section Transect Line

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Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 10
Alternatives 2 & 3
Estimated Extent of Partial Excavation
(Plan View)

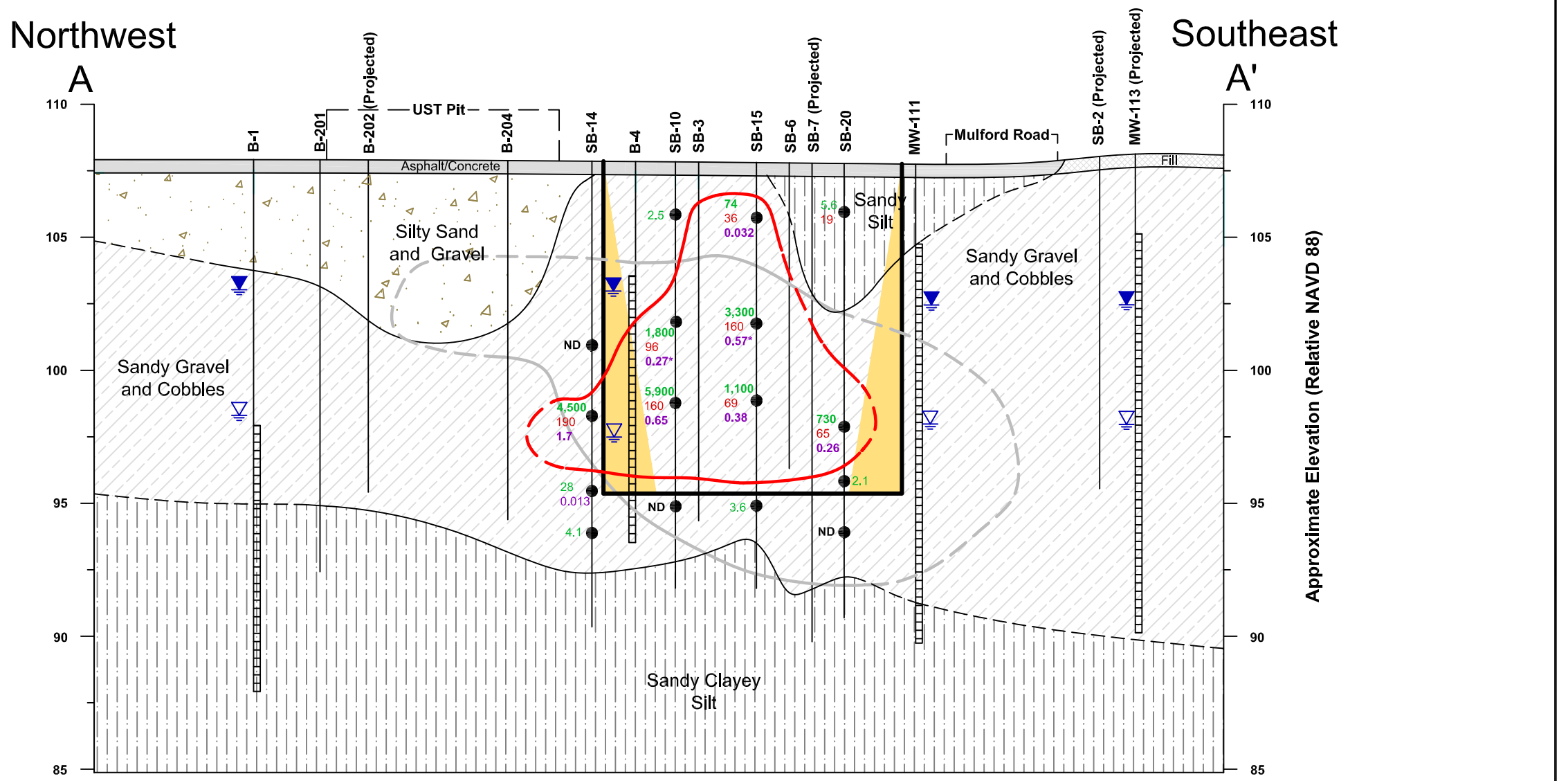
DATE: 4/28/2017 | DRAWING: 2017 DFS Site Map.dwg

LEGEND:

- Boring
- Screened interval
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on 2013 soil sampling results (dashed where inferred)
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on pre-2005 soil sampling results (not shown, see Table 1)
- Highest recorded groundwater elevation
- Lowest recorded groundwater elevation
- Soil analytical sample location
- 28 — Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- 10 — Diesel-range hydrocarbon concentration in mg/kg
- 0.001 — Benzene concentration in mg/kg
- ND — No analytes were detected at or above laboratory detection limits
- **0.13** — Bold indicates analyte concentration exceeding the proposed Site cleanup standard
- **0.05*** — Analyte not detected at or above indicated laboratory detection limit; however, the detection limit exceeded the proposed Site cleanup standard
- Contact line between soil types
- Estimated extent of partial excavation
- Area within anticipated excavation boundary that may be inaccessible due to sidewall sloping requirements (area shown assumes standard sidewall slope of 1:1)

SOIL/ROCK CLASSIFICATION LEGEND:

- Concrete or Asphalt
- Brown, fine to coarse Sand and Gravel with some Cobbles and Silt
- Brown to gray, medium to coarse sandy Gravel and Cobbles
- Brown to greenish gray, fine sandy, clayey SILT



0 15 30 60

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

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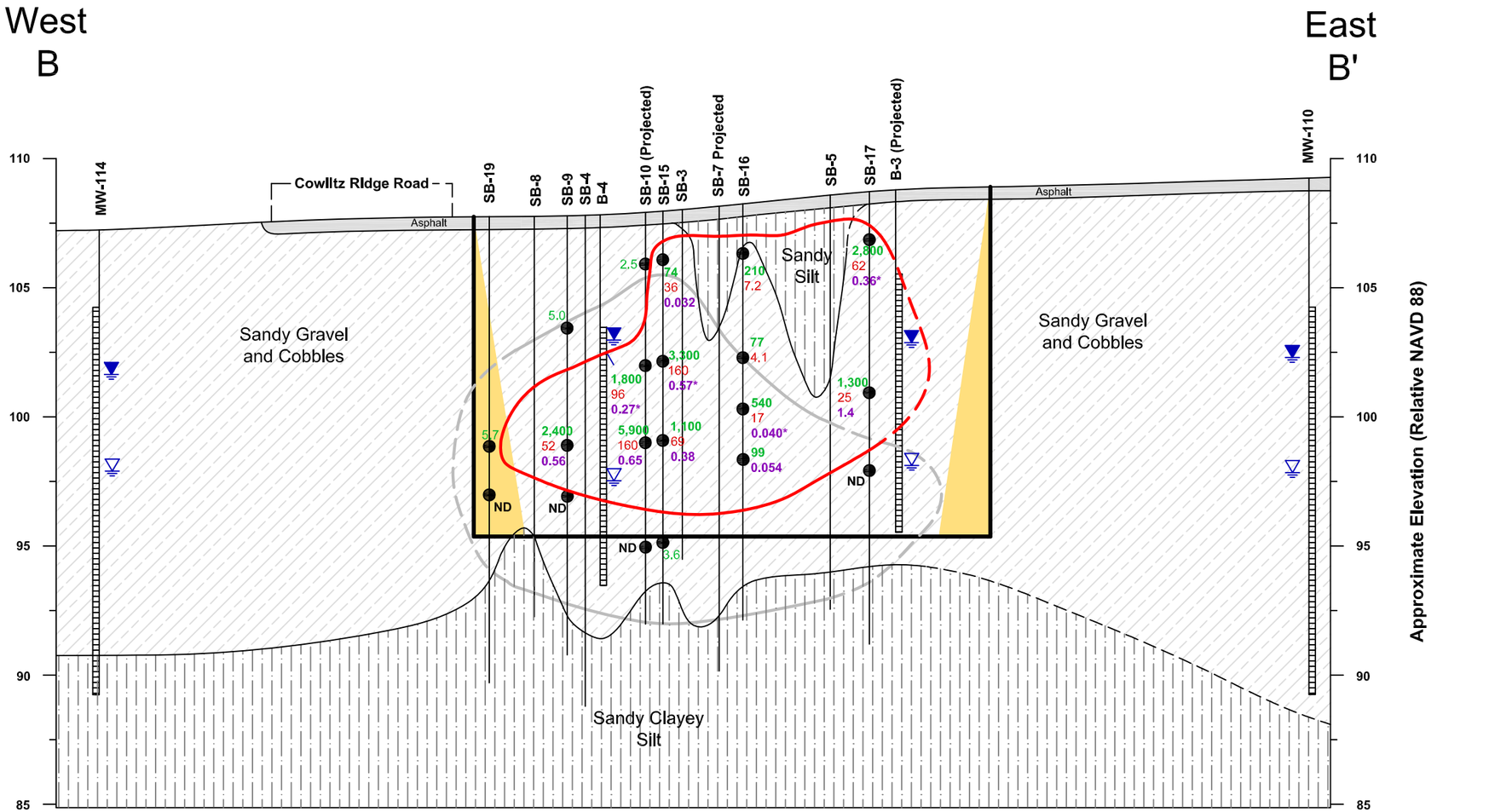
Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 11
Alternatives 2 & 3
Estimated Extent of Partial Excavation
(Cross-Sectionional View A-A')

DATE: 4/28/2017 | DRAWING: 2017 DFS X-Section.dwg

LEGEND:

- Boring
- Screened interval
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on 2013 soil sampling results (dashed where inferred)
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on pre-2005 soil sampling results (not shown, see Table 1)
- Highest recorded groundwater elevation
- Lowest recorded groundwater elevation
- Soil analytical sample location
- 28 — Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- 10 — Diesel-range hydrocarbon concentration in mg/kg
- 0.001 — Benzene concentration in mg/kg
- ND — No analytes were detected at or above laboratory detection limits
- **0.13** — Bold indicates analyte concentration exceeding the proposed Site cleanup standard
- **0.05*** — Analyte not detected at or above indicated laboratory detection limit; however, the detection limit exceeded the proposed Site cleanup standard
- Contact line between soil types
- Estimated extent of partial excavation
- Area within anticipated excavation boundary that may be inaccessible due to sidewall sloping requirements (area shown assumes standard sidewall slope of 1:1)



0 15 30 60

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

SOIL/ROCK CLASSIFICATION LEGEND:

- Concrete or Asphalt
- Brown, fine to coarse Sand and Gravel with some Cobbles and Silt
- Brown to gray, medium to coarse sandy Gravel and Cobbles
- Brown to greenish gray, fine sandy, clayey SILT

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101 Mulford Road
Toledo, Washington

FIGURE 12
Alternatives 2 & 3
Estimated Extent of Partial Excavation
(Cross-Sectionional View B-B')

DATE: 4/28/2017 | DRAWING: 2017 DFS X-Section.dwg

Parcel #012429004000

Active Station Property
Parcel #012429003001

No excavation planned for the area in the vicinity of the UST basin and pump islands due to the presence of subsurface product supply piping and other service station infrastructure.

Excavation 1

Partial excavation would be expected to maintain minimum 10 foot setback from edges of UST basin to prevent potential undermining of tanks due to sloughing of pea gravel backfill.

Cowlitz Ridge Road

I-5 N Exit 59 On-Ramp

Mulford Road

Restaurant

Service Station

SHELL SIGN

CONC WALK

UST BASIN

PUMP

PUMP

SHELL SIGN

B-1

B-2

B-3

B-4

B-201

B-202

B-203

B-204

B-205

SB-2

SB-3

SB-4

SB-5

SB-6

SB-7

SB-8

SB-9

SB-10

SB-12

SB-13

SB-14

SB-15

SB-16

SB-17

SB-18

SB-19

SB-20

SB-21

MW-110

MW-111

MW-112

MW-113

MW-114

MW-119

N

0 40'

Scale in Feet

LEGEND:

- MW-114 — Monitoring Well Location
- B-201 — 1992 Soil Boring Location (Kaldveer Associates)
- SB-7 — 2004 Soil Boring Location (SAIC)
- SB-9 — 2013 Soil Boring Location (Leidos)
- Property Boundary
- Fence
- Current Site Features
- UST — Underground Storage Tank
- Approximate Extent of Petroleum Contamination in Soil (Dashed Where Inferred)
- Estimated Extent of Partial Excavation
- Anticipated Air Sparge Zone of Influence (20' Diameter). SVE Wells Omitted for Clarity

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101 Mulford Road
Toledo, Washington

FIGURE 13
Alternative 3
Estimated Extent of Partial Excavation and Air Sparge Well Layout

DATE: 4/28/2017 | DRAWING: 2017 DFS Site Map.dwg

Parcel #012429004000

Active Station Property
Parcel #012429003001

Cowlitz Ridge Road

I-5 N Exit 59 On-Ramp

Mulford Road

Restaurant

Service Station

SHELL SIGN

CONC WALK

UST BASIN

PUMP

PUMP

SHELL SIGN

Excavation 1

A

A'

B

B'

B-1

B-2

B-3

B-4

B-201

B-202

B-203

B-204

B-205

SB-2

SB-3

SB-4

SB-5

SB-6

SB-7

SB-8

SB-9

SB-10

SB-12

SB-13

SB-14

SB-15

SB-16

SB-17

SB-18

SB-19

SB-20

SB-21

MW-110

MW-111

MW-112

MW-113

MW-114

MW-119

N

0 40'

Scale in Feet

LEGEND:

- MW-114 — Monitoring Well Location
- B-201 — 1992 Soil Boring Location (Kaldveer Associates)
- SB-7 — 2004 Soil Boring Location (SAIC)
- SB-9 — 2013 Soil Boring Location (Leidos)
- Property Boundary
- Fence
- Current Site Features
- UST — Underground Storage Tank
- Approximate Extent of Petroleum Contamination in Soil (Dashed Where Inferred)
- Estimated Extent of Property-Wide Excavation
- A — A' Approximate Geologic Cross-Section Transect Line

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101 Mulford Road
Toledo, Washington

FIGURE 14
Alternatives 4 & 5
Estimated Extent of Property-Wide Excavation (Plan View)

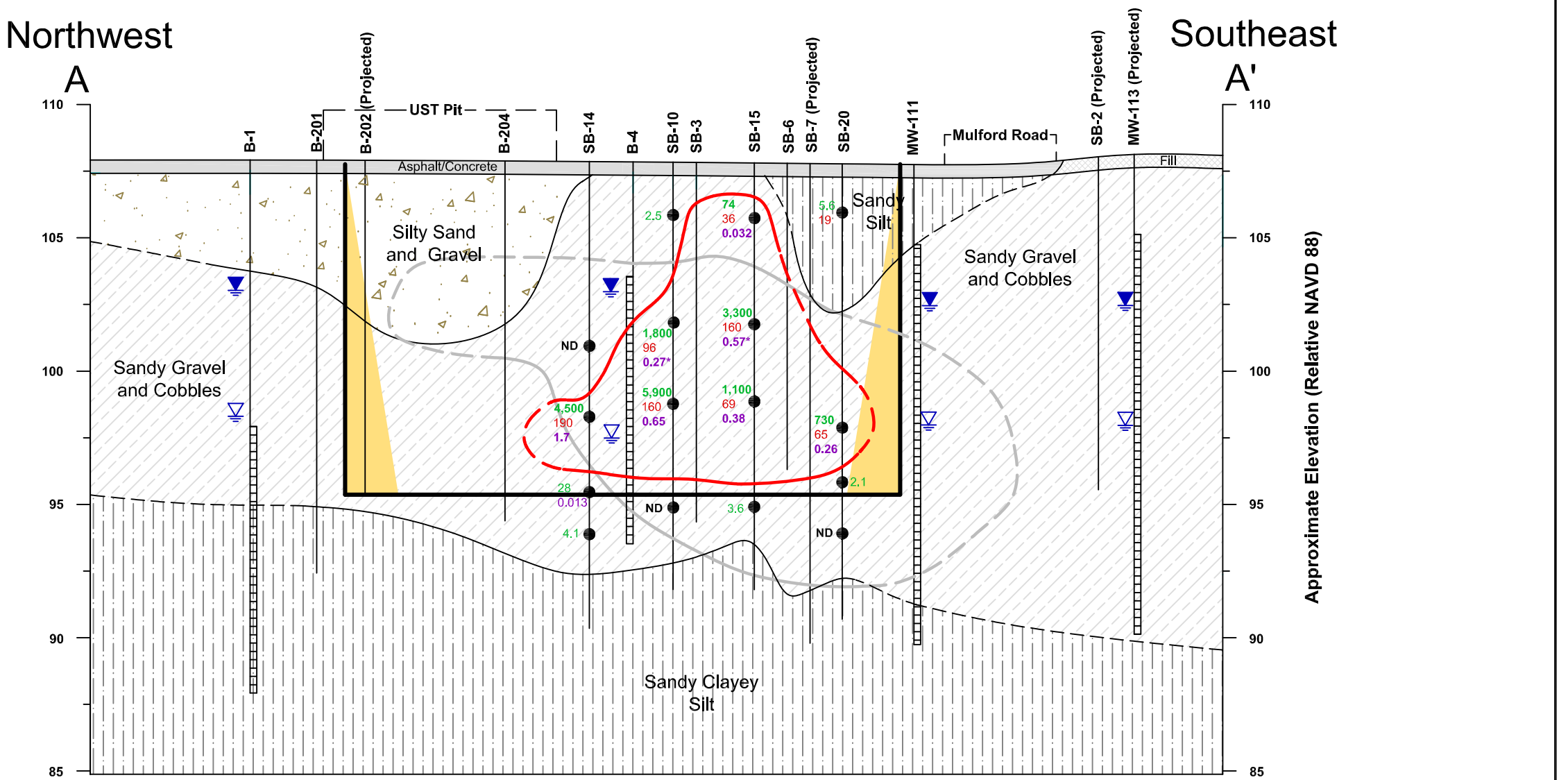
DATE: 4/26/2017 | DRAWING: 2017 DFS Site Map.dwg

LEGEND:

- Boring
- Screened interval
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on 2013 soil sampling results (dashed where inferred)
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on pre-2005 soil sampling results (not shown, see Table 1)
- Highest recorded groundwater elevation
- Lowest recorded groundwater elevation
- Soil analytical sample location
- 28 — Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- 10 — Diesel-range hydrocarbon concentration in mg/kg
- 0.001 — Benzene concentration in mg/kg
- ND — No analytes were detected at or above laboratory detection limits
- **0.13** — Bold indicates analyte concentration exceeding the proposed Site cleanup standard
- 0.05* — Analyte not detected at or above indicated laboratory detection limit; however, the detection limit exceeded the proposed Site cleanup standard
- Contact line between soil types
- Estimated extent of partial excavation
- Area within anticipated excavation boundary that may be inaccessible due to sidewall sloping requirements (area shown assumes standard sidewall slope of 1:1)

SOIL/ROCK CLASSIFICATION LEGEND:

- Concrete or Asphalt
- Brown, fine to coarse Sand and Gravel with some Cobbles and Silt
- Brown to gray, medium to coarse sandy Gravel and Cobbles
- Brown to greenish gray, fine sandy, clayey SILT



0 15 30 60

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

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Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 15
Alternatives 4 & 5
Estimated Extent of Property-Wide Excavation
(Cross-Sectionional View A-A')

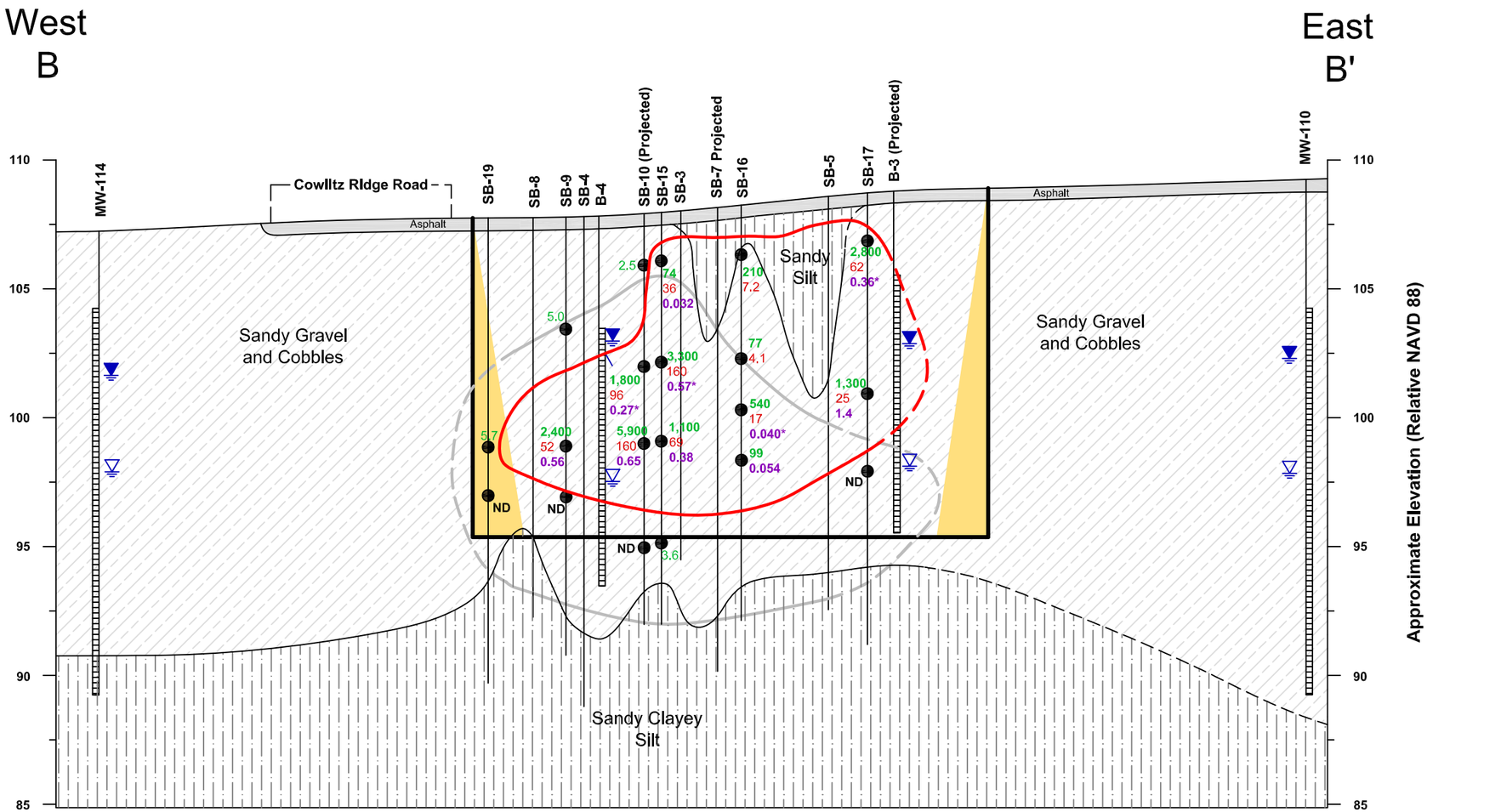
DATE: 4/28/2017 | DRAWING: 2017 DFS X-Section.dwg

LEGEND:

- Boring
- Screened interval
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on 2013 soil sampling results (dashed where inferred)
- Estimated extent of soil contamination exceeding proposed Site cleanup standards, based on pre-2005 soil sampling results (not shown, see Table 1)
- Highest recorded groundwater elevation
- Lowest recorded groundwater elevation
- Soil analytical sample location
- 28 — Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- 10 — Diesel-range hydrocarbon concentration in mg/kg
- 0.001 — Benzene concentration in mg/kg
- ND — No analytes were detected at or above laboratory detection limits
- **0.13** — Bold indicates analyte concentration exceeding the proposed Site cleanup standard
- **0.05*** — Analyte not detected at or above indicated laboratory detection limit; however, the detection limit exceeded the proposed Site cleanup standard
- Contact line between soil types
- Estimated extent of partial excavation
- Area within anticipated excavation boundary that may be inaccessible due to sidewall sloping requirements (area shown assumes standard sidewall slope of 1:1)

SOIL/ROCK CLASSIFICATION LEGEND:

- Concrete or Asphalt
- Brown, fine to coarse Sand and Gravel with some Cobbles and Silt
- Brown to gray, medium to coarse sandy Gravel and Cobbles
- Brown to greenish gray, fine sandy, clayey SILT



0 15 30 60

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

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FIGURE 16
Alternatives 4 & 5
Estimated Extent of Property-Wide Excavation
(Cross-Sectionional View B-B')

DATE: 4/28/2017 | DRAWING: 2017 DFS X-Section.dwg

APPENDIX A

Soil Sampling Assessment Summary Report

March 28, 2014

Mr. Steve Teel
Washington State Department of Ecology
Southwest Regional Office – Toxics Cleanup Program
P.O. Box 47775
Olympia, Washington 98504-7775

Subject: **Soil Sampling Assessment Summary Report**
Cowlitz BP / Cowlitz Food and Fuel /
Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

Dear Mr. Teel:

Leidos Engineering, LLC (Leidos; formerly SAIC Energy, Environment & Infrastructure, LLC [SAIC]), on behalf of Chevron Environmental Management Company (CEMC), prepared this report to summarize the results of soil sampling activities performed in November 2013 at the above-referenced site (the Site) in Toledo, Washington.

The objective of this assessment was to evaluate current petroleum hydrocarbon concentrations in soil on the active service station portion of the Site and at the base of the two interim remedial action (IRA) excavations performed in 2010.

The scope of work and procedures employed to complete these activities were generally consistent with those described in SAIC's September 2013 work plan[1], which was conditionally approved by Ecology in a letter dated October 2, 2013. Where deviations exist in the work scope or procedures employed, a description and justification for the changes are provided in this report.

SOIL BORING AND SAMPLING ACTIVITIES

From November 4 to November 8, 2013, Leidos directed and observed completion of the following 13 soil borings at the Site (Figures 1 and 2):

1. SAIC, 2013. *Soil Sampling and Natural Attenuation Assessment Work Plan – Final, Cowlitz BP / Cowlitz Food and Fuel / Former Texaco Service Station No. 211556, 101 Mulford Road, Toledo, Washington.* September 25.

- Soil borings SB-9, SB-10, and SB-14 through SB-21 were completed on the southern portion of the active service station property, immediately downgradient of the underground storage tank (UST) basin and pump island area;
- Soil borings SB-12 and SB-13 were completed within the boundaries of 2010 IRA Excavation #1, to the east of the active service station; and
- Soil boring SB-11 was completed within the boundaries of 2010 IRA Excavation #2 on the inactive service station property.

As described in the Work Plan, CEMC policy requires that each boring be cleared to a depth of at least 8 feet below ground surface (bgs) using a hand auger, or air knife excavation technology, to avoid damage to utilities or other subsurface infrastructure.

For borings completed in the vicinity of the UST basin and pump islands, Leidos geologists first attempted to advance and sample each boring from the ground surface to 8 feet bgs using a stainless steel hand auger, without the assistance of an air knife. This was done to limit the potential loss of volatile petroleum constituents in soil samples that could be caused by the compressed air wand and suction hose of the air knife. However, this was generally not possible due the consistent presence of large cobbles in the subsurface throughout this area. Therefore, the initial 8 feet of each boring were typically advanced using the assistance of an air knife, while soil samples were collected between the air knife zones at 2-foot intervals using a hand auger.

For soil borings SB-11, SB-12, and SB-13, which were completed within the boundaries of the 2010 IRA excavations, no soil samples were collected in the air knife interval.

Following clearance of each boring to a depth of at least 8 feet, a limited-access sonic rig was used to complete drilling and sample collection at each boring. Air knife and sonic drilling activities were performed by Cascade Drilling L.P. of Woodinville, Washington.

During the drilling activities, a Leidos geologist was present to log soil lithology and collect soil samples for field-screening and laboratory analysis. Soil samples were classified in accordance with the Unified Soil Classification System. In addition, each sample was field screened for the presence of petroleum hydrocarbons by visual and olfactory observations. Sheen tests were conducted, and headspace vapor measurements were recorded using a flame-ionization detector and a photo-ionization detector.

Soil lithology encountered was consistent with previous investigations at the Site. The Site is generally underlain by gravelly alluvial deposits with cobbles and varying percentages of sand and silt. The gravelly alluvial deposits are interbedded with layers of sand and silt. A sandy silt layer, approximately 3 to 7 feet thick, is present just beneath the asphalt and overlies the alluvial deposits in the vicinity south-southwest of the southern-most pump island. The upper alluvial lithology varies in thickness from approximately 12 to 17 feet. A thick, continuous silt/clay layer of undetermined thickness is present beneath the gravelly alluvial deposits, forming the base of the shallow aquifer. Geologic logs for each boring are included in Attachment A.

Upon completion of sampling, each soil boring was backfilled with bentonite chips to a depth of approximately 1 foot bgs. The upper foot of the boring was then filled to the ground surface with black, ready-mix cement. Four borings (SB-18 through SB-21)

located in Lewis County rights of way (ROWs) for Mulford Road and Cowlitz Ridge Road were completed with temporary, 1-foot diameter, cold-asphalt patches. These patches were replaced with permanent, hot-asphalt patches on November 20, 2013, in accordance with the requirements of a Lewis County ROW permit obtained for the project.

LABORATORY ANALYSIS OF SOIL SAMPLES

At least two soil samples from each boring were collected and submitted for laboratory analysis. These samples generally included one from the capillary fringe and a second to confirm the maximum vertical extent of contamination. Additional soil samples were also submitted for sample intervals exhibiting indications of significant petroleum-range impact, based on the results of field screening analyses. Selected samples were submitted to Eurofins Lancaster Laboratories, Inc. for the following analyses:

- Gasoline-range organics (GRO) by ECY 97-602 NWTPH-Gx;
- Diesel-range organics (DRO) and heavy oils (HRO) by ECY 97-602 NWTPH-Dx;
- DRO and HRO by ECY 97-602 NWTPH-Dx with silica-gel cleanup;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by SW-846 8021B;
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by SW-846 8270C with selective ion monitoring; and
- Total lead by SW-846 6010B.

SUMMARY AND EVALUATION OF SOIL SAMPLING RESULTS

A summary of all soil sampling laboratory results is provided in Tables 1 and 2, and a complete laboratory analytical report is included as Attachment B. The following sections provide a brief summary and evaluation of soil sampling results for each of the three primary areas assessed.

UST BASIN AND PUMP ISLAND AREA

In the area south of the UST basin and pump islands (Figure 2), petroleum-range contamination exceeding proposed Site cleanup levels[2] was detected in nine of the 10 borings completed (no petroleum-range contamination was detected in soil boring SB-19). The following contaminants of concern (COCs) were detected:

- GRO in nine soil borings (SB-9, SB-10, SB-14 through SB-18, SB-20, and SB-21) at concentrations up to 5,900 milligrams per kilogram (mg/kg);
- Benzene in eight soil borings (SB-9, SB-10, SB-14 through SB-18, and SB-20) at concentrations up to 1.7 mg/kg;
- Toluene in one soil boring (SB-14) at a concentration of 8.2 mg/kg;

2. Cleanup levels for the Site as proposed in the October 31, 2012 Draft Feasibility Study Report prepared by SAIC. Proposed Site cleanup levels are also shown in Tables 1and 2 of this report.

- Ethylbenzene in three soil borings (SB-10, SB-15, and SB-17) at concentrations up to 10 mg/kg; and
- Total xylenes in three soil borings (SB-10, SB-14, and SB-17) at concentrations up to 65 mg/kg.

GRO, DRO, and benzene soil sampling results for borings in this area are also presented graphically in updated geologic cross-sections included on Figures 3 and 5. For comparison, geologic cross-sections based on pre-2005 soil sampling results are also included on Figures 4 and 6.

Soil sampling results from this area indicate that GRO and benzene are the primary COCs in this area of the Site and that contamination largely occurs within the zone of seasonal groundwater fluctuation. However, these substances were also detected above cleanup levels in near-surface (approximately 2 feet bgs) soil samples collected at three of the boring locations (SB-15, SB-16, and SB-17) in this area (Figure 5). These near-surface detections of petroleum-range contamination are inconsistent with a UST release, and are instead believed to be indicators of a shallow petroleum release mechanism at the Site.

2010 IRA EXCAVATION-1

Two soil borings (SB-12 and SB-13) were completed within the boundaries of 2010 IRA Excavation-1 (Figure 2). As requested by Ecology, the locations for these borings were selected to be at the approximate locations of IRA excavation samples EX1-30-9 and EX1-55-9.5, respectively.

Field screening and laboratory results from borings SB-12 and SB-13 indicate that petroleum-range contamination remains in this area of the Site at concentrations exceeding proposed Site cleanup levels. Contamination appears to be present within a relatively thin smear zone at the groundwater interface. The following table provides a summary and comparison of the 2010 and 2013 soil sampling results from these two locations.

Sample ID	Sample Date	GRO (mg/kg)	DRO (mg/kg)	Benzene (mg/kg)
EX1-30-9	10/7/2010	**3,100**	**4,500**	< 0.02
SB-12-9.5	11/6/2013	1.5	< 3.3	< 0.0055
SB-12-10.5	11/6/2013	**1,600**	**2,500**	**< 0.19**
SB-12-12	11/6/2013	2.6	< 3.3	< 0.0046
SB-12-13.5	11/6/2013	< 1.0	< 3.3	< 0.0051
EX1-55-9.5	10/11/2010	**6,600**	**1,100**	< 0.02
SB-13-10.5	11/7/2013	**150**	82	**0.085**
SB-13-12.5	11/7/2013	< 1.0	< 3.4	< 0.0052

Note: Bold values indicate laboratory results confirmed or potentially exceeding proposed Site cleanup levels.

2010 IRA EXCAVATION-2

One soil boring (SB-11) was completed in the area of 2010 IRA Excavation-2 (Figure 1). This boring was completed in the approximate location of IRA excavation sample EX2-14-9.5. Two soil samples were collected from boring SB-11. The first sample (SB-11-10) was collected at 10 feet bgs, immediately below the quarry spall excavation backfill (i.e., at the base of the excavation at this location), and the second sample was collected at 12.5 feet bgs. The boring was completed to a final depth of 20 feet bgs.

Field screening and laboratory results of these samples detected no evidence of petroleum-range contamination above proposed Site cleanup levels.

SUMMARY AND CONCLUSIONS

Results of the 2013 soil sampling assessment at the Site indicate that petroleum-range contamination (primarily GRO and benzene) continues to be present on the active service station property, but that cleanup objectives appear to have been achieved on the inactive station portion of the Site.

In the area immediately downgradient (south) of the UST basin and pump islands, GRO and benzene contamination in soil continue to be widespread. However, comparison of soil sampling data from this assessment to pre-2005 data (Figures 3 and 5) suggests that the lateral and vertical extent of impacted soil may be decreasing in response to ongoing natural attenuation at the Site. The current data set indicates no detections of COCs exceeding proposed Site cleanup levels at a depth greater than approximately 10.5 feet bgs. In comparison, results of soil sampling performed in December 2004 indicate that GRO and benzene contamination exceeding cleanup levels was previously detected at depths of up to 15 feet bgs.

Although the current data set indicates that maximum vertical depth of contamination has decreased, it also suggests that shallow soil contamination (approximately 2 feet bgs) is more extensive than previously identified, or has increased since the December 2004 sampling event. In this area, GRO was detected in samples from 2 feet bgs in three soil borings (SB-15, SB-16, and SB-17), at concentrations up to 2,800 mg/kg. The confirmed presence of shallow soil contamination at these locations is not consistent with the historic UST release that was previously determined to have occurred at the Site. Instead, based on the shallow depth of these samples, and their lateral distance from the pump islands, it is likely that this contamination is the result of surface releases that have occurred, and may continue to occur, in association with the operation of an active service station at the Site. Additional support for on-going surface releases at the Site is provided by observations, by Leidos personnel, of petroleum sheens in rain water sheet flow draining from the station during the November 2013 soil sampling activities.

In the area of IRA Excavation-1, on the active service station property, sampling results for soil borings SB-12 and SB-13 indicate that petroleum-range contamination (including DRO) continues to be present within a relatively thin smear zone at the groundwater interface. Results for sample SB-12-10.5 indicate that GRO and DRO concentrations in this area remain relatively high; however, groundwater data for monitoring well MW-110, MW-112, MW-119, and MW-103 indicate that groundwater downgradient of

this area does not contain petroleum-range contamination exceeding proposed Site cleanup levels (see Third Quarter 2013 Groundwater Monitoring Report, prepared by Leidos, dated January 31, 2014). Therefore, soil contamination remaining in this area is believed to be localized and stable.

In the area of IRA Excavation-2, on the inactive service station property, sampling results for boring SB-11 were non-detect or below Site cleanup levels for all COCs. Based on these data, and the results of groundwater monitoring performed at monitoring well MW-120 since November 2011, Leidos believes that the limited GRO contamination remaining in place at the conclusion of the 2010 IRA excavation was addressed by the addition of Oxygen Release Compound® to the base of the excavation, and/or naturally occurring attenuation processes. Therefore, we believe that cleanup objectives for this portion of the Site have been completed.

CLOSING

Chevron currently anticipates performing groundwater monitoring for the evaluation of natural attenuation at the Site through May 2014 (four quarterly events). Upon evaluation of those data, our project team would like to meet with you again to discuss the results of these evaluations, and develop an agreed upon path forward for satisfaction of the Agreed Order for the Site.

If you have any questions or comments regarding this report, please contact me at (425) 482-3323 or by email at shropshirer@leidos.com.

Sincerely,

Leidos Engineering, LLC

Russell S. Shropshire, PE
Senior Project Manager

Enclosures:
Figure 1 – Site Map and Soil Boring Locations
Figure 2 – Soil Boring Locations – Active Station Property
Figure 3 – 2013 Soil Sampling Results – Cross-Section A-A'
Figure 4 – Pre-2005 Soil Sampling Results – Cross-Section A-A'
Figure 5 – 2013 Soil Sampling Results – Cross-Section B-B'
Figure 6 – Pre-2005 Soil Sampling Results – Cross-Section B-B'
Table 1 – Summary of Soil Analytical Data – TPH, BTEX, Total Lead
Table 2 – Summary of Soil Analytical Data – cPAHs
Attachment A – Boring Logs
Attachment B – Laboratory Analysis Report

cc: Mr. Mark Horne – CEMC
Mr. Charles Vineyard
Mr. John Houlihan – Houlihan Law
Project File

REPORT LIMITATIONS

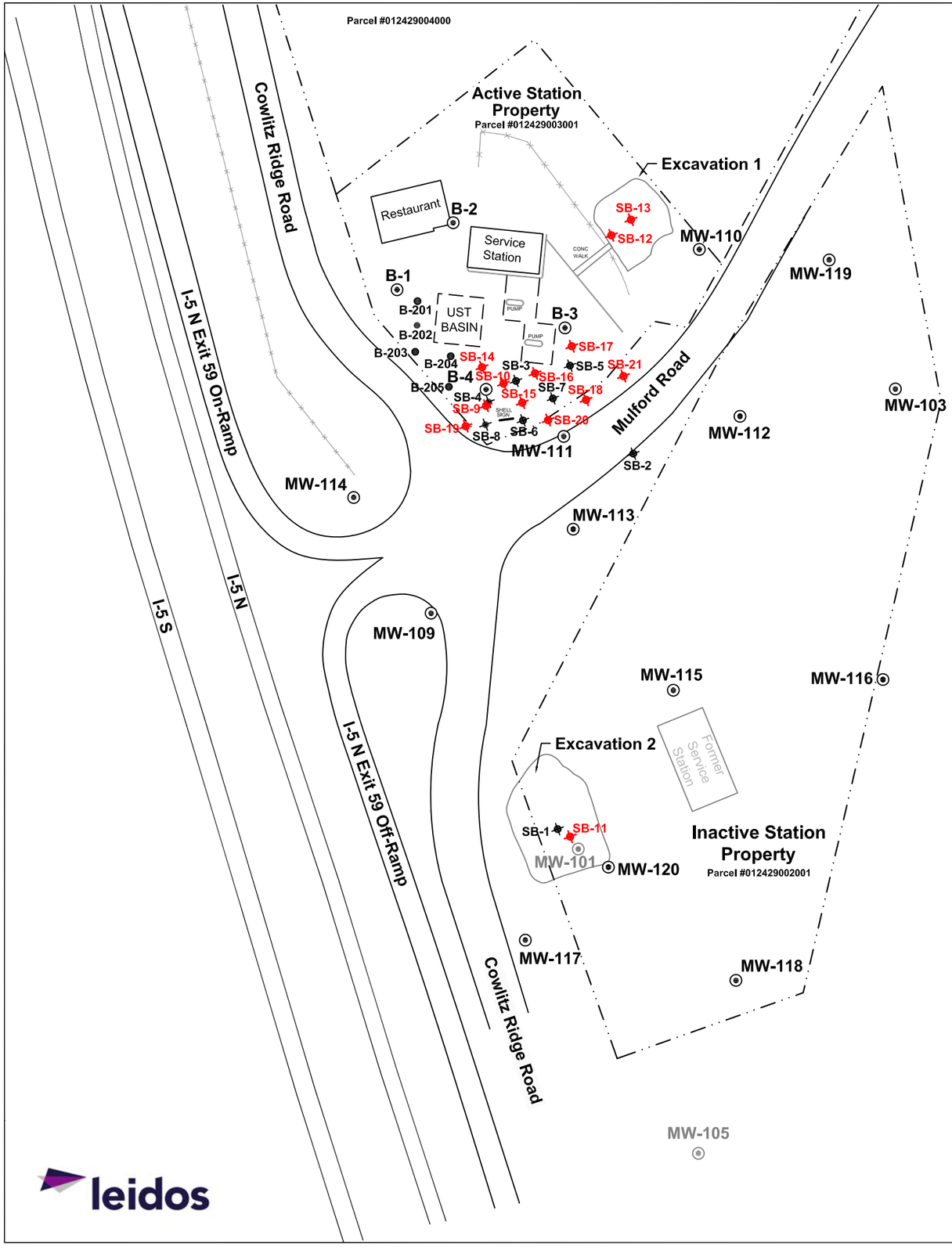
This technical document was prepared on behalf of CEMC and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by Leidos. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges that they do so at their own risk, and Leidos shall have no responsibility or liability for the consequences thereof.

Site history and background information provided in this technical document are based on sources that may include interviews with environmental regulatory agencies and property management personnel and a review of acquired environmental regulatory agency documents and property information obtained from CEMC and others. Leidos has not made, nor has it been asked to make, any independent investigation concerning the accuracy, reliability, or completeness of such information beyond that described in this technical document.

Recognizing reasonable limits of time and cost, this technical document cannot wholly eliminate uncertainty regarding the vertical and lateral extent of impacted environmental media.

Opinions and recommendations presented in this technical document apply only to site conditions and features as they existed at the time of Leidos site visits or site work and cannot be applied to conditions and features of which Leidos is unaware and has not had the opportunity to evaluate.

All sources of information on which Leidos has relied in making its conclusions (including direct field observations) are identified by reference in this technical document or in appendices attached to this technical document. Any information not listed by reference or in appendices has not been evaluated or relied upon by Leidos in the context of this technical document. The conclusions, therefore, represent our professional opinion based on the identified sources of information.



LEGEND:

SB-9	2013 Soil Boring Location
MW-114	Monitoring Well Location
MW-101	Former Monitoring Well Location Decommissioned on October 5, 6, and 7, 2010
B-201	1992 Soil Boring Location
SB-7	2004 Soil Boring Location
	Property Boundary
	Fence
	Current Site Features
	Former Station Facilities
UST	Underground Storage Tank
	Approximate Extent of October 2010 Remedial Excavation

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Cowlitz BP / Cowlitz Food and Fuel /
Former Texaco Service Station No. 211556
101 Mulford Road
Toledo, Washington

FIGURE 1

Site Map and Soil Boring Locations

DATE: 3/14/2014 | DRAWING: 211556 2012 Site Map.dwg

Parcel #012429004000

Active Station Property
Parcel #012429003001

Restaurant

Service Station

UST BASIN

PUMP

PUMP

CONC WALK

SHELL SIGN

Excavation 1

A

A'

B

B'

B-1

B-2

B-3

B-4

B-201

B-202

B-203

B-204

B-205

MW-110

MW-111

MW-112

MW-113

MW-114

SB-2

SB-3

SB-4

SB-5

SB-6

SB-7

SB-8

SB-9

SB-10

SB-12

SB-13

SB-14

SB-15

SB-16

SB-17

SB-18

SB-19

SB-20

SB-21

I-5 N Exit 59 On-Ramp

Mulford Road

N

0 40'

Scale in Feet

LEGEND:

SB-9	2013 Soil Boring Location
MW-114	Monitoring Well Location
B-201	1992 Soil Boring Location
SB-7	2004 Soil Boring Location
	Property Boundary
	Fence
	Current Site Features
UST	Underground Storage Tank
	Approximate Extent of October 2010 Interim Remedial Action Excavation
A A'	Approximate Geologic Cross Section Transect Line

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101 Mulford Road
Toledo, Washington

FIGURE 2
Soil Boring Locations - Active Station Property

DATE: 3/14/2014

DRAWING: 211556 2012 Site Map.dwg

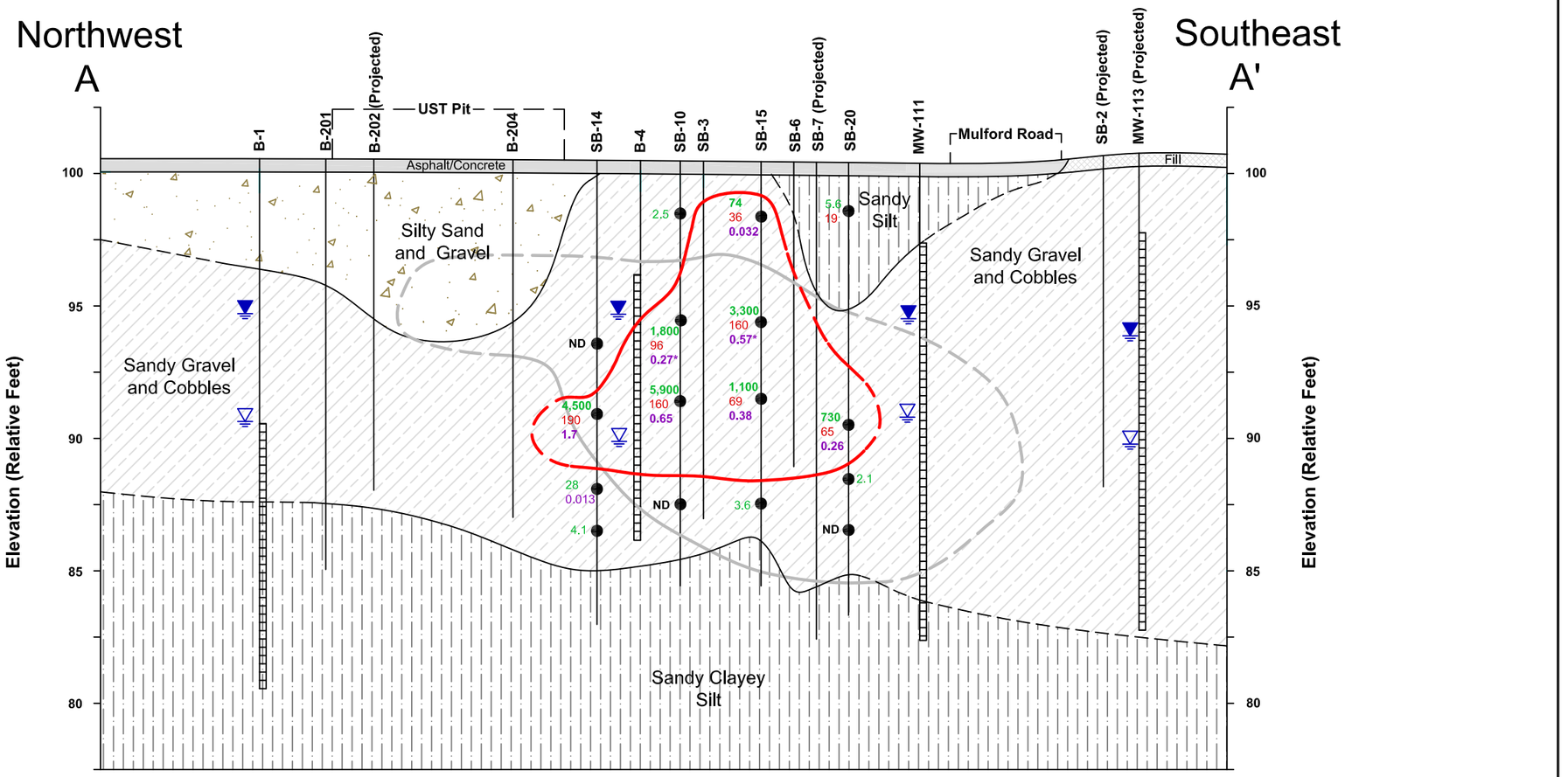
LEGEND:

- Boring
- Screened interval
- Estimated extent of soil contamination exceeding Site cleanup levels, based on November 2013 soil sampling results (dashed where inferred)
- Estimated extent of soil contamination exceeding Site cleanup levels, based on pre-2005 soil sampling results (see Figure 4 for additional details)
- Highest recorded groundwater elevation
- Lowest recorded groundwater elevation
- Soil analytical sample location
- 3,300 — Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- 160 — Diesel-range hydrocarbon concentration in mg/kg
- 0.38 — Benzene concentration in mg/kg
- ND — No analytes were detected at or above laboratory detection limits
- **0.27*** — Analyte not detected at or above indicated laboratory detection limit; however, the detection limit exceeded the Site cleanup level
- **0.38** — Bold indicates analyte concentration exceeding Site cleanup level
- Contact line between soil types

Note: Analyte concentration not included if less than laboratory detection limits.

SOIL/ROCK CLASSIFICATION LEGEND:

- Concrete or Asphalt
- Brown, fine to coarse Sand and Gravel with some cobbles and silt
- Brown to gray, medium to coarse sandy Gravel and Cobbles
- Brown to greenish gray, fine sandy, clayey Silt



0 15 30 60

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

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101 Mulford Road
Toledo, Washington

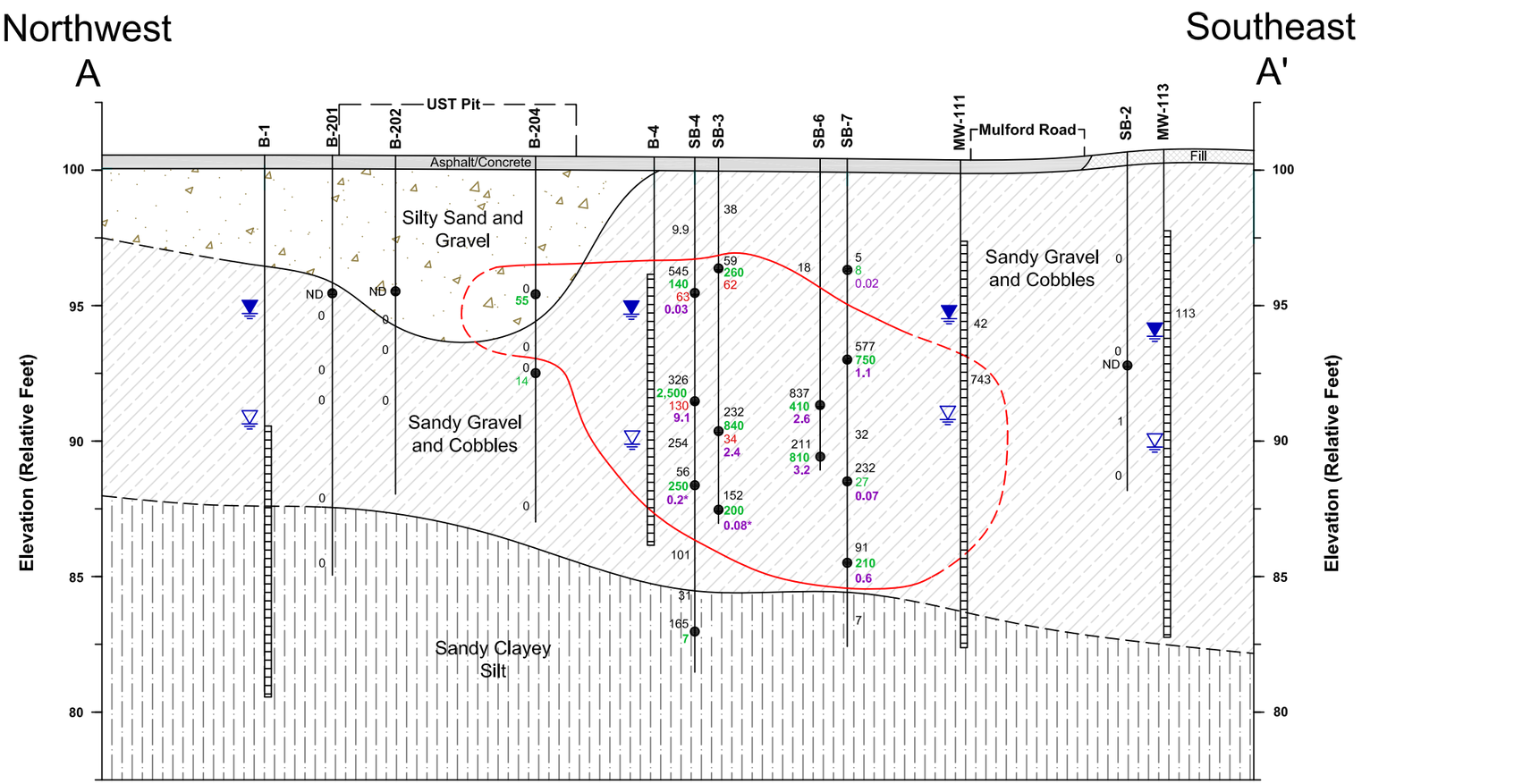
FIGURE 3

2013 Soil Sampling Results -
Cross-Section A-A'

DATE: 3/20/2014 | DRAWING: 211556 X-Section.dwg

LEGEND:

- Boring
- Screened interval
- Estimated extent of soil contamination exceeding Site cleanup levels, based on pre-2005 soil sampling results (dashed where inferred)
- Highest recorded groundwater elevation
- Lowest recorded groundwater elevation
- Soil analytical sample location
- 28 — Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- 10 — Diesel-range hydrocarbon concentration in mg/kg
- 0.001 — Benzene concentration in mg/kg
- ND — No analytes were detected at or above laboratory detection limits
- 0.05* — Analyte not detected at or above indicated laboratory detection limit; detection limit exceeded the Site cleanup level
- **0.13** — Bold indicates analyte concentration exceeding Site cleanup level
- 140 — Photoionization detector (PID) reading in parts per million (ppm)
- Contact line between soil types



SOIL/ROCK CLASSIFICATION LEGEND:

- Concrete or Asphalt
- Brown, fine to coarse Sand and Gravel with some Cobbles and Silt
- Brown to gray, medium to coarse sandy Gravel and Cobbles
- Brown to greenish gray, fine sandy, clayey SILT

0 15 30 60

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

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FIGURE 4
Pre-2005 Soil Sampling Results -
Cross-Section A-A'

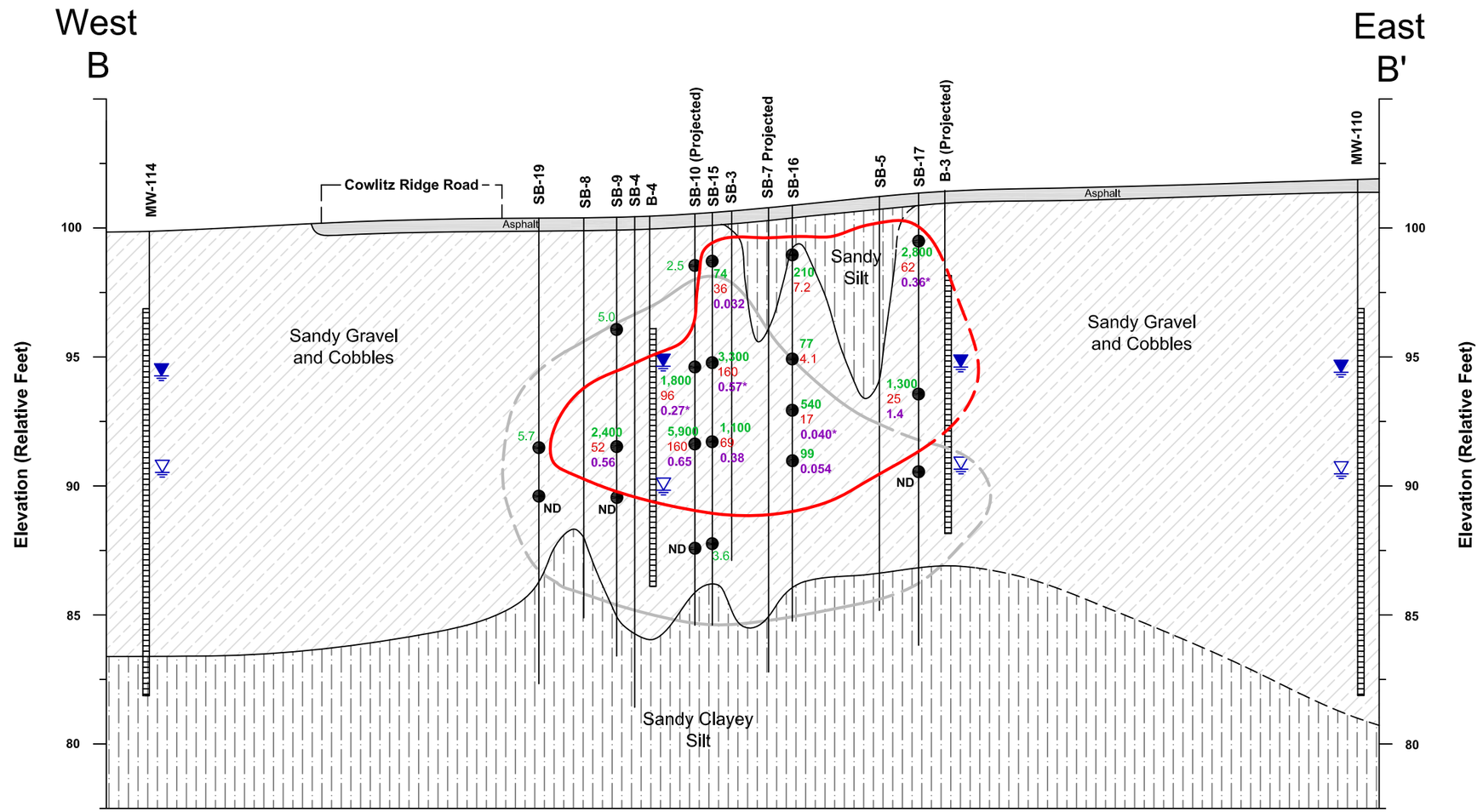
DATE: 3/19/2014 | DRAWING: 21-1556 X-Section.dwg

LEGEND:

- Boring
- Screened interval
- Estimated extent of soil contamination exceeding Site cleanup levels, based on November 2013 soil sampling results (dashed where inferred)
- Estimated extent of soil contamination exceeding Site cleanup levels, based on pre-2005 soil sampling results (see Figure 6 for additional details)
- Highest recorded groundwater elevation
- Lowest recorded groundwater elevation
- Soil analytical sample location
- 3,300 — Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- 160 — Diesel-range hydrocarbon concentration in mg/kg
- 0.038 — Benzene concentration in mg/kg
- ND — No analytes were detected at or above laboratory detection limits
- **0.27*** — Analyte not detected at or above indicated laboratory detection limit; however, the detection limit exceeded the Site cleanup level
- **0.38** — Bold indicates analyte concentration exceeding Site cleanup level
- Contact line between soil types

SOIL/ROCK CLASSIFICATION LEGEND:

- Concrete or Asphalt
- Brown to gray, medium to coarse sandy Gravel and Cobbles
- Brown to greenish gray, fine sandy, clayey Silt



0 15 30 60

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

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101 Mulford Road
Toledo, Washington

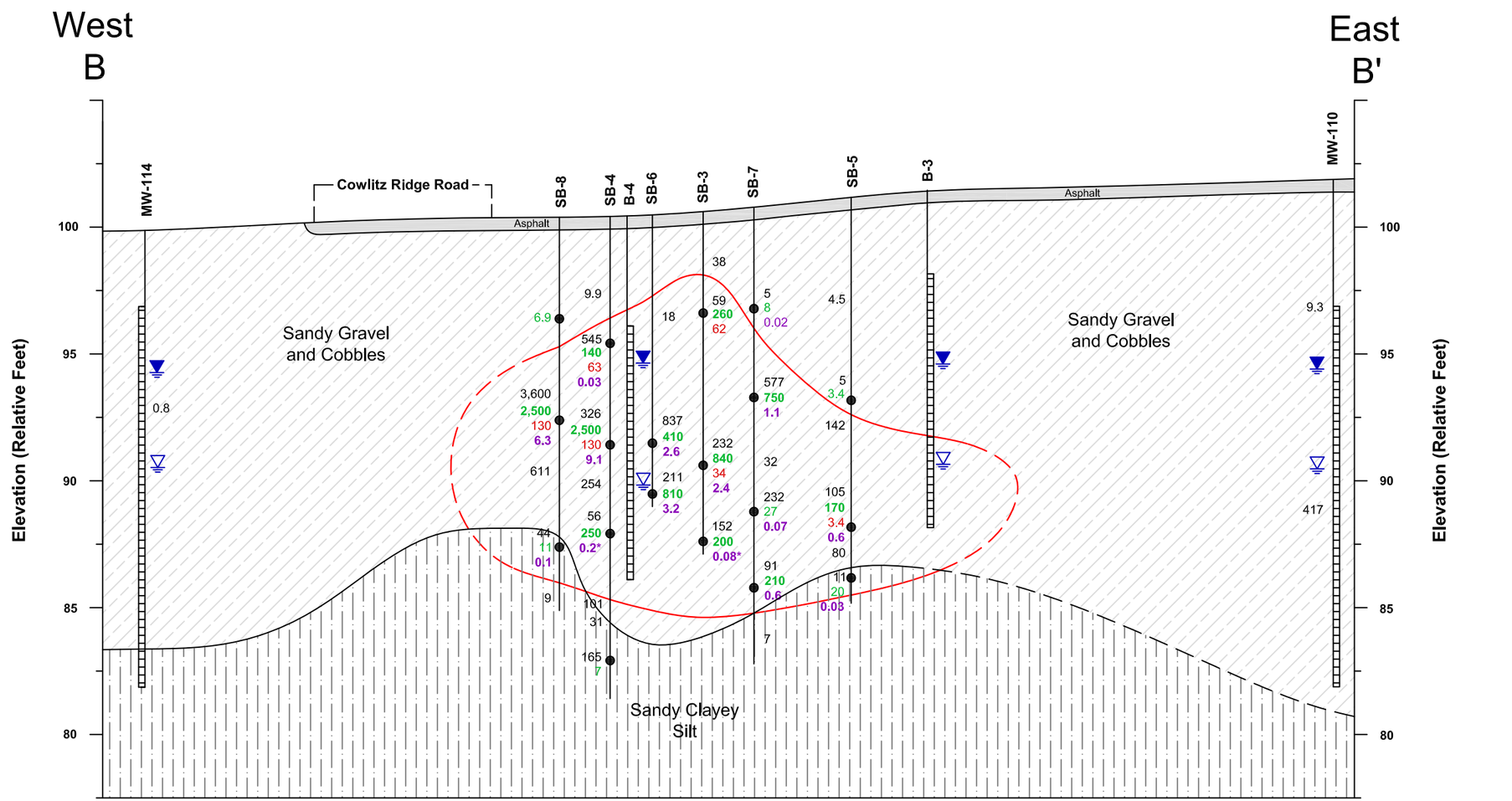
FIGURE 5

2013 Soil Sampling Results -
Cross-Section B-B'

DATE: 3/20/2014 | DRAWING: 211556 X-Section.dwg

LEGEND:

- Boring
- Screened interval
- Estimated extent of soil contamination exceeding Site cleanup levels, based on pre-2005 soil sampling results (dashed where inferred)
- Highest recorded groundwater elevation
- Lowest recorded groundwater elevation
- Soil analytical sample location
- 28 — Gasoline-range hydrocarbon concentration in milligrams per kilogram (mg/kg)
- 10 — Diesel-range hydrocarbon concentration in mg/kg
- 0.001 — Benzene concentration in mg/kg
- ND — No analytes were detected at or above laboratory detection limits
- 0.05* — Analyte not detected at or above indicated laboratory detection limit; detection limit exceeded the Site cleanup level
- **0.13** — Bold indicates analyte concentration exceeding Site cleanup level
- 140 — Photoionization detector (PID) reading in parts per million (ppm)
- Contact line between soil types



SOIL/ROCK CLASSIFICATION LEGEND:

- Concrete or Asphalt
- Brown to gray, medium to coarse sandy Gravel and Cobbles
- Brown to greenish gray, fine sandy, clayey SILT

0 15 30 60

HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 5'

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(Cowlitz Food and Fuel / Former Texaco 211556)
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FIGURE 6

Pre-2005 Soil Sampling Results -
Cross-Section B-B'

DATE: 3/19/2014 | DRAWING: 21-1556 X-Section.dwg

TABLE 1

SUMMARY OF HISTORICAL ANALYTICAL DATA - TPH, BTEX[1]

COWLITZ BP (COWLITZ FOOD AND FUEL)/FORMER TEXACA SERVICE STATION 211556

101 Mulford Road Toledo, Washington

Concentration reported in mg/kg

Sample ID	Depth (ft)	Date Sampled	Gasoline Range Organics[2] (mg/kg)	Diesel Range Organics (mg/kg)		Heavy Oils (mg/kg)		Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total Lead (mg/kg)
				w/o silica gel	w silica gel	w/o silica gel	w silica gel					
SB-9-4	4	11/4/2013	5.0	<3.7	<3.7	<12	<12	<0.0065	<0.0065	0.0072	<0.019	8.80
SB-9-9	9	11/8/2013	**2,400**	52	34	<11	<11	**0.56**	4.5	<2.7	5.0	4.63
SB-9-11	11	11/8/2013	<0.9	<3.3	<3.3	<11	<11	<0.0046	<0.0046	<0.0046	<0.014	3.40
DUP-3-110813	11	11/8/2013	<0.9	<3.2	<3.2	<11	<11	<0.0043	0.0051	<0.0043	<0.013	2.64
SB-10-2	2	11/4/2013	2.5	<3.9	<3.9	<13	<13	<0.0075	0.013	0.023	0.11	7.57
SB-10-6	6	11/6/2013	**1,800**	96	74	<12	<12	<0.27	0.35	1.0	1.9	10.7
SB-10-9	9	11/7/2013	**5,900**	160	140	<11	<11	**0.65**	4.2	**7.5**	**15**	7.13
SB-10-13	13	11/7/2013	<1	<3.3	<3.3	<11	<11	<0.0048	<0.0048	<0.0048	<0.15	2.53
SB-11-10	10	11/6/2013	19	<3.3	<3.3	<11	<11	<0.0048	0.0049	0.024	0.046	5.79
SB-11-12.5	12.5	11/6/2013	<1	<3.3	<3.3	<11	<11	<0.0048	<0.0048	<0.0048	<0.014	6.79
SB-12-9.5	9.5	11/6/2013	1.5	<3.3	<3.3	15	<11	<0.0055	<0.0055	<0.0055	<0.016	6.34
SB-12-10.5	10.5	11/6/2013	**1,600**	**2,500**	**2,300**	<110	<110	<0.19	2.2	<1.5	3.4	11.0
SB-12-12	12	11/6/2013	2.6	<3.3	<3.3	<11	<11	<0.0046	<0.0046	<0.0046	<0.014	5.70
SB-12-13.5	13.5	11/6/2013	<1.0	<3.3	<3.3	<11	<11	<0.0051	0.017	<0.0051	<0.015	7.21
SB-13-10.5	10.5	11/7/2013	**150**	82	76	14	<11	**0.085**	0.32	0.17	0.88	7.34
SB-13-12.5	12.5	11/7/2013	<1.0	<3.4	<3.4	<11	<11	<0.0052	<0.0052	<0.0052	<0.015	6.78
SB-14-7	7	11/5/2013	<1.1	<3.5	<3.5	<12	<12	<0.0056	<0.0056	<0.0056	<0.017	8.67
SB-14-9.5	9.5	11/7/2013	**4,500**	190	170	<11	<11	**1.7**	**8.2**	<5.3	**9.7**	7.24
DUP-1-110713	9.5	11/7/2013	**2,200**	150	140	<11	<11	<0.45	<2.6	1.6	4.2	6.21
SB-14-12.5	12.5	11/7/2013	28	<3.3	<3.3	<11	<11	0.013	0.032	0.054	0.059	3.60
SB-14-14	14	11/7/2013	4.1	<3.2	<3.2	<11	<11	<0.0053	0.0065	0.0059	<0.016	1.85
SB-15-2	2	11/5/2013	**74**	36	19	83	16	**0.032**	0.086	0.22	0.65	11.5
SB-15-6	6	11/6/2013	**3,300**	160	130	<11	<11	<0.57	1.4	3.8	5.7	12.5
SB-15-9	9	11/7/2013	**1,100**	69	57	<11	<11	**0.38**	1.4	**6.8**	7.2	4.24
SB-15-13	13	11/7/2013	3.6	<3.4	<3.4	<11	<11	<0.0048	<0.0048	0.041	<0.014	1.78
SB-16-2	2	11/6/2013	**210**	7.2	4.2	<14	<14	<0.036	<0.15	0.15	0.24	11.4
SB-16-6	6	11/6/2013	**77**	4.1	<3.3	<11	<11	<0.0055	0.034	0.012	0.096	13.4
SB-16-8	8	11/7/2013	**540**	17	12	12	<11	<0.040	0.17	0.42	0.67	5.05
SB-16-10	10	11/7/2013	**99**	<3.4	<3.4	12	<11	**0.054**	0.097	0.22	0.20	6.84
SB-17-2	2	11/6/2013	**2,800**	62	47	33	<13	<0.36	1.1	**7.9**	**65**	19.3
SB-17-8	8	11/8/2013	**1,300**	25	15	<11	<11	**1.4**	1.7	**10**	**20**	3.64
SB-17-11	11	11/8/2013	<0.9	<3.3	<3.3	<11	<11	<0.0046	<0.0046	<0.0046	<0.014	2.67
SB-18-8	8	11/7/2013	**580**	<3.4	<3.4	<11	<11	**0.43**	1.2	1.4	0.84	4.55
DUP-2-110713	8	11/7/2013	**620**	7.8	6.6	<11	<11	**0.46**	1.3	1.5	0.92	4.09
SB-18-12	12	11/7/2013	<1	<3.5	<3.5	<12	<12	<0.0050	<0.0050	<0.0050	<0.015	3.00
SB-19-9	9	11/8/2013	5.7	<3.2	<3.2	<11	<11	<0.0048	0.014	0.014	0.042	3.55
SB-19-11	19	11/8/2013	<1	<3.2	<3.2	<11	<11	<0.0050	<0.0050	<0.0050	<0.015	2.97
SB-20-2	2	11/8/2013	5.6	19	13	16	<13	<0.0068	0.0068	<0.0091	<0.020	5.29

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TABLE 1

SUMMARY OF HISTORICAL ANALYTICAL DATA - TPH, BTEX[1]

COWLITZ BP (COWLITZ FOOD AND FUEL)/FORMER TEXACA SERVICE STATION 211556

101 Mulford Road Toledo, Washington

Concentration reported in mg/kg

Sample ID	Depth (ft)	Date Sampled	Gasoline Range Organics[2] (mg/kg)	Diesel Range Organics (mg/kg)		Heavy Oils (mg/kg)		Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Total Lead (mg/kg)
SB-20-10	10	11/8/2013	**730**	65	46	<11	<11	**0.26**	0.96	2.1	1.1	5.80
SB-20-12	12	11/8/2013	2.1	<3.3	<3.3	<11	<11	<0.0048	<0.0048	0.0077	<0.014	6.07
SB-20-14	14	11/8/2013	<1.0	<3.4	<3.4	<11	<11	<0.0050	<0.0050	<0.0050	<0.015	3.94
SB-21-6	6	11/8/2013	<1.6	<3.7	<3.7	<12	<12	<0.0082	<0.0082	<0.0082	<0.025	3.83
SB-21-9	9	11/8/2013	**61**	3.3	<3.3	<11	<11	<0.020	<0.069	0.049	0.12	4.42
SB-21-12	12	11/8/2013	<1.2	<3.3	<3.3	<11	<11	<0.0059	<0.0059	<0.0059	<0.018	4.62
MTCA Method A CULs			**30/100**	**2,000**		**2,000**		**0.03**	**7.0**	**6.0**	**9.0**	**250**

ABBREVIATIONS:

CULs = Cleanup levels
DUP = Duplicate
Ecology = Washington State Department of Ecology
< = Concentration was less than the laboratory reporting limit
EPA = United States Environmental Protection Agency
mg/kg = Milligrams per kilogram
MTCA = Model Toxics Control Act
TPH = Tolal Petroleum Hydrocarbons
BTEX = Benzene, toluene, ethylbenzene and total xylenes
w = with
w/o = without

ANALYTICAL METHODS:

Gasoline Range Organics Analyzed by Ecology Method NWTPH-Gx.

Diesel Range Organics Analyzed by Ecology Method NWTPH-Dx with silica-gel cleanup.

Heavy Oils Analyzed by Ecology Method NWTPH-Dx with silica-gel cleanup.
Benzene, Toluene, Ethylbenzene, and Total Xylenes Analyzed by EPA Method 8021B (2004 and older) and EPA Method 8260B (2010)
cPAHs analyzed by EPA Method 8270C SIM
Total Lead analyzed EPA Method 6020

Notes:

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

2. TPH-GRO MTCA Method A cleanup level is 30 mg/kg if benzene is present and 100 mg/kg if benzene is not present.

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TABLE 2
SUMMARY OF HISTORICAL ANALYTICAL DATA - cPAHs
COWLITZ BP (COWLITZ FOOD AND FUEL)/FORMER TEXACA SERVICE STATION 211556
101 Mulford Road Toledo, Washington
Concentration reported in mg/kg

Sample ID	Depth (ft)	Date Sampled	Benzo(a) anthracene[1] (mg/kg)	Benzo(a) pyrene[1] (mg/kg)	Benzo(b) fluoranthene[1] (mg/kg)	Benzo(k) floranthene[1] (mg/kg)	Chrysene[1] (mg/kg)	Dibenz(a,h) anthracene[1] (mg/kg)	Indeno (1,2,3-cd) pyrene[1] (mg/kg)
SB-9-4	4	11/4/2013	<0.00082	<0.00082	<0.00082	<0.00082	<0.00041	<0.00082	<0.00082
SB-9-9	9	11/8/2013	0.0053	0.0020	0.0020	0.00082	0.0050	<0.00073	<0.00073
SB-9-11	11	11/8/2013	<0.00074	<0.00074	<0.00074	<0.00074	<0.00037	<0.00074	<0.00074
DUP-3-110813	11	11/8/2013	<0.00072	<0.00072	<0.00072	<0.00072	<0.00036	<0.00072	<0.00072
SB-10-2	2	11/4/2013	<0.00085	<0.00085	<0.00085	<0.00085	0.0013	<0.00085	<0.00085
SB-10-6	6	11/6/2013	0.0070	0.0037	0.0036	0.0019	0.0080	<0.00082	<0.00082
SB-10-9	9	11/7/2013	0.012	0.0046	0.0041	0.0014	0.011	<0.00075	0.0012
SB-10-13	13	11/7/2013	<0.00073	<0.00073	<0.00073	<0.00073	0.00080	<0.00073	<0.00073
SB-11-10	10	11/6/2013	0.00075	<0.00073	0.0017	0.00097	0.0024	<0.00073	<0.00073
SB-11-12.5	12.5	11/6/2013	<0.00073	<0.00073	<0.00073	<0.00073	<0.00037	<0.00073	<0.00073
SB-12-9.5	9.5	11/6/2013	0.0015	0.0021	0.0032	0.0011	0.0026	<0.00074	0.0011
SB-12-10.5	10.5	11/6/2013	<0.0072	<0.0072	<0.0072	<0.0072	0.017	<0.0072	<0.0072
SB-12-12	12	11/6/2013	<0.00073	<0.00073	<0.00073	<0.00073	<0.00037	<0.00073	<0.00073
SB-12-13.5	13.5	11/6/2013	<0.00073	<0.00073	<0.00073	<0.00073	<0.00036	<0.00073	<0.00073
SB-13-10.5	10.5	11/7/2013	<0.00074	<0.00074	0.0011	<0.00074	0.0014	<0.00074	<0.00074
SB-13-12.5	12.5	11/7/2013	<0.00075	<0.00075	<0.00075	<0.00075	<0.00037	<0.00075	<0.00075
SB-14-7	7	11/5/2013	0.0039	0.0055	0.0098	0.0042	0.018	0.0027	0.0017
SB-14-9.5	9.5	11/7/2013	0.027	0.012	0.011	0.0037	0.026	0.0011	0.0022
DUP-1-110713	9.5	11/7/2013	0.014	0.0060	0.0053	0.0021	0.013	<0.00073	0.0012
SB-14-12.5	12.5	11/7/2013	<0.00074	<0.00074	<0.00074	<0.00074	<0.00037	<0.00074	<0.00074
SB-14-14	14	11/7/2013	<0.00072	<0.00072	<0.00072	<0.00072	<0.00036	<0.00072	<0.00072
SB-15-2	2	11/5/2013	<0.00092	0.00093	0.0019	<0.00092	0.0034	<0.00092	<0.00092
SB-15-6	6	11/6/2013	0.015	0.0079	0.0074	0.0037	0.016	0.00079	0.0013
SB-15-9	9	11/7/2013	0.0051	0.0021	0.0021	0.00081	0.0048	<0.00071	<0.00071
SB-15-13	13	11/7/2013	<0.00076	<0.00076	<0.00076	<0.00076	<0.00038	<0.00076	<0.00076
SB-16-2	2	11/6/2013	<0.00091	<0.00091	<0.00091	<0.00091	<0.00045	<0.00091	<0.00091
SB-16-6	6	11/6/2013	0.0029	0.0018	0.0016	0.00081	0.0025	<0.00073	<0.00073
SB-16-8	8	11/7/2013	0.0070	0.0029	0.0024	0.00093	0.0055	<0.00074	<0.00074
SB-16-10	10	11/7/2013	<0.00075	<0.00075	0.0018	<0.00075	0.0011	<0.00075	<0.00075
SB-17-2	2	11/6/2013	0.0018	<0.00086	0.0020	<0.00086	0.0026	<0.00086	<0.00086
SB-17-8	8	11/8/2013	0.0027	0.0011	0.0013	<0.00074	0.0032	<0.00074	<0.0074
SB-17-11	11	11/8/2013	<0.00075	<0.00075	<0.00075	<0.00075	<0.00037	<0.00075	<0.000075
SB-18-8	8	11/7/2013	<0.00074	<0.00074	<0.00074	<0.00074	0.00055	<0.00074	<0.00074
DUP-2-110713	8	11/7/2013	<0.00074	<0.00074	<0.00074	<0.00074	0.00044	<0.00074	<0.00074
SB-18-12	12	11/7/2013	<0.00077	<0.00077	<0.00077	<0.00077	<0.00038	<0.00077	<0.00077

TABLE 2
SUMMARY OF HISTORICAL ANALYTICAL DATA - cPAHs
COWLITZ BP (COWLITZ FOOD AND FUEL)/FORMER TEXACA SERVICE STATION 211556
101 Mulford Road Toledo, Washington
Concentration reported in mg/kg

Sample ID	Depth (ft)	Date Sampled	Benzo(a) anthracene[1] (mg/kg)	Benzo(a) pyrene[1] (mg/kg)	Benzo(b) fluoranthene[1] (mg/kg)	Benzo(k) floranthene[1] (mg/kg)	Chrysene[1] (mg/kg)	Dibenz(a,h) anthracene[1] (mg/kg)	Indeno (1,2,3-cd) pyrene[1] (mg/kg)
SB-19-9	9	11/8/2013	<0.00072	<0.0072	<0.00072	<0.00072	0.00062	<0.00072	<0.00072
SB-19-11	19	11/8/2013	<0.00072	<0.00072	<0.00072	<0.00072	<0.00036	<0.00072	<0.00072
SB-20-2	2	11/8/2013	<0.00087	<0.00087	<0.00087	<0.00087	0.00098	<0.00087	<0.00087
SB-20-10	10	11/8/2013	0.0054	0.0023	0.0021	0.00072	0.0050	<0.00071	<0.00071
SB-20-12	12	11/8/2013	<0.00073	<0.00073	<0.00073	<0.00073	<0.00036	<0.00073	<0.00073
SB-20-14	14	11/8/2013	<0.00075	<0.00075	<0.00075	<0.00075	<0.00037	<0.00075	<0.00075
SB-21-6	6	11/8/2013	<0.00082	<0.00082	<0.00082	<0.00082	<0.00041	<0.00082	<0.00082
SB-21-9	9	11/8/2013	<0.00072	<0.00072	<0.00072	<0.00072	0.00061	<0.00072	<0.00072
SB-21-12	12	11/8/2013	<0.00073	<0.00073	<0.00073	<0.00073	<0.00037	<0.00073	<0.00073
MTCA Method A CULs			--	--	--	--	--	--	--

Abbreviations:

cPAHs = Carcinogenic polycyclic aromatic hydrocarbons

DUP = Duplicate

(ft.) = Feet

(mg/kg) = Milligrams per kilogram

MTCA = Model Toxics Control Act

SIM = Selective Ion Monitoring

USEPA = United States Environmental Protection Agency

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Attachment A:
Boring Logs

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-9

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/4/2013
Date Completed: 11/8/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 17 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	Two layers asphalt to six inches. Boring was cleared by airknife to 8 feet bgs.
	PID/FID							Soil samples collected by hand auger between ground surface and 8 feet bgs.
Moist	1.9				GW		1	(GW) Brown, medium dense, sandy, fine to coarse GRAVEL with 30% medium to coarse sand, 5% silt, and cobbles up to 8 inches in diameter. (no odor, no sheen)
							2	
							3	Same as above. Cobbles up to 12 inches in diameter. (no odor, no sheen)
Moist	19.8		SB-9-4.5	G = 5.0 D <3.7 HO <12 B <0.0065			4	
							5	
Moist	0.0/0.0				GP		6	(GP) Brown, medium dense, fine to medium GRAVEL with 5% sand. (no odor, no sheen)
							7	
Moist	2.4/0.1				GP		8	(GP) Same as above. (no odor, no sheen)
Wet	1827/3101		SB-9-9	G **2,400** D 52 HO <11 B **0.56**			9	(GP) Gray, medium dense, sandy, medium to coarse GRAVEL with 20% cobbles and 15% sand. (slight odor, slight sheen)
Wet	2.0/1.9				GP		10	Gray, medium dense, sandy, medium to coarse GRAVEL with 20% cobbles and 15% sand. (no odor, no sheen)
Wet	1.7/0.4		SB-9-11	G <0.9 D <3.3 HO <11 B <0.0046			11	
Wet	1.3/0.5						12	(GP) Same as above. Brown GRAVEL (no odor, no sheen)
Wet	1.6/0.1				GP		13	
Wet	1.7/0.3						14	
							15	
Moist	0.0/0.0				ML/CL		16	(ML/CL) Olive gray, very hard, clayey SILT/silty CLAY with high plasticity. (no odor, no sheen)
							17	Bottom of borehole at 17.0 feet.
							18	
							19	
							20	

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-10

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/4/2013
Date Completed: 11/7/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 16 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	Asphalt to 3 inches. Boring was cleared by airknife to 8 feet bgs.
	PID/FID				GW		1	(GW) Brown, medium dense, sandy, fine to coarse GRAVEL with 30% sand, 10% cobbles up to 13 inches in diameter, and 5% silt. (no odor, no sheen)
								Soil samples collected by hand auger between ground surface and 8 feet bgs.
Moist	57/61		SB-10-2	G = 2.5 D <3.9 HO <13 B <0.0075			2	Same as above. (slight odor, no sheen)
					GW		3	(GW) Brown sandy, silty GRAVEL with organics and woody debris at 3.5 feet. (no odor, no sheen)
Moist	8.1/0.0						4	Same as above. (no odor, no sheen)
							5	(GP) Olive gray to brown, medium dense, coarse GRAVEL with 20% coarse sand and 15% cobbles up to 8 inches in diameter. (moderate odor, slight sheen)
Moist	998/720		SB-10-6	G **1,800** D 96 HO <12 B <0.27	GP		6	
							7	
Moist	1472/939						8	(GM) Brown to gray, medium dense, sandy, fine to coarse GRAVEL with 30% sand, 15% silt, and 10% cobbles. (slight odor, slight sheen)
Wet	1700/3332		SB-10-9	G **5,900** D 160 HO <11 B **0.65**	GM		9	
Wet	488/103						10 ▼	Same as above. (slight odor, slight sheen)
Wet	52/20.7				GM		11	(GM) Same as above. (slight odor, no sheen)
Moist	20.9/5.1						12	Same as above. (slight odor, no sheen) (GM) Same as above. (no odor, no sheen)
Moist	5.5/2.8		SB-10-13	G <1 D <3.3 HO <11 B <0.0048	GM		13	Same as above. (no odor, no sheen)
Moist	3.7/2.2						14	
Moist	1.0/0.0						15	(ML/CL) Olive gray, very hard, clayey SILT/silty CLAY with high plasticity. (no odor, no sheen)
					ML/CL		16	Bottom of borehole at 16.0 feet.
							17	
							18	
							19	
							20	

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-11

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/5/2013
Date Completed: 11/6/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 20 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	Road base FILL. Geotextile fabric at 1.25 feet. Boring was cleared by airknife to 8 feet bgs.
							1	Excavation Backfill to 7.25 feet.
							2	
							3	
							4	
							5	
							6	
Wet							7	
							8	Quarry Spalls to 9.75 feet.
							9	
Wet	0.0/0.0		SB-11-10	G = 19 D <3.3 HO <11 B <0.0048	GP		10	(GP) Brown, medium dense, sandy, cobbly, medium to coarse GRAVEL with 20% medium to coarse sand and 15% cobbles up to 10 inches in diameter. (no odor, no sheen)
							11	Same as above. (no, odor, no sheen)
Sat.	0.0/0.0		SB-11-12.5	G <1 D <3.3 HO <11 B <0.0048			12	
Sat.	0.0/0.0						13	(GP) Gray, medium dense, fine to coarse GRAVEL with 10% cobbles and <5% sand. (no odor, no sheen)
Wet					GP		14	
Wet	0.0/0.0						15	Same as above. (no odor, no sheen)
Moist							16	(GP) Same as above. (no odor, no sheen)
					GP		17	
Moist	0.0/0.0						18	(ML/CL) Olive gray, very hard, silty CLAY/clayey SILT with high plasticity. (no odor, no sheen)
					ML/CL		19	Same as above. (no odor, no sheen)
							20	Bottom of borehole at 20.0 feet.

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-12

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/5/2013
Date Completed: 11/6/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 16 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
	PID/FID						0	Roadbase FILL. Gravel. Boring was cleared by airknife to 8 feet bgs.
							1	Excavation Backfill down to 7.5 feet.
							2	
							3	
							4	
							5	
							6	
							7	
							8	Quarry Spalls to 9.5 feet.
Moist	6.3/0.0		SB-12-9.5	G = 1.5 D <3.3 HO = 15 B <0.0055			9	
Wet	4.1/0.0				GP		10	(GP) Brown, medium dense, sandy, fine to coarse GRAVEL with 30% medium to coarse sand and 10% cobbles. (no odor, no sheen)
Sat.	1240/1404		SB-12-10.5	G **1,600** **D = 2,500** HO <110 B <0.19			11	Same as above, gray, medium dense GRAVEL. (strong odor, moderate sheen) (GP) Brown, medium dense, sandy, fine to coarse GRAVEL with 30% sand and 10% cobbles. (no odor, no sheen)
	8.2/0.5						12	
Sat.	4.3/0.0		SB-12-12	G = 2.6 D <3.3 HO <11 B <0.0046	GP		13	
Wet	4.8/0.0						14	Same as above. (no odor, no sheen)
Moist	3.0/0.0		SB-12-13.5	G <1.0 D <3.3 HO <11 B <0.0051			15	(ML/CL) Olive gray, very hard, silty CLAY/clayey SILT with high plasticity. (no odor, no sheen)
	0.0/0.0				ML/CL		16	
							17	Bottom of borehole at 16.0 feet.
							18	
							19	
							20	

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-13

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/5/2013
Date Completed: 11/7/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 16 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
	PID/FID						0	Road base FILL. Boring was cleared by airknife to 8 feet bgs.
								Excavation Backfill to 8 feet.
							1	
							2	
							3	
							4	
							5	
							6	
							7	
							8	Quarry Spalls to 10 feet.
Moist	8.6/4.5						9	
Wet	15.9/2.2				GP		10	(GP) Brown, medium dense, sandy, fine to coarse GRAVEL with 30% medium to coarse sand and 20% cobbles. (no odor, no sheen)
Sat.	1.7/2.8		SB-13-10.5	G = **150** D = 82 HO = 14 B = **0.085**			11	Same as above with gray GRAVEL. (no odor, no sheen) Brown, medium dense, sandy, cobbly, fine to coarse GRAVEL with 30% sand and 20% cobbles. (no odor, no sheen)
Sat.	4.1/1.8						12	(GP) Same as above. (no odor, no sheen)
Moist	5.7/1.4		SB-13-12.5	G = <1.0 D = <3.4 HO = <11 B = <0.0052	GP		13	Same as above. (no odor, no sheen)
Moist	0.0/0.0						14	
Moist	0.0/0.0				ML/CL		15	(ML/CL) Olive, very hard, silty CLAY/clayey SILT with high plasticity. (no odor, no sheen)
							16	Bottom of borehole at 16.0 feet.
							17	
							18	
							19	
							20	

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-14

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/5/2013
Date Completed: 11/7/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 17.5 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
	PID/FID				GW		0	Asphalt. Boring was cleared by airknife to 8 feet bgs.
								(GW) FILL. Soil samples collected by hand auger between ground surface and 8 feet bgs.
							1	Asphalt.
					GW			(GW) Brown, medium dense, sandy, fine to coarse GRAVEL with 30% sand, 15% gravel up to 15 inches in diameter, and 5% silt. (no odor, no sheen)
Moist	3.3/0.0						2	
							3	Same as above. (no odor, no sheen)
Moist	4.5/4.8						4	(GW) Same as above. (no odor, no sheen)
					GW		5	
								(GP) Brown, medium dense, sandy, coarse GRAVEL with 30% cobbles up to 12 inches in diameter and 15% coarse sand. (no odor, no sheen)
Moist	0.9/0.0				GP		6	
			SB-14-7	G <1.1 D <3.5 HO <12 B <0.0056			7	Same as above with 70% coarse GRAVEL, 20% cobbles, and 10% sand. (no odor, no sheen)
Moist	9.0/5.6						8	(GP) Same as above. (no odor, no sheen)
					GP			
							9	Gray, sandy, cobbly GRAVEL. (slight odor, slight sheen)
Wet	1842/3332		SB-14-9.5	G **4,500** D 190 HO <11 B **1.7**			10	(GP) Same as above.
					GP			
Sat.	10.3/4.7						11	
Sat.	3.5/1.3						12	Brown, medium dense, fine to coarse GRAVEL and COBBLES with 10% coarse sand. (no odor, no sheen)
			SB-14-12.5	G 28 D <3.3 HO <11 B = 0.013				
Moist	8.9/4.4						13	(GP) Same as above with 30% coarse sand. (no odor, no sheen)
					GP			
Moist	11.3/4.5		SB-14-14	G = 4.1 D <3.2 HO <11 B <0.0053			14	Same as above. (no odor, no sheen)
Moist	1.3/6.7						15	
								(ML/CL) Olive gray, very hard, clayey SILT/silty CLAY with high plasticity. (no odor, no sheen)
Moist	0.0/0.0				ML/CL		16	
							17	
								Bottom of borehole at 17.5 feet.
							18	
							19	
							20	

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-15

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/5/2013
Date Completed: 11/7/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 16 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
	PID/FID							Asphalt. Top 3 inches. Boring was cleared by airknife to 8 feet bgs.
								Road base FILL. Gravel. Soil samples collected by hand auger between ground surface and 8 feet bgs.
					GW		1	(GW) Brown, medium dense, sandy, fine to coarse GRAVEL with 30% coarse sand and 15% cobbles up to 12 inches diameter, and 5% silt.
Moist	77.1/45.8		SB-15-2	G **74** D 36 HO = 83 B **0.032**			2	Same as above. (slight odor, no sheen)
							3	
							4	(GW) Same as above. (slight odor, no sheen)
Moist	28.1/20.3				GW		5	
								(GP) Brown, medium dense, sandy, cobbly, medium to coarse GRAVEL with 15% sand and 15% cobbles up to 12 inches in diameter. (strong odor, moderate sheen)
Moist	1655/3242		SB-15-6	G **3,300** D 160 HO <11 B <0.57	GP		6	
							7	Same as above. (slight odor, slight sheen)
Moist	1645/1882						8	
Wet	2145/3332		SB-15-9	G **1,100** D 69 HO <11 B **0.38**			9	(GP) Gray, medium dense, sandy, cobbly, fine to coarse GRAVEL with 30% sand and 10% cobbles. (moderate odor, slight sheen)
Sat.	707/376				GP		10	
Wet	302/201						11	Brown, medium dense, sandy, medium to coarse GRAVEL with 30% sand and 15% cobbles. (slight odor, no sheen)
Moist	266/226						12	
Moist	38/24.6		SB-15-13	G 3.6 D <3.4 HO <11 B <0.0048			13	(GP) Same as above with 20% cobbles and 5% sand. (no odor, no sheen)
Moist	3.2/5.4				GP		14	
								(ML/CL) Olive gray, very hard, silty CLAY/clayey SILT with high plasticity. (no sheen, no odor)
Moist	0.0/0.0				ML/CL		15	
							16	Bottom of borehole at 16.0 feet.
							17	
							18	
							19	
							20	

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-16

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/6/2013
Date Completed: 11/7/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 16 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
	PID/FID						0	Asphalt. Top 3 inches. Boring was cleared by airknife to 8 feet bgs.
								Road base FILL. Soil samples collected by hand auger between ground surface and 8 feet bgs.
					SM		1	(SM) Brown, medium dense, silty, fine to medium SAND with 30% silt, 5% coarse gravel, and some organics.
Moist	156/227		SB-16-2	G **210** D 7.2 HO <14 B <0.036			2	Same as above. (slight odor, no sheen)
					GW		3	(GW) Brown, medium dense, sandy, fine to coarse GRAVEL with 30% medium to coarse sand and 15% cobbles up to 8 inches in diameter.
Moist	17.1/5.3						4	Same as above. (no odor, no sheen)
							5	
Moist	60.2/26.0		SB-16-6	G **77** D 4.1 HO <11 B <0.0055	GW		6	(GW) Same as above. (slight odor, no sheen)
							7	
Wet	288/113		SB-16-8	G **540** D 17 HO = 12 B <0.040	GP		8	(GP) Brown, medium dense, sandy, medium to coarse GRAVEL with 15% cobbles and 10% sand. (no odor, no sheen)
Sat.	173/76						9	Same as above. (no odor, no sheen)
	15.1/4.2		SB-16-10	G **99** D <3.4 HO = 12 B **0.054**			10	
Sat.	21.7/4.6						11	
	21.8/10.1				GP		12	(GP) Same as above. (no odor, no sheen)
Sat.	7.3/5.7						13	Brown, medium dense, sandy, cobbly, medium GRAVEL with 30% coarse sand, 15% cobbles, and 5% silt. (no odor, no sheen)
Wet	5.2/2.5						14	
Moist	0.0/0.0						15	
					CL/ML			(CL/ML) Olive gray, very hard, silty CLAY/clayey SILT with high plasticity. (no odor, no sheen)
							16	Bottom of borehole at 16.0 feet.
							17	
							18	
							19	
							20	

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-17

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/6/2013
Date Completed: 11/8/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 17.5 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
	PID/FID							Asphalt. Up to 3 inches. Boring was cleared by airknife to 8 feet bgs.
							1	Road base FILL. Soil samples collected by hand auger between ground surface and 8 feet bgs.
					SM			(SM) Brown, loose, silty SAND with 10% gravel. (moderate odor, slight sheen)
Moist	1151/1933		SB-17-2	G **2,800** D 62 HO = 33 B <0.36			2	Roots, woody debris at 25 inches.
					GW		3	(GW) Brown, medium dense, sandy GRAVEL. (no sheen)
Moist	18.2/10.0						4	Same as above with gravel up to 6 inches in diameter and 5% silt (no sheen)
							5	
Moist	4.5/0.2						6	(GW) Same as above. (no odor, no sheen)
					GW		7	
Moist	2290/3101		SB-17-8	G **1,300** D 25 HO <11 B **1.4**			8	Brown, medium dense, sandy, fine to coarse GRAVEL with 30% sand, 15% cobbles, and 10% silt. (moderate odor, slight sheen)
Wet	1885/3075						9	(GW) Same as above. (moderate odor, slight sheen)
					GW			
Wet	3.7/2.4						10	Same as above. (no odor, no sheen)
Wet	4.6/5.1		SB-17-11	G <0.9 D <3.3 HO <11 B <0.0046			11	
Wet	2.7/1.6						12	(GW) Same as above. (no odor, no sheen)
Moist	0.0/0.0				GW		13	
Moist	0.0/0.0						14	
Moist	0.0/0.0						15	(ML/CL) Olive gray, very hard, silty CLAY/clayey SILT with high plasticity. (no odor, no sheen)
Moist	0.0/0.0				ML/CL		16	
							17	
							18	Bottom of borehole at 17.5 feet.
							19	
							20	

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-18

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/7/2013
Date Completed: 11/7/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 16 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
	PID/FID						0	Asphalt. Top 4 inches. Boring was cleared by airknife to 8 feet bgs.
								Soil samples collected by hand auger between ground surface and 8 feet bgs.
							1	
Moist	1.1/1.4				SP		2	(SP) Brown, loose, gravelly SAND with 5% silt. (no odor, no sheen)
							3	
							4	(GP) No recovery: Cobbles up to 4 inches in diameter. (no odor, no sheen)
					GP		5	
Moist	2.5/0.4						6	Same as above with increasing sand. (no odor, no sheen)
							7	
Moist	1227/1148		SB-18-8	G **580** D <3.4 HO <11 B **0.43**	GP		8	(GP) Brownish-gray, medium dense, sandy, fine to coarse GRAVEL with 30% sand and 10% cobbles. (slight odor, slight sheen)
Moist	106/99						9	Same as above. (slight odor, no sheen)
Wet	26/22.3						10	(GW) Brown, medium dense, sandy, fine to coarse GRAVEL with 30% sand, 10% cobbles, and 10% silt. (no odor, no sheen)
Sat.	6.5/5.1				GW		11	
Wet	9.3/2.2		SB-18-12	G <1 D <3.5 HO <12 B <0.0050	GP		12	(GP) Brown, medium dense, sandy, cobbly, fine to coarse GRAVEL with 30% sand and 10% cobbles. (no odor, no sheen)
Moist	5.7/1.1						13	Same as above. (no odor, no sheen)
Moist	4.1/1.4						14	
					CL-ML		15	(CL-ML) Olive gray, very hard, silty CLAY/clayey SILT with high plasticity. (no odor, no sheen)
							16	Bottom of borehole at 16.0 feet.
							17	
							18	
							19	
							20	

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-19

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/7/2013
Date Completed: 11/8/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 18 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
	PID/FID							Asphalt. Top 3 inches. Boring was cleared by airknife to 8 feet bgs.
								Road base FILL.
							1	Soil samples collected by hand auger between ground surface and 8 feet bgs.
Moist	1.1/0.0				GW		2	(GW) Brown, medium dense, sandy, fine to coarse GRAVEL with 30% sand, 20% cobbles, and 10% silt. (no odor, no sheen)
							3	
Moist	0.3/0.0						4	Same as above. (no odor, no sheen)
							5	(GP) Brown, medium dense, cobbly GRAVEL with 30% cobbles and 20% sand. (no odor, no sheen)
Moist					GP		6	
							7	
							8	Same as above. (no odor, no sheen)
Moist	4.0/0.6							
Wet	18.3/8.9		SB-19-9	G = 5.7 D <3.2 HO <11 B <0.0048			9	
Wet	8.3/5.3						10	(GP) Same as above. (no odor, no sheen)
Sat.	6.2/2.2		SB-19-11	G <1 D <3.2 HO <11 B <0.0050	GP		11	
Sat.	4.8/1.2						12	
Sat.	6.0/2.0						13	Same as above. (no odor, no sheen)
Sat.	3.8/0.6						14	
Wet	2.1/0.5						15	(ML) Olive gray, very hard, gravelly, cobbly SILT with high plasticity (no odor, no sheen)
Moist					ML		16	
							17	
							18	Bottom of borehole at 18.0 feet.
							19	
							20	

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-20

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/8/2013
Date Completed: 11/8/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 17 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
	PID/FID						0	Asphalt. Top 3 inches. Boring was cleared by airknife to 8 feet bgs. Soil samples collected by hand auger between ground surface and 8 feet bgs.
Moist	20.2/33.1		SB-20-2	G = 5.6 D = 19 HO = 16 B <0.0068	ML		1–3	(ML) Dark brown, soft SILT with medium plasticity and 10% fine to medium sand. (moderate odor, no sheen)
Moist	4.4/4.0				SM		4–5	(SM) Brown, medium dense, silty, gravelly, fine to coarse SAND with 20% gravel, 15% silt, and 10% cobbles. (no odor, no sheen)
Moist	1.1/0.0				GW		6–7	(GW) Brown, medium dense, sandy, cobbly, fine to coarse GRAVEL with 30% sand, 15% cobbles, and 5% silt. (no odor, no sheen)
Moist	55.1/17.5						8	Same as above. Brown to gray GRAVEL. (slight odor, slight sheen)
Wet	1644/3080				GW		9	(GW) Gray, medium dense, sandy, fine to coarse GRAVEL with 30% sand, 10% cobbles, and 5% silt. (slight odor, slight sheen)
Wet	1855/3101		SB-20-10	G **730** D 65 HO <11 B **0.26**			10	Same as above. (moderate odor, slight sheen)
Sat.	844/687						11	(GW) Same as above. (slight odor, slight sheen)
	10.5/13.1		SB-20-12	G 2.1 D <3.3 HO <11 B <0.0048	GW		12	Same as above. (no odor, no sheen)
Sat.	46/5.4						13	(GW) Same as above. (no odor, no sheen)
Wet	12/1.6		SB-20-14	G <1.0 D <3.4 HO <11 B <0.0050	GW		14	Same as above. (no odor, no sheen)
Wet	8.8/0.0						15	
Wet					ML/CL		16	(ML/CL) Olive gray, very hard, silty CLAY/clayey SILT with high plasticity. (no odor, no sheen)
							17	Bottom of borehole at 17.0 feet.
							18–20	

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18912 North Creek Parkway, Ste. 101
Bothell, WA 98011

Soil Boring: SB-21

Project: Former Texaco Station No. 211556
Client: Chevron EMC
Location: 101 Mulford Road, Toledo, WA

Logged By: G. Cisneros
Date Started: 11/8/2013
Date Completed: 11/8/2013

Driller: Cascade Drilling LP
Drill Method: HA/AK/Sonic
Total Boring Depth: 16 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
	PID/FID						0	Asphalt. Top 3 inches. Boring was cleared by airknife to 8 feet bgs. Soil samples collected by hand auger between ground surface and 8 feet bgs.
Moist	1.6/0.0				GP		1–3	(GP) Brown, medium dense, sandy, rounded, fine to coarse GRAVEL with 10% sand. (no odor, no sheen)
Moist	10.8/0.0						4–5	Same as above. (no odor, no sheen)
Moist	1.8/0.0		SB-21-6	G <1.6 D <3.7 HO <12 B <0.0082	SP		6–7	(SP) Brown, medium dense, fine to medium SAND with 10% fine gravel and 5% cobbles. (no odor, no sheen)
Moist	10.0/0.8						8	Same as above. (no odor, no sheen)
Wet	829/1564		SB-21-9	G **61** D <3.3 HO <11 B <0.020	GP		9	(GP) Gray, medium dense, sandy, fine to coarse GRAVEL with 15% sand and 10% cobbles. (slight odor, slight sheen)
Wet	228/163						10	Brownish gray GRAVEL with 15% sand. (slight odor, no sheen)
Wet	38.1/29.8				GP		11	(GP) Same as above. Brown GRAVEL. (no odor, no sheen)
Wet	16.1/25.3		SB-21-12	G <1.2 D <3.3 HO <11 B <0.0059			12	Brown, medium dense, sandy, fine to coarse GRAVEL with 30% sand and 10% cobbles. (no odor, no sheen)
Sat.	6.2/2.4						13	(GP) Same as above. (no odor, no sheen)
Sat.	5.4/1.6				GP		14	Same as above. (no odor, no sheen)
Moist	4.1/0.8						15	(ML/CL) Olive gray, very hard, clayey SILT/silty CLAY with high plasticity. (no odor, no sheen)
					ML/CL		16	Bottom of borehole at 16.0 feet.
							17–20	

Attachment B:
Laboratory Analysis Report

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron
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6001 Bollinger Canyon Road
San Ramon CA 94583

November 27, 2013

Project: 211556

Submittal Date: 11/12/2013
Group Number: 1433626
PO Number: 0015119898
Release Number: SHRILL HOPKINS
State of Sample Origin: WA

Client Sample Description	Lancaster Labs (LL) #
SB-9-4 Grab Soil	7275384
SB-10-2 Grab Soil	7275385
SB-15-2 Grab Soil	7275386
SB-14-7 Grab Soil	7275387
SB-15-6 Grab Soil	7275388
SB-10-6 Grab Soil	7275389
SB-16-2 Grab Soil	7275390
SB-16-6 Grab Soil	7275391
SB-11-10 Grab Soil	7275392
SB-11-12.5 Grab Soil	7275393
SB-17-2 Grab Soil	7275394
SB-12-9.5 Grab Soil	7275395
SB-12-10.5 Grab Soil	7275396
SB-12-12 Grab Soil	7275397
SB-12-13.5 Grab Soil	7275398
SB-13-10.5 Grab Soil	7275399
SB-13-12.5 Grab Soil	7275400
SB-14-9.5 Grab Soil	7275401
DUP-1-110713 Grab Soil	7275402
SB-14-12.5 Grab Soil	7275403
SB-14-14 Grab Soil	7275404
SB-16-8 Grab Soil	7275405
SB-16-10 Grab Soil	7275406
SB-10-9 Grab Soil	7275407
SB-10-13 Grab Soil	7275408
SB-15-9 Grab Soil	7275409
SB-15-13 Grab Soil	7275410
SB-18-8 Grab Soil	7275411
SB-18-12 Grab Soil	7275412
DUP-2-110713 Grab Soil	7275413
SB-17-8 Grab Soil	7275414

SB-17-11 Grab Soil	7275415
SB-9-9 Grab Soil	7275416
SB-20-2 Grab Soil	7275417
SB-9-11 Grab Soil	7275418
DUP-3-110813 Grab Soil	7275419
SB-19-9 Grab Soil	7275420
SB-19-11 Grab Soil	7275421
SB-20-10 Grab Soil	7275422
SB-20-12 Grab Soil	7275423
SB-20-14 Grab Soil	7275424
SB-21-6 Grab Soil	7275425
SB-21-9 Grab Soil	7275426
SB-21-12 Grab Soil	7275427

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

ELECTRONIC COPY TO Leidos Attn: Russ Shropshire

Respectfully Submitted,

Lynn M. Frederiksen
Principal Specialist Group Leader

(717) 556-7255

Sample Description: SB-9-4 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275384
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/04/2013 15:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT904

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00082	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00082	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00082	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00082	1
10725	Chrysene	218-01-9	N.D.	0.00041	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00082	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00082	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	5.0	1.3	26.26
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0065	26.26
08179	Ethylbenzene	100-41-4	0.0072	0.0065	26.26
08179	Toluene	108-88-3	N.D.	0.0065	26.26
08179	Total Xylenes	1330-20-7	N.D.	0.019	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
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.7	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	8.80	0.594	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	19.1	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-9-4 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275384
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/04/2013 15:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT904

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13318SLE026	11/17/2013 07:18	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13318SLE026	11/15/2013 09:20	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/15/2013 21:58	Laura M Krieger	26.26
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/15/2013 21:58	Laura M Krieger	26.26
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/04/2013 15:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133180026A	11/20/2013 00:44	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133180027A	11/19/2013 20:06	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133180027A	11/15/2013 07:35	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133180026A	11/15/2013 07:35	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 17:24	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002A	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-10-2 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275385
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/04/2013 15:45 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT102

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00085	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00085	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00085	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00085	1
10725	Chrysene	218-01-9	0.0013	0.00042	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00085	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00085	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	2.5	1.5	29.26
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0075	29.26
08179	Ethylbenzene	100-41-4	0.023	0.0075	29.26
08179	Toluene	108-88-3	0.013	0.0075	29.26
08179	Total Xylenes	1330-20-7	0.11	0.023	29.26
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	13	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.9	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	13	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	7.57	0.631	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-10-2 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275385
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/04/2013 15:45 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT102

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13318SLE026	11/17/2013 07:50	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13318SLE026	11/15/2013 09:20	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/15/2013 20:43	Laura M Krieger	29.26
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/15/2013 20:43	Laura M Krieger	29.26
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/04/2013 15:45	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133180026A	11/20/2013 03:03	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133180027A	11/19/2013 20:26	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133180027A	11/15/2013 07:35	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133180026A	11/15/2013 07:35	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 17:28	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002A	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-15-2 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275386
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/05/2013 15:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT152

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00092	1
10725	Benzo(a)pyrene	50-32-8	0.00093	0.00092	1
10725	Benzo(b)fluoranthene	205-99-2	0.0019	0.00092	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00092	1
10725	Chrysene	218-01-9	0.0034	0.00046	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00092	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00092	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	74	6.5	116.18
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	0.032	0.0081	29.04
08179	Ethylbenzene	100-41-4	0.22	0.0081	29.04
08179	Toluene	108-88-3	0.086	0.0081	29.04
08179	Total Xylenes	1330-20-7	0.65	0.024	29.04
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	36	4.2	1
08272	Heavy Range Organics C24-C40	n.a.	83	14	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	19	4.2	1
12006	HRO C24-C40 w/Si Gel	n.a.	16	14	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	11.5	0.674	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	28.0	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-15-2 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275386
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/05/2013 15:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT152

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13318SLE026	11/17/2013 08:21	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13318SLE026	11/15/2013 09:20	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/16/2013 02:05	Laura M Krieger	116.18
08179	BTEX by 8021	SW-846 8021B	1	13319A31B	11/19/2013 02:47	Marie D Beamenderfer	29.04
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/05/2013 15:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133180026A	11/20/2013 03:42	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133180027A	11/19/2013 23:05	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133180027A	11/15/2013 07:35	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133180026A	11/15/2013 07:35	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 17:40	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002A	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-14-7 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275387
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/05/2013 16:10 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT147

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.0039	0.00076	1
10725	Benzo(a)pyrene	50-32-8	0.0055	0.00076	1
10725	Benzo(b)fluoranthene	205-99-2	0.0098	0.00076	1
10725	Benzo(k)fluoranthene	207-08-9	0.0042	0.00076	1
10725	Chrysene	218-01-9	0.018	0.00038	1
10725	Dibenz(a,h)anthracene	53-70-3	0.0027	0.00076	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	0.0017	0.00076	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.1	24.21
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0056	24.21
08179	Ethylbenzene	100-41-4	N.D.	0.0056	24.21
08179	Toluene	108-88-3	N.D.	0.0056	24.21
08179	Total Xylenes	1330-20-7	N.D.	0.017	24.21
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.5	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.5	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	8.67	0.569	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-14-7 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275387
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/05/2013 16:10 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT147

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13318SLE026	11/19/2013 08:20	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13318SLE026	11/15/2013 09:20	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/15/2013 22:33	Laura M Krieger	24.21
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/15/2013 22:33	Laura M Krieger	24.21
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/05/2013 16:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133180026A	11/20/2013 01:23	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133180027A	11/19/2013 20:46	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133180027A	11/15/2013 07:35	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133180026A	11/15/2013 07:35	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 17:44	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002A	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-15-6 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275388
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 08:50 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT156

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.015	0.00076	1
10725	Benzo(a)pyrene	50-32-8	0.0079	0.00076	1
10725	Benzo(b)fluoranthene	205-99-2	0.0074	0.00076	1
10725	Benzo(k)fluoranthene	207-08-9	0.0037	0.00076	1
10725	Chrysene	218-01-9	0.016	0.00038	1
10725	Dibenz(a,h)anthracene	53-70-3	0.00079	0.00076	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	0.0013	0.00076	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	3,300	230	4931.31
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.57	2465.65
08179	Ethylbenzene	100-41-4	3.8	0.57	2465.65
08179	Toluene	108-88-3	1.4	0.57	2465.65
08179	Total Xylenes	1330-20-7	5.7	1.7	2465.65
	Reporting limits were raised due to interference from the sample matrix.				
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	160	3.4	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	130	3.4	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	12.5	0.558	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	13.0	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-15-6 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275388
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 08:50 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT156

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13318SLE026	11/19/2013 10:59	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13318SLE026	11/15/2013 09:20	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31B	11/18/2013 19:07	Marie D Beamenderfer	4931.31
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/16/2013 03:51	Laura M Krieger	2465.65
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/06/2013 08:50	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133180026A	11/20/2013 03:23	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133180027A	11/19/2013 21:05	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133180027A	11/15/2013 07:35	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133180026A	11/15/2013 07:35	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 17:49	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002A	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-10-6 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275389
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 12:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT106

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.0070	0.00082	1
10725	Benzo(a)pyrene	50-32-8	0.0037	0.00082	1
10725	Benzo(b)fluoranthene	205-99-2	0.0036	0.00082	1
10725	Benzo(k)fluoranthene	207-08-9	0.0019	0.00082	1
10725	Chrysene	218-01-9	0.0080	0.00041	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00082	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00082	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	1,800	140	2789.51
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.27	1115.8
08179	Ethylbenzene	100-41-4	1.0	0.27	1115.8
08179	Toluene	108-88-3	0.35	0.27	1115.8
08179	Total Xylenes	1330-20-7	1.9	0.82	1115.8
	Reporting limits were raised due to interference from the sample matrix.				
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	96	3.7	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	74	3.7	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	10.7	0.601	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	18.5	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-10-6 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275389
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 12:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT106

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13318SLE026	11/19/2013 08:52	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13318SLE026	11/15/2013 09:20	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31B	11/18/2013 19:43	Marie D Beamenderfer	2789.51
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/16/2013 04:27	Laura M Krieger	1115.8
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/06/2013 12:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133180026A	11/20/2013 02:43	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133180027A	11/19/2013 21:25	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133180027A	11/15/2013 07:35	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133180026A	11/15/2013 07:35	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 17:53	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002A	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-16-2 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275390
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 12:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT162

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00091	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00091	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00091	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00091	1
10725	Chrysene	218-01-9	N.D.	0.00045	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00091	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00091	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	210	18	332.07
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.036	132.83
08179	Ethylbenzene	100-41-4	0.15	0.036	132.83
08179	Toluene	108-88-3	N.D.	0.15	132.83
08179	Total Xylenes	1330-20-7	0.24	0.11	132.83
	Reporting limits were raised due to interference from the sample matrix.				
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	7.2	4.1	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	14	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	4.2	4.1	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	14	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	11.4	0.679	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	27.1	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-16-2 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275390
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 12:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT162

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13318SLE026	11/19/2013 09:24	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13318SLE026	11/15/2013 09:20	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/16/2013 05:02	Laura M Krieger	332.07
08179	BTEX by 8021	SW-846 8021B	1	13319A31B	11/19/2013 00:26	Marie D Beamenderfer	132.83
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/06/2013 12:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133180026A	11/20/2013 01:43	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133180027A	11/19/2013 21:45	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133180027A	11/15/2013 07:35	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133180026A	11/15/2013 07:35	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 16:59	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002A	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-16-6 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275391
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 13:50 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT166

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.0029	0.00073	1
10725	Benzo(a)pyrene	50-32-8	0.0018	0.00073	1
10725	Benzo(b)fluoranthene	205-99-2	0.0016	0.00073	1
10725	Benzo(k)fluoranthene	207-08-9	0.00081	0.00073	1
10725	Chrysene	218-01-9	0.0025	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00073	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00073	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	77	4.4	99.65
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0055	24.91
08179	Ethylbenzene	100-41-4	0.034	0.0055	24.91
08179	Toluene	108-88-3	0.012	0.0055	24.91
08179	Total Xylenes	1330-20-7	0.096	0.016	24.91
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	4.1	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	13.4	0.540	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	9.2	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-16-6 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275391
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 13:50 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT166

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13318SLE026	11/19/2013 09:55	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13318SLE026	11/15/2013 09:20	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/16/2013 05:37	Laura M Krieger	99.65
08179	BTEX by 8021	SW-846 8021B	1	13319A31B	11/19/2013 03:23	Marie D Beamenderfer	24.91
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/06/2013 13:50	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133180026A	11/20/2013 02:03	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133180027A	11/19/2013 22:05	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133180027A	11/15/2013 07:35	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133180026A	11/15/2013 07:35	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 17:57	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002A	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-11-10 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275392
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 14:40 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1110

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.00075	0.00073	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00073	1
10725	Benzo(b)fluoranthene	205-99-2	0.0017	0.00073	1
10725	Benzo(k)fluoranthene	207-08-9	0.00097	0.00073	1
10725	Chrysene	218-01-9	0.0024	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00073	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00073	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	19	1	21.98
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0048	21.98
08179	Ethylbenzene	100-41-4	0.024	0.0048	21.98
08179	Toluene	108-88-3	0.0049	0.0048	21.98
08179	Total Xylenes	1330-20-7	0.046	0.015	21.98
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	5.79	0.551	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	9.2	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-11-10 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275392
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 14:40 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1110

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13318SLE026	11/19/2013 10:27	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13318SLE026	11/15/2013 09:20	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/15/2013 23:09	Laura M Krieger	21.98
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/15/2013 23:09	Laura M Krieger	21.98
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/06/2013 14:40	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133180026A	11/20/2013 02:23	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133180027A	11/19/2013 22:25	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133180027A	11/15/2013 07:35	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133180026A	11/15/2013 07:35	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 18:01	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002A	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-11-12.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275393
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 15:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1112

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00073	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00073	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00073	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00073	1
10725	Chrysene	218-01-9	N.D.	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00073	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00073	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	1	21.69
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0048	21.69
08179	Ethylbenzene	100-41-4	N.D.	0.0048	21.69
08179	Toluene	108-88-3	N.D.	0.0048	21.69
08179	Total Xylenes	1330-20-7	N.D.	0.014	21.69
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	6.79	0.527	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	8.8	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-11-12.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275393
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 15:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1112

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 07:36	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/15/2013 23:44	Laura M Krieger	21.69
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/15/2013 23:44	Laura M Krieger	21.69
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/06/2013 15:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133180026A	11/20/2013 00:24	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133180027A	11/19/2013 22:45	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133180027A	11/15/2013 07:35	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133180026A	11/15/2013 07:35	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 18:05	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002A	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-17-2 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275394
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 15:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT172

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.0018	0.00086	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00086	1
10725	Benzo(b)fluoranthene	205-99-2	0.0020	0.00086	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00086	1
10725	Chrysene	218-01-9	0.0026	0.00043	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00086	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00086	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	2,800	360	6970.09
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.36	1394.02
08179	Ethylbenzene	100-41-4	7.9	0.36	1394.02
08179	Toluene	108-88-3	1.1	0.36	1394.02
08179	Total Xylenes	1330-20-7	65	1.1	1394.02
	Reporting limits were raised due to interference from the sample matrix.				
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	62	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	33	13	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	47	3.9	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	13	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	19.3	0.625	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	23.1	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-17-2 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275394
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 15:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT172

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 08:07	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/16/2013 06:13	Laura M Krieger	6970.09
08179	BTEX by 8021	SW-846 8021B	1	13319A31B	11/19/2013 01:01	Marie D Beamenderfer	1394.02
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/06/2013 15:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133200029A	11/21/2013 04:31	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133200030A	11/20/2013 17:17	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133200030A	11/18/2013 07:10	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133200029A	11/18/2013 07:10	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 18:09	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002B	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-12-9.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275395
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 16:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT129

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.0015	0.00074	1
10725	Benzo(a)pyrene	50-32-8	0.0021	0.00074	1
10725	Benzo(b)fluoranthene	205-99-2	0.0032	0.00074	1
10725	Benzo(k)fluoranthene	207-08-9	0.0011	0.00074	1
10725	Chrysene	218-01-9	0.0026	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00074	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	0.0011	0.00074	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	1.5	1.1	24.73
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0055	24.73
08179	Ethylbenzene	100-41-4	N.D.	0.0055	24.73
08179	Toluene	108-88-3	N.D.	0.0055	24.73
08179	Total Xylenes	1330-20-7	N.D.	0.016	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.	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	15	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	6.34	0.549	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	9.9	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-12-9.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275395
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 16:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT129

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 08:38	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/15/2013 21:22	Laura M Krieger	24.73
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/15/2013 21:22	Laura M Krieger	24.73
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/06/2013 16:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133200029A	11/21/2013 05:13	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133200030A	11/20/2013 17:37	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133200030A	11/18/2013 07:10	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133200029A	11/18/2013 07:10	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 18:14	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002B	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-12-10.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275396
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 16:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1210

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.0072	10
10725	Benzo(a)pyrene	50-32-8	N.D.	0.0072	10
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.0072	10
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.0072	10
10725	Chrysene	218-01-9	0.017	0.0036	10
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.0072	10
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.0072	10
	Reporting limits were raised due to interference from the sample matrix.				
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	1,600	75	1733.89
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.19	866.95
08179	Ethylbenzene	100-41-4	N.D.	1.5	866.95
08179	Toluene	108-88-3	2.2	0.19	866.95
08179	Total Xylenes	1330-20-7	3.4	0.57	866.95
	Reporting limits were raised due to interference from the sample matrix.				
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	2,500	33	10
08272	Heavy Range Organics C24-C40	n.a.	N.D.	110	10
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	2,300	33	10
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	110	10
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	11.0	0.533	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	8.0	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-12-10.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275396
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 16:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1210

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/22/2013 04:38	Mark A Clark	10
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31B	11/18/2013 20:18	Marie D Beamenderfer	1733.89
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/16/2013 06:48	Laura M Krieger	866.95
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/06/2013 16:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133200029A	11/22/2013 16:50	Glorines Suarez-Rivera	10
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133200030A	11/22/2013 16:31	Glorines Suarez-Rivera	10
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133200030A	11/18/2013 07:10	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133200029A	11/18/2013 07:10	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 18:18	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002B	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-12-12 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275397
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 16:20 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1212

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00073	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00073	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00073	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00073	1
10725	Chrysene	218-01-9	N.D.	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00073	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00073	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	2.6	0.9	20.55
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0046	20.55
08179	Ethylbenzene	100-41-4	N.D.	0.0046	20.55
08179	Toluene	108-88-3	N.D.	0.0046	20.55
08179	Total Xylenes	1330-20-7	N.D.	0.014	20.55
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	5.70	0.538	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	9.7	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-12-12 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275397
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 16:20 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1212

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 09:40	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/16/2013 00:19	Laura M Krieger	20.55
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/16/2013 00:19	Laura M Krieger	20.55
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/06/2013 16:20	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133200029A	11/21/2013 02:02	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133200030A	11/20/2013 18:57	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133200030A	11/18/2013 07:10	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133200029A	11/18/2013 07:10	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 18:30	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002B	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-12-13.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275398
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 16:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1213

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00073	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00073	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00073	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00073	1
10725	Chrysene	218-01-9	N.D.	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00073	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00073	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.0	23.17
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0051	23.17
08179	Ethylbenzene	100-41-4	N.D.	0.0051	23.17
08179	Toluene	108-88-3	0.017	0.0051	23.17
08179	Total Xylenes	1330-20-7	N.D.	0.015	23.17
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	7.21	0.530	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	8.4	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-12-13.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275398
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/06/2013 16:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1213

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 10:11	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/16/2013 00:55	Laura M Krieger	23.17
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/16/2013 00:55	Laura M Krieger	23.17
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/06/2013 16:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133200029A	11/21/2013 02:23	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133200030A	11/20/2013 19:18	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133200030A	11/18/2013 07:10	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133200029A	11/18/2013 07:10	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 18:55	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002B	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-13-10.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275399
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 08:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1310

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00074	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00074	1
10725	Benzo(b)fluoranthene	205-99-2	0.0011	0.00074	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00074	1
10725	Chrysene	218-01-9	0.0014	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00074	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00074	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	150	8.5	192.2
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	0.085	0.017	76.88
08179	Ethylbenzene	100-41-4	0.17	0.017	76.88
08179	Toluene	108-88-3	0.32	0.017	76.88
08179	Total Xylenes	1330-20-7	0.88	0.051	76.88
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	82	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	14	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	76	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	7.34	0.531	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	9.5	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-13-10.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275399
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 08:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1310

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 14:20	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31B	11/18/2013 20:53	Marie D Beamenderfer	192.2
08179	BTEX by 8021	SW-846 8021B	1	13319A31B	11/19/2013 02:12	Marie D Beamenderfer	76.88
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 08:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133200029A	11/21/2013 05:35	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133200030A	11/20/2013 21:05	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133200030A	11/18/2013 07:10	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133200029A	11/18/2013 07:10	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 18:38	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002B	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-13-12.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275400
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 08:40 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1312

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00075	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00075	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00075	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00075	1
10725	Chrysene	218-01-9	N.D.	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00075	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00075	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.0	23.03
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0052	23.03
08179	Ethylbenzene	100-41-4	N.D.	0.0052	23.03
08179	Toluene	108-88-3	N.D.	0.0052	23.03
08179	Total Xylenes	1330-20-7	N.D.	0.015	23.03
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
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.4	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	6.78	0.550	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	10.8	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-13-12.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275400
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 08:40 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1312

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 14:50	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31A	11/16/2013 01:30	Laura M Krieger	23.03
08179	BTEX by 8021	SW-846 8021B	1	13319A31A	11/16/2013 01:30	Laura M Krieger	23.03
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 08:40	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133200029A	11/21/2013 02:44	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133200030A	11/20/2013 19:40	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133200030A	11/18/2013 07:10	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133200029A	11/18/2013 07:10	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 18:42	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002B	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-14-9.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275401
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 09:45 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT149

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.027	0.00071	1
10725	Benzo(a)pyrene	50-32-8	0.012	0.00071	1
10725	Benzo(b)fluoranthene	205-99-2	0.011	0.00071	1
10725	Benzo(k)fluoranthene	207-08-9	0.0037	0.00071	1
10725	Chrysene	218-01-9	0.026	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	0.0011	0.00071	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	0.0022	0.00071	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**	
02006	NWTPH-GX Soil C7-C12	n.a.	4,500	190	4464.93
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	1.7	0.38	1785.97
08179	Ethylbenzene	100-41-4	N.D.	5.3	1785.97
08179	Toluene	108-88-3	8.2	0.38	1785.97
08179	Total Xylenes	1330-20-7	9.7	1.1	1785.97
	Reporting limits were raised due to interference from the sample matrix.				
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	190	3.2	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	170	3.2	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	7.24	0.514	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	6.5	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-14-9.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275401
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 09:45 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT149

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 15:22	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31B	11/18/2013 21:29	Marie D Beamenderfer	4464.93
08179	BTEX by 8021	SW-846 8021B	1	13322A31A	11/20/2013 00:53	Laura M Krieger	1785.97
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 09:45	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133200029A	11/21/2013 03:06	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133200030A	11/20/2013 20:01	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133200030A	11/18/2013 07:10	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133200029A	11/18/2013 07:10	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 18:47	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002B	11/18/2013 21:52	Scott W Freisher	1

Sample Description: DUP-1-110713 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275402
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MTFD1

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.014	0.00073	1
10725	Benzo(a)pyrene	50-32-8	0.0060	0.00073	1
10725	Benzo(b)fluoranthene	205-99-2	0.0053	0.00073	1
10725	Benzo(k)fluoranthene	207-08-9	0.0021	0.00073	1
10725	Chrysene	218-01-9	0.013	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00073	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	0.0012	0.00073	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	2,200	220	5094.47
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.45	2037.79
08179	Ethylbenzene	100-41-4	1.6	0.45	2037.79
08179	Toluene	108-88-3	N.D.	2.6	2037.79
08179	Total Xylenes	1330-20-7	4.2	1.3	2037.79
	Reporting limits were raised due to interference from the sample matrix.				
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	150	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	140	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	6.21	0.539	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	9.0	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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: DUP-1-110713 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275402
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MTFD1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 15:53	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31B	11/18/2013 22:04	Marie D Beamenderfer	5094.47
08179	BTEX by 8021	SW-846 8021B	1	13319A31B	11/19/2013 01:37	Marie D Beamenderfer	2037.79
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 00:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133200029A	11/21/2013 03:27	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133200030A	11/20/2013 20:22	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133200030A	11/18/2013 07:10	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133200029A	11/18/2013 07:10	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708003	11/19/2013 18:51	Katlin N Cataldi	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708003	11/18/2013 23:15	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820002B	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-14-12.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275403
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 10:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1412

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00074	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00074	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00074	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00074	1
10725	Chrysene	218-01-9	N.D.	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00074	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00074	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	28	2.0	45.54
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	0.013	0.0050	22.77
08179	Ethylbenzene	100-41-4	0.032	0.0050	22.77
08179	Toluene	108-88-3	0.054	0.0050	22.77
08179	Total Xylenes	1330-20-7	0.059	0.015	22.77
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	3.60	0.532	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	9.6	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-14-12.5 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275403
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 10:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1412

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 16:24	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13319A31B	11/18/2013 22:39	Marie D Beamenderfer	45.54
08179	BTEX by 8021	SW-846 8021B	1	13322A31A	11/20/2013 01:29	Laura M Krieger	22.77
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 10:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133200029A	11/21/2013 03:48	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133200030A	11/20/2013 20:43	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133200030A	11/18/2013 07:10	Olivia Arosemena	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133200029A	11/18/2013 07:10	Olivia Arosemena	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 12:40	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820002B	11/18/2013 21:52	Scott W Freisher	1

Sample Description: SB-14-14 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275404
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 10:10 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1414

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00072	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00072	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00072	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00072	1
10725	Chrysene	218-01-9	N.D.	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00072	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00072	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	4.1	1.1	24.9
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0053	24.9
08179	Ethylbenzene	100-41-4	0.0059	0.0053	24.9
08179	Toluene	108-88-3	0.0065	0.0053	24.9
08179	Total Xylenes	1330-20-7	N.D.	0.016	24.9
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.2	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.2	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	1.85	0.536	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	6.8	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-14-14 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275404
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 10:10 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1414

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 16:54	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31A	11/20/2013 00:18	Laura M Krieger	24.9
08179	BTEX by 8021	SW-846 8021B	1	13322A31A	11/20/2013 00:18	Laura M Krieger	24.9
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 10:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220009A	11/20/2013 11:38	Tyler O Griffin	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220010A	11/20/2013 05:22	Tyler O Griffin	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220010A	11/18/2013 16:35	JoElla L Rice	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220009A	11/18/2013 16:35	JoElla L Rice	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 12:44	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003A	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-16-8 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275405
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 12:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT168

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.0070	0.00074	1
10725	Benzo(a)pyrene	50-32-8	0.0029	0.00074	1
10725	Benzo(b)fluoranthene	205-99-2	0.0024	0.00074	1
10725	Benzo(k)fluoranthene	207-08-9	0.00093	0.00074	1
10725	Chrysene	218-01-9	0.0055	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00074	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00074	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	540	20	450.64
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.040	180.25
08179	Ethylbenzene	100-41-4	0.42	0.040	180.25
08179	Toluene	108-88-3	0.17	0.040	180.25
08179	Total Xylenes	1330-20-7	0.67	0.12	180.25
	Reporting limits were raised due to interference from the sample matrix.				
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	17	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	12	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	12	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	5.05	0.552	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	10.3	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-16-8 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275405
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 12:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT168

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/21/2013 17:25	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31B	11/20/2013 21:42	Marie D Beamenderfer	450.64
08179	BTEX by 8021	SW-846 8021B	1	13322A31B	11/21/2013 04:23	Marie D Beamenderfer	180.25
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 12:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220009A	11/20/2013 11:58	Tyler O Griffin	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220010A	11/20/2013 06:01	Tyler O Griffin	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220010A	11/18/2013 16:35	JoElla L Rice	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220009A	11/18/2013 16:35	JoElla L Rice	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 12:56	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003A	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-16-10 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275406
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 12:45 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT-16

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00075	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00075	1
10725	Benzo(b)fluoranthene	205-99-2	0.0018	0.00075	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00075	1
10725	Chrysene	218-01-9	0.0011	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00075	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00075	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	99	7.5	164.92
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	0.054	0.019	82.46
08179	Ethylbenzene	100-41-4	0.22	0.019	82.46
08179	Toluene	108-88-3	0.097	0.019	82.46
08179	Total Xylenes	1330-20-7	0.20	0.056	82.46
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
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.4	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	6.84	0.559	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	11.5	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-16-10 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275406
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 12:45 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT-16

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/22/2013 03:36	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13324A31A	11/21/2013 20:00	Laura M Krieger	164.92
08179	BTEX by 8021	SW-846 8021B	1	13322A31B	11/20/2013 22:19	Marie D Beamenderfer	82.46
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 12:45	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220009A	11/20/2013 12:18	Tyler O Griffin	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220010A	11/20/2013 06:21	Tyler O Griffin	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220010A	11/18/2013 16:35	JoElla L Rice	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220009A	11/18/2013 16:35	JoElla L Rice	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:00	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003A	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-10-9 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275407
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 13:20 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT109

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.012	0.00075	1
10725	Benzo(a)pyrene	50-32-8	0.0046	0.00075	1
10725	Benzo(b)fluoranthene	205-99-2	0.0041	0.00075	1
10725	Benzo(k)fluoranthene	207-08-9	0.0014	0.00075	1
10725	Chrysene	218-01-9	0.011	0.00038	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00075	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	0.0012	0.00075	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	5,900	270	5986.01
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	0.65	0.54	2394.4
08179	Ethylbenzene	100-41-4	7.5	0.54	2394.4
08179	Toluene	108-88-3	4.2	0.54	2394.4
08179	Total Xylenes	1330-20-7	15	1.6	2394.4
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	160	3.4	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	140	3.4	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	7.13	0.543	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	11.5	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-10-9 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275407
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 13:20 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT109

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13319SLD026	11/22/2013 04:07	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13319SLD026	11/16/2013 10:30	William H Saadeh	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31B	11/20/2013 22:55	Marie D Beamenderfer	5986.01
08179	BTEX by 8021	SW-846 8021B	1	13322A31B	11/21/2013 04:59	Marie D Beamenderfer	2394.4
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 13:20	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220009A	11/20/2013 12:38	Tyler O Griffin	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220010A	11/20/2013 06:41	Tyler O Griffin	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220010A	11/18/2013 16:35	JoElla L Rice	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220009A	11/18/2013 16:35	JoElla L Rice	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:04	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003A	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-10-13 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275408
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 13:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1013

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00073	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00073	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00073	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00073	1
10725	Chrysene	218-01-9	0.00080	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00073	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00073	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	1	21.85
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0048	21.85
08179	Ethylbenzene	100-41-4	N.D.	0.0048	21.85
08179	Toluene	108-88-3	N.D.	0.0048	21.85
08179	Total Xylenes	1330-20-7	N.D.	0.015	21.85
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	2.53	0.533	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	9.8	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-10-13 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275408
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 13:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1013

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/21/2013 18:59	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31A	11/19/2013 20:10	Laura M Krieger	21.85
08179	BTEX by 8021	SW-846 8021B	1	13322A31A	11/19/2013 20:10	Laura M Krieger	21.85
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 13:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220009A	11/20/2013 09:39	Tyler O Griffin	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220010A	11/20/2013 07:01	Tyler O Griffin	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220010A	11/18/2013 16:35	JoElla L Rice	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220009A	11/18/2013 16:35	JoElla L Rice	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:08	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003A	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-15-9 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275409
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 14:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT159

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.0051	0.00071	1
10725	Benzo(a)pyrene	50-32-8	0.0021	0.00071	1
10725	Benzo(b)fluoranthene	205-99-2	0.0021	0.00071	1
10725	Benzo(k)fluoranthene	207-08-9	0.00081	0.00071	1
10725	Chrysene	218-01-9	0.0048	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00071	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00071	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	1,100	88	2059.18
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	0.38	0.22	1029.59
08179	Ethylbenzene	100-41-4	6.8	0.22	1029.59
08179	Toluene	108-88-3	1.4	0.22	1029.59
08179	Total Xylenes	1330-20-7	7.2	0.66	1029.59
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	69	3.2	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	57	3.2	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	4.24	0.530	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	6.6	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-15-9 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275409
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 14:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT159

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/21/2013 20:35	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31B	11/20/2013 23:32	Marie D Beamenderfer	2059.18
08179	BTEX by 8021	SW-846 8021B	1	13322A31A	11/20/2013 05:01	Laura M Krieger	1029.59
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 14:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220009A	11/20/2013 09:59	Tyler O Griffin	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220010A	11/20/2013 07:21	Tyler O Griffin	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220010A	11/18/2013 16:35	JoElla L Rice	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220009A	11/18/2013 16:35	JoElla L Rice	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:12	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003A	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-15-13 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275410
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 14:40 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1513

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00076	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00076	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00076	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00076	1
10725	Chrysene	218-01-9	N.D.	0.00038	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00076	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00076	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	3.6	1	20.89
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0048	20.89
08179	Ethylbenzene	100-41-4	0.041	0.0048	20.89
08179	Toluene	108-88-3	N.D.	0.0048	20.89
08179	Total Xylenes	1330-20-7	0.069	0.014	20.89
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
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.4	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	1.78	0.552	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	12.9	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.				

General Sample Comments

State of Washington Lab Certification No. C457
This sample was submitted to the laboratory on 11/13/13 at 10:00.
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-15-13 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275410
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 14:40 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1513

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/21/2013 21:07	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31B	11/21/2013 00:08	Marie D Beamenderfer	20.89
08179	BTEX by 8021	SW-846 8021B	1	13322A31B	11/21/2013 00:08	Marie D Beamenderfer	20.89
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 14:40	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220009A	11/20/2013 10:19	Tyler O Griffin	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220010A	11/20/2013 07:40	Tyler O Griffin	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220010A	11/18/2013 16:35	JoElla L Rice	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220009A	11/18/2013 16:35	JoElla L Rice	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:16	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003A	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-18-8 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275411
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 15:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT188

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00074	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00074	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00074	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00074	1
10725	Chrysene	218-01-9	0.00055	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00074	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00074	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	580	38	836.96
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	0.43	0.094	418.48
08179	Ethylbenzene	100-41-4	1.4	0.094	418.48
08179	Toluene	108-88-3	1.2	0.094	418.48
08179	Total Xylenes	1330-20-7	0.84	0.28	418.48
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
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.4	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	4.55	0.551	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	11.0	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.				

General 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-18-8 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275411
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 15:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT188

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/21/2013 21:40	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13324A31A	11/21/2013 20:37	Laura M Krieger	836.96
08179	BTEX by 8021	SW-846 8021B	1	13322A31B	11/21/2013 00:44	Marie D Beamenderfer	418.48
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 15:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220009A	11/20/2013 10:39	Tyler O Griffin	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220010A	11/20/2013 08:00	Tyler O Griffin	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220010A	11/18/2013 16:35	JoElla L Rice	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220009A	11/18/2013 16:35	JoElla L Rice	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:20	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003A	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-18-12 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275412
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 15:40 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1812

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00077	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00077	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00077	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00077	1
10725	Chrysene	218-01-9	N.D.	0.00038	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00077	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00077	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	1	21.54
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0050	21.54
08179	Ethylbenzene	100-41-4	N.D.	0.0050	21.54
08179	Toluene	108-88-3	N.D.	0.0050	21.54
08179	Total Xylenes	1330-20-7	N.D.	0.015	21.54
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.5	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	12	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.5	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	3.00	0.578	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	13.5	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.				

General 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-18-12 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275412
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 15:40 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1812

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/21/2013 22:12	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31A	11/19/2013 20:46	Laura M Krieger	21.54
08179	BTEX by 8021	SW-846 8021B	1	13322A31A	11/19/2013 20:46	Laura M Krieger	21.54
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 15:40	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220009A	11/20/2013 10:59	Tyler O Griffin	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220010A	11/20/2013 08:20	Tyler O Griffin	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220010A	11/18/2013 16:35	JoElla L Rice	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220009A	11/18/2013 16:35	JoElla L Rice	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:24	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003A	11/18/2013 21:00	Scott W Freisher	1

Sample Description: DUP-2-110713 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275413
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MTFD2

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00074	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00074	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00074	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00074	1
10725	Chrysene	218-01-9	0.00044	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00074	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00074	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	620	35	789.81
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	0.46	0.087	394.91
08179	Ethylbenzene	100-41-4	1.5	0.087	394.91
08179	Toluene	108-88-3	1.3	0.087	394.91
08179	Total Xylenes	1330-20-7	0.92	0.26	394.91
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	7.8	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	6.6	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	4.09	0.537	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	9.6	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.				

General 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: DUP-2-110713 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275413
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/07/2013 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MTFD2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/21/2013 22:44	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31B	11/21/2013 01:21	Marie D Beamenderfer	789.81
08179	BTEX by 8021	SW-846 8021B	1	13322A31A	11/20/2013 06:47	Laura M Krieger	394.91
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/07/2013 00:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220020A	11/21/2013 09:07	Glorines Suarez-Rivera	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220021A	11/21/2013 13:16	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220021A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220020A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:29	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003A	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-17-8 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275414
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 08:20 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT178

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.0027	0.00074	1
10725	Benzo(a)pyrene	50-32-8	0.0011	0.00074	1
10725	Benzo(b)fluoranthene	205-99-2	0.0013	0.00074	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00074	1
10725	Chrysene	218-01-9	0.0032	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00074	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00074	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	1,300	190	4348.11
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	1.4	0.48	2174.05
08179	Ethylbenzene	100-41-4	10	0.48	2174.05
08179	Toluene	108-88-3	1.7	0.48	2174.05
08179	Total Xylenes	1330-20-7	20	1.5	2174.05
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	25	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	15	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	3.64	0.551	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	10.2	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.				

General 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-17-8 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275414
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 08:20 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT178

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/21/2013 23:17	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31B	11/21/2013 02:34	Marie D Beamenderfer	4348.11
08179	BTEX by 8021	SW-846 8021B	1	13322A31B	11/21/2013 05:36	Marie D Beamenderfer	2174.05
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 08:20	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220020A	11/21/2013 12:55	Glorines Suarez-Rivera	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220021A	11/21/2013 13:37	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220021A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220020A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 12:15	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003B	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-17-11 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275415
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 08:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1711

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00075	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00075	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00075	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00075	1
10725	Chrysene	218-01-9	N.D.	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00075	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00075	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.9	20.6
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0046	20.6
08179	Ethylbenzene	100-41-4	N.D.	0.0046	20.6
08179	Toluene	108-88-3	N.D.	0.0046	20.6
08179	Total Xylenes	1330-20-7	N.D.	0.014	20.6
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	2.67	0.559	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	10.6	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.				

General 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-17-11 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275415
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 08:30 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1711

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/21/2013 23:49	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31B	11/20/2013 21:06	Marie D Beamenderfer	20.6
08179	BTEX by 8021	SW-846 8021B	1	13322A31B	11/20/2013 21:06	Marie D Beamenderfer	20.6
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 08:30	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220020A	11/21/2013 13:37	Glorines Suarez-Rivera	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220021A	11/21/2013 14:20	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220021A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220020A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:33	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003B	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-9-9 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275416
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 09:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT099

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.0053	0.00073	1
10725	Benzo(a)pyrene	50-32-8	0.0020	0.00073	1
10725	Benzo(b)fluoranthene	205-99-2	0.0020	0.00073	1
10725	Benzo(k)fluoranthene	207-08-9	0.00082	0.00073	1
10725	Chrysene	218-01-9	0.0050	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00073	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00073	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	2,400	94	2148.04
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	0.56	0.19	859.22
08179	Ethylbenzene	100-41-4	N.D.	2.7	859.22
08179	Toluene	108-88-3	4.5	0.19	859.22
08179	Total Xylenes	1330-20-7	5.0	0.56	859.22
	Reporting limits were raised due to interference from the sample matrix.				
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	52	3.2	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	34	3.2	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	4.63	0.542	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	8.6	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.				

General 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-9-9 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275416
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 09:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT099

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/22/2013 00:22	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31B	11/21/2013 03:10	Marie D Beamenderfer	2148.04
08179	BTEX by 8021	SW-846 8021B	1	13322A31B	11/21/2013 06:12	Marie D Beamenderfer	859.22
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 09:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220020A	11/21/2013 16:06	Glorines Suarez-Rivera	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220021A	11/26/2013 09:13	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220021A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220020A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:44	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003B	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-20-2 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275417
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 09:10 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT202

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00087	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00087	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00087	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00087	1
10725	Chrysene	218-01-9	0.00098	0.00043	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00087	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00087	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	5.6	1.4	26.05
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0068	26.05
08179	Ethylbenzene	100-41-4	N.D.	0.0091	26.05
08179	Toluene	108-88-3	0.0068	0.0068	26.05
08179	Total Xylenes	1330-20-7	N.D.	0.020	26.05
	Reporting limits were raised due to interference from the sample matrix.				
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	19	3.9	1
08272	Heavy Range Organics C24-C40	n.a.	16	13	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	13	3.9	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	13	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	5.29	0.643	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	23.0	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.				

General 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-20-2 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275417
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 09:10 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT202

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/22/2013 00:54	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31B	11/20/2013 19:30	Marie D Beamenderfer	26.05
08179	BTEX by 8021	SW-846 8021B	1	13322A31B	11/20/2013 19:30	Marie D Beamenderfer	26.05
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 09:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220020A	11/21/2013 13:58	Glorines Suarez-Rivera	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220021A	11/21/2013 14:41	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220021A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220020A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:48	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003B	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-9-11 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275418
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 09:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT911

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00074	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00074	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00074	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00074	1
10725	Chrysene	218-01-9	N.D.	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00074	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00074	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.9	20.53
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0046	20.53
08179	Ethylbenzene	100-41-4	N.D.	0.0046	20.53
08179	Toluene	108-88-3	N.D.	0.0046	20.53
08179	Total Xylenes	1330-20-7	N.D.	0.014	20.53
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	3.40	0.537	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	10.5	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.				

General 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-9-11 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275418
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 09:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT911

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/22/2013 01:26	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31B	11/20/2013 20:07	Marie D Beamenderfer	20.53
08179	BTEX by 8021	SW-846 8021B	1	13322A31B	11/20/2013 20:07	Marie D Beamenderfer	20.53
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 09:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220020A	11/21/2013 14:20	Glorines Suarez-Rivera	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220021A	11/21/2013 15:02	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220021A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220020A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:53	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003B	11/18/2013 21:00	Scott W Freisher	1

Sample Description: DUP-3-110813 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275419
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MTFD3

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00072	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00072	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00072	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00072	1
10725	Chrysene	218-01-9	N.D.	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00072	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00072	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	0.9	19.75
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0043	19.75
08179	Ethylbenzene	100-41-4	N.D.	0.0043	19.75
08179	Toluene	108-88-3	0.0051	0.0043	19.75
08179	Total Xylenes	1330-20-7	N.D.	0.013	19.75
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.2	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.2	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	2.64	0.529	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	8.3	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.				

General 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: DUP-3-110813 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275419
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MTFD3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/22/2013 01:58	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31A	11/19/2013 22:32	Laura M Krieger	19.75
08179	BTEX by 8021	SW-846 8021B	1	13322A31A	11/19/2013 22:32	Laura M Krieger	19.75
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 00:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220020A	11/21/2013 14:41	Glorines Suarez-Rivera	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220021A	11/21/2013 15:23	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220021A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220020A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 13:57	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003B	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-19-9 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275420
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 10:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT199

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00072	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00072	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00072	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00072	1
10725	Chrysene	218-01-9	0.00062	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00072	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00072	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	5.7	1	22.1
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0048	22.1
08179	Ethylbenzene	100-41-4	0.014	0.0048	22.1
08179	Toluene	108-88-3	0.014	0.0048	22.1
08179	Total Xylenes	1330-20-7	0.042	0.015	22.1
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.2	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.2	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	3.55	0.532	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	8.8	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.				

General 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-19-9 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275420
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 10:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT199

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/22/2013 02:31	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31A	11/19/2013 23:07	Laura M Krieger	22.1
08179	BTEX by 8021	SW-846 8021B	1	13322A31A	11/19/2013 23:07	Laura M Krieger	22.1
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 10:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220020A	11/21/2013 15:44	Glorines Suarez-Rivera	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220021A	11/21/2013 15:44	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220021A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220020A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 14:01	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003B	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-19-11 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275421
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 10:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1911

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00072	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00072	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00072	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00072	1
10725	Chrysene	218-01-9	N.D.	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00072	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00072	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	1	23.03
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0050	23.03
08179	Ethylbenzene	100-41-4	N.D.	0.0050	23.03
08179	Toluene	108-88-3	N.D.	0.0050	23.03
08179	Total Xylenes	1330-20-7	N.D.	0.015	23.03
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.2	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.2	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	2.97	0.531	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	7.7	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.				

General 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-19-11 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275421
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 10:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M1911

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLD026	11/22/2013 03:03	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLD026	11/18/2013 03:00	Sherry L Morrow	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13322A31A	11/19/2013 23:43	Laura M Krieger	23.03
08179	BTEX by 8021	SW-846 8021B	1	13322A31A	11/19/2013 23:43	Laura M Krieger	23.03
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 10:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220020A	11/21/2013 15:02	Glorines Suarez-Rivera	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220021A	11/21/2013 16:06	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220021A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220020A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 14:05	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003B	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-20-10 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275422
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 10:50 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M2010

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	0.0054	0.00071	1
10725	Benzo(a)pyrene	50-32-8	0.0023	0.00071	1
10725	Benzo(b)fluoranthene	205-99-2	0.0021	0.00071	1
10725	Benzo(k)fluoranthene	207-08-9	0.00072	0.00071	1
10725	Chrysene	218-01-9	0.0050	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00071	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00071	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	730	47	1087.11
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	0.26	0.24	1087.11
08179	Ethylbenzene	100-41-4	2.1	0.24	1087.11
08179	Toluene	108-88-3	0.96	0.24	1087.11
08179	Total Xylenes	1330-20-7	1.1	0.71	1087.11
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	65	3.2	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	46	3.2	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	5.80	0.542	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	7.7	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.				

General 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-20-10 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275422
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 10:50 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M2010

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLI026	11/22/2013 00:30	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLI026	11/18/2013 10:00	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13324A31A	11/21/2013 21:13	Laura M Krieger	1087.11
08179	BTEX by 8021	SW-846 8021B	1	13324A31A	11/21/2013 21:13	Laura M Krieger	1087.11
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 10:50	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220020A	11/21/2013 15:23	Glorines Suarez-Rivera	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220021A	11/21/2013 16:29	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220021A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220020A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133225708005	11/21/2013 14:09	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133225708005	11/19/2013 09:25	Denise K Conners	1
00111	Moisture	SM 2540 G-1997	1	13322820003B	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-20-12 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275423
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 11:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M2012

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00073	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00073	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00073	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00073	1
10725	Chrysene	218-01-9	N.D.	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00073	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00073	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	2.1	1	21.99
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0048	21.99
08179	Ethylbenzene	100-41-4	0.0077	0.0048	21.99
08179	Toluene	108-88-3	N.D.	0.0048	21.99
08179	Total Xylenes	1330-20-7	N.D.	0.014	21.99
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	6.07	0.535	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	8.4	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.				

General 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-20-12 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275423
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 11:00 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M2012

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLI026	11/22/2013 01:01	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLI026	11/18/2013 10:00	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13324A31A	11/21/2013 22:26	Laura M Krieger	21.99
08179	BTEX by 8021	SW-846 8021B	1	13324A31A	11/21/2013 22:26	Laura M Krieger	21.99
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 11:00	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220022A	11/21/2013 07:21	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220023A	11/20/2013 22:29	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220023A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220022A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133235708001	11/20/2013 13:16	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133235708001	11/19/2013 22:35	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820003B	11/18/2013 21:00	Scott W Freisher	1

Sample Description: SB-20-14 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275424
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 11:10 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M2014

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00075	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00075	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00075	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00075	1
10725	Chrysene	218-01-9	N.D.	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00075	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00075	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.0	22.29
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0050	22.29
08179	Ethylbenzene	100-41-4	N.D.	0.0050	22.29
08179	Toluene	108-88-3	N.D.	0.0050	22.29
08179	Total Xylenes	1330-20-7	N.D.	0.015	22.29
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
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.4	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	3.94	0.543	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	11.5	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.				

General 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-20-14 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275424
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 11:10 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M2014

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLI026	11/22/2013 01:32	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLI026	11/18/2013 10:00	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13324A31A	11/22/2013 00:15	Laura M Krieger	22.29
08179	BTEX by 8021	SW-846 8021B	1	13324A31A	11/22/2013 00:15	Laura M Krieger	22.29
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 11:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220022A	11/21/2013 08:03	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220023A	11/20/2013 23:12	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220023A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220022A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133235708001	11/20/2013 13:30	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133235708001	11/19/2013 22:35	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820004B	11/18/2013 22:35	Scott W Freisher	1

Sample Description: SB-21-6 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275425
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 11:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT216

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00082	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00082	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00082	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00082	1
10725	Chrysene	218-01-9	N.D.	0.00041	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00082	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00082	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.6	33.02
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0082	33.02
08179	Ethylbenzene	100-41-4	N.D.	0.0082	33.02
08179	Toluene	108-88-3	N.D.	0.0082	33.02
08179	Total Xylenes	1330-20-7	N.D.	0.025	33.02
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
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.7	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	12	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	3.83	0.613	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	19.2	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.				

General 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-21-6 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275425
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 11:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT216

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLI026	11/22/2013 02:03	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLI026	11/18/2013 10:00	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13324A31A	11/22/2013 00:51	Laura M Krieger	33.02
08179	BTEX by 8021	SW-846 8021B	1	13324A31A	11/22/2013 00:51	Laura M Krieger	33.02
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 11:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220022A	11/21/2013 08:24	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220023A	11/20/2013 23:33	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220023A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220022A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133235708001	11/20/2013 13:34	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133235708001	11/19/2013 22:35	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820004B	11/18/2013 22:35	Scott W Freisher	1

Sample Description: SB-21-9 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275426
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 13:10 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT219

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00072	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00072	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00072	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00072	1
10725	Chrysene	218-01-9	0.00061	0.00036	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00072	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00072	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	61	3.9	89.69
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.020	22.42
08179	Ethylbenzene	100-41-4	0.049	0.0049	22.42
08179	Toluene	108-88-3	N.D.	0.069	22.42
08179	Total Xylenes	1330-20-7	0.12	0.015	22.42
	Reporting limits were raised due to interference from the sample matrix.				
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	3.3	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	4.42	0.528	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	8.1	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.				

General 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-21-9 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275426
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 13:10 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

MT219

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLI026	11/22/2013 02:34	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLI026	11/18/2013 10:00	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13324A31A	11/21/2013 21:50	Catherine J Schwarz	89.69
08179	BTEX by 8021	SW-846 8021B	1	13324A31B	11/22/2013 17:32	Marie D Beamenderfer	22.42
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 13:10	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220022A	11/21/2013 08:46	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220023A	11/20/2013 23:54	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220023A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220022A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133235708001	11/20/2013 13:39	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133235708001	11/19/2013 22:35	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820004B	11/18/2013 22:35	Scott W Freisher	1

Sample Description: SB-21-12 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275427
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 13:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M2112

CAT No.	Analysis Name	CAS Number	Dry Result	Dry Method Detection Limit	Dilution Factor
GC/MS Semivolatiles	**SW-846 8270C SIM**		**mg/kg**	**mg/kg**	
10725	Benzo(a)anthracene	56-55-3	N.D.	0.00073	1
10725	Benzo(a)pyrene	50-32-8	N.D.	0.00073	1
10725	Benzo(b)fluoranthene	205-99-2	N.D.	0.00073	1
10725	Benzo(k)fluoranthene	207-08-9	N.D.	0.00073	1
10725	Chrysene	218-01-9	N.D.	0.00037	1
10725	Dibenz(a,h)anthracene	53-70-3	N.D.	0.00073	1
10725	Indeno(1,2,3-cd)pyrene	193-39-5	N.D.	0.00073	1
GC Volatiles	**ECY 97-602 NWTPH-Gx**		**mg/kg**	**mg/kg**	
02006	NWTPH-GX Soil C7-C12	n.a.	N.D.	1.2	26.71
GC Volatiles	**SW-846 8021B**		**mg/kg**	**mg/kg**	
08179	Benzene	71-43-2	N.D.	0.0059	26.71
08179	Ethylbenzene	100-41-4	N.D.	0.0059	26.71
08179	Toluene	108-88-3	N.D.	0.0059	26.71
08179	Total Xylenes	1330-20-7	N.D.	0.018	26.71
GC Petroleum Hydrocarbons	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
08272	Diesel Range Organics C12-C24	n.a.	N.D.	3.3	1
08272	Heavy Range Organics C24-C40	n.a.	N.D.	11	1
GC Petroleum Hydrocarbons w/Si	**ECY 97-602 NWTPH-Dx modified**		**mg/kg**	**mg/kg**	
12006	DRO C12-C24 w/Si Gel	n.a.	N.D.	3.3	1
12006	HRO C24-C40 w/Si Gel	n.a.	N.D.	11	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**mg/kg**	**mg/kg**	
06955	Lead	7439-92-1	4.62	0.543	1
Wet Chemistry	**SM 2540 G-1997**		**%**	**%**	
00111	Moisture	n.a.	9.8	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.				

General 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-21-12 Grab Soil
Facility# 211556
101 Mulford Road - Toledo, WA

LL Sample # SW 7275427
LL Group # 1433626
Account # 11255

Project Name: 211556

Collected: 11/08/2013 13:15 by AL

Submitted: 11/12/2013 09:15
Reported: 11/27/2013 09:52

Chevron
L4310
6001 Bollinger Canyon Road
San Ramon CA 94583

M2112

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10725	SIM SVOA (microwave)	SW-846 8270C SIM	1	13320SLI026	11/22/2013 03:05	Mark A Clark	1
10811	BNA Soil Microwave SIM	SW-846 3546	1	13320SLI026	11/18/2013 10:00	Anna E Stager	1
02006	NWTPH-GX Soil C7-C12	ECY 97-602 NWTPH-Gx	1	13324A31A	11/22/2013 01:27	Laura M Krieger	26.71
08179	BTEX by 8021	SW-846 8021B	1	13324A31A	11/22/2013 01:27	Laura M Krieger	26.71
06647	GC-5g Field Preserved MeOH	SW-846 5035A	1	201331833122	11/08/2013 13:15	Client Supplied	n.a.
08272	NWTPH-Dx soil	ECY 97-602 NWTPH-Dx modified	1	133220022A	11/21/2013 09:07	Christine E Dolman	1
12006	NWTPH-Dx soil w/ 10g Si Gel	ECY 97-602 NWTPH-Dx modified	1	133220023A	11/21/2013 00:16	Christine E Dolman	1
12008	NW Dx soil w/ 10g column	ECY 97-602 NWTPH-Dx 06/97	1	133220023A	11/18/2013 23:25	Karen L Beyer	1
11234	WA DRO NW DX Soils (Non SG)	ECY 97-602 NWTPH-Dx 06/97	1	133220022A	11/18/2013 23:25	Karen L Beyer	1
06955	Lead	SW-846 6010B	1	133235708001	11/20/2013 13:43	Joanne M Gates	1
05708	SW SW846 ICP/ICP MS Digest	SW-846 3050B	1	133235708001	11/19/2013 22:35	Annamaria Stipkovits	1
00111	Moisture	SM 2540 G-1997	1	13322820004B	11/18/2013 22:35	Scott W Freisher	1

Quality Control Summary

Client Name: Chevron Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

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.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13318SLE026	Sample number(s): 7275384-7275392							
Benzo(a)anthracene	N.D.	0.00067	mg/kg	99		83-119		
Benzo(a)pyrene	N.D.	0.00067	mg/kg	102		80-122		
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	109		82-135		
Benzo(k)fluoranthene	N.D.	0.00067	mg/kg	101		79-123		
Chrysene	N.D.	0.00033	mg/kg	102		84-113		
Dibenz(a,h)anthracene	N.D.	0.00067	mg/kg	101		78-124		
Indeno(1,2,3-cd)pyrene	N.D.	0.00067	mg/kg	100		77-124		
Batch number: 13319SLD026	Sample number(s): 7275393-7275407							
Benzo(a)anthracene	N.D.	0.00067	mg/kg	108		83-119		
Benzo(a)pyrene	N.D.	0.00067	mg/kg	109		80-122		
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	120		82-135		
Benzo(k)fluoranthene	N.D.	0.00067	mg/kg	109		79-123		
Chrysene	N.D.	0.00033	mg/kg	110		84-113		
Dibenz(a,h)anthracene	N.D.	0.00067	mg/kg	112		78-124		
Indeno(1,2,3-cd)pyrene	N.D.	0.00067	mg/kg	111		77-124		
Batch number: 13320SLD026	Sample number(s): 7275408-7275421							
Benzo(a)anthracene	N.D.	0.00067	mg/kg	107		83-119		
Benzo(a)pyrene	N.D.	0.00067	mg/kg	102		80-122		
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	114		82-135		
Benzo(k)fluoranthene	N.D.	0.00067	mg/kg	103		79-123		
Chrysene	N.D.	0.00033	mg/kg	102		84-113		
Dibenz(a,h)anthracene	N.D.	0.00067	mg/kg	103		78-124		
Indeno(1,2,3-cd)pyrene	N.D.	0.00067	mg/kg	103		77-124		
Batch number: 13320SLI026	Sample number(s): 7275422-7275427							
Benzo(a)anthracene	N.D.	0.00067	mg/kg	100		83-119		
Benzo(a)pyrene	N.D.	0.00067	mg/kg	100		80-122		
Benzo(b)fluoranthene	N.D.	0.00067	mg/kg	113		82-135		
Benzo(k)fluoranthene	N.D.	0.00067	mg/kg	98		79-123		
Chrysene	N.D.	0.00033	mg/kg	102		84-113		
Dibenz(a,h)anthracene	N.D.	0.00067	mg/kg	110		78-124		
Indeno(1,2,3-cd)pyrene	N.D.	0.00067	mg/kg	108		77-124		
Batch number: 13319A31A	Sample number(s): 7275384-7275398,7275400							
Benzene	N.D.	0.0050	mg/kg	100	103	80-120	3	30
Ethylbenzene	N.D.	0.0050	mg/kg	98	101	80-120	4	30
NWTPH-GX Soil C7-C12	N.D.	1.0	mg/kg	94	94	65-120	1	30
Toluene	N.D.	0.0050	mg/kg	97	100	80-120	3	30
Total Xylenes	N.D.	0.015	mg/kg	97	100	80-120	4	30
Batch number: 13319A31B	Sample number(s): 7275386,7275388-7275391,7275394,7275396,7275399,7275401-							

*- 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 Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	7275403							
Benzene	N.D.	0.0050	mg/kg	100	103	80-120	3	30
Ethylbenzene	N.D.	0.0050	mg/kg	98	101	80-120	4	30
NWTPH-GX Soil C7-C12	N.D.	1.0	mg/kg	94	94	65-120	1	30
Toluene	N.D.	0.0050	mg/kg	97	100	80-120	3	30
Total Xylenes	N.D.	0.015	mg/kg	97	100	80-120	4	30
Batch number: 13322A31A	Sample number(s): 7275401,7275403-7275404,7275408-7275409,7275412-7275413,7275419-7275421							
Benzene	N.D.	0.0050	mg/kg	99	100	80-120	1	30
Ethylbenzene	N.D.	0.0050	mg/kg	99	100	80-120	1	30
NWTPH-GX Soil C7-C12	N.D.	1.0	mg/kg	88	89	65-120	1	30
Toluene	N.D.	0.0050	mg/kg	98	101	80-120	3	30
Total Xylenes	N.D.	0.015	mg/kg	99	100	80-120	2	30
Batch number: 13322A31B	Sample number(s): 7275405-7275407,7275409-7275411,7275413-7275418							
Benzene	N.D.	0.0050	mg/kg	99	100	80-120	1	30
Ethylbenzene	N.D.	0.0050	mg/kg	99	100	80-120	1	30
NWTPH-GX Soil C7-C12	N.D.	1.0	mg/kg	88	89	65-120	1	30
Toluene	N.D.	0.0050	mg/kg	98	101	80-120	3	30
Total Xylenes	N.D.	0.015	mg/kg	99	100	80-120	2	30
Batch number: 13324A31A	Sample number(s): 7275406,7275411,7275422-7275427							
Benzene	N.D.	0.0050	mg/kg	109	107	80-120	3	30
Ethylbenzene	N.D.	0.0050	mg/kg	107	107	80-120	0	30
NWTPH-GX Soil C7-C12	N.D.	1.0	mg/kg	99	98	65-120	1	30
Toluene	N.D.	0.0050	mg/kg	106	105	80-120	1	30
Total Xylenes	N.D.	0.015	mg/kg	107	107	80-120	0	30
Batch number: 13324A31B	Sample number(s): 7275426							
Benzene	N.D.	0.0050	mg/kg	109	107	80-120	3	30
Ethylbenzene	N.D.	0.0050	mg/kg	107	107	80-120	0	30
Toluene	N.D.	0.0050	mg/kg	106	105	80-120	1	30
Total Xylenes	N.D.	0.015	mg/kg	107	107	80-120	0	30
Batch number: 133180026A	Sample number(s): 7275384-7275393							
Diesel Range Organics C12-C24	N.D.	3.0	mg/kg	76		60-120		
Heavy Range Organics C24-C40	N.D.	10.	mg/kg					
Batch number: 133200029A	Sample number(s): 7275394-7275403							
Diesel Range Organics C12-C24	N.D.	3.0	mg/kg	76		60-120		
Heavy Range Organics C24-C40	N.D.	10.	mg/kg					
Batch number: 133220009A	Sample number(s): 7275404-7275412							
Diesel Range Organics C12-C24	N.D.	3.0	mg/kg	73		60-120		
Heavy Range Organics C24-C40	N.D.	10.	mg/kg					
Batch number: 133220020A	Sample number(s): 7275413-7275422							
Diesel Range Organics C12-C24	N.D.	3.0	mg/kg	80		60-120		
Heavy Range Organics C24-C40	N.D.	10.	mg/kg					
Batch number: 133220022A	Sample number(s): 7275423-7275427							
Diesel Range Organics C12-C24	N.D.	3.0	mg/kg	93		60-120		
Heavy Range Organics C24-C40	N.D.	10.	mg/kg					
Batch number: 133180027A	Sample number(s): 7275384-7275393							

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Quality Control Summary

Client Name: Chevron Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	61		50-133		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 133200030A	Sample number(s): 7275394-7275403							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	81		50-133		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 133220010A	Sample number(s): 7275404-7275412							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	66		50-133		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 133220021A	Sample number(s): 7275413-7275422							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	70		50-133		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 133220023A	Sample number(s): 7275423-7275427							
DRO C12-C24 w/Si Gel	N.D.	3.0	mg/kg	84		50-133		
HRO C24-C40 w/Si Gel	N.D.	10.	mg/kg					
Batch number: 133225708003	Sample number(s): 7275384-7275402							
Lead	N.D.	0.500	mg/kg	113		80-120		
Batch number: 133225708005	Sample number(s): 7275403-7275422							
Lead	N.D.	0.500	mg/kg	105		80-120		
Batch number: 133235708001	Sample number(s): 7275423-7275427							
Lead	N.D.	0.500	mg/kg	112		80-120		
Batch number: 13322820002A	Sample number(s): 7275384-7275393							
Moisture				100		99-101		
Batch number: 13322820002B	Sample number(s): 7275394-7275403							
Moisture				100		99-101		
Batch number: 13322820003A	Sample number(s): 7275404-7275413							
Moisture				100		99-101		
Batch number: 13322820003B	Sample number(s): 7275414-7275423							
Moisture				100		99-101		
Batch number: 13322820004B	Sample number(s): 7275424-7275427							
Moisture				100		99-101		

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 13318SLE026	Sample number(s): 7275384-7275392 UNSPK: P267556								
Benzo(a)anthracene	89	90	44-143	2	30				
Benzo(a)pyrene	93	97	44-140	5	30				

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Quality Control Summary

Client Name: Chevron Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Benzo(b)fluoranthene	98	98	26-142	0	30				
Benzo(k)fluoranthene	92	101	54-142	9	30				
Chrysene	93	94	29-148	1	30				
Dibenz(a,h)anthracene	98	102	20-137	4	30				
Indeno(1,2,3-cd)pyrene	95	99	17-136	4	30				
Batch number: 13319SLD026	Sample number(s): 7275393-7275407 UNSPK: P273843								
Benzo(a)anthracene	92	106	44-143	14	30				
Benzo(a)pyrene	76	111	44-140	30	30				
Benzo(b)fluoranthene	90	154*	26-142	39*	30				
Benzo(k)fluoranthene	97	106	54-142	9	30				
Chrysene	63	128	29-148	40*	30				
Dibenz(a,h)anthracene	76	78	20-137	3	30				
Indeno(1,2,3-cd)pyrene	63	70	17-136	11	30				
Batch number: 13320SLD026	Sample number(s): 7275408-7275421 UNSPK: 7275408								
Benzo(a)anthracene	106	107	44-143	0	30				
Benzo(a)pyrene	101	102	44-140	0	30				
Benzo(b)fluoranthene	113	113	26-142	1	30				
Benzo(k)fluoranthene	102	102	54-142	0	30				
Chrysene	99	101	29-148	2	30				
Dibenz(a,h)anthracene	102	103	20-137	1	30				
Indeno(1,2,3-cd)pyrene	102	103	17-136	1	30				
Batch number: 13320SLI026	Sample number(s): 7275422-7275427 UNSPK: P274722								
Benzo(a)anthracene	96	95	44-143	0	30				
Benzo(a)pyrene	91	92	44-140	1	30				
Benzo(b)fluoranthene	91	98	26-142	4	30				
Benzo(k)fluoranthene	123	123	54-142	0	30				
Chrysene	71	76	29-148	3	30				
Dibenz(a,h)anthracene	72	69	20-137	4	30				
Indeno(1,2,3-cd)pyrene	59	60	17-136	1	30				
Batch number: 133180026A	Sample number(s): 7275384-7275393 BKG: 7275384								
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: 133200029A	Sample number(s): 7275394-7275403 BKG: 7275394								
Diesel Range Organics C12-C24						48	38	22*	20
Heavy Range Organics C24-C40						26	19	29* (1)	20
Batch number: 133220009A	Sample number(s): 7275404-7275412 BKG: 7275404								
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: 133220020A	Sample number(s): 7275413-7275422 BKG: 7275414								
Diesel Range Organics C12-C24						22	14	44* (1)	20
Heavy Range Organics C24-C40						N.D.	N.D.	0 (1)	20
Batch number: 133220022A	Sample number(s): 7275423-7275427 BKG: 7275423								
Diesel Range Organics C12-C24						N.D.	N.D.	0 (1)	20
Heavy Range Organics C24-C40						N.D.	N.D.	0 (1)	20

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Quality Control Summary

Client Name: Chevron Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 133180027A	Sample number(s): 7275384-7275393					BKG: 7275384			
DRO C12-C24 w/Si Gel						N.D.	N.D.	0 (1)	20
HRO C24-C40 w/Si Gel						N.D.	N.D.	0 (1)	20
Batch number: 133200030A	Sample number(s): 7275394-7275403					BKG: 7275394			
DRO C12-C24 w/Si Gel						36	32	14 (1)	20
HRO C24-C40 w/Si Gel						N.D.	N.D.	0 (1)	20
Batch number: 133220010A	Sample number(s): 7275404-7275412					BKG: 7275404			
DRO C12-C24 w/Si Gel						N.D.	N.D.	0 (1)	20
HRO C24-C40 w/Si Gel						N.D.	N.D.	0 (1)	20
Batch number: 133220021A	Sample number(s): 7275413-7275422					BKG: 7275414			
DRO C12-C24 w/Si Gel						13	6.7	66* (1)	20
HRO C24-C40 w/Si Gel						N.D.	N.D.	0 (1)	20
Batch number: 133220023A	Sample number(s): 7275423-7275427					BKG: 7275423			
DRO C12-C24 w/Si Gel						N.D.	N.D.	0 (1)	20
HRO C24-C40 w/Si Gel						N.D.	N.D.	0 (1)	20
Batch number: 133225708003	Sample number(s): 7275384-7275402					UNSPK: 7275390	BKG: 7275390		
Lead	95	89	75-125	4	20	8.29	7.97	4	20
Batch number: 133225708005	Sample number(s): 7275403-7275422					UNSPK: 7275414	BKG: 7275414		
Lead	100	100	75-125	0	20	3.27	3.98	20 (1)	20
Batch number: 133235708001	Sample number(s): 7275423-7275427					UNSPK: P279024	BKG: P279024		
Lead	-227 (2)	-340 (2)	75-125	6	20	334	285	16	20
Batch number: 13322820002A	Sample number(s): 7275384-7275393					BKG: 7275390			
Moisture						27.1	24.9	8*	5
Batch number: 13322820002B	Sample number(s): 7275394-7275403					BKG: 7275395			
Moisture						9.9	10.4	4	5
Batch number: 13322820003A	Sample number(s): 7275404-7275413					BKG: 7275409			
Moisture						6.6	6.4	3	5
Batch number: 13322820003B	Sample number(s): 7275414-7275423					BKG: 7275417			
Moisture						23.0	24.7	7*	5
Batch number: 13322820004B	Sample number(s): 7275424-7275427					BKG: P276499			
Moisture						15.8	14.8	7*	5

Surrogate Quality Control

*- Outside of specification
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Quality Control Summary

Client Name: Chevron Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

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: SIM SVOA (microwave)
Batch number: 13318SLE026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7275384	98	93	96
7275385	94	89	97
7275386	96	89	95
7275387	108	95	99
7275388	108	95	110
7275389	97	92	77
7275390	92	91	89
7275391	102	97	103
7275392	101	94	100
Blank	93	89	94
LCS	96	92	98
MS	93	86	95
MSD	97	89	98
Limits:	54-129	59-125	61-125

Analysis Name: SIM SVOA (microwave)
Batch number: 13319SLD026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7275393	88	84	95
7275394	95	83	84
7275395	94	88	105
7275396	105	76	203*
7275397	95	89	106
7275398	93	86	103
7275399	103	92	118
7275400	94	87	104
7275401	103	91	184*
7275402	101	89	109
7275403	96	90	106
7275404	88	83	97
7275405	99	89	105
7275406	93	86	103
7275407	94	86	111
Blank	89	87	99
LCS	98	91	104
MS	88	76	96
MSD	98	90	111
Limits:	54-129	59-125	61-125

Analysis Name: SIM SVOA (microwave)
Batch number: 13320SLD026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10

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Quality Control Summary

Client Name: Chevron Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

Surrogate Quality Control

7275408	84	84	95
7275409	93	90	113
7275410	90	87	98
7275411	89	87	100
7275412	87	86	96
7275413	89	86	97
7275414	90	87	105
7275415	84	83	93
7275416	91	88	109
7275417	78	76	90
7275418	88	88	96
7275419	88	85	97
7275420	90	87	99
7275421	87	87	97
Blank	84	85	91
LCS	90	91	102
MS	88	88	96
MSD	90	90	99
Limits:	54-129	59-125	61-125

Analysis Name: SIM SVOA (microwave)
Batch number: 13320SLI026

	Fluoranthene-d10	Benzo(a)pyrene-d12	1-Methylnaphthalene-d10
7275422	95	89	102
7275423	96	89	101
7275424	95	88	102
7275425	94	88	103
7275426	93	85	102
7275427	93	87	100
Blank	93	87	100
LCS	96	90	104
MS	109	93	342*
MSD	114	89	402*
Limits:	54-129	59-125	61-125

Analysis Name: Method 8021 Soil Master
Batch number: 13319A31A

	Trifluorotoluene-F	Trifluorotoluene-P
7275384	89	89
7275385	85	88
7275386	95	
7275387	79	79
7275388		137
7275389		112
7275390	96	
7275391	97	
7275392	80	78
7275393	87	85
7275394	207*	
7275395	83	82
7275396		85

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Quality Control Summary

Client Name: Chevron Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

Surrogate Quality Control

7275397	78	78
7275398	90	90
7275400	76	78
Blank	103	98
LCS	99	94
LCSD	101	97
Limits:	61-122	50-139

Analysis Name: Method 8021 Soil Master
Batch number: 13319A31B

	Trifluorotoluene-F	Trifluorotoluene-P
7275386		83
7275388	240*	
7275389	130*	
7275390		92
7275391		83
7275394		105
7275396	129*	
7275399	93	99
7275401	385*	
7275402	211*	85
7275403	84	
Blank	99	98
LCS	99	94
LCSD	101	97
Limits:	61-122	50-139

Analysis Name: Method 8021 Soil Master
Batch number: 13322A31A

	Trifluorotoluene-F	Trifluorotoluene-P
7275401		336*
7275403		75
7275404	69	70
7275408	77	82
7275409		208*
7275412	68	72
7275413		213*
7275419	75	90
7275420	70	83
7275421	74	79
Blank	102	99
LCS	93	93
LCSD	84	93
Limits:	61-122	50-139

Analysis Name: Method 8021 Soil Master
Batch number: 13322A31B

	Trifluorotoluene-F	Trifluorotoluene-P
7275405	114	95
7275406		97

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Quality Control Summary

Client Name: Chevron Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

Surrogate Quality Control

7275407	421*	218*
7275409	258*	
7275410	77	81
7275411		188*
7275413	278*	
7275414	695*	535*
7275415	103	92
7275416	141*	94
7275417	72	75
7275418	77	82
Blank	98	104
LCS	93	93
LCSD	84	93
Limits:	61-122	50-139

Analysis Name: Method 8021 Soil Master
Batch number: 13324A31A

	Trifluorotoluene-F	Trifluorotoluene-P
7275406	104	
7275411	277*	
7275422	135*	115
7275423	77	84
7275424	89	98
7275425	90	98
7275426	96	
7275427	90	100
Blank	99	108
LCS	97	91
LCSD	95	90
Limits:	61-122	50-139

Analysis Name: Method 8021 Soil Master
Batch number: 13324A31B

	Trifluorotoluene-P
7275426	84
Blank	109
LCS	91
LCSD	90
Limits:	50-139

Analysis Name: NWTPH-Dx soil
Batch number: 133180026A

	Orthoterphenyl
7275384	74
7275385	88
7275386	80
7275387	91
7275388	101
7275389	91
7275390	77

*- Outside of specification
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Quality Control Summary

Client Name: Chevron Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

Surrogate Quality Control

7275391	95
7275392	90
7275393	92
Blank	92
DUP	83
LCS	92

Limits: 50-150

Analysis Name: NWTPH-Dx soil w/ 10g Si Gel
Batch number: 133180027A

	Orthoterphenyl
7275384	61
7275385	68
7275386	60
7275387	77
7275388	84
7275389	75
7275390	68
7275391	79
7275392	74
7275393	78
Blank	79
DUP	70
LCS	78

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 133200029A

	Orthoterphenyl
7275394	104
7275395	96
7275396	119
7275397	95
7275398	102
7275399	93
7275400	97
7275401	109
7275402	117
7275403	95
Blank	99
DUP	91
LCS	93

Limits: 50-150

Analysis Name: NWTPH-Dx soil w/ 10g Si Gel
Batch number: 133200030A

	Orthoterphenyl
7275394	93
7275395	79
7275396	116

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Quality Control Summary

Client Name: Chevron Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

Surrogate Quality Control

7275397	88
7275398	98
7275399	85
7275400	74
7275401	104
7275402	111
7275403	94
Blank	91
DUP	90
LCS	100
Limits:	50-150

Analysis Name: NWTPH-Dx soil
Batch number: 133220009A

	Orthoterphenyl
7275404	89
7275405	96
7275406	93
7275407	99
7275408	92
7275409	97
7275410	91
7275411	92
7275412	94
Blank	93
DUP	46*
LCS	93
Limits:	50-150

Analysis Name: NWTPH-Dx soil w/ 10g Si Gel
Batch number: 133220010A

	Orthoterphenyl
7275404	74
7275405	83
7275406	77
7275407	91
7275408	83
7275409	88
7275410	76
7275411	82
7275412	80
Blank	84
DUP	41*
LCS	87
Limits:	50-150

Analysis Name: NWTPH-Dx soil
Batch number: 133220020A

	Orthoterphenyl
7275413	103

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Quality Control Summary

Client Name: Chevron Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

Surrogate Quality Control

7275414	107
7275415	105
7275416	110
7275417	98
7275418	101
7275419	106
7275420	103
7275421	105
7275422	107
Blank	102
DUP	105
LCS	102

Limits: 50-150

Analysis Name: NWTPH-Dx soil w/ 10g Si Gel
Batch number: 133220021A

Orthoterphenyl

7275413	90
7275414	93
7275415	105
7275416	94
7275417	86
7275418	83
7275419	87
7275420	63
7275421	103
7275422	87
Blank	89
DUP	81
LCS	86

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 133220022A

Orthoterphenyl

7275423	110
7275424	99
7275425	107
7275426	101
7275427	107
Blank	100
DUP	107
LCS	112

Limits: 50-150

Analysis Name: NWTPH-Dx soil w/ 10g Si Gel
Batch number: 133220023A

Orthoterphenyl

7275423	96
7275424	95

*- 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
Group Number: 1433626
Reported: 11/27/13 at 09:52 AM

Surrogate Quality Control

7275425	96
7275426	94
7275427	98
Blank	93
DUP	91
LCS	105
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

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Acct. # 11255 Group # 1433626 Sample # 7275384-427

For Lancaster Laboratories use only

Instructions on reverse side correspond with circled numbers.

1 Client Information

Facility # ~~211556~~ 211556 WBS NWENV-02115560-0804

Site Address 101 Mulford Rd, Toledo, WA

Chevron PM Mark Horne Lead Consultant Leidos

Consultant/Office Bothell

Consultant Project Mgr. R. Shropshire

Consultant Phone # 425-482-3323

Sampler A. Lembrick & G. Cisneros

2 Sample Identification

3 Grab / Composite

4 Matrix

Soil ☒ Water ☐ Sediment ☐ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Oil ☐ Air ☐

5 Analyses Requested

Total Number of Containers

BTEX + MTBE 8021 ☒ 8260 ☐ Naphth ☐

8260 full scan

Oxygenates

NWTPH GX

NWTPH DX

Silica Gel Cleanup ☒

Lead Total ☒ Diss. ☐ Method 6010C

WAVPH ☐ WAEPH ☐

NWTPH Dx No SilicaGel

cPAHs 8270 SIM

Moisture

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Water	Sediment	Oil	Total Number of Containers
SB-9-4	11/4/13	1530	/		/				4
SB-10-2	11/4/13	1545	/		/				4
SB-15-2	11/5/13	1515	/		/				4
SB-14-7	11/5/13	1610	/		/				4
SB-15-6	11/6/13	0850	/		/				4
SB-10-6	11/6/13	1200	/		/				4
SB-16-2	11/6/13	1215	/		/				4
SB-16-6	11/6/13	1350	/		/				4
SB-11-10	11/6/13	1440	/		/				4
SB-11-12.5	11/6/13	1515	/		/				4
SB-17-2	11/6/13	1530	/		/				4
SB-12-9.5	11/6/13	1600	/		/				4
SB-12-10.5	11/6/13	1615	/		/				4

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 Options (please circle if required)

Type I - Full | Type VI (Raw Data)

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/11/13	1330			

9

Relinquished by	Date	Time	Received by	Date	Time

Relinquished by Commerical Carrier: UPS ✓ FedEx _____ Other _____

Received by [signature] Date 11/12/13 Time 0915

Temperature Upon Receipt 1.1-0.5 °C

Custody Seals Intact? Yes No

The white copy should accompany samples to Lancaster Laboratories. The yellow copy should be retained by the client.

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

For Lancaster Laboratories use only
Acct. # 11255 Group # 1433626 Sample # 7275384-427
Instructions on reverse side correspond with circled numbers.

① Client Information

Facility #: ~~2155~~6 211556
WBS: NWENV-02115560-~~0802~~ 0804 RSS
Site Address: 101 Mulford Rd, Toledo WA
Chevron PM: Mark Horne
Lead Consultant: Leidos
Consultant/Office: Bothell
Consultant Project Mgr.: R. Shropshire
Consultant Phone #: 425-482-3323
Sampler: A. Kubrick / G. Cisneros

④ Matrix: Sediment ☐ Ground ☐ Surface ☐ Potable ☐ NPDES ☐ Air ☐ Soil ☒ Water Oil

⑤ Analyses Requested: (BTEX) + MTBE 8021 ☒ 8260 ☐ Naphth ☐; 8260 full scan; Oxygenates; NWTPH GX; NWTPH DX ☒ Silica Gel Cleanup ☒; Lead Total ☒ Diss. ☐ Method 6010; WAVPH ☐ WAEPH ☐; NWTPH Dx No Silica Gel; cPAHs 8270 SIM; MOISTURE

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 Sample Identification / ③ / Matrix / Analyses

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE 8021	8260 full scan	Oxygenates	NWTPH GX	NWTPH DX	Lead	WAVPH	NWTPH Dx No Silica Gel	cPAHs 8270 SIM	MOISTURE		
SB-12-12	11/6/13	1620	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
SB-12-13.5	11/6/13	1630	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
SB-13-10.5	11/7/13 ~~11/6/13~~	0830	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
SB-13-12.5	11/7/13	0840	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
SB-14-9.5	11/7/13	0945	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
DUP-1-110713	11/7/13	--	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
SB-14-12.5	11/7/13	1000	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
SB-14-14	11/7/13	1010	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
SB-16-8	11/7/13	1230	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
SB-16-10	11/7/13	1245	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
~~SB-9-9~~ SB-10-9 gc	11/7/13	1320	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
~~SB-9-13~~ SB-10-13 gc	11/7/13	1330	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		
SB-15-9	11/7/13	1415	✓		✓			4	✓			✓	✓	✓		✓	✓	✓		

⑥ Remarks

⑦ Turnaround Time Requested (TAT) (please circle)

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

⑧ Data Package Options (please circle if required)

Type I - Full Type VI (Raw Data)

⑨

Relinquished by	Date	Time	Received by	Date	Time
[signature]	11/11/13	1330			
Relinquished by			Received by		
Relinquished by Commerical Carrier: UPS ✓ FedEx ____ Other ____			Received by [signature]	11/12/13	0915

Temperature Upon Receipt 0.5-1.1 °C
Custody Seals Intact? (Yes) No

Lancaster Laboratories, Inc. • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300
The white copy should accompany samples to Lancaster Laboratories. The yellow copy should be retained by the client.

Issued by Dept. 40 Management 7051.01

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

Acct. # 11255 Group # 1433626 Sample # 7075384-427

For Lancaster Laboratories use only

Instructions on reverse side correspond with circled numbers.

1 Client Information

Facility # 211556 WBS NWENW-0211556-0804

Site Address 101 Mulford Road, Toledo, WA

Chevron PM Mark Horne Lead Consultant Leidos

Consultant/Office Bothell

Consultant Project Mgr. R. Shropshire

Consultant Phone # 425-482-3323

Sampler A. Lembrick / G. Cisneros

2 Sample Identification

3 Collected

4 Matrix

Soil ☒ Water ☐ Sediment ☐ Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Air ☐ Oil ☐

Grab ☒ Composite ☐

5 Analyses Requested

Total Number of Containers

BTEX + MTBE ☒ 8021 ☒ 8260 ☐ Naphth ☐

8260 full scan ☐

Oxygenates ☐

NWTPH GX ☒

NWTPH DX ☒ Silica Gel Cleanup ☒

Lead ☐ Total ☒ Diss. ☐ Method 6010

WAVPH ☐ WAEPH ☐

NWTPH Dx No silica gel

cPAHs 8270 SIM

Moisture

Sample Identification	Date	Time	Grab	Composite	Soil	Water	Sediment	Oil	Total Containers	BTEX + MTBE 8021 8260	8260 full scan	Oxygenates	NWTPH GX	NWTPH DX	Silica Gel Cleanup	Lead	Total	Diss.	Method 6010	WAVPH	WAEPH	NWTPH Dx No silica gel	cPAHs 8270 SIM	Moisture
SB-15-13	11/7/13	1440	/		/				4	/			/	/	/	/						/	/	/
SB-18-8	11/7/13	1530	/		/				4	/			/	/	/	/						/	/	/
SB-18-12	11/7/13	1540	/		/				4	/			/	/	/	/						/	/	/
DUP-2-110713	11/7/13	--	/		/				4	/			/	/	/	/						/	/	/
SB-17-8	11/8/13	0820	/		/				4	/			/	/	/	/						/	/	/
SB-17-11	11/8/13	0830	/		/				4	/			/	/	/	/						/	/	/
SB-9-9	11/8	0900	/		/				4	/			/	/	/	/						/	/	/
SB-20-2	11/8	0910	/		/				4	/			/	/	/	/						/	/	/
SB-9-11	11/8	0915	/		/				4	/			/	/	/	/						/	/	/
DUP-3-110813	11/8	0915	/		/				4	/			/	/	/	/						/	/	/
SB-19-9	11/8	1000	/		/				4	/			/	/	/	/						/	/	/
SB-19-11	11/8	1015	/		/				4	/			/	/	/	/						/	/	/
SB-20-10	11/8	1050	/		/				4	/			/	/	/	/						/	/	/

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 Options (please circle if required)

Type I - Full | Type VI (Raw Data)

9

	Relinquished by	Date	Time	Received by	Date	Time
1		11/11/13	1330			
2						
3						

Relinquished by Commerical Carrier: UPS ✓ FedEx ____ Other ____

Temperature Upon Receipt 0.5 - 1.1 °C

Custody Seals Intact? Yes No

Chevron Northwest Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

Acct. # 11255 (H22 JH 11/13/13 ①) Group # 1433602 Sample # 7375384-427

For Lancaster Laboratories use only

Instructions on reverse side correspond with circled numbers.

SCR #: 146481

1 Client Information

Facility # 211556 WBS NWENV-021556.0804

Site Address 101 Mulford Road, Toledo, WA

Chevron PM Mark Horne Lead Consultant Leidos

Consultant/Office Bothell, WA

Consultant Project Mgr. R. Shropshire

Consultant Phone # 425-482-3323

Sampler A. Lenbuck, G. Cisneros

4 Matrix

Soil ☒ Sediment ☐ Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ Oil ☐ Air ☐

3 Grab / Composite

2 Sample Identification / Collected

Sample Identification	Date	Time	Grab	Composite
SB-20-12	11/8	1100	✓	
SB-20-14		1110	✓	
SB-21-6		1115	✓	
SB-21-9		1310	✓	
SB-21-12		1315	✓	

5 Analyses Requested

Total Number of Containers: 4 4 4 4 4

BTEX + MTBE 8021 ☒ 8260 ☐ Naphth ☐

8260 full scan

Oxygenates ____

NWTPH GX

NWTPH DX ☒ Silica Gel Cleanup ☒

Lead Total ☒ Diss. ☐ Method 6020

WAVPH

WAEPH ☐

NWTPH-Dx No Silica Gel

cPAHs 8270SIM

Moisture

- ☐ 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 Options (please circle if required)

Type I - Full | Type VI (Raw Data)

Relinquished by	Date	Time	Received by	Date	Time
	10/7/13	1300			
	11/11/13	1330			
Relinquished by Commerical Carrier: UPS ✓ FedEx ____ Other ____			Received by	11/12/13	0915

Temperature Upon Receipt 0.5-1.1 °C

Custody Seals Intact? (Yes) No

9

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Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> 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.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*****	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	**+**	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC 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.

APPENDIX B

Natural Attenuation Assessment for Groundwater

APPENDIX C

Alternative Cost Estimates for Disproportionate Cost Analysis

Arcadis U.S., Inc.

1100 Olive Way

Suite 800

Seattle, Washington 98101

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Fax 206 325 8218

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